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Add your introductions here!

# Namespace RetailForce.Fiscalisation

## Classes

### [CloudConnector](#)

Client connector for retailforce cloud connections.

### [FiscalModulCreator](#)

This class can be used to create the fiscal module for the specific client (with all necessary sub modules loaded).

### [FiscalModuleManagement](#)

Class for managing the fiscal module.

### [FiscalResponse](#)

The fiscal response of the fiscalisation system.

### [Helper](#)

### [QrCode](#)

Helper class for generating qr codes.

### [ServiceConfigurationBase](#)

Base class for service configuration.

### [TrustedFiscalModule](#)

General fiscal interface to call country specific implementation and store data for other purposes (e.g. digital receipt).

### [WebApiErrorModel](#)

Error model for extended error (exception) info

## Interfaces

### [IDocumentInterface](#)

Represents a document interface. Document interfaces can be [IFiscalModullImplementation](#) interfaces or [IStorageProvider](#) interfaces.

### [IFiscalModullImplementation](#)

A country specific implementation has to implement this interface.

### [IFiscalResponseCountryBase](#)

# Class CloudConnector

Client connector for retailforce cloud connections.

## Inheritance

System.Object

RetailForce.Common.Logging.LoggingBase

CloudConnector

[CloudClient](#)

## Implements

System.IDisposable

## Inherited Members

RetailForce.Common.Logging.LoggingBase.\_logger

RetailForce.Common.Logging.LoggingBase.\_logSource

RetailForce.Common.Logging.LoggingBase.LogCritical(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogCritical(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogWarning(System.String, System.Object[])

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CloudConnector : LoggingBase, IDisposable
```

## Constructors

CloudConnector(ILogger, String)

Constructor.

## Declaration

```
public CloudConnector(ILogger logger, string logSource)
```

## Parameters

| TYPE                                 | NAME      | DESCRIPTION |
|--------------------------------------|-----------|-------------|
| Microsoft.Extensions.Logging.ILogger | logger    |             |
| System.String                        | logSource |             |

## Properties

### AdditionalParameters

Returns a list of additional parameters which are added on each request.

## Declaration

```
public List<Parameter> AdditionalParameters { get; }
```

## Property Value

| TYPE                                                 | DESCRIPTION |
|------------------------------------------------------|-------------|
| System.Collections.Generic.List<RestSharp.Parameter> |             |

## RefreshToken

### Declaration

```
public string RefreshToken { get; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Methods

### Authenticate(String)

Refreshes the authentication with the refreshtoken

### Declaration

```
public string Authenticate(string refreshToken)
```

### Parameters

| TYPE          | NAME         | DESCRIPTION                            |
|---------------|--------------|----------------------------------------|
| System.String | refreshToken | refresh token from last authentication |

### Returns

| TYPE          | DESCRIPTION                                                          |
|---------------|----------------------------------------------------------------------|
| System.String | A jwt web token representing the authentication token for the cloud. |

### Exceptions

| TYPE                                 | CONDITION                                                                     |
|--------------------------------------|-------------------------------------------------------------------------------|
| System.ArgumentNullException         | Thrown if parameter <code>refreshToken</code> is set to null or empty string. |
| System.Net.Http.HttpRequestException | Thrown if http request was not successful.                                    |
| System.Security.SecurityException    | Thrown if cookie for response token was not created.                          |

## Authenticate(String, String)

Authenticates with the given credentials at retailforce cloud and returns the authentication token.

### Declaration

```
public string Authenticate(string cloudApiKey, string cloudApiSecret)
```

### Parameters

| TYPE          | NAME           | DESCRIPTION                                         |
|---------------|----------------|-----------------------------------------------------|
| System.String | cloudApiKey    | The api key to connect to the retailforce cloud.    |
| System.String | cloudApiSecret | The api secret to connect to the retailforce cloud. |

### Returns

| TYPE          | DESCRIPTION                                                          |
|---------------|----------------------------------------------------------------------|
| System.String | A jwt web token representing the authentication token for the cloud. |

### Remarks

Authentication token is also stored for further requests as long the class is not disposed.

### Exceptions

| TYPE                                 | CONDITION                                                                                                             |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException         | Thrown if parameter <code>cloudApiKey</code> or parameter <code>cloudApiSecret</code> is set to null or empty string. |
| System.Net.Http.HttpRequestException | Thrown if http request was not successful.                                                                            |
| System.Security.SecurityException    | Thrown if cookie for response token was not created or authentication was not successful.                             |

## Delete<TType>(String, Object, Parameter[])

### Declaration

```
public TType Delete<TType>(string url, object body, params Parameter[] parameters)
```

### Parameters

| TYPE                  | NAME       | DESCRIPTION |
|-----------------------|------------|-------------|
| System.String         | url        |             |
| System.Object         | body       |             |
| RestSharp.Parameter[] | parameters |             |

#### Returns

| TYPE  | DESCRIPTION |
|-------|-------------|
| TType |             |

#### Type Parameters

| NAME  | DESCRIPTION |
|-------|-------------|
| TType |             |

#### Dispose()

##### Declaration

```
public void Dispose()
```

#### Get<TType>(String, Object, Parameter[])

##### Declaration

```
public TType Get<TType>(string url, object body, params Parameter[] parameters)
```

#### Parameters

| TYPE                  | NAME       | DESCRIPTION |
|-----------------------|------------|-------------|
| System.String         | url        |             |
| System.Object         | body       |             |
| RestSharp.Parameter[] | parameters |             |

#### Returns

| TYPE  | DESCRIPTION |
|-------|-------------|
| TType |             |

#### Type Parameters

| NAME  | DESCRIPTION |
|-------|-------------|
| TType |             |

#### Post<TType>(String, Object, Parameter[])

##### Declaration

```
public TType Post<TType>(string url, object body, params Parameter[] parameters)
```

#### Parameters

| TYPE          | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.String | url  |             |
| System.Object | body |             |
|               |      |             |

| TYPE                  | NAME       | DESCRIPTION |
|-----------------------|------------|-------------|
| RestSharp.Parameter[] | parameters |             |

#### Returns

| TYPE  | DESCRIPTION |
|-------|-------------|
| TType |             |

#### Type Parameters

| NAME  | DESCRIPTION |
|-------|-------------|
| TType |             |

### Put<TType>(String, Object, Parameter[])

#### Declaration

```
public TType Put<TType>(string url, object body, params Parameter[] parameters)
```

#### Parameters

| TYPE                  | NAME       | DESCRIPTION |
|-----------------------|------------|-------------|
| System.String         | url        |             |
| System.Object         | body       |             |
| RestSharp.Parameter[] | parameters |             |

#### Returns

| TYPE  | DESCRIPTION |
|-------|-------------|
| TType |             |

#### Type Parameters

| NAME  | DESCRIPTION |
|-------|-------------|
| TType |             |

### SignOut()

#### Declaration

```
public void SignOut()
```

#### Implements

System.IDisposable



# Class FiscalModulCreator

This class can be used to create the fiscal module for the specific client (with all necessary sub modules loaded).

## Inheritance

System.Object

FiscalModulCreator

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class FiscalModulCreator
```

## Constructors

FiscalModulCreator(ConfigurationProviderBase, ILogger, CloudService)

Constructor.

## Declaration

```
public FiscalModulCreator(ConfigurationProviderBase configProvider, ILogger logger, CloudService cloudService)
```

## Parameters

| TYPE                                      | NAME           | DESCRIPTION                                                                                   |
|-------------------------------------------|----------------|-----------------------------------------------------------------------------------------------|
| <a href="#">ConfigurationProviderBase</a> | configProvider | The provider to load the necessary configuration.                                             |
| Microsoft.Extensions.Logging.ILogger      | logger         | The logger for this class.                                                                    |
| <a href="#">CloudService</a>              | cloudService   | The cloud service to transfer data to the cloud. Optional if no cloud transfer is configured. |

## Exceptions

| TYPE                         | CONDITION                                                                    |
|------------------------------|------------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>configProvider</code> or <code>logger</code> is set to null. |

## Methods

CreateFiscalModuleForClient(Guid, String, String, String)

Creates a fiscal module for a specific client.

#### Declaration

```
public TrustedFiscalModule CreateFiscalModuleForClient(Guid clientId, string storageBasePath = null, string cloudApiKey = "", string cloudApiSecret = "")
```

#### Parameters

| TYPE          | NAME            | DESCRIPTION                                                                                    |
|---------------|-----------------|------------------------------------------------------------------------------------------------|
| System.Guid   | clientId        | A guid representing the unique clientId for this operation.                                    |
| System.String | storageBasePath | The base path for the data to store for this module (for log-file, and country-specific data). |
| System.String | cloudApiKey     | The api key for cloud authentication to the retailforce cloud.                                 |
| System.String | cloudApiSecret  | The api secret for cloud authentication to the retailforce cloud.                              |

#### Returns

| TYPE                                | DESCRIPTION                                                                           |
|-------------------------------------|---------------------------------------------------------------------------------------|
| <a href="#">TrustedFiscalModule</a> | A <a href="#">TrustedFiscalModule</a> representing the fiscal module for this client. |

#### Exceptions

| TYPE                                            | CONDITION                                     |
|-------------------------------------------------|-----------------------------------------------|
| System.Collections.Generic.KeyNotFoundException | Thrown if the given client is not configured. |

# Class FiscalModuleManagement

Class for managing the fiscal module.

## Inheritance

System.Object

FiscalModuleManagement

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class FiscalModuleManagement
```

## Remarks

It is possible to store more than one cash register definition at the fiscal module.

## Constructors

**FiscalModuleManagement(ILogger, ConfigurationProviderBase)**

Constructor.

## Declaration

```
public FiscalModuleManagement(ILogger logger, ConfigurationProviderBase configProvider)
```

## Parameters

| TYPE                                      | NAME           | DESCRIPTION                                        |
|-------------------------------------------|----------------|----------------------------------------------------|
| Microsoft.Extensions.Logging.ILogger      | logger         |                                                    |
| <a href="#">ConfigurationProviderBase</a> | configProvider | The configuration provider for this fiscal module. |

## Exceptions

| TYPE                         | CONDITION                                             |
|------------------------------|-------------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>configProvider</code> is set to null. |

## Methods

**CreateClient(FiscalClient)**

Creates a client at the fiscal module management.

## Declaration

```
public void CreateClient(FiscalClient client)
```

#### Parameters

| TYPE                         | NAME   | DESCRIPTION           |
|------------------------------|--------|-----------------------|
| <a href="#">FiscalClient</a> | client | The client to create. |

#### Remarks

Also for new clients the [UniqueClientId](#) property must be set.

#### Exceptions

| TYPE                                                      | CONDITION                                                                                                       |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| System.ComponentModel.DataAnnotations.ValidationException | Thrown if one or more RetailForce.Common.Validation.ValidationError occurred when validating the client object. |
| System.ArgumentNullException                              | Thrown if <code>client</code> is set to null.                                                                   |

### CreateClientByCloud(CompanyIdentification, String, String, String, String)

Creates a client loading the configuration data from the cloud.

#### Declaration

```
public Guid CreateClientByCloud(CompanyIdentification companyIdentification, string storeNumber, string terminalNumber, string cloudApiKey, string cloudApiSecret)
```

#### Parameters

| TYPE                                  | NAME                  | DESCRIPTION                                                 |
|---------------------------------------|-----------------------|-------------------------------------------------------------|
| <a href="#">CompanyIdentification</a> | companyIdentification | The identification of the company where the client belongs. |
| System.String                         | storeNumber           | The store number of the client.                             |
| System.String                         | terminalNumber        | The terminal number of the client.                          |
| System.String                         | cloudApiKey           | The api key to access the retailforce cloud.                |
| System.String                         | cloudApiSecret        | The api secret to access the retailforce cloud.             |

#### Returns

| TYPE        | DESCRIPTION                                                      |
|-------------|------------------------------------------------------------------|
| System.Guid | The guid of the newly created client in the configuration store. |

#### Exceptions

| TYPE                                                      | CONDITION                                                                                                                                                                                                                                       |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException                              | Thrown if parameter <code>companyIdentification</code> is set to null or one of the parameters <code>storeNumber</code> , <code>terminalNumber</code> , <code>cloudApiKey</code> or <code>cloudApiSecret</code> is set to null or empty string. |
| System.Collections.Generic.KeyNotFoundException           | Thrown if the given entity is not found in the cloud or you are not authorized for access.                                                                                                                                                      |
| System.ComponentModel.DataAnnotations.ValidationException | Thrown if the fiscal client configuration in the cloud does not match client validation.                                                                                                                                                        |
| System.Net.Http.HttpRequestException                      | Thrown if http request was not successful.                                                                                                                                                                                                      |
| System.Security.SecurityException                         | Thrown if cookie for response token was not created or authentication was not successful.                                                                                                                                                       |

#### CreateClientWithCloud(FiscalClient, List<String>, String, String)

Creates the client and integrates all configuration data on terminal level (also licenses are created on terminal level).

#### Declaration

```
public Guid CreateClientWithCloud(FiscalClient client, List<string> licenses, string apiKey, string apiSecret)
```

#### Parameters

| TYPE                                           | NAME      | DESCRIPTION                                                            |
|------------------------------------------------|-----------|------------------------------------------------------------------------|
| <a href="#">FiscalClient</a>                   | client    | The client to create. Must not be null.                                |
| System.Collections.Generic.List<System.String> | licenses  | A list of licenseld's to create with the client.                       |
| System.String                                  | apiKey    | An apiKey for authentication as the distributor to the cloud service.  |
| System.String                                  | apiSecret | The secret for authentication as the distributor to the cloud service. |

#### Returns

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Guid |             |

#### Remarks

The property must be set to a valid distributor which is allowed to create clients.

Attention: There is always also a new organisation created.

#### Exceptions

| TYPE                                                      | CONDITION |
|-----------------------------------------------------------|-----------|
| System.ArgumentNullException                              | Thrown if |
| System.ComponentModel.DataAnnotations.ValidationException |           |

### DeleteClient(Guid)

#### Declaration

```
public void DeleteClient(Guid clientId)
```

#### Parameters

| TYPE        | NAME     | DESCRIPTION |
|-------------|----------|-------------|
| System.Guid | clientId |             |

### GetClient(Guid)

Returns a fiscal client from the store by given `clientId`.

#### Declaration

```
public FiscalClient GetClient(Guid clientId)
```

#### Parameters

| TYPE        | NAME     | DESCRIPTION                  |
|-------------|----------|------------------------------|
| System.Guid | clientId | The id of the fiscal client. |

#### Returns

| TYPE                         | DESCRIPTION              |
|------------------------------|--------------------------|
| <a href="#">FiscalClient</a> | Requested fiscal client. |

#### Exceptions

| TYPE | CONDITION |
|------|-----------|
|      |           |

| TYPE                               | CONDITION                                       |
|------------------------------------|-------------------------------------------------|
| System.ArgumentNullException       | Thrown if <code>clientId</code> is set to null. |
| System.ArgumentOutOfRangeException | Thrown if requested client is not found.        |

### GetClientId(CompanyIdentification, String, String)

Returns the clientId of the requested client or null of not found in configuration.

#### Declaration

```
public Guid? GetClientId(CompanyIdentification companyIdentification, string storeNumber, string terminalNumber)
```

#### Parameters

| TYPE                                  | NAME                  | DESCRIPTION                                                |
|---------------------------------------|-----------------------|------------------------------------------------------------|
| <a href="#">CompanyIdentification</a> | companyIdentification | An object representing the identification for the company. |
| System.String                         | storeNumber           | The store number of the requested client.                  |
| System.String                         | terminalNumber        | The terminal number of the requested client.               |

#### Returns

| TYPE                         | DESCRIPTION                                                |
|------------------------------|------------------------------------------------------------|
| System.Nullable<System.Guid> | The clientId of the requested client or null of not found. |

#### Exceptions

| TYPE                         | CONDITION                                                                                                                                                      |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>companyIdentification</code> is set to null or if parameter <code>storeNumber</code> or <code>terminalNumber</code> are set to null. |

### GetClients()

Returns all clients stored in the configuration store.

#### Declaration

```
public List<FiscalClient> GetClients()
```

#### Returns

| TYPE                                                            | DESCRIPTION |
|-----------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">FiscalClient</a> > |             |

## UpdateClient(FiscalClient)

Declaration

```
public void UpdateClient(FiscalClient client)
```

Parameters

| TYPE                         | NAME   | DESCRIPTION |
|------------------------------|--------|-------------|
| <a href="#">FiscalClient</a> | client |             |

## ValidateClient(FiscalClient)

Validates a fiscal client.

Declaration

```
public static List<ValidationError> ValidateClient(FiscalClient client)
```

Parameters

| TYPE                         | NAME   | DESCRIPTION             |
|------------------------------|--------|-------------------------|
| <a href="#">FiscalClient</a> | client | The client to validate. |

Returns

| TYPE                                                                           | DESCRIPTION                                                                                                                      |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| System.Collections.Generic.List<RetailForce.Common.Validation.ValidationError> | A list of RetailForce.Common.Validation.ValidationError objects representing the validation errors for the client configuration. |

Exceptions

| TYPE                         | CONDITION                                     |
|------------------------------|-----------------------------------------------|
| System.ArgumentNullException | Thrown if <code>client</code> is set to null. |



# Class FiscalResponse

The fiscal response of the fiscalisation system.

## Inheritance

System.Object  
FiscalResponse

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public sealed class FiscalResponse
```

## Remarks

Can be

## Properties

### AdditionalFields

#### Declaration

```
[JsonIgnore]  
public ReadOnlyDictionary<string, object> AdditionalFields { get; set; }
```

#### Property Value

| TYPE                                                                            | DESCRIPTION |
|---------------------------------------------------------------------------------|-------------|
| System.Collections.ObjectModel.ReadOnlyDictionary<System.String, System.Object> |             |

### AdditionalFieldsProtected

#### Declaration

```
[JsonProperty("AdditionalFields")]  
protected Dictionary<string, object> AdditionalFieldsProtected { get; set; }
```

#### Property Value

| TYPE                                                                | DESCRIPTION |
|---------------------------------------------------------------------|-------------|
| System.Collections.Generic.Dictionary<System.String, System.Object> |             |

## ErrorDescription

The error description if the fiscalisation process failed. Empty if everything went well.

#### Declaration

```
[JsonProperty]
public string ErrorDescription { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### FiscalCountry

The fiscal country for this response.

#### Declaration

```
[JsonProperty]
public FiscalCountry FiscalCountry { get; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">FiscalCountry</a> |             |

### FiscalisationDocumentNumber

The fiscalisation document number.

#### Declaration

```
[JsonProperty]
public int FiscalisationDocumentNumber { get; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### FiscalisationDocumentRevision

The revision of the fiscalisation document.

#### Declaration

```
[JsonProperty]
public int FiscalisationDocumentRevision { get; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### RequestCompletionTime

Gets or sets the request completion time of the fiscal response request.

#### Declaration

```
[JsonProperty]
public DateTime RequestCompletionTime { get; set; }
```

#### Property Value

| TYPE            | DESCRIPTION |
|-----------------|-------------|
| System.DateTime |             |

### RequestTime

Gets or sets the request time of the fiscal response request.

#### Declaration

```
[JsonProperty]
public DateTime RequestTime { get; set; }
```

#### Property Value

| TYPE            | DESCRIPTION |
|-----------------|-------------|
| System.DateTime |             |

### Signature

The signature of the security device (country-specific)

#### Declaration

```
[JsonProperty]
public string Signature { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### UserMessage

The message which must be shown to the user of the cash register system.

#### Declaration

```
[JsonProperty]
public string UserMessage { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Extension Methods

[FiscalResponseAustria.QrCode\(FiscalResponse\)](#)

[FiscalResponseGermany.TransactionStartTime\(FiscalResponse\)](#)

[FiscalResponseGermany.TransactionEndTime\(FiscalResponse\)](#)

[FiscalResponseGermany.ProcessData\(FiscalResponse\)](#)

FiscalResponseGermany.ProcessType(FiscalResponse)  
FiscalResponseGermany.TseSignatureCounter(FiscalResponse)  
FiscalResponseGermany.TseSerial(FiscalResponse)  
FiscalResponseGermany.TseHashAlgorithm(FiscalResponse)  
FiscalResponseGermany.TsePublicKey(FiscalResponse)  
FiscalResponseGermany.TseTimeFormat(FiscalResponse)  
FiscalResponseGermany.QrCodeDataString(FiscalResponse)

# Class Helper

## Inheritance

System.Object

Helper

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public static class Helper
```

## Methods

DeepClone<T>(T)

### Declaration

```
public static T DeepClone<T>(T obj)
```

### Parameters

| TYPE | NAME | DESCRIPTION |
|------|------|-------------|
| T    | obj  |             |

### Returns

| TYPE | DESCRIPTION |
|------|-------------|
| T    |             |

### Type Parameters

| NAME | DESCRIPTION |
|------|-------------|
| T    |             |

# Interface IDocumentInterface

Represents a document interface. Document interfaces can be [IFiscalModullImplementation](#) interfaces or [IStorageProvider](#) interfaces.

Namespace: [RetailForce.Fiscalisation](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public interface IDocumentInterface
```

## Properties

### ProcessingDocumentTypes

Returns all document types which are processed by this interface.

#### Declaration

```
IReadOnlyList<DocumentType> ProcessingDocumentTypes { get; }
```

#### Property Value

| TYPE                                                                     | DESCRIPTION |
|--------------------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">DocumentType</a> > |             |

### SupportedDocumentTypes

Returns all supported document types by this fiscal module.

#### Declaration

```
IReadOnlyList<DocumentType> SupportedDocumentTypes { get; }
```

#### Property Value

| TYPE                                                                     | DESCRIPTION |
|--------------------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">DocumentType</a> > |             |

## Methods

### ValidateDocument(Document)

Validates a document and returns (if appropriate) a list of document validation errors.

#### Declaration

```
List<DocumentValidationError> ValidateDocument(Document document)
```

#### Parameters

| TYPE                     | NAME     | DESCRIPTION               |
|--------------------------|----------|---------------------------|
| <a href="#">Document</a> | document | The document to validate. |

#### Returns

| TYPE                                                                       | DESCRIPTION                             |
|----------------------------------------------------------------------------|-----------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | The list of document validation errors. |

# Interface IFiscalModulImplementation

A country specific implementation has to implement this interface.

Inherited Members

[IDocumentInterface.SupportedDocumentTypes](#)

[IDocumentInterface.ProcessingDocumentTypes](#)

[IDocumentInterface.ValidateDocument\(Document\)](#)

Namespace: [RetailForce.Fiscalisation](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public interface IFiscalModulImplementation : IDocumentInterface
```

## Properties

### AvailableVatDefinitions

Returns all vat objects which are available in this country.

Declaration

```
IReadOnlyList<Vat> AvailableVatDefinitions { get; }
```

Property Value

| TYPE                                                                | DESCRIPTION |
|---------------------------------------------------------------------|-------------|
| <a href="#">System.Collections.Generic.IReadOnlyList&lt;Vat&gt;</a> |             |

### FiscalClientStatus

Returns the status of the fiscal client.

Declaration

```
FiscalClientStatus FiscalClientStatus { get; }
```

Property Value

| TYPE                               | DESCRIPTION |
|------------------------------------|-------------|
| <a href="#">FiscalClientStatus</a> |             |

## Methods

### CancelDocument(Document)

Cancels a document on the fiscal interface.

Declaration

```
FiscalResponse CancelDocument(Document document)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|



| TYPE                     | NAME     | DESCRIPTION             |
|--------------------------|----------|-------------------------|
| <a href="#">Document</a> | document | The document to cancel. |

#### Returns

| TYPE                           | DESCRIPTION                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the appropriate fiscal response data. |

### CreateDocument(DocumentType)

Creates a document at the fiscal interface and returns appropriate data.

#### Declaration

```
FiscalResponse CreateDocument(DocumentType documentType)
```

#### Parameters

| TYPE                         | NAME         | DESCRIPTION                                                        |
|------------------------------|--------------|--------------------------------------------------------------------|
| <a href="#">DocumentType</a> | documentType | The type of the document for which the document should be created. |

#### Returns

| TYPE                           | DESCRIPTION                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the appropriate fiscal response data. |

#### Remarks

For more information concerning the [FiscalResponse](#) look at the fiscal response for the applicable country implementation.

### DecommissionClient(Document)

Decommission of fiscal client (and possible hardware, and possible declaration to financial authorities).

#### Declaration

```
FiscalResponse DecommissionClient(Document endDocument)
```

#### Parameters

| TYPE                     | NAME        | DESCRIPTION                                                                                        |
|--------------------------|-------------|----------------------------------------------------------------------------------------------------|
| <a href="#">Document</a> | endDocument | A document of type <a href="#">NullReceipt</a> representing the end document of the fiscalisation. |

#### Returns

| TYPE | DESCRIPTION |
|------|-------------|
|      |             |

| TYPE                           | DESCRIPTION                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the appropriate fiscal response data. |

### GetDocumentMandatoryFields(Type)

Returns the mandatory fields for this type for the given country implementation.

Declaration

```
IReadOnlyList<string> GetDocumentMandatoryFields(Type t)
```

Parameters

| TYPE        | NAME | DESCRIPTION                           |
|-------------|------|---------------------------------------|
| System.Type | t    | The type to get the mandatory fields. |

Returns

| TYPE                                                    | DESCRIPTION                                                                                 |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------|
| System.Collections.Generic.IReadOnlyList<System.String> | A list of property names representing the mandatory fields for this country implementation. |

### GetTaxFreeVat()

Returns the vat object for country specific zero tax based transactions.

Declaration

```
Vat GetTaxFreeVat()
```

Returns

| TYPE                | DESCRIPTION                                              |
|---------------------|----------------------------------------------------------|
| <a href="#">Vat</a> | A vat object representing the zero tax based vat object. |

Remarks

Can be used for payin/payout, cash difference.

### GetVatIdentification(Decimal, DateTime)

Returns the appropriate vat identification for the requested percentage and date/time.

Declaration

```
int? GetVatIdentification(decimal vatPercent, DateTime requestDate)
```

Parameters

| TYPE            | NAME        | DESCRIPTION                                              |
|-----------------|-------------|----------------------------------------------------------|
| System.Decimal  | vatPercent  | The vat percentage for the requested vat identification. |
| System.DateTime | requestDate | The date/time for the requested vat identification.      |

#### Returns

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| System.Nullable<System.Int32> |             |

### InitializeClient(Document)

Initializes fiscalisation unit (and possible hardware, and possible declaration to financial authorities).

#### Declaration

```
FiscalResponse InitializeClient(Document startDocument)
```

#### Parameters

| TYPE                     | NAME          | DESCRIPTION                                                                                             |
|--------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| <a href="#">Document</a> | startDocument | A document of type <a href="#">NullReceipt</a> representing the starting document of the fiscalisation. |

#### Returns

| TYPE                           | DESCRIPTION                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the appropriate fiscal response data. |

### StoreDocument(Document)

Stores a document to the fiscal interface.

#### Declaration

```
FiscalResponse StoreDocument(Document document)
```

#### Parameters

| TYPE                     | NAME     | DESCRIPTION            |
|--------------------------|----------|------------------------|
| <a href="#">Document</a> | document | The document to store. |

#### Returns

| TYPE | DESCRIPTION |
|------|-------------|
|      |             |

| TYPE                           | DESCRIPTION                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the appropriate fiscal response data. |

#### Remarks

For more information concerning the [FiscalResponse](#) look at the fiscal response for the applicable country implementation.

#### ValidateFiscalClient(Document)

Validates the fiscal client for the given document.

#### Declaration

```
List<DocumentValidationError> ValidateFiscalClient(Document document)
```

#### Parameters

| TYPE                     | NAME     | DESCRIPTION                                |
|--------------------------|----------|--------------------------------------------|
| <a href="#">Document</a> | document | The document containing the fiscal client. |

#### Returns

| TYPE                                                                       | DESCRIPTION                           |
|----------------------------------------------------------------------------|---------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | A list of document validation errors. |

# Interface IFiscalResponseCountryBase

Namespace: [RetailForce.Fiscalisation](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public interface IFiscalResponseCountryBase
```

# Class QrCode

Helper class for generating qr codes.

## Inheritance

System.Object

QrCode

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public static class QrCode
```

## Methods

### GenerateQrCode(String, Int32)

Generates the given string into a System.Drawing.Bitmap showing a qrCode.

#### Declaration

```
public static Bitmap GenerateQrCode(string qrCode, int size = 3)
```

#### Parameters

| TYPE          | NAME   | DESCRIPTION                                |
|---------------|--------|--------------------------------------------|
| System.String | qrCode | The string to convert to a qr code bitmap. |
| System.Int32  | size   | The size of the qr code.                   |

#### Returns

| TYPE                  | DESCRIPTION                              |
|-----------------------|------------------------------------------|
| System.Drawing.Bitmap | A bitmap containing the created qr code. |

### GenerateQrCodeBase64(String, Int32, ImageFormat)

Generates the given string into a base64 encoded image string containing a qr code.

#### Declaration

```
public static string GenerateQrCodeBase64(string qrCode, int size = 3, ImageFormat imageFormat = null)
```

#### Parameters

| TYPE                               | NAME        | DESCRIPTION                            |
|------------------------------------|-------------|----------------------------------------|
| System.String                      | qrCode      | The string to convert to a qr code.    |
| System.Int32                       | size        | The size of the qr code.               |
| System.Drawing.Imaging.ImageFormat | imageFormat | The format of the image, default: png. |

#### Returns

| TYPE          | DESCRIPTION                                                         |
|---------------|---------------------------------------------------------------------|
| System.String | A base64 encoded string containing the qr code of the given string. |

#### GenerateQrCodeFile(String, String, Int32, ImageFormat)

Generates the given string into the given file and format showing a qr code.

#### Declaration

```
public static void GenerateQrCodeFile(string qrCode, string filename, int size = 3, ImageFormat imageFormat = null)
```

#### Parameters

| TYPE                               | NAME        | DESCRIPTION                                    |
|------------------------------------|-------------|------------------------------------------------|
| System.String                      | qrCode      | The string to convert to a qr code image file. |
| System.String                      | filename    | The filename of the destination file.          |
| System.Int32                       | size        | The size of the qr code.                       |
| System.Drawing.Imaging.ImageFormat | imageFormat | The format of the image, default: png.         |

# Class ServiceConfigurationBase

Base class for service configuration.

## Inheritance

System.Object

ServiceConfigurationBase

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class ServiceConfigurationBase
```

## Constructors

### ServiceConfigurationBase()

Constructor.

## Declaration

```
public ServiceConfigurationBase()
```

## Properties

### HttpsCertificateFilename

Path to the https certificate file (\*.pfx). Can be relativ (wwwroot) or absolute.

## Declaration

```
public string HttpsCertificateFilename { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### HttpsCertificatePassword

Password for certificate file.

## Declaration

```
public string HttpsCertificatePassword { get; set; }
```

## Property Value



| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## LogEventLog

True if logging should also log to the event log.

Declaration

```
public bool LogEventLog { get; set; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

Remarks

Default: false.

## LogLevelFilter

Filter for logging.

Declaration

```
public LogLevel LogLevelFilter { get; set; }
```

Property Value

| TYPE                                  | DESCRIPTION |
|---------------------------------------|-------------|
| Microsoft.Extensions.Logging.LogLevel |             |

Remarks

Default: Microsoft.Extensions.Logging.LogLevel.Debug

## LogName

Name of the logging source in event log.

Declaration

```
public string LogName { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

Remarks

Default: 'not specified.'

## Portnumber

Port number for http port.

#### Declaration

```
public int Portnumber { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

#### Remarks

Default: 5000

#### PortnumberHttps

Port number for https port.

#### Declaration

```
public int PortnumberHttps { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

#### Remarks

Default: 5001

#### UseHttps

True if the service should also serve https. Otherwise false.

#### Declaration

```
public bool UseHttps { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

#### Remarks

Default: false

[HttpsCertificateFilename](#), [PortnumberHttps](#) and [HttpsCertificatePassword](#) must be set.

#### UseHttpsRedirection

True if the service should automatically route all incoming requests to https port.

#### Declaration

```
public bool UseHttpsRedirection { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

# Class TrustedFiscalModule

General fiscal interface to call country specific implementation and store data for other purposes (e.g. digital receipt).

## Inheritance

System.Object

RetailForce.Common.Logging.LoggingBase

TrustedFiscalModule

## Implements

System.IDisposable

## Inherited Members

RetailForce.Common.Logging.LoggingBase.\_logger

RetailForce.Common.Logging.LoggingBase.\_logSource

RetailForce.Common.Logging.LoggingBase.LogCritical(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogCritical(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogWarning(System.String, System.Object[])

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public sealed class TrustedFiscalModule : LoggingBase, IDisposable
```

## Properties

### AvailableVatDefinitions

Returns all vat objects which are available in this country.

#### Declaration

```
public IReadOnlyList<Vat> AvailableVatDefinitions { get; }
```

#### Property Value

| TYPE                                                            | DESCRIPTION |
|-----------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">Vat</a> > |             |

### FiscalClientStatus

Returns the fiscal client status for the fiscal module.

#### Declaration

```
public FiscalClientStatus FiscalClientStatus { get; }
```

#### Property Value

| TYPE                               | DESCRIPTION |
|------------------------------------|-------------|
| <a href="#">FiscalClientStatus</a> |             |

## ModulImplementation

Returns the fiscal module implementation for this trusted fiscal module.

Declaration

```
public IFiscalModulImplementation ModulImplementation { get; }
```

Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">IFiscalModulImplementation</a> |             |

## ProcessingDocumentTypes

Returns all document types which are processed by this interface.

Declaration

```
public IReadOnlyList<DocumentType> ProcessingDocumentTypes { get; }
```

Property Value

| TYPE                                                                     | DESCRIPTION |
|--------------------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">DocumentType</a> > |             |

## SupportedDocumentTypes

Returns all supported document types by this fiscal module.

Declaration

```
public IReadOnlyList<DocumentType> SupportedDocumentTypes { get; }
```

Property Value

| TYPE                                                                     | DESCRIPTION |
|--------------------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">DocumentType</a> > |             |

## UniqueClientId

Returns the fiscal client unique id.

Declaration

```
public Guid UniqueClientId { get; }
```

Property Value

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Guid |             |

## Methods

### CancelDocument(Document)

Cancels the given document.

#### Declaration

```
public FiscalResponse CancelDocument(Document document)
```

#### Parameters

| TYPE                     | NAME     | DESCRIPTION             |
|--------------------------|----------|-------------------------|
| <a href="#">Document</a> | document | The document to cancel. |

#### Returns

| TYPE                           | DESCRIPTION                                                               |
|--------------------------------|---------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | The <a href="#">FiscalResponse</a> object containing the fiscal response. |

#### Exceptions

| TYPE                                         | CONDITION                                                 |
|----------------------------------------------|-----------------------------------------------------------|
| <a href="#">System.ArgumentNullException</a> | Thrown if <code>document</code> parameter is set to null. |

### ClosingBookCashDifference(User, List<Payment>)

Books a cash difference to the fiscalisation system.

#### Declaration

```
public FiscalResponse ClosingBookCashDifference(User user, List<Payment> paymentToBook)
```

#### Parameters

| TYPE                                                           | NAME          | DESCRIPTION                                     |
|----------------------------------------------------------------|---------------|-------------------------------------------------|
| <a href="#">User</a>                                           | user          | The user who's operating this function.         |
| <a href="#">System.Collections.Generic.List&lt;Payment&gt;</a> | paymentToBook | The difference for the different payment types. |

#### Returns

| TYPE                           | DESCRIPTION                                  |
|--------------------------------|----------------------------------------------|
| <a href="#">FiscalResponse</a> | The fiscal response for the signed document. |

#### Exceptions

| TYPE                             | CONDITION                                                                                                                                                                                              |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.InvalidOperationException | Thrown if no storage provider of type <a href="#">PaymentStockProvider</a> was added to the internal collection. This occurs when the option SimpleCashPointClosing is not activated at fiscal client. |
| System.ArgumentNullException     | Thrown if parameters <code>user</code> or <code>paymentToBook</code> are set to null.                                                                                                                  |
| System.IO.InvalidDataException   | Thrown if <a href="#">UniqueReadablePaymentIdentifier</a> is not set at every payment of the list.                                                                                                     |

### ClosingBookCashLift(User, List<Payment>, Boolean)

Books a money transfer from cash register system to bank (or any other destination).

#### Declaration

```
public FiscalResponse ClosingBookCashLift(User user, List<Payment> payments, bool isStockAmount)
```

#### Parameters

| TYPE                                                       | NAME          | DESCRIPTION                                                                                                                                   |
|------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">User</a>                                       | user          | The user who's operating this function.                                                                                                       |
| System.Collections.Generic.List< <a href="#">Payment</a> > | payments      | The payments according to parameter <code>isStockAmount</code> .                                                                              |
| System.Boolean                                             | isStockAmount | True if the given payments are the stock which should result after this booking; False if the given payments should be booked by their value. |

#### Returns

| TYPE                           | DESCRIPTION                                  |
|--------------------------------|----------------------------------------------|
| <a href="#">FiscalResponse</a> | The fiscal response for the signed document. |

#### Exceptions

| TYPE                             | CONDITION                                                                                                                                                                                              |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.InvalidOperationException | Thrown if no storage provider of type <a href="#">PaymentStockProvider</a> was added to the internal collection. This occurs when the option SimpleCashPointClosing is not activated at fiscal client. |
| System.ArgumentNullException     | Thrown if parameters <code>user</code> or <code>payments</code> are set to null.                                                                                                                       |
| System.IO.InvalidDataException   | Thrown if <a href="#">UniqueReadablePaymentIdentifier</a> is not set at every payment of the list.                                                                                                     |

## ClosingBookOpeningStock(User, List<Payment>)

Book the opening stock for a cash register closing statement.

### Declaration

```
public FiscalResponse ClosingBookOpeningStock(User user, List<Payment> openingStockPayment)
```

### Parameters

| TYPE                                                       | NAME                | DESCRIPTION                                         |
|------------------------------------------------------------|---------------------|-----------------------------------------------------|
| <a href="#">User</a>                                       | user                | The user who's operating this function.             |
| System.Collections.Generic.List< <a href="#">Payment</a> > | openingStockPayment | The opening stock for the individual payment types. |

### Returns

| TYPE                           | DESCRIPTION                                  |
|--------------------------------|----------------------------------------------|
| <a href="#">FiscalResponse</a> | The fiscal response for the signed document. |

### Exceptions

| TYPE                             | CONDITION                                                                                                                                                                                              |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException     | Thrown if parameter <code>openingStockPayment</code> or parameter <code>user</code> is set to null.                                                                                                    |
| System.InvalidOperationException | Thrown if no storage provider of type <a href="#">PaymentStockProvider</a> was added to the internal collection. This occurs when the option SimpleCashPointClosing is not activated at fiscal client. |
| System.IO.InvalidDataException   | Thrown if <a href="#">UniqueReadablePaymentIdentifier</a> is not set at every payment of the list.                                                                                                     |

## ClosingCashPointCheck(List<Payment>)

Checks the actual stock of the payments for this cash register and returns a list of payments with difference (or an empty list if there's no difference).

### Declaration

```
public List<Payment> ClosingCashPointCheck(List<Payment> paymentsToCheck)
```

### Parameters

| TYPE                                                       | NAME            | DESCRIPTION                                                          |
|------------------------------------------------------------|-----------------|----------------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">Payment</a> > | paymentsToCheck | A list of payments and their respective amounts to check. Attention: |

### Returns



| TYPE                                     | DESCRIPTION                                                                     |
|------------------------------------------|---------------------------------------------------------------------------------|
| System.Collections.Generic.List<Payment> | A list of payments with difference (or an empty list if there's no difference). |

#### Exceptions

| TYPE                             | CONDITION                                                                                                                                                                                              |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.InvalidOperationException | Thrown if no storage provider of type <a href="#">PaymentStockProvider</a> was added to the internal collection. This occurs when the option SimpleCashPointClosing is not activated at fiscal client. |
| System.IO.InvalidDataException   | Thrown if <a href="#">UniqueReadablePaymentIdentifier</a> is not set at every payment of the list.                                                                                                     |
| System.ArgumentNullException     | Thrown if parameter <code>paymentsToCheck</code> is set to null.                                                                                                                                       |

#### ClosingCashPointClose(User, List<Payment>, Boolean)

Closes the actual day with a closing statement.

#### Declaration

```
public FiscalResponse ClosingCashPointClose(User user, List<Payment> paymentsToCheck = null, bool raiseCashDifferenceException = false)
```

#### Parameters

| TYPE                                     | NAME                         | DESCRIPTION                                                                                                                                                                                                                              |
|------------------------------------------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">User</a>                     | user                         | The user who's operating this function.                                                                                                                                                                                                  |
| System.Collections.Generic.List<Payment> | paymentsToCheck              | A list of payment values to check for cash difference if parameter <code>raiseCashDifferenceException</code> is set. Please refer to <a href="#">ClosingCashPointCheck(List&lt;Payment&gt;)</a> for more information for this parameter. |
| System.Boolean                           | raiseCashDifferenceException | True if a cashpoint check has to be evaluated in front and an exception will raised if there is a cash difference; otherwise false. Setting this parameter to true the parameter <code>paymentsToCheck</code> must not be null.          |

#### Returns

| TYPE                           | DESCRIPTION                                                                            |
|--------------------------------|----------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object for the booked cashpoint closing (end of day). |

#### Exceptions

| TYPE                             | CONDITION                                                                                                                                                                                              |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.InvalidOperationException | Thrown if no storage provider of type <a href="#">PaymentStockProvider</a> was added to the internal collection. This occurs when the option SimpleCashPointClosing is not activated at fiscal client. |
| System.ArgumentNullException     | Thrown if parameter <code>paymentsToCheck</code> is set to null and parameter <code>raiseCashDifferenceException</code> is set to true or if parameter <code>user</code> is set to null.               |
| System.IO.InvalidDataException   | Thrown if <a href="#">UniqueReadablePaymentIdentifier</a> is not set at every payment of the list.                                                                                                     |
| System.Data.DataException        | Thrown if a cash difference occurs and parameter <code>raiseCashDifferenceException</code> is set to true.                                                                                             |

### ClosingGetActualStock()

Returns the actual stock of payments of the actual client.

#### Declaration

```
public List<Payment> ClosingGetActualStock()
```

#### Returns

| TYPE                                                       | DESCRIPTION                                                     |
|------------------------------------------------------------|-----------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">Payment</a> > | A list of payment values representing the actual payment stock. |

#### Exceptions

| TYPE                             | CONDITION                                                                                                                                                                                              |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.InvalidOperationException | Thrown if no storage provider of type <a href="#">PaymentStockProvider</a> was added to the internal collection. This occurs when the option SimpleCashPointClosing is not activated at fiscal client. |

### CreateDocument(DocumentType)

Creates a document in the fiscal environment.

#### Declaration

```
public FiscalResponse CreateDocument(DocumentType documentType)
```

#### Parameters

| TYPE                         | NAME         | DESCRIPTION                                                        |
|------------------------------|--------------|--------------------------------------------------------------------|
| <a href="#">DocumentType</a> | documentType | The type of the document for which the document should be created. |

#### Returns

| TYPE                           | DESCRIPTION                                                               |
|--------------------------------|---------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | The <a href="#">FiscalResponse</a> object containing the fiscal response. |

## DecommissionClient(Document)

Decommission of fiscal client (and possible hardware, and possible declaration to financial authorities).

Declaration

```
public FiscalResponse DecommissionClient(Document endDocument)
```

Parameters

| TYPE                     | NAME        | DESCRIPTION                                                                                        |
|--------------------------|-------------|----------------------------------------------------------------------------------------------------|
| <a href="#">Document</a> | endDocument | A document of type <a href="#">NullReceipt</a> representing the end document of the fiscalisation. |

Returns

| TYPE                           | DESCRIPTION                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the appropriate fiscal response data. |

Exceptions

| TYPE                                                      | CONDITION                                                                                                                                                             |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException                              | Thrown if parameter <code>endDocument</code> is set to null.                                                                                                          |
| System.ArgumentOutOfRangeException                        | Thrown if clientid of document does not match clientid of fiscal module or if documenttype is not set to <a href="#">NullReceipt</a> .                                |
| System.ComponentModel.DataAnnotations.ValidationException | Thrown if one or more document validation errors where raised. You can use <a href="#">ValidateDocument(Document)</a> to test if your document has validation errors. |

## Dispose()

Declaration

```
public void Dispose()
```

## GetDocumentMandatoryFields(String)

Returns the mandatory fields for type given by `typeName` for the given country implementation.

Declaration

```
public IReadOnlyList<string> GetDocumentMandatoryFields(string typeName)
```

Parameters

| TYPE          | NAME     | DESCRIPTION                                                                                                     |
|---------------|----------|-----------------------------------------------------------------------------------------------------------------|
| System.String | typeName | The name of the requested type. Must be in namespace <a href="#">RetailForce.Fiscalisation.Model.Document</a> . |

#### Returns

| TYPE                                                    | DESCRIPTION                                                                                 |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------|
| System.Collections.Generic.IReadOnlyList<System.String> | A list of property names representing the mandatory fields for this country implementation. |

#### Exceptions

| TYPE                           | CONDITION                                         |
|--------------------------------|---------------------------------------------------|
| System.NotImplementedException | Thrown if the given type name is not implemented. |

### GetDocumentMandatoryFields(Type)

Returns the mandatory fields for this type for the given country implementation.

#### Declaration

```
public IReadOnlyList<string> GetDocumentMandatoryFields(Type t)
```

#### Parameters

| TYPE        | NAME | DESCRIPTION                           |
|-------------|------|---------------------------------------|
| System.Type | t    | The type to get the mandatory fields. |

#### Returns

| TYPE                                                    | DESCRIPTION                                                                                 |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------|
| System.Collections.Generic.IReadOnlyList<System.String> | A list of property names representing the mandatory fields for this country implementation. |

### GetStaticStandardLocalClientDataPath(Guid)

Returns the standard local store path for the individual client given by `uniqueClientId`.

#### Declaration

```
public static string GetStaticStandardLocalClientDataPath(Guid uniqueClientId)
```

#### Parameters

| TYPE        | NAME           | DESCRIPTION                                |
|-------------|----------------|--------------------------------------------|
| System.Guid | uniqueClientId | The client for whom the path is requested. |

#### Returns

| TYPE          | DESCRIPTION                                                                                    |
|---------------|------------------------------------------------------------------------------------------------|
| System.String | The standard local store path for the individual client given by <code>uniqueClientId</code> . |

#### GetStaticStandardLocalStorePath()

Returns the standard local store path if there's no other path configured.

#### Declaration

```
public static string GetStaticStandardLocalStorePath()
```

#### Returns

| TYPE          | DESCRIPTION                                                        |
|---------------|--------------------------------------------------------------------|
| System.String | The standard local store path if there's no other path configured. |

#### GetTaxFreeVat()

Returns the vat object for country specific zero tax based transactions.

#### Declaration

```
public Vat GetTaxFreeVat()
```

#### Returns

| TYPE                | DESCRIPTION                                              |
|---------------------|----------------------------------------------------------|
| <a href="#">Vat</a> | A vat object representing the zero tax based vat object. |

#### Remarks

Can be used for payin/payout, cash difference.

#### GetVatIdentification(Decimal, DateTime)

Returns the appropriate vat identification for the requested percentage and date/time.

#### Declaration

```
public int? GetVatIdentification(decimal vatPercent, DateTime requestDate)
```

#### Parameters

| TYPE            | NAME        | DESCRIPTION                                              |
|-----------------|-------------|----------------------------------------------------------|
| System.Decimal  | vatPercent  | The vat percentage for the requested vat identification. |
| System.DateTime | requestDate | The date/time for the requested vat identification.      |

#### Returns

| TYPE                          | DESCRIPTION                                                                                        |
|-------------------------------|----------------------------------------------------------------------------------------------------|
| System.Nullable<System.Int32> | An integer representing the vat identification for the requested values; null if nothing is found. |

## InitializeClient(Document)

Initializes fiscalisation unit (and possible hardware, and possible declaration to financial authorities).

Declaration

```
public FiscalResponse InitializeClient(Document startDocument)
```

Parameters

| TYPE                     | NAME          | DESCRIPTION                                                                                             |
|--------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| <a href="#">Document</a> | startDocument | A document of type <a href="#">NullReceipt</a> representing the starting document of the fiscalisation. |

Returns

| TYPE                           | DESCRIPTION                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the appropriate fiscal response data. |

Remarks

You don't have to call [CreateDocument\(DocumentType\)](#) in front, this will be done automatically by this function.

Exceptions

| TYPE                                                      | CONDITION                                                                                                                                                             |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException                              | Thrown if parameter <code>startDocument</code> is set to null.                                                                                                        |
| System.ArgumentOutOfRangeException                        | Thrown if clientid of document does not match clientid of fiscal module or if documenttype is not set to <a href="#">NullReceipt</a> .                                |
| System.ComponentModel.DataAnnotations.ValidationException | Thrown if one or more document validation errors where raised. You can use <a href="#">ValidateDocument(Document)</a> to test if your document has validation errors. |

## RevertDocument(Document)

Reverts a document (turns all values negative)

Declaration

```
public Document RevertDocument(Document document)
```

Parameters

| TYPE                     | NAME     | DESCRIPTION             |
|--------------------------|----------|-------------------------|
| <a href="#">Document</a> | document | The document to revert. |

#### Returns

| TYPE                     | DESCRIPTION            |
|--------------------------|------------------------|
| <a href="#">Document</a> | The reverted document. |

#### Remarks

There is no document validation done in this method.

#### Exceptions

| TYPE                         | CONDITION                                                 |
|------------------------------|-----------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>document</code> is set to null. |

### StoreDocument(Document)

Stores a document to the fiscal system and all attached data queue elements.

#### Declaration

```
public FiscalResponse StoreDocument(Document document)
```

#### Parameters

| TYPE                     | NAME     | DESCRIPTION            |
|--------------------------|----------|------------------------|
| <a href="#">Document</a> | document | The document to store. |

#### Returns

| TYPE                           | DESCRIPTION                                                               |
|--------------------------------|---------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | The <a href="#">FiscalResponse</a> object containing the fiscal response. |

#### Remarks

Before using [StoreDocument\(Document\)](#) you have to call [CreateDocument\(DocumentType\)](#).

#### Exceptions

| TYPE                                                      | CONDITION                                                                                                                                                             |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.ComponentModel.DataAnnotations.ValidationException | Thrown if one or more document validation errors where raised. You can use <a href="#">ValidateDocument(Document)</a> to test if your document has validation errors. |

| TYPE                             | CONDITION                                                                                                          |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException     | Thrown if <code>document</code> parameter is set to null.                                                          |
| System.InvalidOperationException | Thrown if Document.UniqueClientId is set to System.Guid.Empty or given clientid does not match fiscal client guid. |

## ValidateDocument(Document)

Validates a document against all attached data queue elements.

### Declaration

```
public List<DocumentValidationError> ValidateDocument(Document document)
```

### Parameters

| TYPE                     | NAME     | DESCRIPTION               |
|--------------------------|----------|---------------------------|
| <a href="#">Document</a> | document | The document to validate. |

### Returns

| TYPE                                                                       | DESCRIPTION                                                                                                                                             |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | A list of <a href="#">DocumentValidationError</a> objects representing all errors and warnings for the given document. In the best case: An empty list. |

### Exceptions

| TYPE                         | CONDITION                                                 |
|------------------------------|-----------------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>document</code> parameter is set to null. |

### Implements

System.IDisposable



# Class WebApiErrorModel

Error model for extended error (exception) info

## Inheritance

System.Object

WebApiErrorModel

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class WebApiErrorModel
```

## Properties

### Message

#### Declaration

```
public string Message { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### StatusCode

#### Declaration

```
public int StatusCode { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

# Namespace RetailForce.Fiscalisation.Cloud

## Classes

### [CloudClient](#)

functions to communicate with the cloud

### [CloudClientSettings](#)

### [CloudMessage](#)

Represents a message in the cloud.

### [CloudService](#)

### [CloudTokenFile](#)

# Class CloudClient

functions to communicate with the cloud

## Inheritance

System.Object

RetailForce.Common.Logging.LoggingBase

[CloudConnector](#)

CloudClient

## Implements

System.IDisposable

## Inherited Members

[CloudConnector.RefreshToken](#)

[CloudConnector.AdditionalParameters](#)

[CloudConnector.Authenticate\(String\)](#)

[CloudConnector.Authenticate\(String, String\)](#)

[CloudConnector.Dispose\(\)](#)

[CloudConnector.SignOut\(\)](#)

[CloudConnector.Post<TType>\(String, Object, Parameter\[\]\)](#)

[CloudConnector.Get<TType>\(String, Object, Parameter\[\]\)](#)

[CloudConnector.Put<TType>\(String, Object, Parameter\[\]\)](#)

[CloudConnector.Delete<TType>\(String, Object, Parameter\[\]\)](#)

[RetailForce.Common.Logging.LoggingBase.\\_logger](#)

[RetailForce.Common.Logging.LoggingBase.\\_logSource](#)

[RetailForce.Common.Logging.LoggingBase.LogCritical\(System.String, System.Object\[\]\)](#)

[RetailForce.Common.Logging.LoggingBase.LogCritical\(System.Exception, System.String, System.Object\[\]\)](#)

[RetailForce.Common.Logging.LoggingBase.LogError\(System.String, System.Object\[\]\)](#)

[RetailForce.Common.Logging.LoggingBase.LogError\(System.Exception, System.String, System.Object\[\]\)](#)

[RetailForce.Common.Logging.LoggingBase.LogWarning\(System.String, System.Object\[\]\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Cloud](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CloudClient : CloudConnector, IDisposable
```

## Constructors

### CloudClient(ILogger, String)

Creates a cloud client

## Declaration

```
public CloudClient(ILogger logger, string localTempFileStorePath)
```

## Parameters

| TYPE                                 | NAME                   | DESCRIPTION                       |
|--------------------------------------|------------------------|-----------------------------------|
| Microsoft.Extensions.Logging.ILogger | logger                 | Logger                            |
| System.String                        | localTempFileStorePath | Base path of the local file store |

## Methods

### GetClientIdFromFilePath(String)

returns the uniqueClientId (last directory from an filename)

#### Declaration

```
public static Guid GetClientIdFromFilePath(string fullFileName)
```

#### Parameters

| TYPE          | NAME         | DESCRIPTION |
|---------------|--------------|-------------|
| System.String | fullFileName |             |

#### Returns

| TYPE        | DESCRIPTION         |
|-------------|---------------------|
| System.Guid | Guid uniqueClientId |

### GetLicenseToken(CloudClientSettings, Boolean)

returns the upload token, get from temp file, if not available request a new one

#### Declaration

```
public string GetLicenseToken(CloudClientSettings clientSettings, bool renew = false)
```

#### Parameters

| TYPE                                | NAME           | DESCRIPTION                                 |
|-------------------------------------|----------------|---------------------------------------------|
| <a href="#">CloudClientSettings</a> | clientSettings |                                             |
| System.Boolean                      | renew          | request an new token and overrides the file |

#### Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### RequestCleanTransactions(String, Guid)

requests a upload token from cloud

#### Declaration

```
public void RequestCleanTransactions(string licenseToken, Guid uniqueClientId)
```

#### Parameters

| TYPE          | NAME           | DESCRIPTION                          |
|---------------|----------------|--------------------------------------|
| System.String | licenseToken   | licensetoken to validate the license |
| System.Guid   | uniqueClientId | Client id from the fiscalisation     |

#### RequestLicenseToken(Guid, String)

requests a upload token from cloud

#### Declaration

```
public string RequestLicenseToken(Guid uniqueClientId, string accessLicenseId)
```

#### Parameters

| TYPE          | NAME            | DESCRIPTION                      |
|---------------|-----------------|----------------------------------|
| System.Guid   | uniqueClientId  | Client id from the fiscalisation |
| System.String | accessLicenseId |                                  |

#### Returns

| TYPE          | DESCRIPTION       |
|---------------|-------------------|
| System.String | The license token |

#### RequestSasToken(String, Guid, String, String)

requests a upload token from cloud

#### Declaration

```
public string RequestSasToken(string licenseToken, Guid uniqueClientId, string fileType, string fileName)
```

#### Parameters

| TYPE          | NAME           | DESCRIPTION                          |
|---------------|----------------|--------------------------------------|
| System.String | licenseToken   | licensetoken to validate the license |
| System.Guid   | uniqueClientId | Client id from the fiscalisation     |

| TYPE          | NAME     | DESCRIPTION                                                    |
|---------------|----------|----------------------------------------------------------------|
| System.String | fileType | type of the file (in the cloud it will be stored as directory) |
| System.String | fileName | name of the file after upload in the cloud                     |

#### Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### UploadDigitalDocument(Guid, String, String)

uploads a file and generates a downloadurl per function (attention expiration have to be defined in sas function)

#### Declaration

```
public string UploadDigitalDocument(Guid uniqueClientId, string licenseToken, string filePath)
```

#### Parameters

| TYPE          | NAME           | DESCRIPTION |
|---------------|----------------|-------------|
| System.Guid   | uniqueClientId |             |
| System.String | licenseToken   |             |
| System.String | filePath       |             |

#### Returns

| TYPE          | DESCRIPTION                  |
|---------------|------------------------------|
| System.String | sas url to download the file |

#### Implements

System.IDisposable

# Class CloudClientSettings

## Inheritance

System.Object

CloudClientSettings

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Cloud](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CloudClientSettings
```

# Class CloudMessage

Represents a message in the cloud.

## Inheritance

System.Object  
CloudMessage

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Cloud](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CloudMessage
```

## Fields

### ClientInitializationCompleted

#### Declaration

```
public const string ClientInitializationCompleted = "ClientInitializationCompletedMessage"
```

#### Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Properties

### MessageTypeName

The name of the message name.

#### Declaration

```
public string MessageTypeName { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Parameter

The parameter of the message.

#### Declaration

```
public List<string> Parameter { get; set; }
```



Property Value

| TYPE                                           | DESCRIPTION |
|------------------------------------------------|-------------|
| System.Collections.Generic.List<System.String> |             |

# Class CloudService

## Inheritance

System.Object  
CloudService

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Cloud](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CloudService
```

## Constructors

### CloudService(ILogger, String)

#### Declaration

```
public CloudService(ILogger logger, string localStoragePath)
```

#### Parameters

| TYPE                                 | NAME             | DESCRIPTION |
|--------------------------------------|------------------|-------------|
| Microsoft.Extensions.Logging.ILogger | logger           |             |
| System.String                        | localStoragePath |             |

## Properties

### BasePath

returns the base path where the cloud files have to be written

#### Declaration

```
public string BasePath { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### QueuedFiles

Returns the count of the queued files for cloud transfer.

#### Declaration

```
public int QueuedFiles { get; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

#### Methods

AddNewFile(Guid, String, String, String, String)

Add new file

#### Declaration

```
public Task AddNewFile(Guid uniqueClientId, string accessKey, string accessSecret, string accessLicenseId, string fileName)
```

#### Parameters

| TYPE          | NAME            | DESCRIPTION |
|---------------|-----------------|-------------|
| System.Guid   | uniqueClientId  |             |
| System.String | accessKey       |             |
| System.String | accessSecret    |             |
| System.String | accessLicenseId |             |
| System.String | fileName        |             |

#### Returns

| TYPE                        | DESCRIPTION |
|-----------------------------|-------------|
| System.Threading.Tasks.Task |             |

# Class CloudTokenFile

## Inheritance

System.Object  
CloudTokenFile

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Cloud](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CloudTokenFile
```

## Properties

### AccessLicenseId

#### Declaration

```
public string AccessLicenseId { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### RefreshToken

#### Declaration

```
public string RefreshToken { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### SasToken

#### Declaration

```
public string SasToken { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Namespace

## RetailForce.Fiscalisation.Cloud.Implementation.Austria

### Classes

#### [BoolResponse](#)

Represents a boolean response from the cash register fon service.

#### [ResultResponse](#)

Represents a result response from the cash register fon service (with message from service).

# Class BoolResponse

Represents a boolean response from the cash register fon service.

## Inheritance

System.Object

BoolResponse

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Cloud.Implementation.Austria](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class BoolResponse
```

## Properties

### Activated

True if the requested ressource is ok (IN\_BETRIEB); otherwise false.

## Declaration

```
public bool Activated { get; set; }
```

## Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## Message

The message of the response.

## Declaration

```
public string Message { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class ResultResponse

Represents a result response from the cash register fon service (with message from service).

## Inheritance

System.Object  
ResultResponse

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Cloud.Implementation.Austria](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class ResultResponse
```

## Properties

### Message

The message of the response.

#### Declaration

```
public string Message { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Result

The result code of the response.

#### Declaration

```
public string Result { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Namespace RetailForce.Fiscalisation.Configuration

## Classes

### [Address](#)

Address object.

### [CashRegister](#)

A single cash Register

### [ClientConfigurationJsonConverter](#)

Json Converter to read client configuration

### [CompanyIdentification](#)

Represents a company identification number (vat number, tax number, ...)

### [ConfigurationProviderBase](#)

Abstract configuration provider to load the configuration for the fiscal system.

### [ConfigurationValidationBase](#)

Base class for all configuration objects with validation.

### [FileConfigurationProvider](#)

Configuration provider with file access (one file for all clients).

### [FiscalClient](#)

Represents a single fiscal client (representation of a cash register)

### [JsonConfiguration](#)

The Json configuration class for the list of clients.

### [JsonConfigurationProviderBase](#)

Base class to read configuration from json string.

### [Parameter](#)

Represents a configuration parameter.

### [ParameterInfo](#)

Parameter description object for parameters in configuration.

### [Software](#)

Cashregister software information.

## Interfaces

### [IFiscalImplementationConfiguration](#)

Basic interface for client configuration according to the correct country.

## Enums

### [CompanyIdentification.IdentificationType](#)

The supported identification types.



## FiscalCountry

Supported countries.

# Class Address

Address object.

Inheritance

System.Object

Address

[Partner](#)

Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Configuration](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public class Address
```

## Properties

### City

Declaration

```
[Required]  
public string City { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### CountryCode

Countrycode according ISO 3166 alpha-3

Declaration

```
[Required]  
public string CountryCode { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### FullStreet

returns the combination of street and street number

Declaration

```
public string FullStreet { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### PostalCode

##### Declaration

```
[Required]  
public string PostalCode { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Street

##### Declaration

```
[Required]  
public string Street { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### StreetNumber

##### Declaration

```
[Required]  
public string StreetNumber { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Methods

##### FromAdress(Address)

##### Declaration

```
public static Address FromAdress(Address objectInheritsAddress)
```

##### Parameters

| TYPE                    | NAME                  | DESCRIPTION |
|-------------------------|-----------------------|-------------|
| <a href="#">Address</a> | objectInheritsAddress |             |

Returns

| TYPE                    | DESCRIPTION |
|-------------------------|-------------|
| <a href="#">Address</a> |             |

# Class CashRegister

A single cash Register

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<RetailForce.Common.Validation.ValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>

[ConfigurationValidationBase](#)

CashRegister

## Inherited Members

[ConfigurationValidationBase.ValidateCountrySpecificProperty<CountryRequiredAttributeType>\(\)](#)

[ConfigurationValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[ConfigurationValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

[ConfigurationValidationBase.ValidateElement\(\)](#)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate()

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidateProperties(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>

(System.Boolean)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Configuration](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CashRegister : ConfigurationValidationBase
```

## Properties

### Brand

The manufacturer of the hardware cashregister.

### Declaration

```
public string Brand { get; set; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### CurrencyIsoCode

The currency iso code of the base currency according to ISO 4217.

### Declaration

```
[Required]  
public string CurrencyIsoCode { get; set; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Remarks

All amounts stored in the document are based to this currency code (except special marked foreign amounts).

## Id

The id of the cash register

Declaration

```
public string Id { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

**Modelname**

The model name of the hardware cashregister.

Declaration

```
public string Modelname { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

**SerialNumber**

The serial number of the cashregister.

Declaration

```
public string SerialNumber { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

**Software**

The used cashregister software and it's version.

Declaration

```
public Software Software { get; set; }
```

Property Value

| TYPE                     | DESCRIPTION |
|--------------------------|-------------|
| <a href="#">Software</a> |             |

# Class ClientConfigurationJsonConverter

Json Converter to read client configuration

## Inheritance

System.Object

Newtonsoft.Json.JsonConverter

ClientConfigurationJsonConverter

## Inherited Members

Newtonsoft.Json.JsonConverter.CanRead

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Configuration](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class ClientConfigurationJsonConverter : JsonConverter
```

## Properties

### CanWrite

#### Declaration

```
public override bool CanWrite { get; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## Overrides

Newtonsoft.Json.JsonConverter.CanWrite

## Methods

### CanConvert(Type)

#### Declaration

```
public override bool CanConvert(Type objectType)
```

#### Parameters

| TYPE        | NAME       | DESCRIPTION |
|-------------|------------|-------------|
| System.Type | objectType |             |

## Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

Overrides

Newtonsoft.Json.JsonConverter.CanConvert(System.Type)

ReadJson(JsonReader, Type, Object, JsonSerializer)

Declaration

```
public override object ReadJson(JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer)
```

Parameters

| TYPE                           | NAME          | DESCRIPTION |
|--------------------------------|---------------|-------------|
| Newtonsoft.Json.JsonReader     | reader        |             |
| System.Type                    | objectType    |             |
| System.Object                  | existingValue |             |
| Newtonsoft.Json.JsonSerializer | serializer    |             |

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Object |             |

Overrides

Newtonsoft.Json.JsonConverter.ReadJson(Newtonsoft.Json.JsonReader, System.Type, System.Object, Newtonsoft.Json.JsonSerializer)

WriteJson(JsonWriter, Object, JsonSerializer)

Declaration

```
public override void WriteJson(JsonWriter writer, object value, JsonSerializer serializer)
```

Parameters

| TYPE                           | NAME       | DESCRIPTION |
|--------------------------------|------------|-------------|
| Newtonsoft.Json.JsonWriter     | writer     |             |
| System.Object                  | value      |             |
| Newtonsoft.Json.JsonSerializer | serializer |             |

Overrides

Newtonsoft.Json.JsonConverter.WriteJson(Newtonsoft.Json.JsonWriter, System.Object, Newtonsoft.Json.JsonSerializer)



# Class CompanyIdentification

Represents a company identification number (vat number, tax number, ...)

## Inheritance

System.Object

CompanyIdentification

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Configuration](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CompanyIdentification
```

## Properties

### Identification

The identification according to the type.

#### Declaration

```
public string Identification { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Type

The type of the identification.

#### Declaration

```
public virtual CompanyIdentification.IdentificationType Type { get; set; }
```

#### Property Value

| TYPE                                                     | DESCRIPTION |
|----------------------------------------------------------|-------------|
| <a href="#">CompanyIdentification.IdentificationType</a> |             |

# Enum CompanyIdentification.IdentificationType

The supported identification types.

Namespace: [RetailForce.Fiscalisation.Configuration](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum IdentificationType
```

## Fields

| NAME      | DESCRIPTION |
|-----------|-------------|
| GlnNumber |             |
| TaxNumber |             |
| VatNumber |             |

# Class ConfigurationProviderBase

Abstract configuration provider to load the configuration for the fiscal system.

## Inheritance

System.Object

ConfigurationProviderBase

[JsonConfigurationProviderBase](#)

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Configuration](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public abstract class ConfigurationProviderBase
```

## Fields

### Clients

The list of all clients stored at this provider.

#### Declaration

```
protected Dictionary<Guid, FiscalClient> Clients
```

#### Field Value

| TYPE                                                                              | DESCRIPTION |
|-----------------------------------------------------------------------------------|-------------|
| System.Collections.Generic.Dictionary<System.Guid, <a href="#">FiscalClient</a> > |             |

### EncryptionSalt

#### Declaration

```
public const string EncryptionSalt = "RetailForce_2021!"
```

#### Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Methods

### CreateClient(FiscalClient)

Creates a new client and stores it to the store.

#### Declaration

```
public void CreateClient(FiscalClient client)
```

#### Parameters

| TYPE                         | NAME   | DESCRIPTION     |
|------------------------------|--------|-----------------|
| <a href="#">FiscalClient</a> | client | The new client. |

#### DecryptString(Guid, String)

Decrypts a string of the fiscal client configuration.

#### Declaration

```
public static string DecryptString(Guid uniqueClientId, string stringToDecrypt)
```

#### Parameters

| TYPE          | NAME            | DESCRIPTION                                                     |
|---------------|-----------------|-----------------------------------------------------------------|
| System.Guid   | uniqueClientId  | The unique client id of the fiscal client of the configuration. |
| System.String | stringToDecrypt | The string to decrypt.                                          |

#### Returns

| TYPE          | DESCRIPTION           |
|---------------|-----------------------|
| System.String | The decrypted string. |

#### EncryptString(Guid, String)

Encrypts a string of the fiscal client configuration.

#### Declaration

```
public static string EncryptString(Guid uniqueClientId, string stringToEncrypt)
```

#### Parameters

| TYPE          | NAME            | DESCRIPTION                                                     |
|---------------|-----------------|-----------------------------------------------------------------|
| System.Guid   | uniqueClientId  | The unique client id of the fiscal client of the configuration. |
| System.String | stringToEncrypt | The string to encrypt.                                          |

#### Returns

| TYPE | DESCRIPTION |
|------|-------------|
|------|-------------|

| TYPE          | DESCRIPTION           |
|---------------|-----------------------|
| System.String | The encrypted string. |

### GetClientConfiguration(Guid)

Returns the client configuration for the requested id.

Declaration

```
public FiscalClient GetClientConfiguration(Guid clientId)
```

Parameters

| TYPE        | NAME     | DESCRIPTION                                                 |
|-------------|----------|-------------------------------------------------------------|
| System.Guid | clientId | The id (System.Guid) of the requested client configuration. |

Returns

| TYPE                         | DESCRIPTION                                    |
|------------------------------|------------------------------------------------|
| <a href="#">FiscalClient</a> | The client configuration for the requested id. |

Exceptions

| TYPE                               | CONDITION                                    |
|------------------------------------|----------------------------------------------|
| System.ArgumentOutOfRangeException | Thrown if the given clientId does not exist. |

### GetClients()

Gets a list of all available clients stored at the system.

Declaration

```
public Guid[] GetClients()
```

Returns

| TYPE          | DESCRIPTION                                 |
|---------------|---------------------------------------------|
| System.Guid[] | A list of all available unique client id's. |

### LoadConfiguration()

Loads the configuration into memory from the appropriate store.

Declaration

```
public abstract void LoadConfiguration()
```

### StoreConfiguration()

Stores the configuration from memory into the appropriate store.

Declaration

```
public abstract void StoreConfiguration()
```

**TryGetClientConfiguration(Guid, out FiscalClient)**

Tries to return the client configuration (returnvalue = true); otherwise false.

Declaration

```
public bool TryGetClientConfiguration(Guid clientId, out FiscalClient fiscalClient)
```

Parameters

| TYPE                         | NAME         | DESCRIPTION                                                 |
|------------------------------|--------------|-------------------------------------------------------------|
| System.Guid                  | clientId     | The id (System.Guid) of the requested client configuration. |
| <a href="#">FiscalClient</a> | fiscalClient | The client configuration for the requested id (if found).   |

Returns

| TYPE           | DESCRIPTION                                                  |
|----------------|--------------------------------------------------------------|
| System.Boolean | True if the client configuration was found; otherwise false. |

# Class ConfigurationValidationBase

Base class for all configuration objects with validation.

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<RetailForce.Common.Validation.ValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>

ConfigurationValidationBase

[CashRegister](#)

[FiscalClient](#)

[ClientConfiguration](#)

[ClientConfiguration](#)

[TaxonomyStoreConfiguration](#)

[TseConfiguration](#)

## Inherited Members

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate()

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidateProperties(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>(System.Boolean)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Configuration](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public abstract class ConfigurationValidationBase : ValidationPropertyBase<ValidationError>
```

## Properties

### VALIDATION\_ERROR\_SOURCE

The correct validation error source for "ConfigurationValidation"

## Declaration

```
protected override string VALIDATION_ERROR_SOURCE { get; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Overrides

RetailForce.Common.Validation.ValidationBase<RetailForce.Common.Validation.ValidationError>.VALIDATION\_ERROR\_SOURCE

## Methods

### AddPropertyError(ErrorLevel, String, String, String)

Adds a property attribute error with to correct implementation of ValidationErrorType.

## Declaration

```
protected override ValidationError AddPropertyError(ErrorLevel level, string declaringTypeName, string propertyName, string errorString)
```

## Parameters

| TYPE                                     | NAME              | DESCRIPTION                                                               |
|------------------------------------------|-------------------|---------------------------------------------------------------------------|
| RetailForce.Common.Validation.ErrorLevel | level             | The level of the property error.                                          |
| System.String                            | declaringTypeName | The name of the declaring type of the property with the validation error. |

| TYPE          | NAME         | DESCRIPTION                                         |
|---------------|--------------|-----------------------------------------------------|
| System.String | propertyName | The name of the property with the validation error. |
| System.String | errorString  | The error description of the property error.        |

Returns

| TYPE                                              | DESCRIPTION                                                    |
|---------------------------------------------------|----------------------------------------------------------------|
| RetailForce.Common.Validation.ValidationException | The created RetailForce.Common.Validation.ValidationException. |

Overrides

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationException>.AddPropertyError(RetailForce.Common.Validation.ErrorLevel, System.String, System.String, System.String)

ValidateCountrySpecificProperty<CountryRequiredAttributeType>()

Declaration

```
public List<ValidationException> ValidateCountrySpecificProperty<CountryRequiredAttributeType>()
    where CountryRequiredAttributeType : RequiredAttribute
```

Returns

| TYPE                                                                               | DESCRIPTION |
|------------------------------------------------------------------------------------|-------------|
| System.Collections.Generic.List<RetailForce.Common.Validation.ValidationException> |             |

Type Parameters

| NAME                         | DESCRIPTION |
|------------------------------|-------------|
| CountryRequiredAttributeType |             |

ValidateElement()

Validates the element with element specific validation and returns a list of validation errors.

Declaration

```
protected override List<ValidationException> ValidateElement()
```

Returns

| TYPE                                                                               | DESCRIPTION                                                          |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| System.Collections.Generic.List<RetailForce.Common.Validation.ValidationException> | A list of RetailForce.Common.Validation.ValidationException objects. |

Overrides

RetailForce.Common.Validation.ValidationBase<RetailForce.Common.Validation.ValidationException>.ValidateElement()



# Class FileConfigurationProvider

Configuration provider with file access (one file for all clients).

## Inheritance

System.Object

[ConfigurationProviderBase](#)

[JsonConfigurationProviderBase](#)

FileConfigurationProvider

## Inherited Members

[JsonConfigurationProviderBase.GetJsonConfiguration\(\)](#)

[JsonConfigurationProviderBase.GetFiscalClients\(String\)](#)

[ConfigurationProviderBase.Clients](#)

[ConfigurationProviderBase.EncryptionSalt](#)

[ConfigurationProviderBase.DecryptString\(Guid, String\)](#)

[ConfigurationProviderBase.EncryptString\(Guid, String\)](#)

[ConfigurationProviderBase.CreateClient\(FiscalClient\)](#)

[ConfigurationProviderBase.GetClients\(\)](#)

[ConfigurationProviderBase.GetClientConfiguration\(Guid\)](#)

[ConfigurationProviderBase.TryGetClientConfiguration\(Guid, FiscalClient\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Configuration](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class FileConfigurationProvider : JsonConfigurationProviderBase
```

## Constructors

### FileConfigurationProvider(String)

Constructor.

## Declaration

```
public FileConfigurationProvider(string configurationFile)
```

## Parameters

| TYPE          | NAME              | DESCRIPTION                                                                                 |
|---------------|-------------------|---------------------------------------------------------------------------------------------|
| System.String | configurationFile | The path to the configuration file. If no configuration file is found a new one is created. |

## Exceptions

| TYPE | CONDITION |
|------|-----------|
|------|-----------|

| TYPE                                 | CONDITION                                                                    |
|--------------------------------------|------------------------------------------------------------------------------|
| System.IO.DirectoryNotFoundException | Thrown if the path of the given <code>configurationFile</code> is not found. |
| System.ArgumentNullException         | Thrown if <code>configurationFile</code> is set to null or empty string.     |

## Methods

### LoadConfiguration()

Loads the configuration into memory from the appropriate store.

Declaration

```
public override void LoadConfiguration()
```

Overrides

[ConfigurationProviderBase.LoadConfiguration\(\)](#)

### StoreConfiguration()

Stores the configuration from memory into the appropriate store.

Declaration

```
public override void StoreConfiguration()
```

Overrides

[ConfigurationProviderBase.StoreConfiguration\(\)](#)

# Class FiscalClient

Represents a single fiscal client (representation of a cash register)

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<RetailForce.Common.Validation.ValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>

[ConfigurationValidationBase](#)

FiscalClient

## Implements

System.IEquatable<[FiscalClient](#)>

## Inherited Members

[ConfigurationValidationBase.ValidateCountrySpecificProperty<CountryRequiredAttributeType>\(\)](#)

[ConfigurationValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[ConfigurationValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

[ConfigurationValidationBase.ValidateElement\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidateProperties\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>\(System.Boolean\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

Namespace: [RetailForce.Fiscalisation.Configuration](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class FiscalClient : ConfigurationValidationBase, IEquatable<FiscalClient>
```

## Properties

### CashRegister

Information about the cash register.

#### Declaration

```
public CashRegister CashRegister { get; set; }
```

#### Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">CashRegister</a> |             |

### CompanyAddress

The address of the company (not the address of the store, except they are the same).

#### Declaration

```
public Address CompanyAddress { get; set; }
```

#### Property Value

| TYPE                    | DESCRIPTION |
|-------------------------|-------------|
| <a href="#">Address</a> |             |

### CompanyIdentification

The company identification.

#### Declaration

```
public CompanyIdentification[] CompanyIdentification { get; set; }
```

Property Value

| TYPE                    | DESCRIPTION |
|-------------------------|-------------|
| CompanyIdentification[] |             |

Remarks

For germany at least taxnumber and vatnumber must be set.

### CompanyName

The name of the company.

Declaration

```
[Required]  
public string CompanyName { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

Remarks

It is necessary that this is the correct name according to country specific law.

### CompanyTaxNumber

The tax number of the company

Declaration

```
public string CompanyTaxNumber { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### CompanyVatNumber

The vat number of the company

Declaration

```
public string CompanyVatNumber { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### DistributerId

The distributer id for the license for the fiscal client.

Declaration

```
public Guid DistributerId { get; set; }
```

Property Value

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Guid |             |

### FiscalCountry

The fiscal country for the fiscal implementation.

#### Declaration

```
[Required]
public FiscalCountry FiscalCountry { get; set; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">FiscalCountry</a> |             |

#### Remarks

Possible values at the moment are:

- Germany

#### FiscalModulImplementationConfiguration

The configuration for the country specific implementation.

#### Declaration

```
[Required]
[JsonConverter(typeof(ClientConfigurationJsonConverter))]
public IFiscalImplementationConfiguration FiscalModulImplementationConfiguration { get; set; }
```

#### Property Value

| TYPE                                               | DESCRIPTION |
|----------------------------------------------------|-------------|
| <a href="#">IFiscalImplementationConfiguration</a> |             |

#### LicenseConsumerId

The licence consumer (buyer) of the license for this fiscal client.

#### Declaration

```
public Guid LicenseConsumerId { get; set; }
```

#### Property Value

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Guid |             |

#### SimpleCashPointClosing

True if the fiscal module supports simple cashpoint closing (end of day); Otherwise false.

#### Declaration

```
public bool SimpleCashPointClosing { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

#### Remarks

In this case calculation of payments during a day will be done.

#### StoreAddress

The address of the store where the cash register resides.

#### Declaration

```
public Address StoreAddress { get; set; }
```

#### Property Value

| TYPE    | DESCRIPTION |
|---------|-------------|
| Address |             |

### StoreName

The name of the store.

Declaration

```
public string StoreName { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### StoreNumber

The identification (number or string) of the store.

Declaration

```
[Required]  
public string StoreNumber { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### TerminalNumber

The terminal number of the cash register (if there are more than one terminal at one store).

Declaration

```
[Required]  
public string TerminalNumber { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### TestClient

True if this client is a test client; otherwise false.

Declaration

```
public bool TestClient { get; set; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

### UniqueClientId

Represents the unique client id of the fiscal client.

Declaration

```
[Required]  
public Guid UniqueClientId { get; set; }
```

Property Value

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Guid |             |

## Methods

### Encrypt()

Encrypts sensitive data on the client.

Declaration

```
public void Encrypt()
```

### Equals(FiscalClient)

Returns whether the given object equals the current object or not.

Declaration

```
public bool Equals(FiscalClient other)
```

Parameters

| TYPE                         | NAME  | DESCRIPTION            |
|------------------------------|-------|------------------------|
| <a href="#">FiscalClient</a> | other | The object to compare. |

Returns

| TYPE           | DESCRIPTION                                                                                                         |
|----------------|---------------------------------------------------------------------------------------------------------------------|
| System.Boolean | True if the given <a href="#">FiscalClient</a> has the same <a href="#">UniqueClientId</a> than the current object. |

### ToString()

Returns the client as string representation.

Declaration

```
public override string ToString()
```

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

Overrides

System.Object.ToString()

Implements

System.IEquatable<T>

# Enum FiscalCountry

Supported countries.

Namespace: [RetailForce.Fiscalisation.Configuration](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum FiscalCountry
```

## Fields

| NAME    | DESCRIPTION |
|---------|-------------|
| Austria |             |
| Germany |             |



# Interface IFiscalImplementationConfiguration

Basic interface for client configuration according to the correct country.

Namespace: [RetailForce.Fiscalisation.Configuration](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
[JsonConverter(typeof(ClientConfigurationJsonConverter))]  
public interface IFiscalImplementationConfiguration
```

## Properties

### FiscalCountry

The fiscal country of the client configuration.

Declaration

```
FiscalCountry FiscalCountry { get; }
```

Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">FiscalCountry</a> |             |

## Methods

### Encrypt(Guid)

Encrypts sensitive data.

Declaration

```
void Encrypt(Guid uniqueClientId)
```

Parameters

| TYPE        | NAME           | DESCRIPTION |
|-------------|----------------|-------------|
| System.Guid | uniqueClientId |             |

### RemoveSensitiveData()

Removes sensitive data from the configuration.

Declaration

```
void RemoveSensitiveData()
```

Remarks

Used for sending data from cloud to client to remove sensitive data from configuration which is not needed by the client.

# Class JsonConfiguration

The Json configuration class for the list of clients.

## Inheritance

System.Object

JsonConfiguration

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Configuration](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class JsonConfiguration
```

## Constructors

JsonConfiguration(List<FiscalClient>)

Constructor.

## Declaration

```
public JsonConfiguration(List<FiscalClient> clients)
```

## Parameters

| TYPE                                                            | NAME    | DESCRIPTION |
|-----------------------------------------------------------------|---------|-------------|
| System.Collections.Generic.List< <a href="#">FiscalClient</a> > | clients |             |

## Properties

FiscalClients

The list of fiscal clients.

## Declaration

```
public List<FiscalClient> FiscalClients { get; set; }
```

## Property Value

| TYPE                                                            | DESCRIPTION |
|-----------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">FiscalClient</a> > |             |

# Class JsonConfigurationProviderBase

Base class to read configuration from json string.

## Inheritance

System.Object

[ConfigurationProviderBase](#)

JsonConfigurationProviderBase

[FileConfigurationProvider](#)

## Inherited Members

[ConfigurationProviderBase.Clients](#)

[ConfigurationProviderBase.EncryptionSalt](#)

[ConfigurationProviderBase.DecryptString\(Guid, String\)](#)

[ConfigurationProviderBase.EncryptString\(Guid, String\)](#)

[ConfigurationProviderBase.CreateClient\(FiscalClient\)](#)

[ConfigurationProviderBase.GetClients\(\)](#)

[ConfigurationProviderBase.GetClientConfiguration\(Guid\)](#)

[ConfigurationProviderBase.TryGetClientConfiguration\(Guid, FiscalClient\)](#)

[ConfigurationProviderBase.LoadConfiguration\(\)](#)

[ConfigurationProviderBase.StoreConfiguration\(\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Configuration](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public abstract class JsonConfigurationProviderBase : ConfigurationProviderBase
```

## Methods

### GetFiscalClients(String)

Sets internal clients object based from the json configuration string.

#### Declaration

```
protected void GetFiscalClients(string jsonConfigurationString)
```

#### Parameters

| TYPE          | NAME                    | DESCRIPTION |
|---------------|-------------------------|-------------|
| System.String | jsonConfigurationString |             |

### GetJsonConfiguration()

Returns a string containing the json configuration.

#### Declaration

```
protected string GetJsonConfiguration()
```

## Returns

| TYPE          | DESCRIPTION                                                   |
|---------------|---------------------------------------------------------------|
| System.String | The json string containing the configuration for the clients. |

# Class Parameter

Represents a configuration parameter.

## Inheritance

System.Object

Parameter

## Implements

System.IEquatable<[Parameter](#)>

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Configuration](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Parameter : IEquatable<Parameter>
```

## Constructors

### Parameter()

Constructor.

#### Declaration

```
public Parameter()
```

### Parameter(String, String)

Constructor.

#### Declaration

```
public Parameter(string name, string value)
```

## Parameters

| TYPE          | NAME  | DESCRIPTION |
|---------------|-------|-------------|
| System.String | name  |             |
| System.String | value |             |

## Properties

### ParameterName

#### Declaration

```
public string ParameterName { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## ParameterValue

Declaration

```
public string ParameterValue { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Methods

### Equals(Parameter)

Declaration

```
public bool Equals(Parameter other)
```

Parameters

| TYPE                      | NAME  | DESCRIPTION |
|---------------------------|-------|-------------|
| <a href="#">Parameter</a> | other |             |

Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## Implements

System.IEquatable<T>

# Class ParameterInfo

Parameter description object for parameters in configuration.

## Inheritance

System.Object  
ParameterInfo

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Configuration](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class ParameterInfo
```

## Properties

### Caption

The caption (displayed to user) of the parameter value

#### Declaration

```
public string Caption { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Description

The description of the parameter value

#### Declaration

```
public string Description { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Encrypted

True if this parameter has to be encrypted when storing to the database and true if the value should not be displayed in the ui without clicking "view" button.

#### Declaration

```
public bool Encrypted { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

#### Name

The name of the parameter value

#### Declaration

```
public string Name { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### RegexValidation

A regex for validation of the parameter value (can be empty)

#### Declaration

```
public string RegexValidation { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Required

True if this parameter is required; otherwise false

#### Declaration

```
public bool Required { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |



# Class Software

Cashregister software information.

## Inheritance

System.Object

Software

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Configuration](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Software
```

## Properties

### Brand

The name of the used cashregister software.

#### Declaration

```
public string Brand { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Version

The actual version of the used cashregister software.

#### Declaration

```
public string Version { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Namespace RetailForce.Fiscalisation.Constants

## Classes

### [CloudStoreConstants](#)

Taxonomy cloud store constants !!! this class is only public so we can use the values in the unit test, which is not an optimal solution, but otherwise we have to adapt the unit test whenever a value changes

### [TaxonomyStoreConstants](#)

Taxonomy store constants !!! this class is only public so we can use the values in the unit test, which is not an optimal solution, but otherwise we have to adapt the unit test whenever a value changes

# Class CloudStoreConstants

Taxonomy cloud store constants !!! this class is only public so we can use the values in the unit test, which is not an optimal solution, but otherwise we have to adapt the unit test whenever a value changes

## Inheritance

System.Object

CloudStoreConstants

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Constants](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public static class CloudStoreConstants
```

## Fields

### FS\_FILE\_NAME\_FORMAT

File store file name 0: UploadType (U = upload, A = append, D = Delete) 1: cashpoint closing number 2: date format (yyyyMMdd) 3: extension that defines the type (e.g. tar, zip)

## Declaration

```
public static readonly string FS_FILE_NAME_FORMAT
```

## Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### FS\_REFERENCE\_ZIP\_FILE\_NAME

File name of the zip file with reference file

## Declaration

```
public static readonly string FS_REFERENCE_ZIP_FILE_NAME
```

## Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### FS\_TRANSACTION\_FILE\_NAME\_FORMAT

File store file name 0: UploadType (U = upload, A = append, D = Delete) 1: cashpoint closing number 2: transaction number 3: date format (yyyyMMdd) 4: extension that defines the type (e.g. tar, zip)

Declaration

```
public static readonly string FS_TRANSACTION_FILE_NAME_FORMAT
```

Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class TaxonomyStoreConstants

Taxonomy store constants !!! this class is only public so we can use the values in the unit test, which is not an optimal solution, but otherwise we have to adapt the unit test whenever a value changes

## Inheritance

System.Object

TaxonomyStoreConstants

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Constants](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public static class TaxonomyStoreConstants
```

## Fields

### FS\_CASHPOINTCLOSING\_FILE\_ENTRY

Cashpoint closing

#### Declaration

```
public const string FS_CASHPOINTCLOSING_FILE_ENTRY = "CashpointClosing.json"
```

#### Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### FS\_CASHPOINTCLOSINGHEAD\_FILE\_ENTRY

Cashpoint closing head

#### Declaration

```
public const string FS_CASHPOINTCLOSINGHEAD_FILE_ENTRY = "Head.json"
```

#### Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### FS\_FILE\_INITIAL\_CLOSINGNUMBER

Initial closing number (first closing number)

#### Declaration

```
public const int FS_FILE_INITIAL_CLOSINGNUMBER = 1
```

Field Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### FS\_FILE\_NAME\_FORMAT

File store file name 0: date format (yyyyMMdd) 1: cashpoint closing number

Declaration

```
public static readonly string FS_FILE_NAME_FORMAT
```

Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### FS\_REFERENCE\_FILE\_NAME

File name of reference file

Declaration

```
public static readonly string FS_REFERENCE_FILE_NAME
```

Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### FS\_REFERENCE\_ZIP\_FILE\_NAME

File name of the zip file with reference file

Declaration

```
public static readonly string FS_REFERENCE_ZIP_FILE_NAME
```

Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### FS\_TRANSACTION\_ENTRY\_FORMAT

File store transaction entry name 0: transaction number

Declaration

```
public static readonly string FS_TRANSACTION_ENTRY_FORMAT
```

Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Namespace RetailForce.Fiscalisation.Entities

## Classes

### [LicenseException](#)

Represents a license exception which is thrown if the requesting client has no license.

### [RetailForceCloudUrl](#)

### [ZipFileExtended](#)

Zip Utils this is only public so we can use it on our unit tests (which is not 100% optimal)



# Class LicenseException

Represents a license exception which is thrown if the requesting client has no license.

## Inheritance

System.Object  
System.Exception  
System.ApplicationException  
LicenseException

## Implements

System.Runtime.Serialization.ISerializable

## Inherited Members

System.Exception.GetBaseException()  
System.Exception.GetObjectData(System.Runtime.Serialization.SerializationInfo, System.Runtime.Serialization.StreamingContext)  
System.Exception.GetType()  
System.Exception.ToString()  
System.Exception.Data  
System.Exception.HelpLink  
System.Exception.HResult  
System.Exception.InnerException  
System.Exception.Message  
System.Exception.Source  
System.Exception.StackTrace  
System.Exception.TargetSite  
System.Exception.SerializeObjectState  
System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Entities](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class LicenseException : ApplicationException, ISerializable
```

## Constructors

LicenseException(Guid, String, String)

Constructor.

## Declaration

```
public LicenseException(Guid clientId, string requestedLicenseId, string message)
```

## Parameters

| TYPE        | NAME     | DESCRIPTION                                 |
|-------------|----------|---------------------------------------------|
| System.Guid | clientId | The client which has requested the license. |
|             |          |                                             |

| TYPE          | NAME               | DESCRIPTION                   |
|---------------|--------------------|-------------------------------|
| System.String | requestedLicenseId | The requested access license. |
| System.String | message            | The message of the exception. |

## LicenseException(String)

Constructor.

Declaration

```
public LicenseException(string message)
```

Parameters

| TYPE          | NAME    | DESCRIPTION                   |
|---------------|---------|-------------------------------|
| System.String | message | The message of the exception. |

## Properties

### ClientId

The client which has requested the license.

Declaration

```
public Guid ClientId { get; }
```

Property Value

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Guid |             |

### RequestedLicenseId

The requested access license.

Declaration

```
public string RequestedLicenseId { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Implements

System.Runtime.Serialization.ISerializable

# Class RetailForceCloudUrl

## Inheritance

System.Object

RetailForceCloudUrl

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Entities](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public static class RetailForceCloudUrl
```

## Properties

### CloudUrl

#### Declaration

```
public static string CloudUrl { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### PresignedFunctionUrl

#### Declaration

```
public static string PresignedFunctionUrl { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class ZipFileExtended

Zip Utils this is only public so we can use it on our unit tests (which is not 100% optimal)

## Inheritance

System.Object

ZipFileExtended

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Entities](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class ZipFileExtended
```

## Methods

### AddJsonEntry<T>(String, T)

Adds object as json

## Declaration

```
public void AddJsonEntry<T>(string entryName, T entry)
```

## Parameters

| TYPE          | NAME      | DESCRIPTION |
|---------------|-----------|-------------|
| System.String | entryName |             |
| T             | entry     |             |

## Type Parameters

| NAME | DESCRIPTION |
|------|-------------|
| T    |             |

### Contains(String, Boolean)

Check if zip contains entry

## Declaration

```
public bool Contains(string entryName, bool ignoreCase = true)
```

## Parameters

| TYPE           | NAME       | DESCRIPTION |
|----------------|------------|-------------|
| System.String  | entryName  |             |
| System.Boolean | ignoreCase |             |

Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## Create(String)

Create new zip file

Declaration

```
public static ZipFileExtended Create(string file)
```

Parameters

| TYPE          | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.String | file |             |

Returns

| TYPE                            | DESCRIPTION |
|---------------------------------|-------------|
| <a href="#">ZipFileExtended</a> |             |

## GetEntries()

Get Entries

Declaration

```
public List<string> GetEntries()
```

Returns

| TYPE                                           | DESCRIPTION |
|------------------------------------------------|-------------|
| System.Collections.Generic.List<System.String> |             |

## GetJsonEntry<T>(String)

Get json entry

Declaration

```
public T GetJsonEntry<T>(string entryName)
```

Parameters

| TYPE          | NAME      | DESCRIPTION |
|---------------|-----------|-------------|
| System.String | entryName |             |

#### Returns

| TYPE | DESCRIPTION |
|------|-------------|
| T    |             |

#### Type Parameters

| NAME | DESCRIPTION |
|------|-------------|
| T    |             |

### Open(String)

Zip file extended

#### Declaration

```
public static ZipFileExtended Open(string file)
```

#### Parameters

| TYPE          | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.String | file |             |

#### Returns

| TYPE                            | DESCRIPTION |
|---------------------------------|-------------|
| <a href="#">ZipFileExtended</a> |             |

### Remove(String)

Remove entry

#### Declaration

```
public bool Remove(string entryName)
```

#### Parameters

| TYPE          | NAME      | DESCRIPTION |
|---------------|-----------|-------------|
| System.String | entryName |             |

#### Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

# Namespace RetailForce.Fiscalisation.Implementation

## Classes

### [TrustedFiscalModuleImplementationBase](#)

Base class for all country specific implementations.

# Class TrustedFiscalModuleImplementationBase

Base class for all country specific implementations.

## Inheritance

System.Object

RetailForce.Common.Logging.LoggingBase

TrustedFiscalModuleImplementationBase

[TrustedFiscalModuleAustria](#)

[TrustedFiscalModuleGermany](#)

## Implements

[IFiscalModulImplementation](#)

[IDocumentInterface](#)

## Inherited Members

RetailForce.Common.Logging.LoggingBase.\_logger

RetailForce.Common.Logging.LoggingBase.\_logSource

RetailForce.Common.Logging.LoggingBase.LogCritical(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogCritical(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogWarning(System.String, System.Object[])

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public abstract class TrustedFiscalModuleImplementationBase : LoggingBase, IFiscalModulImplementation, IDocumentInterface
```

## Constructors

TrustedFiscalModuleImplementationBase(ILogger, FiscalClient, String, CloudService, String, String)

Constructor.

## Declaration

```
public TrustedFiscalModuleImplementationBase(ILogger logger, FiscalClient client, string logSource, CloudService cloudService = null, string cloudApiKey = null, string cloudApiSecret = null)
```

## Parameters

| TYPE                                 | NAME   | DESCRIPTION                |
|--------------------------------------|--------|----------------------------|
| Microsoft.Extensions.Logging.ILogger | logger | The logger for this class. |
| <a href="#">FiscalClient</a>         | client |                            |



| TYPE                         | NAME           | DESCRIPTION                                             |
|------------------------------|----------------|---------------------------------------------------------|
| System.String                | logSource      | The name of the source when a log entry is written.     |
| <a href="#">CloudService</a> | cloudService   | The service to connect to the retailforce cloud system. |
| System.String                | cloudApiKey    | The api key for cloud authentication.                   |
| System.String                | cloudApiSecret | The api secret for cloud authentication.                |

#### Remarks

If parameter `cloudService` is set by valid object then authentication will be tried with given security information.

#### Exceptions

| TYPE                              | CONDITION                                                               |
|-----------------------------------|-------------------------------------------------------------------------|
| System.ArgumentNullException      | Thrown if <code>logger</code> or <code>logSource</code> is set to null. |
| System.Security.SecurityException | Thrown if authentication to cloud was not successful.                   |

#### Fields

#### Client

#### Declaration

```
protected readonly FiscalClient Client
```

#### Field Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">FiscalClient</a> |             |

#### Properties

#### AvailableVatDefinitions

Returns all vat objects which are available in this country.

#### Declaration

```
public abstract IReadOnlyList<Vat> AvailableVatDefinitions { get; }
```

#### Property Value

| TYPE                                                            | DESCRIPTION |
|-----------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">Vat</a> > |             |

## CloudMessagesQueued

Returns the count of actual queued cloud files waiting for upload.

Declaration

```
protected int CloudMessagesQueued { get; }
```

Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

## FiscalClientStatus

Returns the status of the fiscal client.

Declaration

```
public abstract FiscalClientStatus FiscalClientStatus { get; }
```

Property Value

| TYPE                               | DESCRIPTION |
|------------------------------------|-------------|
| <a href="#">FiscalClientStatus</a> |             |

## ProcessingDocumentTypes

Returns all document types which are processed by this interface.

Declaration

```
public abstract IReadOnlyList<DocumentType> ProcessingDocumentTypes { get; }
```

Property Value

| TYPE                                                                     | DESCRIPTION |
|--------------------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">DocumentType</a> > |             |

## SupportedDocumentTypes

Returns all supported document types by this fiscal module.

Declaration

```
public abstract IReadOnlyList<DocumentType> SupportedDocumentTypes { get; }
```

Property Value

| TYPE                                                                     | DESCRIPTION |
|--------------------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">DocumentType</a> > |             |

## Methods

### CancelDocument(Document)

Cancels a document on the fiscal interface.

## Declaration

```
public abstract FiscalResponse CancelDocument(Document document)
```

## Parameters

| TYPE                     | NAME     | DESCRIPTION             |
|--------------------------|----------|-------------------------|
| <a href="#">Document</a> | document | The document to cancel. |

## Returns

| TYPE                           | DESCRIPTION                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the appropriate fiscal response data. |

## CreateDocument(DocumentType)

Creates a document at the fiscal interface and returns appropriate data.

## Declaration

```
public abstract FiscalResponse CreateDocument(DocumentType documentType)
```

## Parameters

| TYPE                         | NAME         | DESCRIPTION                                                        |
|------------------------------|--------------|--------------------------------------------------------------------|
| <a href="#">DocumentType</a> | documentType | The type of the document for which the document should be created. |

## Returns

| TYPE                           | DESCRIPTION                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the appropriate fiscal response data. |

## Remarks

For more information concerning the [FiscalResponse](#) look at the fiscal response for the applicable country implementation.

## DecommissionClient(Document)

Decommission of fiscal client (and possible hardware, and possible declaration to financial authorities).

## Declaration

```
public abstract FiscalResponse DecommissionClient(Document endDocument)
```

## Parameters

| TYPE                     | NAME        | DESCRIPTION                                                                                        |
|--------------------------|-------------|----------------------------------------------------------------------------------------------------|
| <a href="#">Document</a> | endDocument | A document of type <a href="#">NullReceipt</a> representing the end document of the fiscalisation. |

## Returns

| TYPE                           | DESCRIPTION                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the appropriate fiscal response data. |

### GetCountryUnspecificFiscalClientStatus()

Declaration

```
protected FiscalClientStatus GetCountryUnspecificFiscalClientStatus()
```

Returns

| TYPE                               | DESCRIPTION |
|------------------------------------|-------------|
| <a href="#">FiscalClientStatus</a> |             |

### GetDocumentMandatoryFields(Type)

Returns the mandatory fields for this type for the given country implementation.

Declaration

```
public virtual IReadOnlyList<string> GetDocumentMandatoryFields(Type t)
```

Parameters

| TYPE        | NAME | DESCRIPTION                           |
|-------------|------|---------------------------------------|
| System.Type | t    | The type to get the mandatory fields. |

Returns

| TYPE                                                    | DESCRIPTION                                                                                 |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------|
| System.Collections.Generic.IReadOnlyList<System.String> | A list of property names representing the mandatory fields for this country implementation. |

### GetTaxFreeVat()

Returns the vat object for country specific zero tax based transactions.

Declaration

```
public abstract Vat GetTaxFreeVat()
```

Returns

| TYPE                | DESCRIPTION                                              |
|---------------------|----------------------------------------------------------|
| <a href="#">Vat</a> | A vat object representing the zero tax based vat object. |

Remarks

Can be used for payin/payout, cash difference.

## GetVatIdentification(Decimal, DateTime)

Returns the appropriate vat identification for the requested percentage and date/time.

### Declaration

```
public virtual int? GetVatIdentification(decimal vatPercent, DateTime requestDate)
```

### Parameters

| TYPE            | NAME        | DESCRIPTION                                              |
|-----------------|-------------|----------------------------------------------------------|
| System.Decimal  | vatPercent  | The vat percentage for the requested vat identification. |
| System.DateTime | requestDate | The date/time for the requested vat identification.      |

### Returns

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| System.Nullable<System.Int32> |             |

## InitializeClient(Document)

Initializes fiscalisation unit (and possible hardware, and possible declaration to financial authorities).

### Declaration

```
public abstract FiscalResponse InitializeClient(Document startDocument)
```

### Parameters

| TYPE                     | NAME          | DESCRIPTION                                                                                             |
|--------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| <a href="#">Document</a> | startDocument | A document of type <a href="#">NullReceipt</a> representing the starting document of the fiscalisation. |

### Returns

| TYPE                           | DESCRIPTION                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the appropriate fiscal response data. |

## StoreDocument(Document)

Stores a document to the fiscal interface.

### Declaration

```
public abstract FiscalResponse StoreDocument(Document document)
```

### Parameters

| TYPE | NAME | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

| TYPE                     | NAME     | DESCRIPTION            |
|--------------------------|----------|------------------------|
| <a href="#">Document</a> | document | The document to store. |

#### Returns

| TYPE                           | DESCRIPTION                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the appropriate fiscal response data. |

#### Remarks

For more information concerning the [FiscalResponse](#) look at the fiscal response for the applicable country implementation.

### ValidateDocument(Document)

Validates a document and returns (if appropriate) a list of document validation errors.

#### Declaration

```
public abstract List<DocumentValidationError> ValidateDocument(Document document)
```

#### Parameters

| TYPE                     | NAME     | DESCRIPTION               |
|--------------------------|----------|---------------------------|
| <a href="#">Document</a> | document | The document to validate. |

#### Returns

| TYPE                                                                       | DESCRIPTION                             |
|----------------------------------------------------------------------------|-----------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | The list of document validation errors. |

### ValidateFiscalClient(Document)

Validates the fiscal client for the given document.

#### Declaration

```
public abstract List<DocumentValidationError> ValidateFiscalClient(Document document)
```

#### Parameters

| TYPE                     | NAME     | DESCRIPTION                                |
|--------------------------|----------|--------------------------------------------|
| <a href="#">Document</a> | document | The document containing the fiscal client. |

#### Returns

| TYPE | DESCRIPTION |
|------|-------------|
|      |             |

| TYPE                                                                       | DESCRIPTION                           |
|----------------------------------------------------------------------------|---------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | A list of document validation errors. |

### Implements

[IFiscalModulImplementation](#)

[IDocumentInterface](#)

# Namespace RetailForce.Fiscalisation.Implementation.Austria

## Classes

### [AustrianFiscalisationRequiredAttribute](#)

Attribute for properties of objects which are necessary for austrian fiscalisation.

### [AustrianValidation](#)

### [ClientConfiguration](#)

The Austrian country specific configuration for the client.

### [FiscalResponseAustria](#)

Representation for fiscal response austria (additional fields)

### [SignDeviceConfiguration](#)

Sign device configuration (hsm, smartcard, etc.)

### [SignDeviceDriverInfo](#)

Information about the sign device driver an it's configuration.

### [TrustedFiscalModuleAustria](#)

Implementation for fiscalisation of Austria.

## Interfaces

### [ISignageInterface](#)

## Enums

### [SignDeviceDriver](#)

The device driver type.



# Class AustrianFiscalisationRequiredAttribute

Attribute for properties of objects which are necessary for austrian fiscalisation.

## Inheritance

System.Object

System.Attribute

System.ComponentModel.DataAnnotations.ValidationAttribute

System.ComponentModel.DataAnnotations.RequiredAttribute

AustrianFiscalisationRequiredAttribute

## Inherited Members

System.ComponentModel.DataAnnotations.RequiredAttribute.IsValid(System.Object)

System.ComponentModel.DataAnnotations.RequiredAttribute.AllowEmptyStrings

System.ComponentModel.DataAnnotations.ValidationAttribute.FormatErrorMessage(System.String)

System.ComponentModel.DataAnnotations.ValidationAttribute.GetValidationResult(System.Object, System.ComponentModel.DataAnnotations.ValidationContext)

System.ComponentModel.DataAnnotations.ValidationAttribute.IsValid(System.Object, System.ComponentModel.DataAnnotations.ValidationContext)

System.ComponentModel.DataAnnotations.ValidationAttribute.Validate(System.Object, System.ComponentModel.DataAnnotations.ValidationContext)

System.ComponentModel.DataAnnotations.ValidationAttribute.Validate(System.Object, System.String)

System.ComponentModel.DataAnnotations.ValidationAttribute.ErrorMessage

System.ComponentModel.DataAnnotations.ValidationAttribute.ErrorMessageResourceName

System.ComponentModel.DataAnnotations.ValidationAttribute.ErrorMessageResourceType

System.ComponentModel.DataAnnotations.ValidationAttribute.ErrorMessageString

System.ComponentModel.DataAnnotations.ValidationAttribute.RequiresValidationContext

System.Attribute.Equals(System.Object)

System.Attribute.GetCustomAttribute(System.Reflection.Assembly, System.Type)

System.Attribute.GetCustomAttribute(System.Reflection.Assembly, System.Type, System.Boolean)

System.Attribute.GetCustomAttribute(System.Reflection.MemberInfo, System.Type)

System.Attribute.GetCustomAttribute(System.Reflection.MemberInfo, System.Type, System.Boolean)

System.Attribute.GetCustomAttribute(System.Reflection.Module, System.Type)

System.Attribute.GetCustomAttribute(System.Reflection.Module, System.Type, System.Boolean)

System.Attribute.GetCustomAttribute(System.Reflection.ParameterInfo, System.Type)

System.Attribute.GetCustomAttribute(System.Reflection.ParameterInfo, System.Type, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.Assembly)

System.Attribute.GetCustomAttributes(System.Reflection.Assembly, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.Assembly, System.Type)

System.Attribute.GetCustomAttributes(System.Reflection.Assembly, System.Type, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.MemberInfo)

System.Attribute.GetCustomAttributes(System.Reflection.MemberInfo, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.MemberInfo, System.Type)

System.Attribute.GetCustomAttributes(System.Reflection.MemberInfo, System.Type, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.Module)

System.Attribute.GetCustomAttributes(System.Reflection.Module, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.Module, System.Type)

System.Attribute.GetCustomAttributes(System.Reflection.Module, System.Type, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.ParameterInfo)

System.Attribute.GetCustomAttributes(System.Reflection.ParameterInfo, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.ParameterInfo, System.Type)

System.Attribute.GetCustomAttributes(System.Reflection.ParameterInfo, System.Type, System.Boolean)

System.Attribute.GetHashCode()

System.Attribute.IsDefaultAttribute()  
System.Attribute.IsDefined(System.Reflection.Assembly, System.Type)  
System.Attribute.IsDefined(System.Reflection.Assembly, System.Type, System.Boolean)  
System.Attribute.IsDefined(System.Reflection.MemberInfo, System.Type)  
System.Attribute.IsDefined(System.Reflection.MemberInfo, System.Type, System.Boolean)  
System.Attribute.IsDefined(System.Reflection.Module, System.Type)  
System.Attribute.IsDefined(System.Reflection.Module, System.Type, System.Boolean)  
System.Attribute.IsDefined(System.Reflection.ParameterInfo, System.Type)  
System.Attribute.IsDefined(System.Reflection.ParameterInfo, System.Type, System.Boolean)  
System.Attribute.Match(System.Object)  
System.Attribute.TypeId  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
[AttributeUsage(AttributeTargets.Property)]  
public class AustrianFiscalisationRequiredAttribute : RequiredAttribute
```

# Class AustrianValidation

## Inheritance

System.Object

AustrianValidation

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public static class AustrianValidation
```

## Fields

### SupportedVatDefinitions

#### Declaration

```
public static readonly ReadOnlyCollection<Vat> SupportedVatDefinitions
```

#### Field Value

| TYPE                                                                     | DESCRIPTION |
|--------------------------------------------------------------------------|-------------|
| System.Collections.ObjectModel.ReadOnlyCollection< <a href="#">Vat</a> > |             |

### VALIDATION\_ERROR\_SOURCE

#### Declaration

```
public const string VALIDATION_ERROR_SOURCE = "TrustedFiscalModuleAustria"
```

#### Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Methods

### ValidateDocument(Document)

#### Declaration

```
public static List<DocumentValidationErrors> ValidateDocument(Document document)
```

#### Parameters

| TYPE                     | NAME     | DESCRIPTION |
|--------------------------|----------|-------------|
| <a href="#">Document</a> | document |             |

#### Returns

| TYPE                                                                       | DESCRIPTION |
|----------------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > |             |

#### ValidateDocumentPosition(List<DocumentValidationError>, DateTime, DocumentPositionBase)

#### Declaration

```
public static void ValidateDocumentPosition(List<DocumentValidationError> errorList, DateTime bookDate, DocumentPositionBase position)
```

#### Parameters

| TYPE                                                                       | NAME      | DESCRIPTION |
|----------------------------------------------------------------------------|-----------|-------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | errorList |             |
| System.DateTime                                                            | bookDate  |             |
| <a href="#">DocumentPositionBase</a>                                       | position  |             |

# Class ClientConfiguration

The Austrian country specific configuration for the client.

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<RetailForce.Common.Validation.ValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>

[ConfigurationValidationBase](#)

ClientConfiguration

## Implements

[IFiscalImplementationConfiguration](#)

## Inherited Members

[ConfigurationValidationBase.ValidateCountrySpecificProperty<CountryRequiredAttributeType>\(\)](#)

[ConfigurationValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[ConfigurationValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

[ConfigurationValidationBase.ValidateElement\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidateProperties\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>\(System.Boolean\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Implementation.Austria](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class ClientConfiguration : ConfigurationValidationBase, IFiscalImplementationConfiguration
```

## Properties

### AesKey

The aes key for encoding grand total.

## Declaration

```
public string AesKey { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## CloudArchive

True if cloud archive is active; otherwise false.

## Declaration

```
public bool CloudArchive { get; set; }
```

## Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## FiscalCountry

Returns the fiscal country for this configuration.

#### Declaration

```
public FiscalCountry FiscalCountry { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| FiscalCountry |             |

#### FonMemberId

Member id of the fon (Finanzonline) user.

#### Declaration

```
public string FonMemberId { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### FonPin

Pin of the fon (Finanzonline) user.

#### Declaration

```
public string FonPin { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### FonUserId

User id of the fon (Finanzonline) user.

#### Declaration

```
public string FonUserId { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### SignDeviceActivated

Returns a list of signature devices which are activated at fon.

#### Declaration

```
public Dictionary<string, DateTime?> SignDeviceActivated { get; set; }
```

#### Property Value

| TYPE                                                                                   | DESCRIPTION |
|----------------------------------------------------------------------------------------|-------------|
| System.Collections.Generic.Dictionary<System.String, System.Nullable<System.DateTime>> |             |

#### SignDeviceConfiguration

The sign device driver configuration.

#### Declaration

```
public List<SignDeviceConfiguration> SignDeviceConfiguration { get; set; }
```

#### Property Value

| TYPE                                                                       | DESCRIPTION |
|----------------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">SignDeviceConfiguration</a> > |             |

## Methods

### Encrypt(Guid)

Encrypts sensitive data.

#### Declaration

```
public void Encrypt(Guid uniqueClientId)
```

#### Parameters

| TYPE        | NAME           | DESCRIPTION |
|-------------|----------------|-------------|
| System.Guid | uniqueClientId |             |

### RemoveSensitiveData()

Removes sensitive data from the configuration.

#### Declaration

```
public void RemoveSensitiveData()
```

#### Remarks

Used for sending data from cloud to client to remove sensitive data from configuration which is not needed by the client.

## Implements

[IFiscalImplementationConfiguration](#)

# Class FiscalResponseAustria

Representation for fiscal response austria (additional fields)

## Inheritance

System.Object

FiscalResponseAustria

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public static class FiscalResponseAustria
```

## Remarks

At the moment there are no additional fields for austria.

## Methods

**CheckCountryAdditionalFields(ReadOnlyDictionary<String, Object>)**

Checks if all country specific fields are set in the dictionary.

## Declaration

```
public static void CheckCountryAdditionalFields(ReadOnlyDictionary<string, object> additionalFields)
```

## Parameters

| TYPE                                                                            | NAME             | DESCRIPTION                                    |
|---------------------------------------------------------------------------------|------------------|------------------------------------------------|
| System.Collections.ObjectModel.ReadOnlyDictionary<System.String, System.Object> | additionalFields | The dictionary of all country specific fields. |

## Exceptions

| TYPE                          | CONDITION                                      |
|-------------------------------|------------------------------------------------|
| System.MissingMemberException | Thrown if a country specific field is missing. |

**GetFiscalResponseAustria(Int32, Int32, String, String, String)**

Returns the fiscal response for austria out of the given parameters.

## Declaration

```
public static FiscalResponse GetFiscalResponseAustria(int fiscalisationDocumentNumber, int fiscalisationDocumentRevision, string signature, string errorDescription, string qrCode)
```



## Parameters

| TYPE          | NAME                          | DESCRIPTION                                                                               |
|---------------|-------------------------------|-------------------------------------------------------------------------------------------|
| System.Int32  | fiscalisationDocumentNumber   | The fiscalisation document number.                                                        |
| System.Int32  | fiscalisationDocumentRevision | The revision of the fiscalisation document.                                               |
| System.String | signature                     | The signature of the security device (country-specific)                                   |
| System.String | errorDescription              | The error description if the fiscalisation process failed. Empty if everything went well. |
| System.String | qrCode                        | The qr code of the response.                                                              |

## Returns

| TYPE                           | DESCRIPTION                                                                           |
|--------------------------------|---------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the fiscal response for austria. |

## QrCode(FiscalResponse)

Returns the qr code for the printout.

## Declaration

```
public static string QrCode(this FiscalResponse fiscalResponse)
```

## Parameters

| TYPE                           | NAME           | DESCRIPTION |
|--------------------------------|----------------|-------------|
| <a href="#">FiscalResponse</a> | fiscalResponse |             |

## Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Interface ISignageInterface

Namespace: [RetailForce.Fiscalisation.Implementation.Austria](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public interface ISignageInterface
```

# Class SignDeviceConfiguration

Sign device configuration (hsm, smartcard, etc.)

## Inheritance

System.Object

SignDeviceConfiguration

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class SignDeviceConfiguration
```

## Properties

### SignDeviceDriver

The device driver of the signature device.

#### Declaration

```
public SignDeviceDriver SignDeviceDriver { get; set; }
```

#### Property Value

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">SignDeviceDriver</a> |             |

### SignDeviceParameter

The device driver parameters.

#### Declaration

```
public virtual List<Parameter> SignDeviceParameter { get; set; }
```

#### Property Value

| TYPE                                                         | DESCRIPTION |
|--------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">Parameter</a> > |             |

# Enum SignDeviceDriver

The device driver type.

Namespace: [RetailForce.Fiscalisation.Implementation.Austria](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum SignDeviceDriver
```

Fields

| NAME           | DESCRIPTION                  |
|----------------|------------------------------|
| ATrustHsm      | A-trust service center hsm.  |
| ATrustHsmLocal | Local installed a-trust hsm. |

# Class SignDeviceDriverInfo

Information about the sign device driver and its configuration.

## Inheritance

System.Object

SignDeviceDriverInfo

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class SignDeviceDriverInfo
```

## Properties

### Parameters

Additional parameters to configure the sign device driver

### Declaration

```
public List<ParameterInfo> Parameters { get; set; }
```

### Property Value

| TYPE                                                             | DESCRIPTION |
|------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">ParameterInfo</a> > |             |

### SignDeviceDriver

The driver for this driver information.

### Declaration

```
public SignDeviceDriver SignDeviceDriver { get; set; }
```

### Property Value

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">SignDeviceDriver</a> |             |

# Class TrustedFiscalModuleAustria

Implementation for fiscalisation of Austria.

## Inheritance

System.Object

RetailForce.Common.Logging.LoggingBase

[TrustedFiscalModuleImplementationBase](#)

TrustedFiscalModuleAustria

## Implements

[IFiscalModulImplementation](#)

[IDocumentInterface](#)

## Inherited Members

[TrustedFiscalModuleImplementationBase.Client](#)

[TrustedFiscalModuleImplementationBase.GetVatIdentification\(Decimal, DateTime\)](#)

[TrustedFiscalModuleImplementationBase.CloudMessagesQueued](#)

[TrustedFiscalModuleImplementationBase.GetCountryUnspecificFiscalClientStatus\(\)](#)

RetailForce.Common.Logging.LoggingBase.\_logger

RetailForce.Common.Logging.LoggingBase.\_logSource

RetailForce.Common.Logging.LoggingBase.LogCritical(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogCritical(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogWarning(System.String, System.Object[])

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public sealed class TrustedFiscalModuleAustria : TrustedFiscalModuleImplementationBase,
    IFiscalModulImplementation, IDocumentInterface
```

## Constructors

**TrustedFiscalModuleAustria(ILogger, FiscalClient, ClientConfiguration, Action<ClientConfiguration>, String, CloudService, String, String)**

Constructor.

## Declaration

```
public TrustedFiscalModuleAustria(ILogger logger, FiscalClient client, ClientConfiguration configuration,
    Action<ClientConfiguration> storeConfiguration, string storagePath = "", CloudService cloudService = null,
    string cloudApiKey = "", string cloudApiSecret = "")
```

## Parameters

| TYPE                                                 | NAME               | DESCRIPTION                            |
|------------------------------------------------------|--------------------|----------------------------------------|
| Microsoft.Extensions.Logging.ILogger                 | logger             | The logger for logging error messages. |
| <a href="#">FiscalClient</a>                         | client             |                                        |
| <a href="#">ClientConfiguration</a>                  | configuration      |                                        |
| System.Action< <a href="#">ClientConfiguration</a> > | storeConfiguration |                                        |
| System.String                                        | storagePath        |                                        |
| <a href="#">CloudService</a>                         | cloudService       |                                        |
| System.String                                        | cloudApiKey        |                                        |
| System.String                                        | cloudApiSecret     |                                        |

## Fields

### END\_RECEIPT

#### Declaration

```
public const string END_RECEIPT = "Schlussbeleg"
```

#### Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### SECURITYDEVICEFAILED

#### Declaration

```
public const string SECURITYDEVICEFAILED = "Sicherheitseinrichtung ausgefallen"
```

#### Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### SECURITYDEVICEFAILED\_URLBASE64

#### Declaration

```
public const string SECURITYDEVICEFAILED_URLBASE64 = "U21jaGVyaGVpdHNIaw5yaWNodHVuZyBhdXNnZWZhbGxlbG"
```

#### Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### START\_RECEIPT

## Declaration

```
public const string START_RECEIPT = "Startbeleg"
```

## Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Properties

### AvailableVatDefinitions

Returns all vat objects which are available in this country.

## Declaration

```
public override IReadOnlyList<Vat> AvailableVatDefinitions { get; }
```

## Property Value

| TYPE                                                            | DESCRIPTION |
|-----------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">Vat</a> > |             |

## Overrides

[TrustedFiscalModuleImplementationBase.AvailableVatDefinitions](#)

### FiscalClientStatus

Returns the status of the fiscal client.

## Declaration

```
public override FiscalClientStatus FiscalClientStatus { get; }
```

## Property Value

| TYPE                               | DESCRIPTION |
|------------------------------------|-------------|
| <a href="#">FiscalClientStatus</a> |             |

## Overrides

[TrustedFiscalModuleImplementationBase.FiscalClientStatus](#)

### ProcessingDocumentTypes

Returns all document types which are processed by this interface.

## Declaration

```
public override IReadOnlyList<DocumentType> ProcessingDocumentTypes { get; }
```

## Property Value

| TYPE                                                                     | DESCRIPTION |
|--------------------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">DocumentType</a> > |             |

## Overrides



## [TrustedFiscalModuleImplementationBase.ProcessingDocumentTypes](#)

### SupportedDocumentTypes

Returns all supported document types by this fiscal module.

Declaration

```
public override IReadOnlyList<DocumentType> SupportedDocumentTypes { get; }
```

Property Value

| TYPE                                                                     | DESCRIPTION |
|--------------------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">DocumentType</a> > |             |

Overrides

[TrustedFiscalModuleImplementationBase.SupportedDocumentTypes](#)

### Methods

#### CancelDocument(Document)

Cancels the active document. Not necessary in austria.

Declaration

```
public override FiscalResponse CancelDocument(Document document)
```

Parameters

| TYPE                     | NAME     | DESCRIPTION             |
|--------------------------|----------|-------------------------|
| <a href="#">Document</a> | document | The document to cancel. |

Returns

| TYPE                           | DESCRIPTION               |
|--------------------------------|---------------------------|
| <a href="#">FiscalResponse</a> | An empty fiscal response. |

Overrides

[TrustedFiscalModuleImplementationBase.CancelDocument\(Document\)](#)

Remarks

In Austrian implementation it is not necessary to call [CreateDocument\(DocumentType\)](#), but it can.

#### CreateDocument(DocumentType)

Returns the fiscal response for starting the document.

Declaration

```
public override FiscalResponse CreateDocument(DocumentType documentType)
```

Parameters

| TYPE                         | NAME         | DESCRIPTION                             |
|------------------------------|--------------|-----------------------------------------|
| <a href="#">DocumentType</a> | documentType | The type of the to be created document. |

#### Returns

| TYPE                           | DESCRIPTION               |
|--------------------------------|---------------------------|
| <a href="#">FiscalResponse</a> | An empty fiscal response. |

#### Overrides

[TrustedFiscalModuleImplementationBase.CreateDocument\(DocumentType\)](#)

#### Remarks

In Austrian implementation it is not necessary to call [CreateDocument\(DocumentType\)](#), but it can.

#### DecommissionClient(Document)

Decommission of fiscal client (and possible hardware, and possible declaration to financial authorities).

#### Declaration

```
public override FiscalResponse DecommissionClient(Document endDocument)
```

#### Parameters

| TYPE                     | NAME        | DESCRIPTION                                                                                        |
|--------------------------|-------------|----------------------------------------------------------------------------------------------------|
| <a href="#">Document</a> | endDocument | A document of type <a href="#">NullReceipt</a> representing the end document of the fiscalisation. |

#### Returns

| TYPE                           | DESCRIPTION                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the appropriate fiscal response data. |

#### Overrides

[TrustedFiscalModuleImplementationBase.DecommissionClient\(Document\)](#)

#### ExportDep(DateTime, DateTime)

Exports all receipt lines of local dep store data.

#### Declaration

```
public Dep ExportDep(DateTime fromDate, DateTime tillDate)
```

#### Parameters

| TYPE            | NAME     | DESCRIPTION                               |
|-----------------|----------|-------------------------------------------|
| System.DateTime | fromdate | The start date of the requested receipts. |

| TYPE            | NAME     | DESCRIPTION                             |
|-----------------|----------|-----------------------------------------|
| System.DateTime | tillDate | The end date of the requested receipts. |

Returns

| TYPE | DESCRIPTION                                                                                                                                           |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dep  | An object of type <a href="#">RetailForce.Fiscalisation.Implementation.Austria.Dep</a> representing the "Datenerfassungsprotokoll" of RKS in Austria. |

### GetDocumentMandatoryFields(Type)

Returns the mandatory fields for this type for the given country implementation.

Declaration

```
public override IReadOnlyList<string> GetDocumentMandatoryFields(Type t)
```

Parameters

| TYPE        | NAME | DESCRIPTION                           |
|-------------|------|---------------------------------------|
| System.Type | t    | The type to get the mandatory fields. |

Returns

| TYPE                                                    | DESCRIPTION                                                                                 |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------|
| System.Collections.Generic.IReadOnlyList<System.String> | A list of property names representing the mandatory fields for this country implementation. |

Overrides

[TrustedFiscalModuleImplementationBase.GetDocumentMandatoryFields\(Type\)](#)

### GetMonthReceipts(Nullable<DateTime>, Nullable<DateTime>)

Returns all month receipts in the requested date frame.

Declaration

```
public List<ReceiptLine> GetMonthReceipts(DateTime? fromdate, DateTime? tillDate)
```

Parameters

| TYPE                             | NAME     | DESCRIPTION                                                                   |
|----------------------------------|----------|-------------------------------------------------------------------------------|
| System.Nullable<System.DateTime> | fromdate | The start date of the request. If omitted the start date is used as 1-1-2000. |
| System.Nullable<System.DateTime> | tillDate | The end date of the request. If omitted the till date is used as now.         |

Returns

| TYPE                                                           | DESCRIPTION                                                                                                 |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">ReceiptLine</a> > | A list of <a href="#">ReceiptLine</a> objects representing the month receipts done in the requested period. |

### GetShortUniqueAustrianCashRegisterId(FiscalClient)

Declaration

```
public string GetShortUniqueAustrianCashRegisterId(FiscalClient client)
```

Parameters

| TYPE                         | NAME   | DESCRIPTION |
|------------------------------|--------|-------------|
| <a href="#">FiscalClient</a> | client |             |

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### GetTaxFreeVat()

Returns the vat object for country specific zero tax based transactions.

Declaration

```
public override Vat GetTaxFreeVat()
```

Returns

| TYPE                | DESCRIPTION                                              |
|---------------------|----------------------------------------------------------|
| <a href="#">Vat</a> | A vat object representing the zero tax based vat object. |

Overrides

[TrustedFiscalModuleImplementationBase.GetTaxFreeVat\(\)](#)

Remarks

Can be used for payin/payout, cash difference and others.

### GetUniqueAustrianCashRegisterId(FiscalClient)

Declaration

```
public string GetUniqueAustrianCashRegisterId(FiscalClient client)
```

Parameters

| TYPE                         | NAME   | DESCRIPTION |
|------------------------------|--------|-------------|
| <a href="#">FiscalClient</a> | client |             |

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### InitializeClient(Document)

Initializes fiscalisation unit (and possible hardware, and possible declaration to financial authorities).

Declaration

```
public override FiscalResponse InitializeClient(Document startDocument)
```

Parameters

| TYPE                     | NAME          | DESCRIPTION                                                                                             |
|--------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| <a href="#">Document</a> | startDocument | A document of type <a href="#">NullReceipt</a> representing the starting document of the fiscalisation. |

Returns

| TYPE                           | DESCRIPTION                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the appropriate fiscal response data. |

Overrides

[TrustedFiscalModuleImplementationBase.InitializeClient\(Document\)](#)

### StoreDocument(Document)

Stores a document to the austrian fiscal system.

Declaration

```
public override FiscalResponse StoreDocument(Document document)
```

Parameters

| TYPE                     | NAME     | DESCRIPTION            |
|--------------------------|----------|------------------------|
| <a href="#">Document</a> | document | The document to store. |

Returns

| TYPE                           | DESCRIPTION                                 |
|--------------------------------|---------------------------------------------|
| <a href="#">FiscalResponse</a> | The fiscal response from the fiscal system. |

Overrides

[TrustedFiscalModuleImplementationBase.StoreDocument\(Document\)](#)

Exceptions

| TYPE                         | CONDITION                                                                                                                                                                                                                                                |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>document</code> is set to null.                                                                                                                                                                                                          |
| System.ArgumentException     | Thrown if fiscal client of document (RetailForce.Fiscalisation.Model.Document.Document.FiscalClient) is not set or if fiscal client id does not match client id of document or if clientconfiguration of fiscal client is not an austrian configuration. |

### ValidateDocument(Document)

Validates a document and returns (if appropriate) a list of document validation errors.

Declaration

```
public override List<DocumentValidationError> ValidateDocument(Document document)
```

Parameters

| TYPE                     | NAME     | DESCRIPTION               |
|--------------------------|----------|---------------------------|
| <a href="#">Document</a> | document | The document to validate. |

Returns

| TYPE                                                                       | DESCRIPTION                             |
|----------------------------------------------------------------------------|-----------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | The list of document validation errors. |

Overrides

[TrustedFiscalModuleImplementationBase.ValidateDocument\(Document\)](#)

### ValidateFiscalClient(Document)

Validates the fiscal client for the given document.

Declaration

```
public override List<DocumentValidationError> ValidateFiscalClient(Document document)
```

Parameters

| TYPE                     | NAME     | DESCRIPTION                                |
|--------------------------|----------|--------------------------------------------|
| <a href="#">Document</a> | document | The document containing the fiscal client. |

Returns

| TYPE                                                                       | DESCRIPTION                           |
|----------------------------------------------------------------------------|---------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | A list of document validation errors. |

Overrides

[TrustedFiscalModuleImplementationBase.ValidateFiscalClient\(Document\)](#)

Exceptions

| TYPE                         | CONDITION                                                                                                                                            |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>document</code> is set to null.                                                                                            |
| System.ArgumentException     | Thrown if property <code>RetailForce.Fiscalisation.Model.Document.Document.FiscalClient</code> of parameter of <code>document</code> is set to null. |

Implements

[IFiscalModuleImplementation](#)

[IDocumentInterface](#)

# Namespace

## RetailForce.Fiscalisation.Implementation.Austria.Dep

### Classes

#### [Dep](#)

Representation of the austrian dep (Datenerfassungsprotokoll)

#### [DepCloudStore](#)

The store of the dep.

#### [DepState](#)

Persists the actual state of the dep.

#### [DepStore](#)

The store of the dep.

#### [ReceiptGroup](#)

Sub-Element of the austrian dep (Datenerfassungsprotokoll)

#### [ReceiptLine](#)

Receipt line for rksv-dep (austria)

#### [RevenueEncryption](#)

Class library to encrypt the current revenue for the receipt line of the dep (= "Umsatzzähler Datenerfassungsprotokoll")



# Class Dep

Representation of the austrian dep (Datenerfassungsprotokoll)

## Inheritance

System.Object

Dep

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Dep](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Dep
```

## Constructors

Dep(ReceiptLine[], String, String[])

Constructor.

## Declaration

```
public Dep(ReceiptLine[] receiptLines, string signatureCertificate, string[] certificateOrdinaries)
```

## Parameters

| TYPE                           | NAME                  | DESCRIPTION                                                  |
|--------------------------------|-----------------------|--------------------------------------------------------------|
| <a href="#">ReceiptLine</a> [] | receiptLines          | The receipt groups for the dep ('Datenerfassungsprotokoll'). |
| System.String                  | signatureCertificate  | The signature certificate. Can be omitted.                   |
| System.String[]                | certificateOrdinaries | A string array of certificate issuers. Can be omitted.       |

## Exceptions

| TYPE                         | CONDITION                                    |
|------------------------------|----------------------------------------------|
| System.ArgumentNullException | Thrown if <code>receiptLines</code> is null. |

## Properties

### ReceiptGroups

An array of compact representation of receipts.

## Declaration

```
[JsonRequired]  
[JsonProperty("Belege-Gruppe")]  
public ReceiptGroup[] ReceiptGroups { get; }
```

## Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| ReceiptGroup[] |             |

# Class DepCloudStore

The store of the dep.

## Inheritance

System.Object

RetailForce.Common.Logging.LoggingBase

DepCloudStore

## Inherited Members

RetailForce.Common.Logging.LoggingBase.\_logger

RetailForce.Common.Logging.LoggingBase.\_logSource

RetailForce.Common.Logging.LoggingBase.LogCritical(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogCritical(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogWarning(System.String, System.Object[])

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Dep](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class DepCloudStore : LoggingBase
```

## Constructors

**DepCloudStore(ILogger, String, String, CloudService)**

### Declaration

```
public DepCloudStore(ILogger logger, string accessKey, string accessSecret, CloudService cloudService)
```

### Parameters

| TYPE                                 | NAME         | DESCRIPTION |
|--------------------------------------|--------------|-------------|
| Microsoft.Extensions.Logging.ILogger | logger       |             |
| System.String                        | accessKey    |             |
| System.String                        | accessSecret |             |
| <a href="#">CloudService</a>         | cloudService |             |

## Methods

**StoreReceiptLine(Guid, ReceiptLine, Decimal, String)**

Stores the receipt line to the dep.

### Declaration

```
public void StoreReceiptLine(Guid uniqueClientId, ReceiptLine receiptLine, decimal revenueSumCalculated,
string receiptFlag = "")
```

#### Parameters

| TYPE                        | NAME                 | DESCRIPTION                                                                                            |
|-----------------------------|----------------------|--------------------------------------------------------------------------------------------------------|
| System.Guid                 | uniqueClientId       | The uniqueClientId of the dep to store.                                                                |
| <a href="#">ReceiptLine</a> | receiptLine          | The receiptLine to store.                                                                              |
| System.Decimal              | revenueSumCalculated | A decimal representing the actual calculated revenue sum. The revenue sum will be rounded to 2 digits. |
| System.String               | receiptFlag          |                                                                                                        |

#### Exceptions

| TYPE                         | CONDITION                                                                                                     |
|------------------------------|---------------------------------------------------------------------------------------------------------------|
| System.ArgumentException     | Thrown if the given receipt line was not signed ( <a href="#">Signature</a> not set).                         |
| System.ArgumentNullException | Thrown if <code>receiptLine</code> is set to null or <code>uniqueClientId</code> is set to System.Guid.Empty. |

# Class DepState

Persists the actual state of the dep.

## Inheritance

System.Object

DepState

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Dep](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class DepState
```

## Properties

### ActualRevenue

The current actual revenue of the dep.

#### Declaration

```
public decimal ActualRevenue { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

### DocumentNr

The current document number of the dep (equals the last used document number).

#### Declaration

```
public int DocumentNr { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### PreviousSignature

The last signature.

#### Declaration

```
public string PreviousSignature { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class DepStore

The store of the dep.

## Inheritance

System.Object

DepStore

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Dep](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class DepStore
```

## Constructors

### DepStore(String)

Constructor.

## Declaration

```
public DepStore(string path = null)
```

## Parameters

| TYPE          | NAME | DESCRIPTION                                                  |
|---------------|------|--------------------------------------------------------------|
| System.String | path | The path to the directory where the dep is stored. Optional. |

## Methods

### Archive(Guid)

Takes all the data of the current dep to archive dep.

## Declaration

```
public void Archive(Guid uniqueClientId)
```

## Parameters

| TYPE        | NAME           | DESCRIPTION                                 |
|-------------|----------------|---------------------------------------------|
| System.Guid | uniqueClientId | The if of the client of the dep to archive. |

### EvaluateDepLine(String, out Decimal, out String)

## Declaration

```
public string EvaluateDeplLine(string deplLine, out decimal revenueSumCalculated, out string receiptFlag)
```

#### Parameters

| TYPE           | NAME                 | DESCRIPTION |
|----------------|----------------------|-------------|
| System.String  | deplLine             |             |
| System.Decimal | revenueSumCalculated |             |
| System.String  | receiptFlag          |             |

#### Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### GetClientDepStorePath(Guid)

Returns the dep store path for the given client.

#### Declaration

```
public string GetClientDepStorePath(Guid clientId)
```

#### Parameters

| TYPE        | NAME     | DESCRIPTION                                           |
|-------------|----------|-------------------------------------------------------|
| System.Guid | clientId | The client for which the dep store path is requested. |

#### Returns

| TYPE          | DESCRIPTION                                                       |
|---------------|-------------------------------------------------------------------|
| System.String | A string representing the dep store path of the requested client. |

#### Exceptions

| TYPE                         | CONDITION                                                                            |
|------------------------------|--------------------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>clientId</code> is set to <code>System.Guid.Empty</code> . |

### GetReceiptLinesByDate(Guid, DateTime, DateTime)

Returns requested receipt lines (from actual dep and archive).

#### Declaration

```
public List<ReceiptLine> GetReceiptLinesByDate(Guid clientId, DateTime fromDate, DateTime tillDate)
```

#### Parameters



| TYPE            | NAME     | DESCRIPTION                                   |
|-----------------|----------|-----------------------------------------------|
| System.Guid     | clientId | The client id of the requested receipt lines. |
| System.DateTime | fromdate | The start date of the request.                |
| System.DateTime | tillDate | The end date of the request.                  |

#### Returns

| TYPE                                                           | DESCRIPTION                                                                             |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">ReceiptLine</a> > | A list of <a href="#">ReceiptLine</a> objects representing the requested receipt lines. |

### IsEmpty(Guid)

Returns whether the actual dep store (not closed one's) is empty.

#### Declaration

```
public bool IsEmpty(Guid clientId)
```

#### Parameters

| TYPE        | NAME     | DESCRIPTION                                                |
|-------------|----------|------------------------------------------------------------|
| System.Guid | clientId | The unique client id of the client to check the dep store. |

#### Returns

| TYPE           | DESCRIPTION                                                  |
|----------------|--------------------------------------------------------------|
| System.Boolean | True if the dep store is empty (no record); otherwise false. |

### ReadFirstLine(Guid)

#### Declaration

```
public string ReadFirstLine(Guid clientId)
```

#### Parameters

| TYPE        | NAME     | DESCRIPTION |
|-------------|----------|-------------|
| System.Guid | clientId |             |

#### Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## ReadFirstReceiptLine(Guid)

Returns the first receipt line of the dep.

Declaration

```
public ReceiptLine ReadFirstReceiptLine(Guid clientId)
```

Parameters

| TYPE        | NAME     | DESCRIPTION |
|-------------|----------|-------------|
| System.Guid | clientId |             |

Returns

| TYPE                        | DESCRIPTION |
|-----------------------------|-------------|
| <a href="#">ReceiptLine</a> |             |

## ReadLastLine(Guid)

Returns the last line of the dep store file.

Declaration

```
public string ReadLastLine(Guid clientId)
```

Parameters

| TYPE        | NAME     | DESCRIPTION                       |
|-------------|----------|-----------------------------------|
| System.Guid | clientId | The client id of the dep to read. |

Returns

| TYPE          | DESCRIPTION                                     |
|---------------|-------------------------------------------------|
| System.String | A string representing the last line of the dep. |

## ReadLastReceiptLine(Guid, out Decimal)

Returns the last receipt line of the dep.

Declaration

```
public ReceiptLine ReadLastReceiptLine(Guid clientId, out decimal actualRevenueSum)
```

Parameters

| TYPE           | NAME             | DESCRIPTION |
|----------------|------------------|-------------|
| System.Guid    | clientId         |             |
| System.Decimal | actualRevenueSum |             |

Returns

| TYPE                        | DESCRIPTION |
|-----------------------------|-------------|
| <a href="#">ReceiptLine</a> |             |

### ReadLastSignedReceiptline(Guid)

Returns the last valid signed receipt line of the dep.

Declaration

```
public ReceiptLine ReadLastSignedReceiptline(Guid clientId)
```

Parameters

| TYPE        | NAME     | DESCRIPTION                       |
|-------------|----------|-----------------------------------|
| System.Guid | clientId | The client id of the dep to read. |

Returns

| TYPE                        | DESCRIPTION                                                                                                                                                   |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">ReceiptLine</a> | The last valid signed receipt line of the dep (signature is not valid, when signature device was not working properly ("Sicherheitseinrichtung ausgefallen"). |

### ReadReceiptLines(Guid)

Returns all receipt lines of the actual dep of the given client.

Declaration

```
public List<ReceiptLine> ReadReceiptLines(Guid clientId)
```

Parameters

| TYPE        | NAME     | DESCRIPTION                                       |
|-------------|----------|---------------------------------------------------|
| System.Guid | clientId | The client where the receipt lines are requested. |

Returns

| TYPE                                                           | DESCRIPTION                                                                                                         |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">ReceiptLine</a> > | A list of <a href="#">ReceiptLine</a> objects representing the receipt lines of the actual dep of the given client. |

Exceptions

| TYPE                         | CONDITION                                                              |
|------------------------------|------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>clientId</code> is set to System.Guid.Empty. |

### ReadReceiptLines(String)

Returns all receipt lines of the given file.

#### Declaration

```
public List<ReceiptLine> ReadReceiptLines(string filename)
```

#### Parameters

| TYPE          | NAME     | DESCRIPTION                       |
|---------------|----------|-----------------------------------|
| System.String | filename | The filename of the file to read. |

#### Returns

| TYPE                                         | DESCRIPTION                                                                                     |
|----------------------------------------------|-------------------------------------------------------------------------------------------------|
| System.Collections.Generic.List<ReceiptLine> | A list of <a href="#">ReceiptLine</a> objects representing the receipt lines of the given file. |

#### Exceptions

| TYPE                            | CONDITION                                                                 |
|---------------------------------|---------------------------------------------------------------------------|
| System.ArgumentNullException    | Thrown if parameter <code>filename</code> is set to null or empty string. |
| System.IO.FileNotFoundException | Thrown if the file is not found.                                          |

### StoreReceiptLine(Guid, ReceiptLine, Decimal, String)

Stores the receipt line to the dep.

#### Declaration

```
public void StoreReceiptLine(Guid clientId, ReceiptLine receiptLine, decimal revenueSumCalculated, string receiptFlag = "")
```

#### Parameters

| TYPE                        | NAME                 | DESCRIPTION                                                                                            |
|-----------------------------|----------------------|--------------------------------------------------------------------------------------------------------|
| System.Guid                 | clientId             | The clientid of the dep to store.                                                                      |
| <a href="#">ReceiptLine</a> | receiptLine          | The receiptline to store.                                                                              |
| System.Decimal              | revenueSumCalculated | A decimal representing the actual calculated revenue sum. The revenue sum will be rounded to 2 digits. |
| System.String               | receiptFlag          |                                                                                                        |

#### Exceptions

| TYPE                         | CONDITION                                                                                               |
|------------------------------|---------------------------------------------------------------------------------------------------------|
| System.ArgumentException     | Thrown if the given receipt line was not signed ( <a href="#">Signature</a> not set).                   |
| System.ArgumentNullException | Thrown if <code>receiptLine</code> is set to null or <code>clientId</code> is set to System.Guid.Empty. |

# Class ReceiptGroup

Sub-Element of the austrian dep (Datenerfassungsprotokoll)

## Inheritance

System.Object

ReceiptGroup

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Dep](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class ReceiptGroup
```

## Constructors

**ReceiptGroup(ReceiptLine[])**

Constructor.

## Declaration

```
public ReceiptGroup(ReceiptLine[] receiptLines)
```

## Parameters

| TYPE                           | NAME         | DESCRIPTION                               |
|--------------------------------|--------------|-------------------------------------------|
| <a href="#">ReceiptLine</a> [] | receiptLines | The receipt lines for this receipt group. |

## Properties

### CertificateOrdinaries

The ordinaries for the certificates.

## Declaration

```
[JsonRequired]  
[JsonProperty("Zertifizierungsstellen")]  
public string[] CertificateOrdinaries { get; set; }
```

## Property Value

| TYPE            | DESCRIPTION |
|-----------------|-------------|
| System.String[] |             |

## Remarks

Can be empty and will be empty in this implementation (is allowed).

can be empty and will be empty in this implementation (is allowed).

## Receipts

All receipts in base64 encoding

### Declaration

```
[JsonRequired]  
[JsonProperty("Belege-kompakt")]  
public string[] Receipts { get; }
```

### Property Value

| TYPE            | DESCRIPTION |
|-----------------|-------------|
| System.String[] |             |

## SignatureCertificate

The signature certificate for this group.

### Declaration

```
[JsonRequired]  
[JsonProperty("Signaturzertifikat")]  
public string SignatureCertificate { get; set; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Remarks

Can be empty and will be empty in this implementation (is allowed).

# Class ReceiptLine

Receipt line for rksv-dep (austria)

## Inheritance

System.Object

ReceiptLine

## Implements

System.IEquatable<[ReceiptLine](#)>

## Inherited Members

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Dep](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class ReceiptLine : IEquatable<ReceiptLine>
```

## Constructors

[ReceiptLine](#)(SecurityCertificateIssuer, String, Int32, DateTime, Decimal, Decimal, Decimal, Decimal, Decimal, String, String, String)

Constructor.

## Declaration

```
public ReceiptLine(SecurityCertificateIssuer certificateIssuer, string cashRegisterUniqueId, int fiscalDocumentNr, DateTime bookDate, decimal revenueNormalVat, decimal revenueReducedVat1, decimal revenueReducedVat2, decimal revenueNoVat, decimal revenueSpecialVat, string revenueEncrypted, string certificate, string previousSignature)
```

## Parameters

| TYPE                                      | NAME                 | DESCRIPTION |
|-------------------------------------------|----------------------|-------------|
| <a href="#">SecurityCertificateIssuer</a> | certificatelssuer    |             |
| System.String                             | cashRegisterUniqueId |             |
| System.Int32                              | fiscalDocumentNr     |             |
| System.DateTime                           | bookDate             |             |
| System.Decimal                            | revenueNormalVat     |             |
| System.Decimal                            | revenueReducedVat1   |             |
| System.Decimal                            | revenueReducedVat2   |             |
| System.Decimal                            | revenueNoVat         |             |



| TYPE           | NAME              | DESCRIPTION |
|----------------|-------------------|-------------|
| System.Decimal | revenueSpecialVat |             |
| System.String  | revenueEncrypted  |             |
| System.String  | certificate       |             |
| System.String  | previousSignature |             |

### ReceiptLine(String, Int32, DateTime, Decimal, Decimal, Decimal, Decimal, Decimal, String, String)

#### Declaration

```
public ReceiptLine(string cashRegisterUniqueId, int fiscalDocumentNr, DateTime bookDate, decimal revenueNormalVat, decimal revenueReducedVat1, decimal revenueReducedVat2, decimal revenueNoVat, decimal revenueSpecialVat, string revenueEncrypted, string previousSignature)
```

#### Parameters

| TYPE            | NAME                 | DESCRIPTION |
|-----------------|----------------------|-------------|
| System.String   | cashRegisterUniqueld |             |
| System.Int32    | fiscalDocumentNr     |             |
| System.DateTime | bookDate             |             |
| System.Decimal  | revenueNormalVat     |             |
| System.Decimal  | revenueReducedVat1   |             |
| System.Decimal  | revenueReducedVat2   |             |
| System.Decimal  | revenueNoVat         |             |
| System.Decimal  | revenueSpecialVat    |             |
| System.String   | revenueEncrypted     |             |
| System.String   | previousSignature    |             |

### ReceiptLine(String, String, Boolean)

#### Declaration

```
public ReceiptLine(string evaluationString, string receiptFlag, bool ownReceiptNr = true)
```

#### Parameters

| TYPE          | NAME             | DESCRIPTION |
|---------------|------------------|-------------|
| System.String | evaluationString |             |
| System.String | receiptFlag      |             |

| TYPE           | NAME         | DESCRIPTION |
|----------------|--------------|-------------|
| System.Boolean | ownReceiptNr |             |

## Properties

### BookDate

Returns the book date of the last receipt line.

#### Declaration

```
public DateTime BookDate { get; }
```

#### Property Value

| TYPE            | DESCRIPTION |
|-----------------|-------------|
| System.DateTime |             |

### CashRegisterId

Returns the cash register id for this receipt line.

#### Declaration

```
public string CashRegisterId { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Certificate

#### Declaration

```
public string Certificate { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### CertificateIssuer

#### Declaration

```
public string CertificateIssuer { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### FiscalDocumentNr

Returns the fiscal document nr of the receipt line.

#### Declaration

```
public int FiscalDocumentNr { get; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

#### FiscalDocumentNrString

Returns the fiscal document number in string representation (as stored in the dep).

#### Declaration

```
public string FiscalDocumentNrString { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### QrCode

Returns the qr code representation of the receipt line.

#### Declaration

```
public string QrCode { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### ReceiptFlag

#### Declaration

```
public string ReceiptFlag { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### RevenueEncrypted

Returns the encrypted revenue (base64 encoded as well).

#### Declaration

```
public string RevenueEncrypted { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Signature

Returns the signature for this receipt line.

Declaration

```
public string Signature { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## SignatureChainValue

Returns the sha256 base64 (first 8 bytes) encoded hash value for the RetailForce.Fiscalisation.Implementation.Austria.Dep.ReceiptLine.ToCompactDepString

Declaration

```
public string SignatureChainValue { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## SignatureValid

Returns true if the signature of this receipt line is valid (signed by signature device); otherwise false.

Declaration

```
public bool SignatureValid { get; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## Methods

### ComputeJwsPayloadHash()

Computes the 256 bit jws payload hash for signing.

Declaration

```
public byte[] ComputeJwsPayloadHash()
```

Returns

| TYPE          | DESCRIPTION                                                |
|---------------|------------------------------------------------------------|
| System.Byte[] | A byte array representing the 256 bit hash of jws payload. |

### Equals(ReceiptLine)

Returns whether the other [ReceiptLine](#) equals this one.

Declaration

```
public bool Equals(ReceiptLine other)
```

Parameters

| TYPE                        | NAME  | DESCRIPTION                             |
|-----------------------------|-------|-----------------------------------------|
| <a href="#">ReceiptLine</a> | other | The other <a href="#">ReceiptLine</a> . |

Returns

| TYPE           | DESCRIPTION                                                                                              |
|----------------|----------------------------------------------------------------------------------------------------------|
| System.Boolean | True if the other <a href="#">ReceiptLine</a> equals this <a href="#">ReceiptLine</a> ; otherwise false. |

### Equals(Object)

Returns whether the other [ReceiptLine](#) equals this one.

Declaration

```
public override bool Equals(object obj)
```

Parameters

| TYPE          | NAME | DESCRIPTION                             |
|---------------|------|-----------------------------------------|
| System.Object | obj  | The other <a href="#">ReceiptLine</a> . |

Returns

| TYPE           | DESCRIPTION                                                                                              |
|----------------|----------------------------------------------------------------------------------------------------------|
| System.Boolean | True if the other <a href="#">ReceiptLine</a> equals this <a href="#">ReceiptLine</a> ; otherwise false. |

Overrides

System.Object.Equals(System.Object)

### GetChainValue(String)

Returns the sha256 base64 (first 8 bytes) encoded hash value for `valueToChain`.

Declaration

```
public static string GetChainValue(string valueToChain)
```

#### Parameters

| TYPE          | NAME         | DESCRIPTION        |
|---------------|--------------|--------------------|
| System.String | valueToChain | The value to hash. |

#### Returns

| TYPE          | DESCRIPTION                                                                          |
|---------------|--------------------------------------------------------------------------------------|
| System.String | The sha256 base64 (first 8 bytes) encoded hash value for <code>valueToChain</code> . |

### GetFiscalDocumentNrAsString(Int32)

#### Declaration

```
public static string GetFiscalDocumentNrAsString(int fiscalDocumentNr)
```

#### Parameters

| TYPE         | NAME             | DESCRIPTION |
|--------------|------------------|-------------|
| System.Int32 | fiscalDocumentNr |             |

#### Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### GetFiscalDocumentNrFromString(String)

#### Declaration

```
public static int GetFiscalDocumentNrFromString(string fiscalDocumentNrString)
```

#### Parameters

| TYPE          | NAME                   | DESCRIPTION |
|---------------|------------------------|-------------|
| System.String | fiscalDocumentNrString |             |

#### Returns

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### GetRevenue(String, String, out String)

Returns the revenue (revenue sum calculation) from the given encrypted revenue.

#### Declaration

```
public decimal GetRevenue(string revenueEncrypted, string aesKey, out string message)
```

#### Parameters

| TYPE          | NAME             | DESCRIPTION                                                                                                                                                 |
|---------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.String | revenueEncrypted | The encrypted and base64 encoded revenue.                                                                                                                   |
| System.String | aesKey           | A string representing the aes key for decryption.                                                                                                           |
| System.String | message          | A string representing the message ("TRA" for Training, "STO" vor voided documents) of the revenue sum calculation. In this case no revenue is returned (0). |

#### Returns

| TYPE           | DESCRIPTION                                                                                  |
|----------------|----------------------------------------------------------------------------------------------|
| System.Decimal | A decimal representing the revenue (revenue sum calculation) of the given encrypted revenue. |

#### GetRevenue(String, out String)

Returns the revenue (revenue sum calculation) from the encrypted revenue of this line.

#### Declaration

```
public decimal GetRevenue(string aesKey, out string message)
```

#### Parameters

| TYPE          | NAME    | DESCRIPTION                                                                                                        |
|---------------|---------|--------------------------------------------------------------------------------------------------------------------|
| System.String | aesKey  | A string representing the aes key for decryption.                                                                  |
| System.String | message | A string representing the message ("TRA" for Training, "STO" vor voided documents) of the revenue sum calculation. |

#### Returns

| TYPE           | DESCRIPTION                                                                        |
|----------------|------------------------------------------------------------------------------------|
| System.Decimal | A decimal representing the revenue (revenue sum calculation) of this receipt line. |

#### ToJwsPayload()

Returns the jws payload for signing of the receipt string.

#### Declaration

```
public string ToJwsPayload()
```

#### Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## ToString()

Returns the string representation of this object.

Declaration

```
public override string ToString()
```

Returns

| TYPE          | DESCRIPTION                                                                       |
|---------------|-----------------------------------------------------------------------------------|
| System.String | The string representation of this object, in this case the rksv dep receipt line. |

Overrides

System.Object.ToString()

## Operators

### Equality(ReceiptLine, ReceiptLine)

Declaration

```
public static bool operator ==(ReceiptLine receiptLine1, ReceiptLine receiptLine2)
```

Parameters

| TYPE                        | NAME         | DESCRIPTION |
|-----------------------------|--------------|-------------|
| <a href="#">ReceiptLine</a> | receiptLine1 |             |
| <a href="#">ReceiptLine</a> | receiptLine2 |             |

Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

### Inequality(ReceiptLine, ReceiptLine)

Declaration

```
public static bool operator !=(ReceiptLine receiptLine1, ReceiptLine receiptLine2)
```

Parameters

| TYPE                        | NAME         | DESCRIPTION |
|-----------------------------|--------------|-------------|
| <a href="#">ReceiptLine</a> | receiptLine1 |             |
| <a href="#">ReceiptLine</a> | receiptLine2 |             |

Returns



| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

### Implements

System.IEquatable<T>

# Class RevenueEncryption

Class library to encrypt the current revenue for the receipt line of the dep (= "Umsatzzähler Datenerfassungsprotokoll")

## Inheritance

System.Object  
RevenueEncryption

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Dep](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class RevenueEncryption
```

## Methods

**Decrypt(Byte[], String, String, Byte[])**

Decryptes the revenue according to the regulations in austrian law (RKSv).

## Declaration

```
public static long Decrypt(byte[] data, string cashRegisterId, string receiptNumber, byte[] aesKey)
```

## Parameters

| TYPE          | NAME           | DESCRIPTION                                      |
|---------------|----------------|--------------------------------------------------|
| System.Byte[] | data           | A byte array representing the encrypted revenue. |
| System.String | cashRegisterId | The identification of the cash register.         |
| System.String | receiptNumber  | The receipt number of the current receipt.       |
| System.Byte[] | aesKey         | The aes key for this cash register.              |

## Returns

| TYPE         | DESCRIPTION                                   |
|--------------|-----------------------------------------------|
| System.Int64 | The revenue in euro cents (23.45 EUR = 2345). |

**DecryptBase64(String, String, String, Byte[])**

Decryptes the revenue from base64 string according to the regulations in austrian law (RKS SV).

Declaration

```
public static long DecryptBase64(string data, string cashRegisterId, string receiptNumber, byte[] aesKey)
```

Parameters

| TYPE          | NAME           | DESCRIPTION                                                          |
|---------------|----------------|----------------------------------------------------------------------|
| System.String | data           | A string representing the encrypted revenue a base64 encoded string. |
| System.String | cashRegisterId | The identification of the cash register.                             |
| System.String | receiptNumber  | The receipt number of the current receipt.                           |
| System.Byte[] | aesKey         | The aes key for this cash register.                                  |

Returns

| TYPE         | DESCRIPTION                                   |
|--------------|-----------------------------------------------|
| System.Int64 | The revenue in euro cents (23.45 EUR = 2345). |

**Encrypt(Int64, String, String, Byte[])**

Encryptes the revenue according to the regulations in austrian law (RKS SV).

Declaration

```
public static byte[] Encrypt(long revenue, string cashRegisterId, string receiptNumber, byte[] aesKey)
```

Parameters

| TYPE          | NAME           | DESCRIPTION                                   |
|---------------|----------------|-----------------------------------------------|
| System.Int64  | revenue        | The revenue in euro cents (23.45 EUR = 2345). |
| System.String | cashRegisterId | The identification of the cash register.      |
| System.String | receiptNumber  | The receipt number of the current receipt.    |
| System.Byte[] | aesKey         | The aes key for this cash register.           |

Returns

| TYPE          | DESCRIPTION                                |
|---------------|--------------------------------------------|
| System.Byte[] | A byte representing the encrypted revenue. |

### EncryptBase64(Int64, String, String, Byte[])

Encryptes the revenue according to the regulations in austrian law (RKSv) in base64 encoding.

Declaration

```
public static string EncryptBase64(long revenue, string cashRegisterId, string receiptNumber, byte[] aesKey)
```

Parameters

| TYPE          | NAME           | DESCRIPTION                                   |
|---------------|----------------|-----------------------------------------------|
| System.Int64  | revenue        | The revenue in euro cents (23.45 EUR = 2345). |
| System.String | cashRegisterId | The identification of the cash register.      |
| System.String | receiptNumber  | The receipt number of the current receipt.    |
| System.Byte[] | aesKey         | The aes key for this cash register.           |

Returns

| TYPE          | DESCRIPTION                                           |
|---------------|-------------------------------------------------------|
| System.String | A string representing the encrypted revenue (base64). |

### FromBase64Key(String)

Returns a 256 bytes aes symmetric key for revenue encryption from string.

Declaration

```
public static byte[] FromBase64Key(string base64Key)
```

Parameters

| TYPE          | NAME      | DESCRIPTION                                                   |
|---------------|-----------|---------------------------------------------------------------|
| System.String | base64Key | The string representing the aes key in base64 representation. |

Returns

| TYPE | DESCRIPTION |
|------|-------------|
|      |             |

| TYPE          | DESCRIPTION                             |
|---------------|-----------------------------------------|
| System.Byte[] | A byte array containing the base64 key. |

### GenerateBase64Key()

Generates a 256 bytes aes symmetric key for revenue encryption. (Aes Key for fiscalisation).

Declaration

```
public static string GenerateBase64Key()
```

Returns

| TYPE          | DESCRIPTION                       |
|---------------|-----------------------------------|
| System.String | The key as base64 encoded string. |

### GenerateKey()

Generates a 256 bytes aes symmetric key for revenue encryption.

Declaration

```
public static byte[] GenerateKey()
```

Returns

| TYPE          | DESCRIPTION            |
|---------------|------------------------|
| System.Byte[] | The key as byte array. |

# Namespace

## RetailForce.Fiscalisation.Implementation.Austria.FonService

### Classes

#### [FonServiceClient](#)

Client for "Finanzonline Österreich"

#### [FonStatus](#)

Represents the status of the client at fon (Finanzoline).

### Enums

#### [CashRegisterDropoutReason](#)

#### [RequestType](#)

The type of the service request.

#### [SecurityCertificateDropoutReason](#)

Represents the reason because of a security certificate is dropped out.

#### [SecurityCertificateIssuer](#)

Represents the issuer of the certificate.

#### [SecurityCertificateType](#)

Represents the type of the security certificate.

# Enum CashRegisterDropoutReason

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.FonService](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum CashRegisterDropoutReason
```

Fields

| NAME          | DESCRIPTION |
|---------------|-------------|
| NotWorking    |             |
| Others        |             |
| PlanedDropout |             |
| Stolen        |             |
| Unrepairable  |             |

# Class FonServiceClient

Client for "Finanzonline Österreich"

## Inheritance

System.Object  
FonServiceClient

## Implements

System.IDisposable

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.FonService](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class FonServiceClient : IDisposable
```

## Remarks

The credentials here used are credentials for the "Registrierkassen-Benutzer" for Finanzonline.

## Constructors

FonServiceClient(Guid, CloudConnector, String, String, Boolean)

Constructor.

## Declaration

```
public FonServiceClient(Guid uniqueClientId, CloudConnector cloudConnector, string cloudApiKey = "", string cloudApiSecret = "", bool isTest = false)
```

## Parameters

| TYPE                           | NAME           | DESCRIPTION                                                                                           |
|--------------------------------|----------------|-------------------------------------------------------------------------------------------------------|
| System.Guid                    | uniqueClientId | The clientId of the connection.                                                                       |
| <a href="#">CloudConnector</a> | cloudConnector | The connector to the retailforce cloud system.                                                        |
| System.String                  | cloudApiKey    | The api key to access the retailforce cloud system. Optional, only needed if fon access is wanted.    |
| System.String                  | cloudApiSecret | The api secret to access the retailforce cloud system. Optional, only needed if fon access is wanted. |



| TYPE           | NAME   | DESCRIPTION                                                                         |
|----------------|--------|-------------------------------------------------------------------------------------|
| System.Boolean | isTest | True if the request should be done in test mode; otherwise false. Default is false. |

#### Remarks

Credentials are stored in the cloud. To check if connection can be done, call property [AccessAllowed](#).

If parameter `cloudApiKey` or `cloudApiSecret` are not set, fon access is disabled.

#### Properties

##### AccessAllowed

Returns whether fon access is possible or not.

#### Declaration

```
public bool AccessAllowed { get; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

#### Remarks

To access fon depends on following items:

- fon credentials are stored correct in the cloud
- client has fon access license

#### Methods

##### Authenticate()

Authentication to cloud connector (stored).

#### Declaration

```
public void Authenticate()
```

##### CheckDocumentValidation(String)

Does document validation on fon service.

#### Declaration

```
public BoolResponse CheckDocumentValidation(string depDocument)
```

#### Parameters

| TYPE          | NAME        | DESCRIPTION                                                    |
|---------------|-------------|----------------------------------------------------------------|
| System.String | depDocument | A string representing the dep record of the document to check. |

#### Returns

| TYPE                         | DESCRIPTION                                                                                               |
|------------------------------|-----------------------------------------------------------------------------------------------------------|
| <a href="#">BoolResponse</a> | True if validation was successful; otherwise false. Also message from service (if applicable) is returned |

#### Exceptions

| TYPE                              | CONDITION                                                                    |
|-----------------------------------|------------------------------------------------------------------------------|
| <a href="#">LicenseException</a>  | Thrown if given client has not fon connection license.                       |
| System.Security.SecurityException | Thrown if nobody is authenticated to the service.                            |
| System.ArgumentNullException      | Thrown if parameter <code>depDocument</code> is set to null or empty string. |

#### ClearCloudFonCache()

Clears the cloud fon cache.

#### Declaration

```
public BoolResponse ClearCloudFonCache()
```

#### Returns

| TYPE                         | DESCRIPTION                                       |
|------------------------------|---------------------------------------------------|
| <a href="#">BoolResponse</a> | True if deletion was successful; otherwise false. |

#### Dispose()

#### Declaration

```
public void Dispose()
```

#### GetCashRegisterActivated(String)

Checks the cash register state with the FON Service.

#### Declaration

```
public BoolResponse GetCashRegisterActivated(string cashRegisterId)
```

#### Parameters

| TYPE          | NAME           | DESCRIPTION                               |
|---------------|----------------|-------------------------------------------|
| System.String | cashRegisterId | The client for which the request is done. |

#### Returns

| TYPE                         | DESCRIPTION                                                                                                                  |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">BoolResponse</a> | True if the cash register is "IN BETRIEB"; otherwise false. Also a message is returned by the function from the fon service. |

#### Exceptions

| TYPE                              | CONDITION                                                                       |
|-----------------------------------|---------------------------------------------------------------------------------|
| <a href="#">LicenseException</a>  | Thrown if given client has not fon connection license.                          |
| System.Security.SecurityException | Thrown if nobody is authenticated to the service.                               |
| System.ArgumentNullException      | Thrown if parameter <code>cashRegisterId</code> is set to null or empty string. |

### GetSecurityCertificateActivated(Int64)

Returns true if the given security certificate is activated (IN\_BETRIEB) at fon (Finanzonline). You have to be authenticated.

#### Declaration

```
public BoolResponse GetSecurityCertificateActivated(long securityCertificate)
```

#### Parameters

| TYPE         | NAME                | DESCRIPTION                                              |
|--------------|---------------------|----------------------------------------------------------|
| System.Int64 | securityCertificate | The certificate id of the security certificate to check. |

#### Returns

| TYPE                         | DESCRIPTION                                                                                                           |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <a href="#">BoolResponse</a> | True if the given security certificate is activated (IN_BETRIEB) at fon (Finanzonline). You have to be authenticated. |

#### Exceptions

| TYPE                              | CONDITION                                                         |
|-----------------------------------|-------------------------------------------------------------------|
| <a href="#">LicenseException</a>  | Thrown if given client has not fon connection license.            |
| System.Security.SecurityException | Thrown if nobody is authenticated to the service.                 |
| System.ArgumentNullException      | thrown if parameter <code>securityCertificate</code> is set to 0. |

### RegisterCashRegister(String, String)

Register of cashregister system.

## Declaration

```
public ResultResponse RegisterCashRegister(string cashRegisterId, string aesKey)
```

## Parameters

| TYPE          | NAME           | DESCRIPTION                                                                          |
|---------------|----------------|--------------------------------------------------------------------------------------|
| System.String | cashRegisterId | A string representing the unique cashregister id.                                    |
| System.String | aesKey         | A string representing the base 64 encoded aes key security key of the cash register. |

## Returns

| TYPE                           | DESCRIPTION                                                 |
|--------------------------------|-------------------------------------------------------------|
| <a href="#">ResultResponse</a> | The result code and message according to fon documentation. |

## Exceptions

| TYPE                              | CONDITION                                                                                                        |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------|
| <a href="#">LicenseException</a>  | Thrown if given client has not fon connection license.                                                           |
| System.Security.SecurityException | Thrown if nobody is authenticated to the service.                                                                |
| System.ArgumentNullException      | Thrown if parameter <code>cashRegisterId</code> or parameter <code>aesKey</code> is set to null or empty string. |

## RegisterSecurityCertificate(Int64, SecurityCertificateType, SecurityCertificateIssuer)

Register a security certificate at fon (Finanzonline). You have to be authenticated.

## Declaration

```
public ResultResponse RegisterSecurityCertificate(long securityCertificate, SecurityCertificateType certificateType, SecurityCertificateIssuer issuer)
```

## Parameters

| TYPE                                      | NAME                | DESCRIPTION                    |
|-------------------------------------------|---------------------|--------------------------------|
| System.Int64                              | securityCertificate | The certificate to register.   |
| <a href="#">SecurityCertificateType</a>   | certificateType     | The type of the certificate.   |
| <a href="#">SecurityCertificateIssuer</a> | issuer              | The issuer of the certificate. |

## Returns

| TYPE                           | DESCRIPTION                                                 |
|--------------------------------|-------------------------------------------------------------|
| <a href="#">ResultResponse</a> | The result code and message according to fon documentation. |

## Exceptions

| TYPE                              | CONDITION                                                         |
|-----------------------------------|-------------------------------------------------------------------|
| <a href="#">LicenseException</a>  | Thrown if given client has not fon connection license.            |
| System.Security.SecurityException | Thrown if nobody is authenticated to the service.                 |
| System.ArgumentNullException      | thrown if parameter <code>securityCertificate</code> is set to 0. |

## SendInitializedMessage(String, String, String)

Sends the initialization message to the contact of the terminal.

### Declaration

```
public void SendInitializedMessage(string terminalNumber, string storeNumber, string storeName)
```

### Parameters

| TYPE          | NAME           | DESCRIPTION          |
|---------------|----------------|----------------------|
| System.String | terminalNumber | The terminal number. |
| System.String | storeNumber    | The store number.    |
| System.String | storeName      | The store name.      |

## SignOut()

Signout for cloud connector.

### Declaration

```
public void SignOut()
```

### Remarks

Removes the server cache before signing out.

## UnregisterCashRegister(String, CashRegisterDropoutReason)

Unregister cash register at fon service.

### Declaration

```
public ResultResponse UnregisterCashRegister(string cashRegisterId, CashRegisterDropoutReason reason)
```

#### Parameters

| TYPE                                      | NAME           | DESCRIPTION                                                                             |
|-------------------------------------------|----------------|-----------------------------------------------------------------------------------------|
| System.String                             | cashRegisterId | The client for which the request is done.                                               |
| <a href="#">CashRegisterDropoutReason</a> | reason         | Reason for cashregister dropout. Attention: just permanent dropout reasons are allowed. |

#### Returns

| TYPE                           | DESCRIPTION                                                 |
|--------------------------------|-------------------------------------------------------------|
| <a href="#">ResultResponse</a> | The result code and message according to fon documentation. |

#### Exceptions

| TYPE                              | CONDITION                                                                       |
|-----------------------------------|---------------------------------------------------------------------------------|
| <a href="#">LicenseException</a>  | Thrown if given client has not fon connection license.                          |
| System.Security.SecurityException | Thrown if nobody is authenticated to the service.                               |
| System.ArgumentNullException      | Thrown if parameter <code>cashRegisterId</code> is set to null or empty string. |

`UnregisterSecurityCertificate(Int64, SecurityCertificateDropoutReason, Nullable<DateTime>)`

Unregister a security certificate at fon (Finanzonline). You have to be authenticated.

#### Declaration

```
public ResultResponse UnregisterSecurityCertificate(long securityCertificate, SecurityCertificateDropoutReason reason, DateTime? fromDate = default(DateTime? ))
```

#### Parameters

| TYPE                                             | NAME                | DESCRIPTION                                                                                   |
|--------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------------|
| System.Int64                                     | securityCertificate | The certificate to unregister.                                                                |
| <a href="#">SecurityCertificateDropoutReason</a> | reason              | The reason of the dropout.                                                                    |
| System.Nullable<System.DateTime>                 | fromDate            | The date of the dropout, has to be set at reason = [1] Stolen, [2] NotWorking, [99] = Others. |

## Returns

| TYPE                           | DESCRIPTION                                                 |
|--------------------------------|-------------------------------------------------------------|
| <a href="#">ResultResponse</a> | The result code and message according to fon documentation. |

## Exceptions

| TYPE                              | CONDITION                                                         |
|-----------------------------------|-------------------------------------------------------------------|
| <a href="#">LicenseException</a>  | Thrown if given client has not fon connection license.            |
| System.Security.SecurityException | Thrown if nobody is authenticated to the service.                 |
| System.ArgumentNullException      | thrown if parameter <code>securityCertificate</code> is set to 0. |

## Implements

System.IDisposable

# Class FonStatus

Represents the status of the client at fon (Finanzoline).

## Inheritance

System.Object

FonStatus

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.FonService](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class FonStatus
```

## Properties

### FiscalClientRegistered

#### Declaration

```
public bool FiscalClientRegistered { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

### LastDocumentValidation

#### Declaration

```
public bool LastDocumentValidation { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

### StartDocumentValidation

#### Declaration

```
public bool StartDocumentValidation { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |



# Enum RequestType

The type of the service request.

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.FonService](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum RequestType
```

## Fields

| NAME                          | DESCRIPTION |
|-------------------------------|-------------|
| RegisterCashRegister          |             |
| RegisterSecurityCertificate   |             |
| SetCashRegisterState          |             |
| StateSecurityCertificateState |             |
| UnregisterCashRegister        |             |
| UnregisterSecurityCertificate |             |
| Validation                    |             |

# Enum SecurityCertificateDropoutReason

Represents the reason because of a security certificate is dropped out.

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.FonService](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum SecurityCertificateDropoutReason
```

## Fields

| NAME          | DESCRIPTION |
|---------------|-------------|
| NotWorking    |             |
| Others        |             |
| PlanedDropout |             |
| Stolen        |             |
| Unrepairable  |             |

# Enum SecurityCertificateIssuer

Represents the issuer of the certificate.

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.FonService](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum SecurityCertificateIssuer
```

## Fields

| NAME        | DESCRIPTION |
|-------------|-------------|
| ATrust      |             |
| GlobalTrust |             |
| PrimeSign   |             |
| Test        |             |
| Unkown      |             |

# Enum SecurityCertificateType

Represents the type of the security certificate.

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.FonService](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum SecurityCertificateType
```

## Fields

| NAME               | DESCRIPTION |
|--------------------|-------------|
| Hsm                |             |
| SecurityCard       |             |
| ServiceProviderHsm |             |

# Namespace

## RetailForce.Fiscalisation.Implementation.Austria.Signing

### Classes

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Represents a certificate and its enclosed data.

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Abstract base class for hsm signing.

#### [SignBase](#)

Basic class for all signing modules (hsm, smartcards)

#### [SmartCardBase](#)

Basic class for all attached Smartcards (for signing).

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# Class Certificate

Represents a certificate and its enclosed data.

## Inheritance

System.Object

Certificate

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Signing](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Certificate
```

## Properties

### Algorithm

The used algorithm.

#### Declaration

```
public virtual string Algorithm { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### CertificateAuthorities

Certificate authorities for this certificate (most of time empty array)

#### Declaration

```
public virtual string[] CertificateAuthorities { get; set; }
```

#### Property Value

| TYPE            | DESCRIPTION |
|-----------------|-------------|
| System.String[] |             |

### CertificateSerial

The serial of the certificate.

#### Declaration

```
public virtual string CertificateSerial { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### CertificateSerialHex

The serial of the certificate as hexadecimal representation.

#### Declaration

```
public virtual string CertificateSerialHex { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### SignatureCertificate

The certificate itself.

#### Declaration

```
public virtual string SignatureCertificate { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class HsmSignBase

Abstract base class for hsm signing.

## Inheritance

System.Object

[SignBase](#)

HsmSignBase

[ATrustHsmLocal](#)

## Inherited Members

[SignBase.Logger](#)

[SignBase.CertificateType](#)

[SignBase.Sign\(ReceiptLine\)](#)

[SignBase.GetCertificate\(\)](#)

[SignBase.GetCertificateAuthority\(\)](#)

[SignBase.SignExecute\(ReceiptLine\)](#)

[SignBase.GetCertificateIssuerString\(SecurityCertificateIssuer\)](#)

[SignBase.GetCertificateIssuerFromString\(String\)](#)

[SignBase.GetSignDeviceDriverInfos\(\)](#)

[SignBase.GetSignDeviceDriverInfos\(SignDeviceDriver\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Signing](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public abstract class HsmSignBase : SignBase
```

## Constructors

[HsmSignBase\(ILogger, String\)](#)

Constructor.

## Declaration

```
public HsmSignBase(ILogger logger, string baseUrl)
```

## Parameters

| TYPE                                 | NAME    | DESCRIPTION                                                |
|--------------------------------------|---------|------------------------------------------------------------|
| Microsoft.Extensions.Logging.ILogger | logger  | The logger for the sign device.                            |
| System.String                        | baseUrl | A string representing the base url for the hsm connection. |

## Exceptions



| TYPE                         | CONDITION                                                                                                      |
|------------------------------|----------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>baseUr1</code> is set to null or empty string or parameter <code>logger</code> is set to null. |
| System.ArgumentException     | Thrown if <code>baseUr1</code> is not a valid http or https url.                                               |

## Fields

### baseHsmUrl

#### Declaration

```
protected string baseHsmUrl
```

#### Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Methods

### GetWebResponse(HttpWebRequest)

Returns the response from the webrequest as string.

#### Declaration

```
protected virtual string GetWebResponse(HttpWebRequest webRequest)
```

#### Parameters

| TYPE                      | NAME       | DESCRIPTION                                    |
|---------------------------|------------|------------------------------------------------|
| System.Net.HttpWebRequest | webRequest | The webrequest object to request the response. |

#### Returns

| TYPE          | DESCRIPTION             |
|---------------|-------------------------|
| System.String | The response as string. |

#### Remarks

This method will not return a response if a System.Net.WebException occurs (will be logged).

### GetWebResponseSerialized<TType>(HttpWebRequest)

Returns the response from the webservice as object (with json deserializing)

#### Declaration

```
protected virtual TType GetWebResponseSerialized<TType>(HttpWebRequest webRequest)
```

#### Parameters

| TYPE                      | NAME       | DESCRIPTION                                    |
|---------------------------|------------|------------------------------------------------|
| System.Net.HttpWebRequest | webRequest | The webrequest object to request the response. |

#### Returns

| TYPE  | DESCRIPTION                                                     |
|-------|-----------------------------------------------------------------|
| TType | An object of type <code>TType</code> representing the response. |

#### Type Parameters

| NAME  | DESCRIPTION      |
|-------|------------------|
| TType | The return type. |

### SetRequestBody(HttpWebRequest, String)

Sets the body for a http request.

#### Declaration

```
protected virtual void SetRequestBody(HttpWebRequest webRequest, string body)
```

#### Parameters

| TYPE                      | NAME       | DESCRIPTION                      |
|---------------------------|------------|----------------------------------|
| System.Net.HttpWebRequest | webRequest | The request to set the body for. |
| System.String             | body       | The body for the request.        |

### ValidateUrl(String)

Checks if the given uri is a valid http or https uri.

#### Declaration

```
protected bool ValidateUrl(string url)
```

#### Parameters

| TYPE          | NAME | DESCRIPTION       |
|---------------|------|-------------------|
| System.String | url  | The url to check. |

#### Returns

| TYPE | DESCRIPTION |
|------|-------------|
|      |             |

| TYPE           | DESCRIPTION                                      |
|----------------|--------------------------------------------------|
| System.Boolean | True if the url is a valid url; otherwise false. |

# Interface ISmartCard

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Signing](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public interface ISmartCard
```

## Methods

### prepareSignature()

Perpares the smart card for signing data

#### Declaration

```
void prepareSignature()
```

#### Remarks

If you want to sign multiple hashes one after another, you only have to call this function once to set the necessary parameter

### readCertificate()

Gets the certificate which belongs to the cash register smartcard

#### Declaration

```
X509Certificate2 readCertificate()
```

#### Returns

| TYPE                                                           | DESCRIPTION                                 |
|----------------------------------------------------------------|---------------------------------------------|
| System.Security.Cryptography.X509Certificates.X509Certificate2 | Returns the certificate as X509Certificate2 |

#### Remarks

Reading the whole certificate is slow. If you need only the serial use `getCertificateSerialDecimal()` or `getCertificateSerialHex()`

### readCertificateSerialDecimal()

Gets the serial of the certificate on the cash register smartcard

#### Declaration

```
string readCertificateSerialDecimal()
```

#### Returns

| TYPE          | DESCRIPTION                   |
|---------------|-------------------------------|
| System.String | Returns the serial in decimal |

### readCertificateSerialHex()

Gets the serial of the certificate on the cash register smartcard

#### Declaration

```
string readCertificateSerialHex()
```

Returns

| TYPE          | DESCRIPTION                       |
|---------------|-----------------------------------|
| System.String | Returns the serial in hexadecimal |

**readCIN()**

Reads the CIN of the smart card

Declaration

```
string readCIN()
```

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

**sign(String, Byte[])**

Signs the given hash.

Declaration

```
byte[] sign(string pin, byte[] SHA256HASH)
```

Parameters

| TYPE          | NAME       | DESCRIPTION |
|---------------|------------|-------------|
| System.String | pin        |             |
| System.Byte[] | SHA256HASH |             |

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Byte[] |             |

Remarks

The function is slower than `signWithoutSelection()` but save, as all required parameter are set before the signature

**signWithoutSelection(String, Byte[])**

Signs the given hash. Make sure that `prepareSignature()` is called before.

Declaration

```
byte[] signWithoutSelection(string pin, byte[] SHA256HASH)
```

Parameters

| TYPE          | NAME       | DESCRIPTION |
|---------------|------------|-------------|
| System.String | pin        |             |
| System.Byte[] | SHA256HASH |             |

#### Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Byte[] |             |

#### Remarks

If you want to sign multiple hashes one after another, you have to call the prepareSignature() function only once to set the necessary parameter

**verify(Byte[], Byte[])**

Verifies that the given signature is correct for the given signed data

#### Declaration

```
bool verify(byte[] signature, byte[] signedData)
```

#### Parameters

| TYPE          | NAME       | DESCRIPTION |
|---------------|------------|-------------|
| System.Byte[] | signature  |             |
| System.Byte[] | signedData |             |

#### Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

# Class SignBase

Basic class for all signing modules (hsm, smartcards)

## Inheritance

System.Object

SignBase

[HsmSignBase](#)

[SmartCardBase](#)

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Signing](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public abstract class SignBase
```

## Constructors

### SignBase(ILogger)

Constructor.

## Declaration

```
public SignBase(ILogger logger)
```

## Parameters

| TYPE                                 | NAME   | DESCRIPTION                     |
|--------------------------------------|--------|---------------------------------|
| Microsoft.Extensions.Logging.ILogger | logger | The logger for the sign device. |

## Exceptions

| TYPE                         | CONDITION                                               |
|------------------------------|---------------------------------------------------------|
| System.ArgumentNullException | Thrown if paramater <code>logger</code> is set to null. |

## Fields

### Logger

## Declaration

```
protected ILogger Logger
```

## Field Value

| TYPE                                 | DESCRIPTION |
|--------------------------------------|-------------|
| Microsoft.Extensions.Logging.ILogger |             |

## Properties

### CertificateType

Returns the type of the certificate of this driver.

#### Declaration

```
public abstract SecurityCertificateType CertificateType { get; }
```

#### Property Value

| TYPE                                    | DESCRIPTION |
|-----------------------------------------|-------------|
| <a href="#">SecurityCertificateType</a> |             |

## Methods

### GetCertificate()

Gets the certificate from the signature unit.

#### Declaration

```
public abstract Certificate GetCertificate()
```

#### Returns

| TYPE                        | DESCRIPTION                            |
|-----------------------------|----------------------------------------|
| <a href="#">Certificate</a> | The certificate of the signature unit. |

### GetCertificateAuthority()

Gets the certificate issuer from the signature unit.

#### Declaration

```
public abstract SecurityCertificateIssuer GetCertificateAuthority()
```

#### Returns

| TYPE                                      | DESCRIPTION                                     |
|-------------------------------------------|-------------------------------------------------|
| <a href="#">SecurityCertificateIssuer</a> | The certificate issuer from the signature unit. |

### GetCertificateIssuerFromString(String)

Returns the certificate issuer from the given string. Allowed input is: AT1

#### Declaration

```
public static SecurityCertificateIssuer GetCertificateIssuerFromString(string certificateIssuer)
```



#### Parameters

| TYPE          | NAME              | DESCRIPTION                                         |
|---------------|-------------------|-----------------------------------------------------|
| System.String | certificatelssuer | A string representing the issuer string to convert. |

#### Returns

| TYPE                                      | DESCRIPTION                                 |
|-------------------------------------------|---------------------------------------------|
| <a href="#">SecurityCertificateIssuer</a> | A object representing the converted issuer. |

#### Exceptions

| TYPE                           | CONDITION                                                                |
|--------------------------------|--------------------------------------------------------------------------|
| System.ArgumentNullException   | Thrown if <code>certificateIssuer</code> is set to null or empty string. |
| System.NotImplementedException | Thrown if a string is sent which cannot be interpreted.                  |

### GetCertificateIssuerString(SecurityCertificateIssuer)

Returns the certificate issuer string (used for signing and receipt line).

#### Declaration

```
public static string GetCertificateIssuerString(SecurityCertificateIssuer issuer)
```

#### Parameters

| TYPE                                      | NAME   | DESCRIPTION                        |
|-------------------------------------------|--------|------------------------------------|
| <a href="#">SecurityCertificateIssuer</a> | issuer | The certificate issuer to convert. |

#### Returns

| TYPE          | DESCRIPTION                                                                                                                        |
|---------------|------------------------------------------------------------------------------------------------------------------------------------|
| System.String | A string representing the certificate issuer string for signing and the receipt line of austrian dep ("Datenerfassungsprotokoll"). |

#### Exceptions

| TYPE                           | CONDITION                                    |
|--------------------------------|----------------------------------------------|
| System.NotImplementedException | Thrown if a is given which is not supported. |

### GetSignDeviceDriverInfos()

Returns the driver infos of all possible sign device drivers.

## Declaration

```
public static List<SignDeviceDriverInfo> GetSignDeviceDriverInfos()
```

## Returns

| TYPE                                                                    | DESCRIPTION                                           |
|-------------------------------------------------------------------------|-------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">SignDeviceDriverInfo</a> > | The driver infos of all possible sign device drivers. |

## GetSignDeviceDriverInfos(SignDeviceDriver)

Returns the driver info for the requested driver.

## Declaration

```
public static SignDeviceDriverInfo GetSignDeviceDriverInfos(SignDeviceDriver driver)
```

## Parameters

| TYPE                             | NAME   | DESCRIPTION                             |
|----------------------------------|--------|-----------------------------------------|
| <a href="#">SignDeviceDriver</a> | driver | The driver where the info is requested. |

## Returns

| TYPE                                 | DESCRIPTION                               |
|--------------------------------------|-------------------------------------------|
| <a href="#">SignDeviceDriverInfo</a> | The driver info for the requested driver. |

## Sign(ReceiptLine)

Signs the given receipt line and returns the appropriate signage.

## Declaration

```
public string Sign(ReceiptLine receiptLine)
```

## Parameters

| TYPE                        | NAME        | DESCRIPTION               |
|-----------------------------|-------------|---------------------------|
| <a href="#">ReceiptLine</a> | receiptLine | The receipt line to sign. |

## Returns

| TYPE          | DESCRIPTION                                                    |
|---------------|----------------------------------------------------------------|
| System.String | The signature for the given receipt line (base64 url encoded). |

## Exceptions

| TYPE                         | CONDITION                                          |
|------------------------------|----------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>receiptLine</code> is set to null. |

## SignExecute(ReceiptLine)

Declaration

```
protected abstract string SignExecute(ReceiptLine receipt)
```

Parameters

| TYPE                        | NAME    | DESCRIPTION |
|-----------------------------|---------|-------------|
| <a href="#">ReceiptLine</a> | receipt |             |

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class SmartCardBase

Basic class for all attached Smartcards (for signing).

## Inheritance

System.Object

[SignBase](#)

SmartCardBase

## Inherited Members

[SignBase.Logger](#)

[SignBase.CertificateType](#)

[SignBase.Sign\(ReceiptLine\)](#)

[SignBase.GetCertificate\(\)](#)

[SignBase.GetCertificateAuthority\(\)](#)

[SignBase.SignExecute\(ReceiptLine\)](#)

[SignBase.GetCertificateIssuerString\(SecurityCertificateIssuer\)](#)

[SignBase.GetCertificateIssuerFromString\(String\)](#)

[SignBase.GetSignDeviceDriverInfos\(\)](#)

[SignBase.GetSignDeviceDriverInfos\(SignDeviceDriver\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Signing](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public abstract class SmartCardBase : SignBase
```

## Constructors

### SmartCardBase(ILogger)

Constructor.

## Declaration

```
public SmartCardBase(ILogger logger)
```

## Parameters

| TYPE                                 | NAME   | DESCRIPTION                     |
|--------------------------------------|--------|---------------------------------|
| Microsoft.Extensions.Logging.ILogger | logger | The logger for the sign device. |

## Exceptions

| TYPE                         | CONDITION                                               |
|------------------------------|---------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>logger</code> is set to null. |

# Class SmartCardFactory

## Inheritance

System.Object  
SmartCardFactory

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Signing](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public sealed class SmartCardFactory
```

## Methods

### createInstance(IsoReader)

#### Declaration

```
public static ISmartCard createInstance(IsoReader isoReader)
```

#### Parameters

| TYPE                   | NAME      | DESCRIPTION |
|------------------------|-----------|-------------|
| PCSC.Iso7816.IsoReader | isoReader |             |

#### Returns

| TYPE                       | DESCRIPTION |
|----------------------------|-------------|
| <a href="#">ISmartCard</a> |             |

### GetReaderNames()

#### Declaration

```
public static string[] GetReaderNames()
```

#### Returns

| TYPE            | DESCRIPTION |
|-----------------|-------------|
| System.String[] |             |

# Namespace

## RetailForce.Fiscalisation.Implementation.Austria.Signing.ATrust

### Classes

#### [ATrustCard](#)

Implementation of A-Trust Sign DLL (hardware).

#### [ATrustHsm](#)

Class for signing in austria with a-trust hsm in a-trust service environment.

#### [ATrustHsmLocal](#)

Class for signing in austria with a-trust hsm in local installation.

### Enums

#### [InitializeState](#)

#### [UrlTypeRequest](#)

The type of the request.

# Class ATrustCard

Implementation of A-Trust Sign DLL (hardware).

## Inheritance

System.Object

ATrustCard

## Implements

System.IDisposable

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Signing.ATrust](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class ATrustCard : IDisposable
```

## Methods

### Dispose()

Called when the class is disposed.

#### Declaration

```
public void Dispose()
```

### ListCards()

#### Declaration

```
public string ListCards()
```

#### Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### SetPin(String)

#### Declaration

```
public void SetPin(string pin)
```

#### Parameters

| TYPE          | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.String | pin  |             |

Implements

System.IDisposable



# Class ATrustHsm

Class for signing in austria with a-trust hsm in a-trust service environment.

## Inheritance

System.Object

SignBase

HsmSignBase

ATrustHsmLocal

ATrustHsm

## Inherited Members

ATrustHsmLocal.\_username

ATrustHsmLocal.\_password

ATrustHsmLocal.CertificateType

ATrustHsmLocal.GetCertificate()

ATrustHsmLocal.GetCertificateAuthority()

ATrustHsmLocal.SignExecute(ReceiptLine)

ATrustHsmLocal.CreateWebRequest(UriTypeRequest)

ATrustHsmLocal.GetHttpMethod(UriTypeRequest)

HsmSignBase.baseHsmUrl

HsmSignBase.ValidateUrl(String)

HsmSignBase.SetRequestBody(HttpWebRequest, String)

HsmSignBase.GetWebResponseSerialized<TType>(HttpWebRequest)

HsmSignBase.GetWebResponse(HttpWebRequest)

SignBase.Logger

SignBase.Sign(ReceiptLine)

SignBase.GetCertificateIssuerString(SecurityCertificateIssuer)

SignBase.GetCertificateIssuerFromString(String)

SignBase.GetSignDeviceDriverInfos()

SignBase.GetSignDeviceDriverInfos(SignDeviceDriver)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Signing.ATrust](#)

Assembly: [RetailForce.Fiscalisation.dll](#)

## Syntax

```
public class ATrustHsm : ATrustHsmLocal
```

## Constructors

**ATrustHsm(ILogger, String, String, String)**

Constructor.

## Declaration

```
public ATrustHsm(ILogger logger, string username, string password, string testUrl = "")
```

## Parameters

| TYPE                                 | NAME     | DESCRIPTION                                                                           |
|--------------------------------------|----------|---------------------------------------------------------------------------------------|
| Microsoft.Extensions.Logging.ILogger | logger   | The logger for the sign device.                                                       |
| System.String                        | username | The username for authentication.                                                      |
| System.String                        | password | The password for authentication.                                                      |
| System.String                        | testUrl  | The test url for test environment at a-trust, leave empty for production environment. |

## Methods

### AddAuthorizationHeader(HttpWebRequest)

Adds the authorization header for local hsm usage.

Declaration

```
protected override void AddAuthorizationHeader(HttpWebRequest webRequest)
```

Parameters

| TYPE                      | NAME       | DESCRIPTION |
|---------------------------|------------|-------------|
| System.Net.HttpWebRequest | webRequest |             |

Overrides

[ATrustHsmLocal.AddAuthorizationHeader\(HttpWebRequest\)](#)

### CreateSignRequestBody(ReceiptLine)

Returns the sign request body for the sign request.

Declaration

```
protected override string CreateSignRequestBody(ReceiptLine receiptLine)
```

Parameters

| TYPE                        | NAME        | DESCRIPTION              |
|-----------------------------|-------------|--------------------------|
| <a href="#">ReceiptLine</a> | receiptLine | The receiptline to sign. |

Returns

| TYPE          | DESCRIPTION                                          |
|---------------|------------------------------------------------------|
| System.String | The complete sign request body for the sign request. |

Overrides

[ATrustHsmLocal.CreateSignRequestBody\(ReceiptLine\)](#)

## CreateUri(UriTypeRequest)

Create the uri for the webrequest based on the given request type.

### Declaration

```
protected override Uri CreateUri(UriTypeRequest requestType)
```

### Parameters

| TYPE                           | NAME        | DESCRIPTION                             |
|--------------------------------|-------------|-----------------------------------------|
| <a href="#">UriTypeRequest</a> | requestType | The request type for the uri to create. |

### Returns

| TYPE       | DESCRIPTION              |
|------------|--------------------------|
| System.Uri | The uri for the request. |

### Overrides

[ATrustHsmLocal.CreateUri\(UriTypeRequest\)](#)

# Class ATrustHsmLocal

Class for signing in austria with a-trust hsm in local installation.

## Inheritance

System.Object

[SignBase](#)

[HsmSignBase](#)

ATrustHsmLocal

[ATrustHsm](#)

## Inherited Members

[HsmSignBase.baseHsmUrl](#)

[HsmSignBase.ValidateUrl\(String\)](#)

[HsmSignBase.SetRequestBody\(HttpWebRequest, String\)](#)

[HsmSignBase.GetWebResponseSerialized<TType>\(HttpWebRequest\)](#)

[HsmSignBase.GetWebResponse\(HttpWebRequest\)](#)

[SignBase.Logger](#)

[SignBase.Sign\(ReceiptLine\)](#)

[SignBase.GetCertificateIssuerString\(SecurityCertificateIssuer\)](#)

[SignBase.GetCertificateIssuerFromString\(String\)](#)

[SignBase.GetSignDeviceDriverInfos\(\)](#)

[SignBase.GetSignDeviceDriverInfos\(SignDeviceDriver\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Signing.ATrust](#)

Assembly: [RetailForce.Fiscalisation.dll](#)

## Syntax

```
public class ATrustHsmLocal : HsmSignBase
```

## Constructors

**ATrustHsmLocal(ILogger, String, String, String, String)**

Constructor.

## Declaration

```
public ATrustHsmLocal(ILogger logger, string baseUrl, string keyLabel, string username, string password)
```

## Parameters

| TYPE                                 | NAME    | DESCRIPTION                                                     |
|--------------------------------------|---------|-----------------------------------------------------------------|
| Microsoft.Extensions.Logging.ILogger | logger  | The logger for the sign device.                                 |
| System.String                        | baseUrl | The base url for hsm signing. Must not be null or empty string. |

| TYPE          | NAME     | DESCRIPTION                                    |
|---------------|----------|------------------------------------------------|
| System.String | keyLabel | The key label for the specific signature unit. |
| System.String | username | The username for authentication to the hsm.    |
| System.String | password | The password for authentication to the hsm.    |

#### Exceptions

| TYPE                         | CONDITION                                                                                                                                                                               |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>baseUr1</code> , <code>keyLabel</code> , <code>username</code> or <code>password</code> is set to null or empty string or parameter <code>logger</code> is set to null. |
| System.ArgumentException     | Thrown if <code>baseUr1</code> is not a valid http or https url.                                                                                                                        |

#### Fields

##### `_password`

##### Declaration

```
protected string _password
```

##### Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

##### `_username`

##### Declaration

```
protected string _username
```

##### Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Properties

##### CertificateType

Returns the type of the certificate of this driver.

##### Declaration

```
public override SecurityCertificateType CertificateType { get; }
```

## Property Value

| TYPE                                    | DESCRIPTION |
|-----------------------------------------|-------------|
| <a href="#">SecurityCertificateType</a> |             |

## Overrides

[SignBase.CertificateType](#)

## Methods

### AddAuthorizationHeader(HttpWebRequest)

Adds the authorization header for local hsm usage.

## Declaration

```
protected virtual void AddAuthorizationHeader(HttpWebRequest webRequest)
```

## Parameters

| TYPE                      | NAME       | DESCRIPTION |
|---------------------------|------------|-------------|
| System.Net.HttpWebRequest | webRequest |             |

### CreateSignRequestBody(ReceiptLine)

Returns the sign request body for the sign request.

## Declaration

```
protected virtual string CreateSignRequestBody(ReceiptLine receiptLine)
```

## Parameters

| TYPE                        | NAME        | DESCRIPTION              |
|-----------------------------|-------------|--------------------------|
| <a href="#">ReceiptLine</a> | receiptLine | The receiptline to sign. |

## Returns

| TYPE          | DESCRIPTION                                          |
|---------------|------------------------------------------------------|
| System.String | The complete sign request body for the sign request. |

### CreateUri(UriTypeRequest)

Create the uri for the webrequest based on the given request type.

## Declaration

```
protected virtual Uri CreateUri(UriTypeRequest requestType)
```

## Parameters

| TYPE | NAME | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

| TYPE                           | NAME        | DESCRIPTION                             |
|--------------------------------|-------------|-----------------------------------------|
| <a href="#">UriTypeRequest</a> | requestType | The request type for the uri to create. |

Returns

| TYPE       | DESCRIPTION              |
|------------|--------------------------|
| System.Uri | The uri for the request. |

### CreateWebRequest(UriTypeRequest)

Creates the necessary web request to place a command.

Declaration

```
protected virtual HttpWebRequest CreateWebRequest(UriTypeRequest requestType)
```

Parameters

| TYPE                           | NAME        | DESCRIPTION              |
|--------------------------------|-------------|--------------------------|
| <a href="#">UriTypeRequest</a> | requestType | The type of the request. |

Returns

| TYPE                      | DESCRIPTION                                                            |
|---------------------------|------------------------------------------------------------------------|
| System.Net.HttpWebRequest | A System.Net.HttpWebRequest object to send the web request to the hsm. |

### GetCertificate()

Gets the certificate from the signature unit.

Declaration

```
public override Certificate GetCertificate()
```

Returns

| TYPE                        | DESCRIPTION                            |
|-----------------------------|----------------------------------------|
| <a href="#">Certificate</a> | The certificate of the signature unit. |

Overrides

[SignBase.GetCertificate\(\)](#)

### GetCertificateAuthority()

Gets the certificate issuer from the signature unit.

Declaration

```
public override SecurityCertificateIssuer GetCertificateAuthority()
```

#### Returns

| TYPE                                      | DESCRIPTION                                     |
|-------------------------------------------|-------------------------------------------------|
| <a href="#">SecurityCertificateIssuer</a> | The certificate issuer from the signature unit. |

#### Overrides

[SignBase.GetCertificateAuthority\(\)](#)

#### GetHttpMethod(UriTypeRequest)

Returns the http method for the given request type.

#### Declaration

```
protected string GetHttpMethod(UriTypeRequest requestType)
```

#### Parameters

| TYPE                           | NAME        | DESCRIPTION                 |
|--------------------------------|-------------|-----------------------------|
| <a href="#">UriTypeRequest</a> | requestType | The requested request type. |

#### Returns

| TYPE          | DESCRIPTION                                           |
|---------------|-------------------------------------------------------|
| System.String | The http method as string for the given request type. |

#### SignExecute(ReceiptLine)

Signs the given receipt line and returns the appropriate signage.

#### Declaration

```
protected override string SignExecute(ReceiptLine receiptLine)
```

#### Parameters

| TYPE                        | NAME        | DESCRIPTION               |
|-----------------------------|-------------|---------------------------|
| <a href="#">ReceiptLine</a> | receiptLine | The receipt line to sign. |

#### Returns

| TYPE          | DESCRIPTION                               |
|---------------|-------------------------------------------|
| System.String | The signature for the given receipt line. |

#### Overrides

[SignBase.SignExecute\(ReceiptLine\)](#)

#### Exceptions



| TYPE                         | CONDITION                                          |
|------------------------------|----------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>receiptLine</code> is set to null. |

# Enum InitializeState

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Signing.ATrust](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum InitializeState
```

Fields

| NAME                        | DESCRIPTION |
|-----------------------------|-------------|
| ClientCouldntBeLoaded       |             |
| CouldntOrAlreadyInitialized |             |
| DIWrongOrDamaged            |             |
| Ok                          |             |

# Enum UrlTypeRequest

The type of the request.

Namespace: [RetailForce.Fiscalisation.Implementation.Austria.Signing.ATrust](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum UrlTypeRequest
```

## Fields

| NAME                 | DESCRIPTION |
|----------------------|-------------|
| Certificate          |             |
| CertificateAuthority |             |
| Sign                 |             |

# Namespace RetailForce.Fiscalisation.Implementation.Germany

## Classes

### [ClientConfiguration](#)

The german country specific configuration for the client.

### [DocumentModelExtensions](#)

Adds certain functionality for document model only needed for german fiscalisation.

### [FiscalResponseGermany](#)

Fiscal response for germany fiscal implementation. Derived from [FiscalResponse](#).

### [GermanFiscalisationRequiredAttribute](#)

Attribute for properties of objects which are necessary for german fiscalisation.

### [GermanyValidation](#)

### [TaxonomyCloudStoreConfiguration](#)

The configuration for the cloud taxonomy store (DS-FinVK).

### [TaxonomyFileStoreConfiguration](#)

The configuration for the local taxonomy store (DS-FinVK).

### [TaxonomyStoreConfiguration](#)

Base class for taxonomy store configuration

### [TrustedFiscalModuleGermany](#)

Implementation for fiscal regulations in germany.

### [TseConfiguration](#)

Configuration for a single tse unit.

### [TseDriverInfo](#)

Information about tse driver and it's configuration.

### [TseParameterJsonConverter](#)

Converts old json format (dictionary in tse parameter) to new list format.

## Interfaces

### [ITseInterface](#)

## Enums

### [TseDriver](#)

The actual implemented Tse Driver for german fiscalisation.

# Class ClientConfiguration

The german country specific configuration for the client.

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<RetailForce.Common.Validation.ValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>

[ConfigurationValidationBase](#)

ClientConfiguration

## Implements

[IFiscalImplementationConfiguration](#)

## Inherited Members

[ConfigurationValidationBase.ValidateCountrySpecificProperty<CountryRequiredAttributeType>\(\)](#)

[ConfigurationValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[ConfigurationValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

[ConfigurationValidationBase.ValidateElement\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidateProperties\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>\(System.Boolean\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class ClientConfiguration : ConfigurationValidationBase, IFiscalImplementationConfiguration
```

## Properties

### FiscalCountry

Returns the fiscal country of the client configuration. In this case: Germany.

## Declaration

```
public FiscalCountry FiscalCountry { get; }
```

## Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">FiscalCountry</a> |             |

### PrimaryTse

Primary Tse Configuration.

## Declaration

```
public TseConfiguration PrimaryTse { get; set; }
```

## Property Value

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">TseConfiguration</a> |             |

### TaxonomyCloudStoreConfiguration

The configuration for the cloud taxonomy store (DS-FinVK).

#### Declaration

```
public TaxonomyCloudStoreConfiguration TaxonomyCloudStoreConfiguration { get; set; }
```

#### Property Value

| TYPE                                            | DESCRIPTION |
|-------------------------------------------------|-------------|
| <a href="#">TaxonomyCloudStoreConfiguration</a> |             |

#### TaxonomyFileStoreConfiguration

The configuration for the local taxonomy store (DS-FinVK).

#### Declaration

```
public TaxonomyFileStoreConfiguration TaxonomyFileStoreConfiguration { get; set; }
```

#### Property Value

| TYPE                                           | DESCRIPTION |
|------------------------------------------------|-------------|
| <a href="#">TaxonomyFileStoreConfiguration</a> |             |

#### Methods

##### Encrypt(Guid)

Encrypts sensitive data.

#### Declaration

```
public void Encrypt(Guid uniqueClientId)
```

#### Parameters

| TYPE        | NAME           | DESCRIPTION |
|-------------|----------------|-------------|
| System.Guid | uniqueClientId |             |

##### RemoveSensitiveData()

Removes sensitive data from the configuration.

#### Declaration

```
public void RemoveSensitiveData()
```

#### Remarks

Used for sending data from cloud to client to remove sensitive data from configuration which is not needed by the client.

#### Implements

[IFiscalImplementationConfiguration](#)

# Class DocumentModelExtensions

Adds certain functionality for document model only needed for german fiscalisation.

## Inheritance

System.Object

DocumentModelExtensions

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public static class DocumentModelExtensions
```

## Methods

### GetBaseGrossValue(IBusinessTransactionTypePosition)

Returns the base gross value of the position. If the position has no base gross value -> gross value is returned instead.

## Declaration

```
public static decimal GetBaseGrossValue(this IBusinessTransactionTypePosition position)
```

## Parameters

| TYPE                                             | NAME     | DESCRIPTION               |
|--------------------------------------------------|----------|---------------------------|
| <a href="#">IBusinessTransactionTypePosition</a> | position | The position to evaluate. |

## Returns

| TYPE           | DESCRIPTION                            |
|----------------|----------------------------------------|
| System.Decimal | The base gross value of this position. |

### GetBaseNetValue(IBusinessTransactionTypePosition)

Returns the base net value of the position. If the position has no base net value -> net value is returned instead.

## Declaration

```
public static decimal GetBaseNetValue(this IBusinessTransactionTypePosition position)
```

## Parameters

| TYPE                                             | NAME     | DESCRIPTION               |
|--------------------------------------------------|----------|---------------------------|
| <a href="#">IBusinessTransactionTypePosition</a> | position | The position to evaluate. |

Returns

| TYPE           | DESCRIPTION                          |
|----------------|--------------------------------------|
| System.Decimal | The base net value of this position. |

### GetBaseTaxValue(IBusinessTransactionTypePosition)

Returns the base tax value of the position. If the position has no base tax value -> tax value is returned instead.

Declaration

```
public static decimal GetBaseTaxValue(this IBusinessTransactionTypePosition position)
```

Parameters

| TYPE                                             | NAME     | DESCRIPTION               |
|--------------------------------------------------|----------|---------------------------|
| <a href="#">IBusinessTransactionTypePosition</a> | position | The position to evaluate. |

Returns

| TYPE           | DESCRIPTION                          |
|----------------|--------------------------------------|
| System.Decimal | The base tax value of this position. |

### GetCaption(IBusinessTransactionTypePosition)

Returns the caption of the position. For item positions ItemCaption will returned, for booking positions the caption of the position.

Declaration

```
public static string GetCaption(this IBusinessTransactionTypePosition position)
```

Parameters

| TYPE                                             | NAME     | DESCRIPTION               |
|--------------------------------------------------|----------|---------------------------|
| <a href="#">IBusinessTransactionTypePosition</a> | position | The position to evaluate. |

Returns

| TYPE          | DESCRIPTION                   |
|---------------|-------------------------------|
| System.String | The caption of this position. |



# Class FiscalResponseGermany

Fiscal response for germany fiscal implementation. Derived from [FiscalResponse](#).

## Inheritance

System.Object

FiscalResponseGermany

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public static class FiscalResponseGermany
```

## Methods

**CheckCountryAdditionalFields(ReadOnlyDictionary<String, Object>)**

Checks if all country specific fields are set in the dictionary.

## Declaration

```
public static void CheckCountryAdditionalFields(ReadOnlyDictionary<string, object> additionalFields)
```

## Parameters

| TYPE                                                                            | NAME             | DESCRIPTION                                    |
|---------------------------------------------------------------------------------|------------------|------------------------------------------------|
| System.Collections.ObjectModel.ReadOnlyDictionary<System.String, System.Object> | additionalFields | The dictionary of all country specific fields. |

## Exceptions

| TYPE                          | CONDITION                                      |
|-------------------------------|------------------------------------------------|
| System.MissingMemberException | Thrown if a country specific field is missing. |

**GetFiscalResponseGermany(Int32, Int32, String, String, String, Int64, Int64, String, String, String, String, String, String, Int64)**

Returns the fiscal response for germany out of the given parameters.

## Declaration

```
public static FiscalResponse GetFiscalResponseGermany(int fiscalDocumentNumber, int fiscalDocumentRevision, string signature, string errorDescription, string qrCodeDataString, long transactionStartTime, long transactionEndTime, string processData, string processtype, string tseSerial, string tseTimeFormat, string tseHashAlgorithm, string tsePublicKey, long tseSignatureCounter)
```

## Parameters

| TYPE          | NAME                   | DESCRIPTION                                                                                                                                                 |
|---------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.Int32  | fiscalDocumentNumber   | The fiscalisation document number.                                                                                                                          |
| System.Int32  | fiscalDocumentRevision | The revision of the fiscalisation document.                                                                                                                 |
| System.String | signature              | The signature of the security device (country-specific)                                                                                                     |
| System.String | errorDescription       | The error description if the fiscalisation process failed. Empty if everything went well.                                                                   |
| System.String | qrCodeDataString       | The QR code data string according to Appendix I of DSFinV-K.                                                                                                |
| System.Int64  | transactionStartTime   | The start time of the transaction. A timestamp / point in time measured in seconds since the Unix epoch.                                                    |
| System.Int64  | transactionEndTime     | The end time of the transaction. A timestamp / point in time measured in seconds since the Unix epoch.                                                      |
| System.String | processData            | The process data of the signed transaction. Binary value (base64 encoded utf8 string). This is the processData according to "Anwendungserlass zu §146a AO". |
| System.String | processType            | The process type of signed transaction. This is the processType according to "Anwendungserlass zu §146a AO".                                                |
| System.String | tseSerial              | The serialnumber of the tss module.                                                                                                                         |
| System.String | tseTimeFormat          | The time format which is used by the tss.                                                                                                                   |
| System.String | tseHashAlgorithm       | The hash algorithm which is used by the tss.                                                                                                                |
| System.String | tsePublicKey           | The public key of the tss.                                                                                                                                  |
| System.Int64  | tseSignatureCounter    | The actual signature counter of the tss after signing the transaction.                                                                                      |

## Returns

| TYPE                           | DESCRIPTION                                                                           |
|--------------------------------|---------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the fiscal response for germany. |

### ProcessData(FiscalResponse)

The process data of the signed transaction. Binary value (base64 encoded utf8 string). This is the processData according to "Anwendungserlass zu §146a AO".

Declaration

```
public static string ProcessData(this FiscalResponse fiscalResponse)
```

Parameters

| TYPE                           | NAME           | DESCRIPTION |
|--------------------------------|----------------|-------------|
| <a href="#">FiscalResponse</a> | fiscalResponse |             |

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### ProcessType(FiscalResponse)

The process type of signed transaction. This is the processType according to "Anwendungserlass zu §146a AO".

Declaration

```
public static string Procestype(this FiscalResponse fiscalResponse)
```

Parameters

| TYPE                           | NAME           | DESCRIPTION |
|--------------------------------|----------------|-------------|
| <a href="#">FiscalResponse</a> | fiscalResponse |             |

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### QrCodeDataString(FiscalResponse)

The QR code data string according to Appendix I of DSFinV-K.

Declaration

```
public static string QrCodeDataString(this FiscalResponse fiscalResponse)
```

Parameters

| TYPE                           | NAME           | DESCRIPTION |
|--------------------------------|----------------|-------------|
| <a href="#">FiscalResponse</a> | fiscalResponse |             |

#### Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### TransactionEndTime(FiscalResponse)

The end time of the transaction. A timestamp / point in time measured in seconds since the Unix epoch.

#### Declaration

```
public static long TransactionEndTime(this FiscalResponse fiscalResponse)
```

#### Parameters

| TYPE                           | NAME           | DESCRIPTION |
|--------------------------------|----------------|-------------|
| <a href="#">FiscalResponse</a> | fiscalResponse |             |

#### Returns

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

#### TransactionStartTime(FiscalResponse)

The start time of the transaction. A timestamp / point in time measured in seconds since the Unix epoch.

#### Declaration

```
public static long TransactionStartTime(this FiscalResponse fiscalResponse)
```

#### Parameters

| TYPE                           | NAME           | DESCRIPTION |
|--------------------------------|----------------|-------------|
| <a href="#">FiscalResponse</a> | fiscalResponse |             |

#### Returns

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

#### TseHashAlgorithm(FiscalResponse)

The hash algorithm which is used by the tss.

#### Declaration

```
public static string TseHashAlgorithm(this FiscalResponse fiscalResponse)
```

#### Parameters

| TYPE                           | NAME           | DESCRIPTION |
|--------------------------------|----------------|-------------|
| <a href="#">FiscalResponse</a> | fiscalResponse |             |

#### Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### TsePublicKey(FiscalResponse)

The public key of the tss.

Declaration

```
public static string TsePublicKey(this FiscalResponse fiscalResponse)
```

Parameters

| TYPE                           | NAME           | DESCRIPTION |
|--------------------------------|----------------|-------------|
| <a href="#">FiscalResponse</a> | fiscalResponse |             |

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### TseSerial(FiscalResponse)

The serialnumber of the tss module.

Declaration

```
public static string TseSerial(this FiscalResponse fiscalResponse)
```

Parameters

| TYPE                           | NAME           | DESCRIPTION |
|--------------------------------|----------------|-------------|
| <a href="#">FiscalResponse</a> | fiscalResponse |             |

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### TseSignatureCounter(FiscalResponse)

The actual signature counter of the tss after signing the transaction.

Declaration

```
public static long TseSignatureCounter(this FiscalResponse fiscalResponse)
```

Parameters

| TYPE                           | NAME           | DESCRIPTION |
|--------------------------------|----------------|-------------|
| <a href="#">FiscalResponse</a> | fiscalResponse |             |

Returns

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

### TseTimeFormat(FiscalResponse)

The time format which is used by the tss.

Declaration

```
public static string TseTimeFormat(this FiscalResponse fiscalResponse)
```

Parameters

| TYPE                           | NAME           | DESCRIPTION |
|--------------------------------|----------------|-------------|
| <a href="#">FiscalResponse</a> | fiscalResponse |             |

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class GermanFiscalisationRequiredAttribute

Attribute for properties of objects which are necessary for german fiscalisation.

## Inheritance

System.Object

System.Attribute

System.ComponentModel.DataAnnotations.ValidationAttribute

System.ComponentModel.DataAnnotations.RequiredAttribute

GermanFiscalisationRequiredAttribute

## Inherited Members

System.ComponentModel.DataAnnotations.RequiredAttribute.IsValid(System.Object)

System.ComponentModel.DataAnnotations.RequiredAttribute.AllowEmptyStrings

System.ComponentModel.DataAnnotations.ValidationAttribute.FormatErrorMessage(System.String)

System.ComponentModel.DataAnnotations.ValidationAttribute.GetValidationResult(System.Object, System.ComponentModel.DataAnnotations.ValidationContext)

System.ComponentModel.DataAnnotations.ValidationAttribute.IsValid(System.Object, System.ComponentModel.DataAnnotations.ValidationContext)

System.ComponentModel.DataAnnotations.ValidationAttribute.Validate(System.Object, System.ComponentModel.DataAnnotations.ValidationContext)

System.ComponentModel.DataAnnotations.ValidationAttribute.Validate(System.Object, System.String)

System.ComponentModel.DataAnnotations.ValidationAttribute.ErrorMessage

System.ComponentModel.DataAnnotations.ValidationAttribute.ErrorMessageResourceName

System.ComponentModel.DataAnnotations.ValidationAttribute.ErrorMessageResourceType

System.ComponentModel.DataAnnotations.ValidationAttribute.ErrorMessageString

System.ComponentModel.DataAnnotations.ValidationAttribute.RequiresValidationContext

System.Attribute.Equals(System.Object)

System.Attribute.GetCustomAttribute(System.Reflection.Assembly, System.Type)

System.Attribute.GetCustomAttribute(System.Reflection.Assembly, System.Type, System.Boolean)

System.Attribute.GetCustomAttribute(System.Reflection.MemberInfo, System.Type)

System.Attribute.GetCustomAttribute(System.Reflection.MemberInfo, System.Type, System.Boolean)

System.Attribute.GetCustomAttribute(System.Reflection.Module, System.Type)

System.Attribute.GetCustomAttribute(System.Reflection.Module, System.Type, System.Boolean)

System.Attribute.GetCustomAttribute(System.Reflection.ParameterInfo, System.Type)

System.Attribute.GetCustomAttribute(System.Reflection.ParameterInfo, System.Type, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.Assembly)

System.Attribute.GetCustomAttributes(System.Reflection.Assembly, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.Assembly, System.Type)

System.Attribute.GetCustomAttributes(System.Reflection.Assembly, System.Type, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.MemberInfo)

System.Attribute.GetCustomAttributes(System.Reflection.MemberInfo, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.MemberInfo, System.Type)

System.Attribute.GetCustomAttributes(System.Reflection.MemberInfo, System.Type, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.Module)

System.Attribute.GetCustomAttributes(System.Reflection.Module, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.Module, System.Type)

System.Attribute.GetCustomAttributes(System.Reflection.Module, System.Type, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.ParameterInfo)

System.Attribute.GetCustomAttributes(System.Reflection.ParameterInfo, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.ParameterInfo, System.Type)

System.Attribute.GetCustomAttributes(System.Reflection.ParameterInfo, System.Type, System.Boolean)

System.Attribute.GetHashCode()

System.Attribute.IsDefaultAttribute()  
System.Attribute.IsDefined(System.Reflection.Assembly, System.Type)  
System.Attribute.IsDefined(System.Reflection.Assembly, System.Type, System.Boolean)  
System.Attribute.IsDefined(System.Reflection.MemberInfo, System.Type)  
System.Attribute.IsDefined(System.Reflection.MemberInfo, System.Type, System.Boolean)  
System.Attribute.IsDefined(System.Reflection.Module, System.Type)  
System.Attribute.IsDefined(System.Reflection.Module, System.Type, System.Boolean)  
System.Attribute.IsDefined(System.Reflection.ParameterInfo, System.Type)  
System.Attribute.IsDefined(System.Reflection.ParameterInfo, System.Type, System.Boolean)  
System.Attribute.Match(System.Object)  
System.Attribute.TypeId  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
[AttributeUsage(AttributeTargets.Property)]  
public class GermanFiscalisationRequiredAttribute : RequiredAttribute
```



# Class GermanyValidation

## Inheritance

System.Object  
GermanyValidation

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public static class GermanyValidation
```

## Fields

### SupportedBusinessTypesMapping

#### Declaration

```
public static readonly ReadOnlyDictionary<BusinessTransactionType, BusinessCaseType>  
SupportedBusinessTypesMapping
```

#### Field Value

| TYPE                                                                                                                            | DESCRIPTION |
|---------------------------------------------------------------------------------------------------------------------------------|-------------|
| System.Collections.ObjectModel.ReadOnlyDictionary< <a href="#">BusinessTransactionType</a> , <a href="#">BusinessCaseType</a> > |             |

### SupportedBuyerTypeMapping

#### Declaration

```
public static readonly ReadOnlyDictionary<string, BuyerType> SupportedBuyerTypeMapping
```

#### Field Value

| TYPE                                                                                         | DESCRIPTION |
|----------------------------------------------------------------------------------------------|-------------|
| System.Collections.ObjectModel.ReadOnlyDictionary<System.String, <a href="#">BuyerType</a> > |             |

### SupportedDocumentTypesMapping

#### Declaration

```
public static readonly ReadOnlyDictionary<DocumentType, TransactionType> SupportedDocumentTypesMapping
```

#### Field Value

| TYPE                                                                                                                | DESCRIPTION |
|---------------------------------------------------------------------------------------------------------------------|-------------|
| System.Collections.ObjectModel.ReadOnlyDictionary< <a href="#">DocumentType</a> , <a href="#">TransactionType</a> > |             |

## SupportedVatDefinitions

### Declaration

```
public static readonly ReadOnlyCollection<Vat> SupportedVatDefinitions
```

### Field Value

| TYPE                                                   | DESCRIPTION |
|--------------------------------------------------------|-------------|
| System.Collections.ObjectModel.ReadOnlyCollection<Vat> |             |

## Properties

### SupportedDocumentTypes

Represents the supported document types by germany fiscalisation.

### Declaration

```
public static List<DocumentType> SupportedDocumentTypes { get; }
```

### Property Value

| TYPE                                          | DESCRIPTION |
|-----------------------------------------------|-------------|
| System.Collections.Generic.List<DocumentType> |             |

## Methods

### ValidateDocument(Document)

validates the document

### Declaration

```
public static List<DocumentValidationError> ValidateDocument(Document document)
```

### Parameters

| TYPE     | NAME     | DESCRIPTION          |
|----------|----------|----------------------|
| Document | document | Document to validate |

### Returns

| TYPE                                                     | DESCRIPTION                                      |
|----------------------------------------------------------|--------------------------------------------------|
| System.Collections.Generic.List<DocumentValidationError> | A list of errors if the document isn't not valid |

### ValidateTseSecurity(List<DocumentValidationError>, FiscalResponse)

validates the fiscal Client

### Declaration

```
public static void ValidateTseSecurity(List<DocumentValidationError> errorList, FiscalResponse fiscalResponse)
```

### Parameters

| TYPE                                                                       | NAME           | DESCRIPTION |
|----------------------------------------------------------------------------|----------------|-------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | errorList      |             |
| <a href="#">FiscalResponse</a>                                             | fiscalResponse |             |

# Interface ITseInterface

Namespace: [RetailForce.Fiscalisation.Implementation.Germany](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public interface ITseInterface
```

# Class TaxonomyCloudStoreConfiguration

The configuration for the cloud taxonomy store (DS-FinVK).

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<RetailForce.Common.Validation.ValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>

[ConfigurationValidationBase](#)

[TaxonomyStoreConfiguration](#)

TaxonomyCloudStoreConfiguration

## Inherited Members

[TaxonomyStoreConfiguration.Compress](#)

[ConfigurationValidationBase.ValidateCountrySpecificProperty<CountryRequiredAttributeType>\(\)](#)

[ConfigurationValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[ConfigurationValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

[ConfigurationValidationBase.ValidateElement\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidateProperties\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>\(System.Boolean\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TaxonomyCloudStoreConfiguration : TaxonomyStoreConfiguration
```

# Class TaxonomyFileStoreConfiguration

The configuration for the local taxonomy store (DS-FinVK).

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<RetailForce.Common.Validation.ValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>

[ConfigurationValidationBase](#)

[TaxonomyStoreConfiguration](#)

TaxonomyFileStoreConfiguration

## Inherited Members

[TaxonomyStoreConfiguration.Compress](#)

[ConfigurationValidationBase.ValidateCountrySpecificProperty<CountryRequiredAttributeType>\(\)](#)

[ConfigurationValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[ConfigurationValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

[ConfigurationValidationBase.ValidateElement\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidateProperties\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>\(System.Boolean\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TaxonomyFileStoreConfiguration : TaxonomyStoreConfiguration
```

## Properties

### LocalStorePath

The local path to the taxonomy store.

## Declaration

```
public string LocalStorePath { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class TaxonomyStoreConfiguration

Base class for taxonomy store configuration

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<RetailForce.Common.Validation.ValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>

[ConfigurationValidationBase](#)

TaxonomyStoreConfiguration

[TaxonomyCloudStoreConfiguration](#)

[TaxonomyFileStoreConfiguration](#)

## Inherited Members

[ConfigurationValidationBase.ValidateCountrySpecificProperty<CountryRequiredAttributeType>\(\)](#)

[ConfigurationValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[ConfigurationValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

[ConfigurationValidationBase.ValidateElement\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidateProperties\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>\(System.Boolean\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TaxonomyStoreConfiguration : ConfigurationValidationBase
```

## Properties

### Compress

True if the file should be compressed; otherwise false.

## Declaration

```
public bool Compress { get; set; }
```

## Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

# Class TrustedFiscalModuleGermany

Implementation for fiscal regulations in germany.

## Inheritance

System.Object

RetailForce.Common.Logging.LoggingBase

[TrustedFiscalModuleImplementationBase](#)

TrustedFiscalModuleGermany

## Implements

[IFiscalModulImplementation](#)

[IDocumentInterface](#)

## Inherited Members

[TrustedFiscalModuleImplementationBase.Client](#)

[TrustedFiscalModuleImplementationBase.GetVatIdentification\(Decimal, DateTime\)](#)

[TrustedFiscalModuleImplementationBase.CloudMessagesQueued](#)

[TrustedFiscalModuleImplementationBase.GetCountryUnspecificFiscalClientStatus\(\)](#)

RetailForce.Common.Logging.LoggingBase.\_logger

RetailForce.Common.Logging.LoggingBase.\_logSource

RetailForce.Common.Logging.LoggingBase.LogCritical(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogCritical(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogWarning(System.String, System.Object[])

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public sealed class TrustedFiscalModuleGermany : TrustedFiscalModuleImplementationBase,
    IFiscalModulImplementation, IDocumentInterface
```

## Constructors

**TrustedFiscalModuleGermany(ILogger, FiscalClient, ClientConfiguration, Action<ClientConfiguration>, CloudService, String, String)**

Constructor.

## Declaration

```
public TrustedFiscalModuleGermany(ILogger logger, FiscalClient client, ClientConfiguration configuration,
    Action<ClientConfiguration> storeConfiguration, CloudService cloudService = null, string cloudApiKey = null,
    string cloudApiSecret = null)
```

## Parameters



| TYPE                                                 | NAME               | DESCRIPTION |
|------------------------------------------------------|--------------------|-------------|
| Microsoft.Extensions.Logging.ILogger                 | logger             |             |
| <a href="#">FiscalClient</a>                         | client             |             |
| <a href="#">ClientConfiguration</a>                  | configuration      |             |
| System.Action< <a href="#">ClientConfiguration</a> > | storeConfiguration |             |
| <a href="#">CloudService</a>                         | cloudService       |             |
| System.String                                        | cloudApiKey        |             |
| System.String                                        | cloudApiSecret     |             |

## Properties

### AvailableVatDefinitions

Returns all vat objects which are available in this country.

#### Declaration

```
public override IReadOnlyList<Vat> AvailableVatDefinitions { get; }
```

#### Property Value

| TYPE                                                            | DESCRIPTION |
|-----------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">Vat</a> > |             |

#### Overrides

[TrustedFiscalModuleImplementationBase.AvailableVatDefinitions](#)

### FiscalClientStatus

#### Declaration

```
public override FiscalClientStatus FiscalClientStatus { get; }
```

#### Property Value

| TYPE                               | DESCRIPTION |
|------------------------------------|-------------|
| <a href="#">FiscalClientStatus</a> |             |

#### Overrides

[TrustedFiscalModuleImplementationBase.FiscalClientStatus](#)

### ProcessingDocumentTypes

Returns all document types processed by this fiscal interface.

#### Declaration

```
public override IReadOnlyList<DocumentType> ProcessingDocumentTypes { get; }
```

#### Property Value

| TYPE                                                                     | DESCRIPTION |
|--------------------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">DocumentType</a> > |             |

Overrides

[TrustedFiscalModuleImplementationBase.ProcessingDocumentTypes](#)

Remarks

The difference between supported and processed documents is that some documents are supported but not processed by this module.

### SupportedDocumentTypes

Returns all document types supported by this fiscal interface.

Declaration

```
public override IReadOnlyList<DocumentType> SupportedDocumentTypes { get; }
```

Property Value

| TYPE                                                                     | DESCRIPTION |
|--------------------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">DocumentType</a> > |             |

Overrides

[TrustedFiscalModuleImplementationBase.SupportedDocumentTypes](#)

### Tse

Returns the connected tse (if connected).

Declaration

```
public TseBase Tse { get; }
```

Property Value

| TYPE                    | DESCRIPTION |
|-------------------------|-------------|
| <a href="#">TseBase</a> |             |

### TseStatus

Returns the status of the tse.

Declaration

```
public TseStatus TseStatus { get; }
```

Property Value

| TYPE                      | DESCRIPTION |
|---------------------------|-------------|
| <a href="#">TseStatus</a> |             |

### Methods

#### CancelDocument(Document)

Cancels the document on the tse

Cancel the document on the tse.

#### Declaration

```
public override FiscalResponse CancelDocument(Document document)
```

#### Parameters

| TYPE                     | NAME     | DESCRIPTION             |
|--------------------------|----------|-------------------------|
| <a href="#">Document</a> | document | The document to cancel. |

#### Returns

| TYPE                           | DESCRIPTION                                          |
|--------------------------------|------------------------------------------------------|
| <a href="#">FiscalResponse</a> | The fiscal response including the transaction number |

#### Overrides

[TrustedFiscalModuleImplementationBase.CancelDocument\(Document\)](#)

#### CreateDocument(DocumentType)

Creates a document on the tse and returns the fiscal response including the transaction number.

#### Declaration

```
public override FiscalResponse CreateDocument(DocumentType documentType)
```

#### Parameters

| TYPE                         | NAME         | DESCRIPTION                                                        |
|------------------------------|--------------|--------------------------------------------------------------------|
| <a href="#">DocumentType</a> | documentType | The type of the document for which the document should be created. |

#### Returns

| TYPE                           | DESCRIPTION                                          |
|--------------------------------|------------------------------------------------------|
| <a href="#">FiscalResponse</a> | The fiscal response including the transaction number |

#### Overrides

[TrustedFiscalModuleImplementationBase.CreateDocument\(DocumentType\)](#)

#### Remarks

Please consider that document type [EndOfDay](#) has not be signed, therefore an empty fiscal response is returned and no transaction is started at tss.

#### DecommissionClient(Document)

Decommission of fiscal client (and possible hardware, and possible declaration to financial authorities).

#### Declaration

```
public override FiscalResponse DecommissionClient(Document endDocument)
```

#### Parameters

| TYPE                     | NAME        | DESCRIPTION                                                                                        |
|--------------------------|-------------|----------------------------------------------------------------------------------------------------|
| <a href="#">Document</a> | endDocument | A document of type <a href="#">NullReceipt</a> representing the end document of the fiscalisation. |

#### Returns

| TYPE                           | DESCRIPTION                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the appropriate fiscal response data. |

#### Overrides

[TrustedFiscalModuleImplementationBase.DecommissionClient\(Document\)](#)

[GetDocumentMandatoryFields\(Type\)](#)

Returns the mandatory fields for this type for the given country implementation.

#### Declaration

```
public override IReadOnlyList<string> GetDocumentMandatoryFields(Type t)
```

#### Parameters

| TYPE        | NAME | DESCRIPTION                           |
|-------------|------|---------------------------------------|
| System.Type | t    | The type to get the mandatory fields. |

#### Returns

| TYPE                                                    | DESCRIPTION                                                                                 |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------|
| System.Collections.Generic.IReadOnlyList<System.String> | A list of property names representing the mandatory fields for this country implementation. |

#### Overrides

[TrustedFiscalModuleImplementationBase.GetDocumentMandatoryFields\(Type\)](#)

[GetOpenEndOfDayCashPointClosing\(Guid, Document\)](#)

#### Declaration

```
public CashPointClosing GetOpenEndOfDayCashPointClosing(Guid uniqueClientId, Document document)
```

#### Parameters

| TYPE                     | NAME           | DESCRIPTION |
|--------------------------|----------------|-------------|
| System.Guid              | uniqueClientId |             |
| <a href="#">Document</a> | document       |             |

#### Returns

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">CashPointClosing</a> |             |

### GetShortUniqueCashRegisterId()

Declaration

```
public string GetShortUniqueCashRegisterId()
```

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### GetTaxFreeVat()

Returns the vat object for country specific zero tax based transactions.

Declaration

```
public override Vat GetTaxFreeVat()
```

Returns

| TYPE                | DESCRIPTION                                              |
|---------------------|----------------------------------------------------------|
| <a href="#">Vat</a> | A vat object representing the zero tax based vat object. |

Overrides

[TrustedFiscalModuleImplementationBase.GetTaxFreeVat\(\)](#)

Remarks

Can be used for payin/payout, cash difference and others.

### InitializeClient(Document)

Initializes fiscalisation unit (and possible hardware, and possible declaration to financial authorities).

Declaration

```
public override FiscalResponse InitializeClient(Document startDocument)
```

Parameters

| TYPE                     | NAME          | DESCRIPTION                                                                                             |
|--------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| <a href="#">Document</a> | startDocument | A document of type <a href="#">NullReceipt</a> representing the starting document of the fiscalisation. |

Returns

| TYPE                           | DESCRIPTION                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | A <a href="#">FiscalResponse</a> object representing the appropriate fiscal response data. |

Overrides

[TrustedFiscalModuleImplementationBase.InitializeClient\(Document\)](#)

### StoreDocument(Document)

Signs the document, returns a [FiscalResponseGermany](#) object and stores it to the DSFin-VK storage.

Declaration

```
public override FiscalResponse StoreDocument(Document document)
```

Parameters

| TYPE                     | NAME     | DESCRIPTION |
|--------------------------|----------|-------------|
| <a href="#">Document</a> | document |             |

Returns

| TYPE                           | DESCRIPTION                                          |
|--------------------------------|------------------------------------------------------|
| <a href="#">FiscalResponse</a> | The fiscal response including the transaction number |

Overrides

[TrustedFiscalModuleImplementationBase.StoreDocument\(Document\)](#)

Exceptions

| TYPE                     | CONDITION                                                                                                                                          |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| System.ArgumentException | Thrown if the given document was not created with correct <a href="#">FiscalResponse</a> created by <a href="#">CreateDocument(DocumentType)</a> . |

### ValidateDocument(Document)

Returns a list of validation error for the given document based on german fiscalisation.

Declaration

```
public override List<DocumentValidationError> ValidateDocument(Document document)
```

Parameters

| TYPE                     | NAME     | DESCRIPTION                               |
|--------------------------|----------|-------------------------------------------|
| <a href="#">Document</a> | document | The <a href="#">Document</a> to validate. |

Returns

| TYPE                                                                       | DESCRIPTION                                                                                                    |
|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | A list of <a href="#">DocumentValidationError</a> objects representing all validation error which where found. |

Overrides

## [TrustedFiscalModuleImplementationBase.ValidateDocument\(Document\)](#)

### [ValidateFiscalClient\(Document\)](#)

Validates the fiscal client for the given document.

#### Declaration

```
public override List<DocumentValidationError> ValidateFiscalClient(Document document)
```

#### Parameters

| TYPE                     | NAME     | DESCRIPTION                                |
|--------------------------|----------|--------------------------------------------|
| <a href="#">Document</a> | document | The document containing the fiscal client. |

#### Returns

| TYPE                                                                       | DESCRIPTION                           |
|----------------------------------------------------------------------------|---------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | A list of document validation errors. |

#### Overrides

### [TrustedFiscalModuleImplementationBase.ValidateFiscalClient\(Document\)](#)

#### Exceptions

| TYPE                         | CONDITION                                                                                                                                            |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>document</code> is set to null.                                                                                            |
| System.ArgumentException     | Thrown if property <code>RetailForce.Fiscalisation.Model.Document.Document.FiscalClient</code> of parameter of <code>document</code> is set to null. |

#### Implements

[IFiscalModulImplementation](#)

[IDocumentInterface](#)

# Class TseConfiguration

Configuration for a single tse unit.

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<RetailForce.Common.Validation.ValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>

[ConfigurationValidationBase](#)

TseConfiguration

## Implements

System.IEquatable<[TseConfiguration](#)>

## Inherited Members

[ConfigurationValidationBase.ValidateCountrySpecificProperty<CountryRequiredAttributeType>\(\)](#)

[ConfigurationValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[ConfigurationValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

[ConfigurationValidationBase.ValidateElement\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.Validate\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidateProperties\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Common.Validation.ValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>\(System.Boolean\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseConfiguration : ConfigurationValidationBase, IEquatable<TseConfiguration>
```

## Properties

### TseDriver

The supported driver for the tse configuration.

#### Declaration

```
public TseDriver TseDriver { get; set; }
```

#### Property Value

| TYPE                      | DESCRIPTION |
|---------------------------|-------------|
| <a href="#">TseDriver</a> |             |

### TseGuid

The guid of the tse (there is wether a guid or an id for a tse, not both).

#### Declaration

```
public Guid? TseGuid { get; set; }
```

#### Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| System.Nullable<System.Guid> |             |

### TseId

The id of the tse.



#### Declaration

```
public string TseId { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### TseParameter

Additional parameters for tse configuration.

#### Declaration

```
[JsonConverter(typeof(TseParameterJsonConverter))]  
public virtual List<Parameter> TseParameter { get; set; }
```

#### Property Value

| TYPE                                                         | DESCRIPTION |
|--------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">Parameter</a> > |             |

#### UseTseGuid

True if the tse has to use the guid; otherwise false (use id).

#### Declaration

```
public bool UseTseGuid { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

#### Methods

##### Equals(TseConfiguration)

#### Declaration

```
public bool Equals(TseConfiguration other)
```

#### Parameters

| TYPE                             | NAME  | DESCRIPTION |
|----------------------------------|-------|-------------|
| <a href="#">TseConfiguration</a> | other |             |

#### Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

#### Implements

System.IEquatable<T>

# Enum TseDriver

The actual implemented Tse Driver for german fiscalisation.

Namespace: [RetailForce.Fiscalisation.Implementation.Germany](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public enum TseDriver
```

## Remarks

Please ensure not to add a new driver here, if driver has not been fully implemented and tested.

## Fields

| NAME     | DESCRIPTION |
|----------|-------------|
| Fiskaly  |             |
| Swissbit |             |
| TestTse  |             |

# Class TseDriverInfo

Information about tse driver and it's configuration.

## Inheritance

System.Object

TseDriverInfo

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseDriverInfo
```

## Properties

### Parameters

Additional parameters to configure the tse driver

### Declaration

```
public List<ParameterInfo> Parameters { get; set; }
```

### Property Value

| TYPE                                                             | DESCRIPTION |
|------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">ParameterInfo</a> > |             |

### TseDriver

The driver for this driver information

### Declaration

```
public TseDriver TseDriver { get; set; }
```

### Property Value

| TYPE                      | DESCRIPTION |
|---------------------------|-------------|
| <a href="#">TseDriver</a> |             |

### UseGuid

True if guid is to use; otherwise false

### Declaration

```
public bool UseGuid { get; set; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

# Class TseParameterJsonConverter

Converts old json format (dictionary in tse parameter) to new list format.

## Inheritance

System.Object

Newtonsoft.Json.JsonConverter

TseParameterJsonConverter

## Inherited Members

Newtonsoft.Json.JsonConverter.CanRead

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseParameterJsonConverter : JsonConverter
```

## Properties

### CanWrite

#### Declaration

```
public override bool CanWrite { get; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## Overrides

Newtonsoft.Json.JsonConverter.CanWrite

## Methods

### CanConvert(Type)

#### Declaration

```
public override bool CanConvert(Type objectType)
```

#### Parameters

| TYPE        | NAME       | DESCRIPTION |
|-------------|------------|-------------|
| System.Type | objectType |             |

## Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

Overrides

Newtonsoft.Json.JsonConverter.CanConvert(System.Type)

ReadJson(JsonReader, Type, Object, JsonSerializer)

Declaration

```
public override object ReadJson(JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer)
```

Parameters

| TYPE                           | NAME          | DESCRIPTION |
|--------------------------------|---------------|-------------|
| Newtonsoft.Json.JsonReader     | reader        |             |
| System.Type                    | objectType    |             |
| System.Object                  | existingValue |             |
| Newtonsoft.Json.JsonSerializer | serializer    |             |

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Object |             |

Overrides

Newtonsoft.Json.JsonConverter.ReadJson(Newtonsoft.Json.JsonReader, System.Type, System.Object, Newtonsoft.Json.JsonSerializer)

WriteJson(JsonWriter, Object, JsonSerializer)

Declaration

```
public override void WriteJson(JsonWriter writer, object value, JsonSerializer serializer)
```

Parameters

| TYPE                           | NAME       | DESCRIPTION |
|--------------------------------|------------|-------------|
| Newtonsoft.Json.JsonWriter     | writer     |             |
| System.Object                  | value      |             |
| Newtonsoft.Json.JsonSerializer | serializer |             |

Overrides

Newtonsoft.Json.JsonConverter.WriteJson(Newtonsoft.Json.JsonWriter, System.Object, Newtonsoft.Json.JsonSerializer)

# Namespace

## RetailForce.Fiscalisation.Implementation.Germany.Taxonomy

### Classes

#### [AddressOptional](#)

#### [AddressStrict](#)

#### [BusinessCase](#)

Der business\_case qualifiziert den Geschäftsvorfall in der Einzelbewegung und im Kassenabschluss fachlich und inhaltlich

#### [BusinessCaseLineClass](#)

#### [Buyer](#)

Bildet die Klammer um alle Daten zu einem Käufer. Hintergrund: Ab einem Rechnungsbetrag von 200,00€ ist die sogenannte Kleinbetragsgrenze einer Rechnung überschritten. Dann muss die Käuferadresse erfasst werden. Dazu dienen die Felder unter der Klammer [buyer]. Auch hier gibt es einen Namen und die entsprechende Adresse.

#### [CashAmountsByCurrency](#)

#### [CashPointClosing](#)

Der Kassenabschluss wird ein-, mehrmals oder kalendertagübergreifend für eine Kasse erstellt.

#### [CashPointClosingHead](#)

In dieser Klammer werden die zentralen Stammdaten des Kassenabschlusses dargestellt.

#### [CashPointClosingSecurity](#)

Container für Daten von Sicherheitseinrichtungen, die für den ganzen Kassenabschluss gelten.

#### [CashRegister](#)

Die Klammer um alle Angaben zur jeweiligen Kasse.

#### [CashRegisterSoftware](#)

#### [CashStatement](#)

Alle Bewegungen einer Kasse werden im CashStatement dargestellt. Das Cashstatement einer Kasse stellt in einem Block die Geschäftsvorfälle und in einem zweiten Block die Zahlungsströme dar.

#### [ClosingCashRegister](#)

#### [Company](#)

Bildet die Klammer bezüglich aller Informationen zum Unternehmen. Ist es beabsichtigt, im laufenden Betrieb des Unternehmens Angaben innerhalb dieser Klammer zu ändern, so muss davor zwingend ein Kassenabschluss durchgeführt werden.

#### [Coordinate](#)

Version 2.2.0

#### [CsvExport](#)

#### [CustomFieldDefinitions](#)

#### [CustomFields](#)

sofern branchen- oder herstellerspezifische Informationen zusätzlich im Datensatz abgebildet werden sollen, für die jedoch keine geeigneten Positionen im Standard vorhanden sind, besteht die Möglichkeit, die Datensatzbeschreibung über benutzerdefinierte

Positionen, sogenannte „Custom\_Fields“, zu erweitern. Aufgrund der individuellen Erweiterung der Taxonomie haben diese Felder lediglich deklaratorischen Charakter und werden keiner automatisierten Weiterverarbeitung zugefügt

## Data

Bildet die Klammer um alle Bewegungsdaten eines Einzelbons. TransactionData unterscheiden die Daten in Gesamtbetrag mit Aufteilung in Zahlarten und umsatzsteuerliche Sachverhalte, Zusatznotizen, BonPositionen mit Artikel oder Warengruppenbezug und Bon Positionen ohne Artikel oder Warengruppenbezug.

## DataPaymentType

Unterteilung der gezahlten Beträge nach Zahlart und Währung.

## FinishTransaction

## FluffyTse

Auf die Transaktion bezogene Daten der Technischen Sicherheitseinrichtung (TSE) im Sinne der deutschen Kassensicherungsverordnung - KassenSichV

## Item

Innerhalb des Geschäftsvorfalles bildet der item die Klammer um alle Artikelspezifischen Informationen.

## Line

## Location

Unter dem Klammerbegriff Abrechnungsort werden alle Daten zum Abrechnungsort der Kasse vorgehalten. Der Abrechnungsort kann eine Abteilungsbezeichnung, eine Filiale oder ein variabler Punkt sein.

## Module

## Payment

Die Zahlart bildet den zweiten Block des CashStatement und untergliedert den gesamten Zahlungsstrom an einer Kasse in verschiedene Zahlarten.

## PaymentPaymentType

Jede Kasse muss unterscheiden können zwischen den Zahlarten Bar, Unbar, Keine. Bar kennzeichnet den Gesamtbetrag aller Barzahlungen. Unbar kennzeichnet die Summe aller Zahlungsströme aus Zahlarten die keine Bargeldzahlung darstellen. Verfügt das Kassensystem über die Möglichkeit, einzelne Zahlarten erfassen und darstellen zu können, so müssen diese dargestellt werden. Eine momentane Aufstellung der einzelnen Zahlarten ist hinterlegt. Es ist auch möglich, dass z. Bsp. Lieferscheine an der Kasse erfasst werden. Für diesen Fall wurde u.a. die Zahlart [Keine] eingeführt. Die Zahlart [Keine] darf mit keiner anderen Zahlart kombiniert werden.

## ProcessingFlags

Die Aktivierung dieses Feldes kennzeichnet, dass diese Kasse eine umsatzsteuerliche Zuordnung zum Zeitpunkt der Forderungsauflösung nicht treffen kann. Soll diese Einstellung geändert werden, so ist zuerst zwingend ein Kassenabschluss zu erstellen. Die umsatzsteuerliche Zuordnung erfolgt somit in jedem Falle zum Zeitpunkt der Lieferung und der Leistung.

## PurchaserAgency

## PurpleTse

Für den gesamten Kassenabschluss gültige Informationen zur Technischen Sicherheitseinrichtung (TSE) im Sinne der deutschen Kassensicherungsverordnung - KassenSichV

## Reference

'Reference' beschreibt eine Referenz auf Taxonomie-Transaktion oder einen Lieferschein bzw. eine Rechnung aus einem Dritt-



System

[Serialize](#)

[Slave](#)

[SlaveSoftware](#)

[SourceCashRegister](#)

[StartTransaction](#)

[SubItem](#)

[TaxonomyFileStore](#)

Saves the taxonomy files to disk and handles unfinished cash point closings

[TaxonomyStore<T>](#)

Represents the local and cloud storage provider for Taxonomy Germany (DSFin-VK, DFKA).

[Transaction](#)

Bildet die Klammer um eine einzige Einzelbewegung. Ist also der Einzelbeleg bzw. der Einzelbon. Auch die Transaktion gliedert sich in Kopf- und Bewegungsdaten.

[TransactionHead](#)

Der Transaktionskopf beinhaltet alle Stammdaten zur Einzelbewegung.

[TransactionSecurity](#)

Container für Daten von Sicherheitseinrichtungen, die für eine einzelne Transaktion gelten.

[User](#)

Der Benutzer ist die Person, die offiziell für die Abrechnung der Einzelbewegung an der Kasse verantwortlich ist. (Bsp.: Bedienung erfasst bzw. boniert, User kassiert)

[VatAmountGrossAndNet](#)

Einem Geschäftsvorfall können ein oder mehrere Beträge getrennt nach Umsatzsteuersätzen zugewiesen werden.

[VatAmountGrossAndNetReceipt](#)

Aufteilung des Gesamtbetrages einer Transaktion in die Einzelbeträge nach ausgewiesenen Umsatzsteuersätzen.

[VatAmountGrossOrNet](#)

[VatAmountOnly](#)

[VatDefinition](#)

Structs

[BusinessCaseLine](#)

Der business\_case einer Line kann nur entweder in Brutto oder Nettodarstellung erfolgen

Enums

[BusinessCaseType](#)

Der Type kennzeichnet Geschäftsvorfälle mit unterschiedlichen Ausprägungen.

[BuyerType](#)

## CountryCode

Ländercode nach ISO 3166 alpha-3

## Currency

Jeder Kassenabschluss hat ausschließlich eine Basiswährung. Die Angabe der Basiswährung bezieht sich auf die Basiswährung der Kasse. Die Basiswährung wird dargestellt nach ISO 4217 (Spalte: ISO-Code) Bsp.: Euro = EUR; Alle Zahlungen in Fremdwährung auf dem Einzelbeleg werden im Kassenabschluss in die Basiswährung umgerechnet.

## LogTimeFormat

Das von der TSE verwendete Format für die Log-Time - 'utcTime' = YYMMDDhhmmZ, 'utcTimeWithSeconds' = YYMMDDhhmmssZ, 'generalizedTime' = YYYYMMDDhhmmssZ, 'generalizedTimeWithMilliseconds' = YYYYMMDDhhmmss.fffZ

## ProcessDataEncoding

Das beim Erzeugen der process\_data verwendete Encoding - kann UTF-8 oder ASCII sein

## ReferenceType

## SignatureAlgorithm

Der von der TSE verwendete Signaturalgorithmus

## TransactionType

Der Transaktionstyp ordnet und unterteilt alle Vorgänge in Geschäftsvorfälle (Beleg) und andere Vorgänge. Durch diese Zuordnung wird auch die Weiterverarbeitung im Kassenabschluss gesteuert. Ausschließlich Einzelbewegungen mit dem Transaktionstyp Beleg besitzen Relevanz für den Kassenabschluss. Im Beleg werden z. Bsp.: Rechnungen, Lieferscheine, Korrekturen etc. dargestellt. Werden Einzelbewegungen aus anderen Grundaufzeichnungssystemen des Unternehmens heraus weiterverarbeitet, so dürfen diese Einzelbewegungen nicht den Transaktionstypen Beleg erhalten

## TypeEnum

# Class AddressOptional

## Inheritance

System.Object  
AddressOptional

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class AddressOptional
```

## Properties

### City

#### Declaration

```
[JsonProperty("city", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(TentacledMinMaxLengthCheckConverter))]  
public string City { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### CountryCode

#### Declaration

```
[JsonProperty("country_code", NullValueHandling = NullValueHandling.Ignore)]  
public CountryCode? CountryCode { get; set; }
```

#### Property Value

| TYPE                                           | DESCRIPTION |
|------------------------------------------------|-------------|
| System.Nullable< <a href="#">CountryCode</a> > |             |

### PostalCode

#### Declaration

```
[JsonProperty("postal_code", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(StickyMinMaxLengthCheckConverter))]  
public string PostalCode { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Street

### Declaration

```
[JsonProperty("street", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(FluffyMinMaxLengthCheckConverter))]  
public string Street { get; set; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class AddressStrict

## Inheritance

System.Object

AddressStrict

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class AddressStrict
```

## Properties

### City

#### Declaration

```
[JsonProperty("city")]  
[JsonConverter(typeof(TentacledMinMaxLengthCheckConverter))]  
public string City { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### CountryCode

#### Declaration

```
[JsonProperty("country_code")]  
public CountryCode CountryCode { get; set; }
```

#### Property Value

| TYPE                        | DESCRIPTION |
|-----------------------------|-------------|
| <a href="#">CountryCode</a> |             |

### PostalCode

#### Declaration

```
[JsonProperty("postal_code")]  
[JsonConverter(typeof(StickyMinMaxLengthCheckConverter))]  
public string PostalCode { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Street

### Declaration

```
[JsonProperty("street")]  
[JsonConverter(typeof(FluffyMinMaxLengthCheckConverter))]  
public string Street { get; set; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class BusinessCase

Der business\_case qualifiziert den Geschäftsvorfall in der Einzelbewegung und im Kassenabschluss fachlich und inhaltlich

## Inheritance

System.Object  
BusinessCase

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class BusinessCase
```

## Properties

### AmountsPerVatId

Einem Geschäftsvorfall können ein oder mehrere Beträge getrennt nach Umsatzsteuersätzen zugewiesen werden.

## Declaration

```
[JsonProperty("amounts_per_vat_id")]  
public List<VatAmountGrossAndNet> AmountsPerVatId { get; set; }
```

## Property Value

| TYPE                                                                    | DESCRIPTION |
|-------------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">VatAmountGrossAndNet</a> > |             |

## CustomFields

## Declaration

```
[JsonProperty("custom_fields", NullValueHandling = NullValueHandling.Ignore)]  
public CustomFields CustomFields { get; set; }
```

## Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">CustomFields</a> |             |

## Name

Der name untergliedert den business\_case fachlich und inhaltlich tiefer. Einem business\_case können kein, ein oder mehrere names zugeordnet werden.

## Declaration

```
[JsonProperty("name", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(PurpleMinMaxLengthCheckConverter))]  
public string Name { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### PurchaserAgencyId

Der Geschäftsvorfall kann einer Agentur zugewiesen werden. Ein Geschäftsvorfall darf nur einer Agentur zugewiesen werden.

#### Declaration

```
[JsonProperty("purchaser_agency_id", NullValueHandling = NullValueHandling.Ignore)]  
public long? PurchaserAgencyId { get; set; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| System.Nullable<System.Int64> |             |

### Type

Der Type kennzeichnet Geschäftsvorfälle mit unterschiedlichen Ausprägungen.

#### Declaration

```
[JsonProperty("type")]  
public BusinessCaseType Type { get; set; }
```

#### Property Value

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">BusinessCaseType</a> |             |



# Struct BusinessCaseLine

Der business\_case einer Line kann nur entweder in Brutto oder Nettodarstellung erfolgen

## Inherited Members

System.ValueType.Equals(System.Object)  
System.ValueType.GetHashCode()  
System.ValueType.ToString()  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetType()  
System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public struct BusinessCaseLine
```

## Fields

### AnythingArray

#### Declaration

```
public List<object> AnythingArray
```

#### Field Value

| TYPE                                           | DESCRIPTION |
|------------------------------------------------|-------------|
| System.Collections.Generic.List<System.Object> |             |

## Bool

#### Declaration

```
public bool? Bool
```

#### Field Value

| TYPE                            | DESCRIPTION |
|---------------------------------|-------------|
| System.Nullable<System.Boolean> |             |

## BusinessCaseLineClass

#### Declaration

```
public BusinessCaseLineClass BusinessCaseLineClass
```

#### Field Value

| TYPE                                  | DESCRIPTION |
|---------------------------------------|-------------|
| <a href="#">BusinessCaseLineClass</a> |             |

## Double

#### Declaration

```
public double? Double
```

#### Field Value

| TYPE                           | DESCRIPTION |
|--------------------------------|-------------|
| System.Nullable<System.Double> |             |

### Integer

#### Declaration

```
public long? Integer
```

#### Field Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| System.Nullable<System.Int64> |             |

### String

#### Declaration

```
public string String
```

#### Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Properties

#### IsNull

#### Declaration

```
public bool IsNull { get; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

### Operators

#### Implicit(BusinessCaseLineClass to BusinessCaseLine)

#### Declaration

```
public static implicit operator BusinessCaseLine(BusinessCaseLineClass BusinessCaseLineClass)
```

#### Parameters

| TYPE                                  | NAME                  | DESCRIPTION |
|---------------------------------------|-----------------------|-------------|
| <a href="#">BusinessCaseLineClass</a> | BusinessCaseLineClass |             |

#### Returns

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">BusinessCaseLine</a> |             |

### Implicit(Boolean to BusinessCaseLine)

Declaration

```
public static implicit operator BusinessCaseLine(bool Bool)
```

Parameters

| TYPE           | NAME | DESCRIPTION |
|----------------|------|-------------|
| System.Boolean | Bool |             |

Returns

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">BusinessCaseLine</a> |             |

### Implicit(List<Object> to BusinessCaseLine)

Declaration

```
public static implicit operator BusinessCaseLine(List<object> AnythingArray)
```

Parameters

| TYPE                                           | NAME          | DESCRIPTION |
|------------------------------------------------|---------------|-------------|
| System.Collections.Generic.List<System.Object> | AnythingArray |             |

Returns

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">BusinessCaseLine</a> |             |

### Implicit(Double to BusinessCaseLine)

Declaration

```
public static implicit operator BusinessCaseLine(double Double)
```

Parameters

| TYPE          | NAME   | DESCRIPTION |
|---------------|--------|-------------|
| System.Double | Double |             |

Returns

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">BusinessCaseLine</a> |             |

### Implicit(Int64 to BusinessCaseLine)

#### Declaration

```
public static implicit operator BusinessCaseLine(long Integer)
```

#### Parameters

| TYPE         | NAME    | DESCRIPTION |
|--------------|---------|-------------|
| System.Int64 | Integer |             |

#### Returns

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">BusinessCaseLine</a> |             |

#### Implicit(String to BusinessCaseLine)

#### Declaration

```
public static implicit operator BusinessCaseLine(string String)
```

#### Parameters

| TYPE          | NAME   | DESCRIPTION |
|---------------|--------|-------------|
| System.String | String |             |

#### Returns

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">BusinessCaseLine</a> |             |

# Class BusinessCaseLineClass

## Inheritance

System.Object

BusinessCaseLineClass

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class BusinessCaseLineClass
```

## Properties

### AmountsPerVatId

#### Declaration

```
[JsonProperty("amounts_per_vat_id")]  
public List<VatAmountOnly> AmountsPerVatId { get; set; }
```

#### Property Value

| TYPE                                                             | DESCRIPTION |
|------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">VatAmountOnly</a> > |             |

### CustomFields

#### Declaration

```
[JsonProperty("custom_fields", NullValueHandling = NullValueHandling.Ignore)]  
public CustomFields CustomFields { get; set; }
```

#### Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">CustomFields</a> |             |

## Name

Der name untergliedert den business\_case fachlich und inhaltlich tiefer. Einem business\_case können kein, ein oder mehrere names zugeordnet werden.

#### Declaration

```
[JsonProperty("name", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(PurpleMinMaxLengthCheckConverter))]  
public string Name { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### PurchaserAgencyId

Der Geschäftsvorfall kann einer Agentur zugewiesen werden. Ein Geschäftsvorfall darf nur einer Agentur zugewiesen werden.

#### Declaration

```
[JsonProperty("purchaser_agency_id", NullValueHandling = NullValueHandling.Ignore)]  
public long? PurchaserAgencyId { get; set; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| System.Nullable<System.Int64> |             |

### Type

Der Type kennzeichnet Geschäftsvorfälle mit unterschiedlichen Ausprägungen.

#### Declaration

```
[JsonProperty("type")]  
public BusinessCaseType Type { get; set; }
```

#### Property Value

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">BusinessCaseType</a> |             |

# Enum BusinessCaseType

Der Type kennzeichnet Geschäftsvorfälle mit unterschiedlichen Ausprägungen.

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum BusinessCaseType
```

## Fields

| NAME                        | DESCRIPTION |
|-----------------------------|-------------|
| Anfangsbestand              |             |
| Anzahlungsaufloesung        |             |
| Anzahlungseinstellung       |             |
| Aufschlag                   |             |
| Auszahlung                  |             |
| DifferenzSollst             |             |
| Einzahlung                  |             |
| EinzweckgutscheinEinloesung |             |
| EinzweckgutscheinKauf       |             |
| Forderungsaufloesung        |             |
| Forderungsentstehung        |             |
| Geldtransit                 |             |
| Lohnzahlung                 |             |
| MehrweckgutscheinEinloesung |             |
| MehrweckgutscheinKauf       |             |
| Pfand                       |             |
| PfandRueckzahlung           |             |
| Privateinlage               |             |
| Privatentnahme              |             |
| Rabatt                      |             |

| NAME           | DESCRIPTION |
|----------------|-------------|
| TrinkgeldAg    |             |
| TrinkgeldAn    |             |
| Umsatz         |             |
| ZuschussEcht   |             |
| ZuschussUnecht |             |



# Class Buyer

Bildet die Klammer um alle Daten zu einem Käufer. Hintergrund: Ab einem Rechnungsbetrag von 200,00€ ist die sogenannte Kleinbetragsgrenze einer Rechnung überschritten. Dann muss die Käuferadresse erfasst werden. Dazu dienen die Felder unter der Klammer [buyer]. Auch hier gibt es einen Namen und die entsprechende Adresse.

## Inheritance

System.Object

Buyer

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Buyer
```

## Properties

### Address

#### Declaration

```
[JsonProperty("address", NullValueHandling = NullValueHandling.Ignore)]  
public AddressOptional Address { get; set; }
```

#### Property Value

| TYPE                            | DESCRIPTION |
|---------------------------------|-------------|
| <a href="#">AddressOptional</a> |             |

### Id

Die Kundennummer des Käufers.

#### Declaration

```
[JsonProperty("id")]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string Id { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Name

Die Name des Käufers.

## Declaration

```
[JsonProperty("name")]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string Name { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Type

### Declaration

```
[JsonProperty("type")]  
public BuyerType Type { get; set; }
```

## Property Value

| TYPE                      | DESCRIPTION |
|---------------------------|-------------|
| <a href="#">BuyerType</a> |             |

## VatIdNumber

Laut §14a UStG ist ggf. auch die Umsatzsteuer-Identifikationsnummer des Leistungsempfängers anzugeben.

### Declaration

```
[JsonProperty("vat_id_number", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(HilariousMinMaxLengthCheckConverter))]  
public string VatIdNumber { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Enum BuyerType

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum BuyerType
```

Fields

| NAME        | DESCRIPTION |
|-------------|-------------|
| Kunde       |             |
| Mitarbeiter |             |

# Class CashAmountsByCurrency

## Inheritance

System.Object

CashAmountsByCurrency

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CashAmountsByCurrency
```

## Properties

### Amount

Der Betrag in der entsprechenden Wahrung

#### Declaration

```
[JsonProperty("amount")]  
[JsonConverter(typeof(FluffyMinMaxValueCheckConverter))]  
public double Amount { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Double |             |

### CurrencyCode

#### Declaration

```
[JsonProperty("currency_code")]  
public Currency CurrencyCode { get; set; }
```

#### Property Value

| TYPE                     | DESCRIPTION |
|--------------------------|-------------|
| <a href="#">Currency</a> |             |

### CustomFields

#### Declaration

```
[JsonProperty("custom_fields", NullValueHandling = NullValueHandling.Ignore)]  
public CustomFields CustomFields { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| CustomFields |             |

# Class CashPointClosing

Der Kassenabschluss wird ein-, mehrmals oder kalendertagübergreifend für eine Kasse erstellt.

## Inheritance

System.Object  
CashPointClosing

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CashPointClosing
```

## Properties

### CashStatement

Alle Bewegungen einer Kasse werden im CashStatement dargestellt. Das Cashstatement einer Kasse stellt in einem Block die Geschäftsvorfälle und in einem zweiten Block die Zahlungsströme dar.

## Declaration

```
[JsonProperty("cash_statement", NullValueHandling = NullValueHandling.Ignore)]  
public CashStatement CashStatement { get; set; }
```

## Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">CashStatement</a> |             |

### CustomFieldDefinitions

## Declaration

```
[JsonProperty("custom_field_definitions", NullValueHandling = NullValueHandling.Ignore)]  
public CustomFieldDefinitions CustomFieldDefinitions { get; set; }
```

## Property Value

| TYPE                                   | DESCRIPTION |
|----------------------------------------|-------------|
| <a href="#">CustomFieldDefinitions</a> |             |

## Head

In dieser Klammer werden die zentralen Stammdaten des Kassenabschlusses dargestellt.

## Declaration

```
[JsonProperty("head")]
public CashPointClosingHead Head { get; set; }
```

#### Property Value

| TYPE                                 | DESCRIPTION |
|--------------------------------------|-------------|
| <a href="#">CashPointClosingHead</a> |             |

#### Number

Jede Kasse vergibt die Kassenabschlussnummer. Diese ist aufsteigend, fortlaufend, nicht zurücksetzbar. Sie darf sich innerhalb einer Kasse nicht wiederholen. Durch die Hinzunahme der cash\_register/id wird der Kassenabschluss eindeutig

#### Declaration

```
[JsonProperty("number")]
public long Number { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

#### Security

Container für Daten von Sicherheitseinrichtungen, die für den ganzen Kassenabschluss gelten.

#### Declaration

```
[JsonProperty("security", NullValueHandling = NullValueHandling.Ignore)]
public CashPointClosingSecurity Security { get; set; }
```

#### Property Value

| TYPE                                     | DESCRIPTION |
|------------------------------------------|-------------|
| <a href="#">CashPointClosingSecurity</a> |             |

#### TaxonomyVersion

##### Taxonomieversion

#### Declaration

```
[JsonProperty("taxonomy_version")]
public string TaxonomyVersion { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Transactions

Bildet die Klammer um alle Einzelbewegungen eines Kassenabschlusses

#### Declaration

```
[JsonProperty("transactions", NullValueHandling = NullValueHandling.Ignore)]  
public List<Transaction> Transactions { get; set; }
```

Property Value

| TYPE                                                           | DESCRIPTION |
|----------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">Transaction</a> > |             |



# Class CashPointClosingHead

In dieser Klammer werden die zentralen Stammdaten des Kassenabschlusses dargestellt.

## Inheritance

System.Object

CashPointClosingHead

## Inherited Members

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CashPointClosingHead
```

## Properties

### BusinessDate

Das optionale Buchungsdatum des Kassenabschluss, z.B. zur Buchung in der Finanzbuchhaltung. Der Buchungstag muss angegeben werden, wenn dieser vom Erstellungstag abweicht. Die Angabe erfolgt nach nach ISO 8601 und RFC3339 im Format 'JJJJ-MM-TT'

## Declaration

```
[JsonProperty("business_date", NullValueHandling = NullValueHandling.Ignore)]  
public DateTimeOffset? BusinessDate { get; set; }
```

## Property Value

| TYPE                                   | DESCRIPTION |
|----------------------------------------|-------------|
| System.Nullable<System.DateTimeOffset> |             |

## Company

Bildet die Klammer bezüglich aller Informationen zum Unternehmen. Ist es beabsichtigt, im laufenden Betrieb des Unternehmens Angaben innerhalb dieser Klammer zu ändern, so muss davor zwingend ein Kassenabschluss durchgeführt werden.

## Declaration

```
[JsonProperty("company")]  
public Company Company { get; set; }
```

## Property Value

| TYPE                    | DESCRIPTION |
|-------------------------|-------------|
| <a href="#">Company</a> |             |

## CreationDate

Das Erstellungsdatum des Kassenabschlusses.

## Declaration

```
[JsonProperty("creation_date")]  
public DateTimeOffset CreationDate { get; set; }
```

## Property Value

| TYPE                  | DESCRIPTION |
|-----------------------|-------------|
| System.DateTimeOffset |             |

## CustomFields

### Declaration

```
[JsonProperty("custom_fields", NullValueHandling = NullValueHandling.Ignore)]  
public CustomFields CustomFields { get; set; }
```

### Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">CustomFields</a> |             |

## FirstId

Die Id der ersten Transaktion die in einen Kassenabschluss fließt.

### Declaration

```
[JsonProperty("first_id")]  
[JsonConverter(typeof(MagentaMinMaxLengthCheckConverter))]  
public string FirstId { get; set; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## LastId

Die Id der letzten Transaktion die in einen Kassenabschluss fließt.

### Declaration

```
[JsonProperty("last_id")]  
[JsonConverter(typeof(MagentaMinMaxLengthCheckConverter))]  
public string LastId { get; set; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Methods

### Equals(Object)

Equals !! if needed override hash code !!

#### Declaration

```
public override bool Equals(object obj)
```

#### Parameters

| TYPE          | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.Object | obj  |             |

#### Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

#### Overrides

System.Object.Equals(System.Object)

# Class CashPointClosingSecurity

Container für Daten von Sicherheitseinrichtungen, die für den ganzen Kassenabschluss gelten.

## Inheritance

System.Object

CashPointClosingSecurity

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CashPointClosingSecurity
```

## Properties

### Tse

Für den gesamten Kassenabschluss gültige Informationen zur Technischen Sicherheitseinrichtung (TSE) im Sinne der deutschen Kassensicherungsverordnung - KassenSichV

## Declaration

```
[JsonProperty("tse", NullValueHandling = NullValueHandling.Ignore)]  
public PurpleTse Tse { get; set; }
```

## Property Value

| TYPE                      | DESCRIPTION |
|---------------------------|-------------|
| <a href="#">PurpleTse</a> |             |

# Class CashRegister

Die Klammer um alle Angaben zur jeweiligen Kasse.

## Inheritance

System.Object

CashRegister

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CashRegister
```

## Properties

### BaseCurrencyCode

#### Declaration

```
[JsonProperty("base_currency_code")]  
public Currency BaseCurrencyCode { get; set; }
```

#### Property Value

| TYPE                     | DESCRIPTION |
|--------------------------|-------------|
| <a href="#">Currency</a> |             |

### Brand

Bezeichnet die Marke des Kassengeräts.

#### Declaration

```
[JsonProperty("brand")]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string Brand { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### CustomFields

#### Declaration

```
[JsonProperty("custom_fields", NullValueHandling = NullValueHandling.Ignore)]  
public CustomFields CustomFields { get; set; }
```

#### Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">CustomFields</a> |             |

#### Id

Die id ist die Identifikationsnummer, die der Hersteller an eine Kasse vergibt um diese eindeutig zu identifizieren. Falls vorhanden wird hier die Id erwartet, die ab dem 01.01.2020 der Finanzverwaltung zu melden ist. Alternativ die Seriennummer. Wichtig: Eine Kassen-Id. darf nicht zweimal vergeben sein! Ebenfalls zu beachten: Falls mehrere Kassen über eine zentrale Kasse abgerechnet werden, so ist bei dieser ID immer die ID des addierenden und meldenden Systems anzugeben.

#### Declaration

```
[JsonProperty("id")]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string Id { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Model

Bezeichnet das Modell der jeweiligen Kasse.

#### Declaration

```
[JsonProperty("model")]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string Model { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### ProcessingFlags

Die Aktivierung dieses Feldes kennzeichnet, dass diese Kasse eine umsatzsteuerliche Zuordnung zum Zeitpunkt der Forderungsauflösung nicht treffen kann. Soll diese Einstellung geändert werden, so ist zuerst zwingend ein Kassenabschluss zu erstellen. Die umsatzsteuerliche Zuordnung erfolgt somit in jedem Falle zum Zeitpunkt der Lieferung und der Leistung.

#### Declaration

```
[JsonProperty("processing_flags", NullValueHandling = NullValueHandling.Ignore)]  
public ProcessingFlags ProcessingFlags { get; set; }
```

#### Property Value

| TYPE                            | DESCRIPTION |
|---------------------------------|-------------|
| <a href="#">ProcessingFlags</a> |             |

#### PurchaserAgencies

Diese Klammer beinhaltet Name und Adresse des Agenturgebers für Agenturumsätze

## Declaration

```
[JsonProperty("purchaser_agencies", NullValueHandling = NullValueHandling.Ignore)]  
public List<PurchaserAgency> PurchaserAgencies { get; set; }
```

## Property Value

| TYPE                                                               | DESCRIPTION |
|--------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">PurchaserAgency</a> > |             |

## SerialNumber

Seriennummer der jeweiligen Kasse.

## Declaration

```
[JsonProperty("serial_number")]  
[JsonConverter(typeof(AmbitiousMinMaxLengthCheckConverter))]  
public string SerialNumber { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Slaves

Die Klammer um alle Angaben zur jeweiligen Kasse.

## Declaration

```
[JsonProperty("slaves", NullValueHandling = NullValueHandling.Ignore)]  
public List<Slave> Slaves { get; set; }
```

## Property Value

| TYPE                                                     | DESCRIPTION |
|----------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">Slave</a> > |             |

## Software

## Declaration

```
[JsonProperty("software", NullValueHandling = NullValueHandling.Ignore)]  
public CashRegisterSoftware Software { get; set; }
```

## Property Value

| TYPE                                 | DESCRIPTION |
|--------------------------------------|-------------|
| <a href="#">CashRegisterSoftware</a> |             |

## VatDefinitions

Hier werden feste umsatzsteuerliche Referenzierungen vergeben. Die Steuersätze 1-999 sind fest vorgegeben bzw. reserviert und 1000-9999999999 stehen zur freien Verfügung

## Declaration

```
[JsonProperty("vat_definitions")]  
public List<VatDefinition> VatDefinitions { get; set; }
```

Property Value

| TYPE                                                             | DESCRIPTION |
|------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">VatDefinition</a> > |             |



# Class CashRegisterSoftware

## Inheritance

System.Object

CashRegisterSoftware

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CashRegisterSoftware
```

## Properties

### Brand

Hier wird der Name der jeweiligen Kassensoftware aufgeführt.

## Declaration

```
[JsonProperty("brand", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string Brand { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Version

Hier erfolgt die Versionsangabe der jeweiligen Software.

## Declaration

```
[JsonProperty("version", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string Version { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class CashStatement

Alle Bewegungen einer Kasse werden im CashStatement dargestellt. Das Cashstatement einer Kasse stellt in einem Block die Geschäftsvorfälle und in einem zweiten Block die Zahlungsströme dar.

## Inheritance

System.Object  
CashStatement

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CashStatement
```

## Properties

### BusinessCases

#### Declaration

```
[JsonProperty("business_cases", NullValueHandling = NullValueHandling.Ignore)]  
public List<BusinessCase> BusinessCases { get; set; }
```

#### Property Value

| TYPE                                                            | DESCRIPTION |
|-----------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">BusinessCase</a> > |             |

### Payment

Die Zahlart bildet den zweiten Block des CashStatement und untergliedert den gesamten Zahlungsstrom an einer Kasse in verschiedene Zahlarten.

#### Declaration

```
[JsonProperty("payment", NullValueHandling = NullValueHandling.Ignore)]  
public Payment Payment { get; set; }
```

#### Property Value

| TYPE                    | DESCRIPTION |
|-------------------------|-------------|
| <a href="#">Payment</a> |             |

# Class ClosingCashRegister

## Inheritance

System.Object

ClosingCashRegister

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class ClosingCashRegister
```

## Properties

### Id

#### Declaration

```
[JsonProperty("id", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string Id { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### SlaveId

#### Declaration

```
[JsonProperty("slave_id", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string SlaveId { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class Company

Bildet die Klammer bezüglich aller Informationen zum Unternehmen. Ist es beabsichtigt, im laufenden Betrieb des Unternehmens Angaben innerhalb dieser Klammer zu ändern, so muss davor zwingend ein Kassenabschluss durchgeführt werden.

## Inheritance

System.Object

Company

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Company
```

## Properties

### Address

#### Declaration

```
[JsonProperty("address")]  
public AddressStrict Address { get; set; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">AddressStrict</a> |             |

### Location

Unter dem Klammerbegriff Abrechnungsort werden alle Daten zum Abrechnungsort der Kasse vorgehalten. Der Abrechnungsort kann eine Abteilungsbezeichnung, eine Filiale oder ein variabler Punkt sein.

#### Declaration

```
[JsonProperty("location")]  
public Location Location { get; set; }
```

#### Property Value

| TYPE                     | DESCRIPTION |
|--------------------------|-------------|
| <a href="#">Location</a> |             |

## Name

#### Declaration

```
[JsonProperty("name")]
[JsonConverter(typeof(FluffyMinMaxLengthCheckConverter))]
public string Name { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### TaxNumber

##### Declaration

```
[JsonProperty("tax_number")]
[JsonConverter(typeof(IndecentMinMaxLengthCheckConverter))]
public string TaxNumber { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### VatIdNumber

##### Declaration

```
[JsonProperty("vat_id_number", NullValueHandling = NullValueHandling.Ignore)]
[JsonConverter(typeof(HilariousMinMaxLengthCheckConverter))]
public string VatIdNumber { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class Coordinate

Version 2.2.0

Inheritance

System.Object

Coordinate

Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public class Coordinate
```

Properties

CashPointClosing

Der Kassenabschluss wird ein-, mehrmals oder kalendertagübergreifend für eine Kasse erstellt.

Declaration

```
[JsonProperty("cash_point_closing")]  
public CashPointClosing CashPointClosing { get; set; }
```

Property Value

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">CashPointClosing</a> |             |

Methods

FromJson(String)

Declaration

```
public static Coordinate FromJson(string json)
```

Parameters

| TYPE          | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.String | json |             |

Returns

| TYPE                       | DESCRIPTION |
|----------------------------|-------------|
| <a href="#">Coordinate</a> |             |

## Extension Methods

[Serialize.ToJson\(Coordinate\)](#)

# Enum CountryCode

Ländercode nach ISO 3166 alpha-3

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum CountryCode
```

## Fields

| NAME | DESCRIPTION |
|------|-------------|
| Abw  |             |
| Afg  |             |
| Ago  |             |
| Aia  |             |
| Ala  |             |
| Alb  |             |
| And  |             |
| Ant  |             |
| Are  |             |
| Arg  |             |
| Arm  |             |
| Asm  |             |
| Ata  |             |
| Atf  |             |
| Atg  |             |
| Aus  |             |
| Aut  |             |
| Aze  |             |
| Bdi  |             |
| Bel  |             |



| NAME | DESCRIPTION |
|------|-------------|
| Ben  |             |
| Bfa  |             |
| Bgd  |             |
| Bgr  |             |
| Bhr  |             |
| Bhs  |             |
| Bih  |             |
| Blr  |             |
| Blz  |             |
| Bmu  |             |
| Bol  |             |
| Bra  |             |
| Brb  |             |
| Brn  |             |
| Btn  |             |
| Bvt  |             |
| Bwa  |             |
| Caf  |             |
| Can  |             |
| Cck  |             |
| Che  |             |
| Chl  |             |
| Chn  |             |
| Civ  |             |
| Cmr  |             |

| NAME | DESCRIPTION |
|------|-------------|
| Cod  |             |
| Cog  |             |
| Cok  |             |
| Col  |             |
| Com  |             |
| Cpv  |             |
| Cri  |             |
| Cub  |             |
| Cxr  |             |
| Cym  |             |
| Cyp  |             |
| Cze  |             |
| Deu  |             |
| Dji  |             |
| Dma  |             |
| Dnk  |             |
| Dom  |             |
| Dza  |             |
| Ecu  |             |
| Egy  |             |
| Eri  |             |
| Esh  |             |
| Esp  |             |
| Est  |             |
| Eth  |             |

| NAME | DESCRIPTION |
|------|-------------|
| Fin  |             |
| Fji  |             |
| Flk  |             |
| Fra  |             |
| Fro  |             |
| Fsm  |             |
| Gab  |             |
| Gbr  |             |
| Geo  |             |
| Gha  |             |
| Gib  |             |
| Gin  |             |
| Glp  |             |
| Gmb  |             |
| Gnb  |             |
| Gnq  |             |
| Grc  |             |
| Grd  |             |
| Grl  |             |
| Gtm  |             |
| Guf  |             |
| Gum  |             |
| Guy  |             |
| Hkg  |             |
| Hmd  |             |

| NAME | DESCRIPTION |
|------|-------------|
| Hnd  |             |
| Hrv  |             |
| Hti  |             |
| Hun  |             |
| Idn  |             |
| Ind  |             |
| lot  |             |
| Irl  |             |
| Irn  |             |
| Irq  |             |
| Isl  |             |
| Isr  |             |
| Ita  |             |
| Jam  |             |
| Jor  |             |
| Jpn  |             |
| Kaz  |             |
| Ken  |             |
| Kgz  |             |
| Khm  |             |
| Kir  |             |
| Kna  |             |
| Kor  |             |
| Kwt  |             |
| Lao  |             |
|      |             |

| NAME | DESCRIPTION |
|------|-------------|
| Lbn  |             |
| Lbr  |             |
| Lby  |             |
| Lca  |             |
| Lie  |             |
| Lka  |             |
| Lso  |             |
| Ltu  |             |
| Lux  |             |
| Lva  |             |
| Mac  |             |
| Mar  |             |
| Mco  |             |
| Mda  |             |
| Mdg  |             |
| Mdv  |             |
| Mex  |             |
| Mhl  |             |
| Mkd  |             |
| Mli  |             |
| Mlt  |             |
| Mmr  |             |
| Mng  |             |
| Mnp  |             |
| Moz  |             |

| NAME | DESCRIPTION |
|------|-------------|
| Mrt  |             |
| Msr  |             |
| Mtg  |             |
| Mus  |             |
| Mwi  |             |
| Mys  |             |
| Myt  |             |
| Nam  |             |
| Ncl  |             |
| Ner  |             |
| Nfk  |             |
| Nga  |             |
| Nic  |             |
| Niu  |             |
| Nld  |             |
| Nor  |             |
| Npl  |             |
| Nru  |             |
| Nzl  |             |
| Omn  |             |
| Pak  |             |
| Pan  |             |
| Pcn  |             |
| Per  |             |
| Phl  |             |

| NAME | DESCRIPTION |
|------|-------------|
| Plw  |             |
| Png  |             |
| Pol  |             |
| Pri  |             |
| Prk  |             |
| Prt  |             |
| Pry  |             |
| Pse  |             |
| Pyf  |             |
| Qat  |             |
| Reu  |             |
| Rou  |             |
| Rus  |             |
| Rwa  |             |
| Sau  |             |
| Scg  |             |
| Sdn  |             |
| Sen  |             |
| Sgp  |             |
| Sgs  |             |
| Shn  |             |
| Sjm  |             |
| Slb  |             |
| Sle  |             |
| Slv  |             |

| NAME | DESCRIPTION |
|------|-------------|
| Smr  |             |
| Som  |             |
| Spm  |             |
| Stp  |             |
| Sur  |             |
| Svk  |             |
| Svn  |             |
| Swe  |             |
| Swz  |             |
| Syc  |             |
| Syr  |             |
| Tca  |             |
| Tcd  |             |
| Tgo  |             |
| Tha  |             |
| Tjk  |             |
| Tkl  |             |
| Tkm  |             |
| Tls  |             |
| Ton  |             |
| Tto  |             |
| Tun  |             |
| Tur  |             |
| Tuv  |             |
| Twn  |             |



| NAME | DESCRIPTION |
|------|-------------|
| Tza  |             |
| Uga  |             |
| Ukr  |             |
| Umi  |             |
| Ury  |             |
| Usa  |             |
| Uzb  |             |
| Vat  |             |
| Vct  |             |
| Ven  |             |
| Vgb  |             |
| Vir  |             |
| Vnm  |             |
| Vut  |             |
| Wlf  |             |
| Wsm  |             |
| Yem  |             |
| Zaf  |             |
| Zmb  |             |
| Zwe  |             |

# Class CsvExport

## Inheritance

System.Object

CsvExport

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CsvExport
```

## Constructors

CsvExport(ILogger)

### Declaration

```
public CsvExport(ILogger logger)
```

### Parameters

| TYPE                                 | NAME   | DESCRIPTION |
|--------------------------------------|--------|-------------|
| Microsoft.Extensions.Logging.ILogger | logger |             |

## Methods

Export(List<CashPointClosing>, String)

### Declaration

```
public void Export(List<CashPointClosing> cashPointClosings, string exportPath)
```

### Parameters

| TYPE                                                                | NAME              | DESCRIPTION |
|---------------------------------------------------------------------|-------------------|-------------|
| System.Collections.Generic.List< <a href="#">CashPointClosing</a> > | cashPointClosings |             |
| System.String                                                       | exportPath        |             |

# Enum Currency

Jeder Kassenabschluss hat ausschließlich eine Basiswährung. Die Angabe der Basiswährung bezieht sich auf die Basiswährung der Kasse. Die Basiswährung wird dargestellt nach ISO 4217 (Spalte: ISO-Code) Bsp.: Euro = EUR; Alle Zahlungen in Fremdwährung auf dem Einzelbeleg werden im Kassenabschluss in die Basiswährung umgerechnet.

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: [RetailForce.Fiscalisation.dll](#)

Syntax

```
public enum Currency
```

## Fields

| NAME | DESCRIPTION |
|------|-------------|
| Aed  |             |
| Afn  |             |
| All  |             |
| Amd  |             |
| Ang  |             |
| Aoa  |             |
| Ars  |             |
| Aud  |             |
| Awg  |             |
| Azn  |             |
| Bam  |             |
| Bbd  |             |
| Bdt  |             |
| Bgn  |             |
| Bhd  |             |
| Bif  |             |
| Bmd  |             |
| Bnd  |             |
| Bob  |             |

| NAME | DESCRIPTION |
|------|-------------|
| Bov  |             |
| Brl  |             |
| Bsd  |             |
| Btn  |             |
| Bwp  |             |
| Byn  |             |
| Byr  |             |
| Bzd  |             |
| Cad  |             |
| Cdf  |             |
| Che  |             |
| Chf  |             |
| Chw  |             |
| Clf  |             |
| Clp  |             |
| Cn   |             |
| Cop  |             |
| Cou  |             |
| Crc  |             |
| Cuc  |             |
| Cup  |             |
| Cve  |             |
| Czk  |             |
| Djf  |             |
| Dkk  |             |

| NAME | DESCRIPTION |
|------|-------------|
| Dop  |             |
| Dzd  |             |
| Egp  |             |
| Ern  |             |
| Etb  |             |
| Eur  |             |
| Fjd  |             |
| Fkp  |             |
| Gbp  |             |
| Gel  |             |
| Ghs  |             |
| Gip  |             |
| Gmd  |             |
| Gnf  |             |
| Gtq  |             |
| Gyd  |             |
| Hkd  |             |
| Hnl  |             |
| Hrk  |             |
| Htg  |             |
| Huf  |             |
| Idr  |             |
| Ils  |             |
| Inr  |             |
| Iqd  |             |

| NAME | DESCRIPTION |
|------|-------------|
| Irr  |             |
| Isk  |             |
| Jmd  |             |
| Jod  |             |
| Jpy  |             |
| Kes  |             |
| Kgs  |             |
| Khr  |             |
| Kmf  |             |
| Kpw  |             |
| Krw  |             |
| Kwd  |             |
| Kyd  |             |
| Kzt  |             |
| Lak  |             |
| Lbp  |             |
| Lkr  |             |
| Lrd  |             |
| Lsl  |             |
| Lyd  |             |
| Mad  |             |
| Mdl  |             |
| Mga  |             |
| Mkd  |             |
| Mmk  |             |

| NAME | DESCRIPTION |
|------|-------------|
| Mnt  |             |
| Mop  |             |
| Mro  |             |
| Mur  |             |
| Mvr  |             |
| Mwk  |             |
| Mxn  |             |
| Mxv  |             |
| Myr  |             |
| Mzn  |             |
| Nad  |             |
| Ngn  |             |
| Nio  |             |
| Nok  |             |
| Npr  |             |
| Nzd  |             |
| Omr  |             |
| Pab  |             |
| Pen  |             |
| Pgk  |             |
| Php  |             |
| Pkr  |             |
| Pln  |             |
| Pyg  |             |
| Qar  |             |

| NAME | DESCRIPTION |
|------|-------------|
| Ron  |             |
| Rsd  |             |
| Rub  |             |
| Rwf  |             |
| Sar  |             |
| Sbd  |             |
| Scr  |             |
| Sdg  |             |
| Sek  |             |
| Sgd  |             |
| Shp  |             |
| Sll  |             |
| Sos  |             |
| Srd  |             |
| Ssp  |             |
| Std  |             |
| Svc  |             |
| Syp  |             |
| Szl  |             |
| Thb  |             |
| Tjs  |             |
| Tmt  |             |
| Tnd  |             |
| Top  |             |
| Try  |             |
|      |             |



| NAME | DESCRIPTION |
|------|-------------|
| Ttd  |             |
| Twd  |             |
| Tzs  |             |
| Uah  |             |
| Ugx  |             |
| Usd  |             |
| Uyi  |             |
| Uyu  |             |
| Uzs  |             |
| Vef  |             |
| Vnd  |             |
| Vuv  |             |
| Wst  |             |
| Xaf  |             |
| Xcd  |             |
| Xof  |             |
| Xpf  |             |
| Xsu  |             |
| Yer  |             |
| Zar  |             |
| Zmw  |             |
| Zwl  |             |

# Class CustomFieldDefinitions

## Inheritance

System.Object

CustomFieldDefinitions

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CustomFieldDefinitions
```

# Class CustomFields

sofern branchen- oder herstellerspezifische Informationen zusätzlich im Datensatz abgebildet werden sollen, für die jedoch keine geeigneten Positionen im Standard vorhanden sind, besteht die Möglichkeit, die Datensatzbeschreibung über benutzerdefinierte Positionen, sogenannte „Custom\_Fields“, zu erweitern. Aufgrund der individuellen Erweiterung der Taxonomie haben diese Felder lediglich deklaratorischen Charakter und werden keiner automatisierten Weiterverarbeitung zugefügt

## Inheritance

System.Object

CustomFields

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CustomFields
```

# Class Data

Bildet die Klammer um alle Bewegungsdaten eines Einzelbons. TransactionData unterscheiden die Daten in Gesamtbetrag mit Aufteilung in Zahlarten und umsatzsteuerliche Sachverhalte, Zusatznotizen, BonPositionen mit Artikel oder Warengruppenbezug und Bon Positionen ohne Artikel oder Warengruppenbezug.

## Inheritance

System.Object

Data

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Data
```

## Properties

### AmountsPerVatId

Aufteilung des Gesamtbetrages einer Transaktion in die Einzelbeträge nach ausgewiesenen Umsatzsteuersätzen.

## Declaration

```
[JsonProperty("amounts_per_vat_id", NullValueHandling = NullValueHandling.Ignore)]  
public List<VatAmountGrossAndNetReceipt> AmountsPerVatId { get; set; }
```

## Property Value

| TYPE                                                                           | DESCRIPTION |
|--------------------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">VatAmountGrossAndNetReceipt</a> > |             |

### FullAmountInclVat

## Declaration

```
[JsonProperty("full_amount_incl_vat")]  
[JsonConverter(typeof(FluffyMinMaxValueCheckConverter))]  
public double FullAmountInclVat { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Double |             |

## Lines

Jeder Bon der ein Geschäft an der Kasse definiert, wird als Transaktion bezeichnet. Eine Transaktion kann aus einer oder mehreren Geschäftsvorfällen bestehen. Diese Geschäftsvorfälle werden im Folgenden [lines] genannt. Die Taxonomie unterscheidet

zwischen ItemLine und TypeLine. Die ItemLine steht für Geschäftsvorfälle, die einen Bezug zu einem Artikel, Produkt oder einer Warengruppe besitzen.

#### Declaration

```
[JsonProperty("lines", NullValueHandling = NullValueHandling.Ignore)]  
public List<Line> Lines { get; set; }
```

#### Property Value

| TYPE                                                    | DESCRIPTION |
|---------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">Line</a> > |             |

#### Notes

Unter [notes] werden entsprechende Zusatznotizen erfasst.

#### Declaration

```
[JsonProperty("notes", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(BraggadociousMinMaxLengthCheckConverter))]  
public string Notes { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### PaymentTypes

#### Declaration

```
[JsonProperty("payment_types", NullValueHandling = NullValueHandling.Ignore)]  
public List<DataPaymentType> PaymentTypes { get; set; }
```

#### Property Value

| TYPE                                                               | DESCRIPTION |
|--------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">DataPaymentType</a> > |             |

# Class DataPaymentType

Unterteilung der gezahlten Beträge nach Zahlart und Währung.

## Inheritance

System.Object  
DataPaymentType

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class DataPaymentType
```

## Properties

### Amount

#### Declaration

```
[JsonProperty("amount")]  
[JsonConverter(typeof(FluffyMinMaxValueCheckConverter))]  
public double Amount { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Double |             |

### CurrencyCode

#### Declaration

```
[JsonProperty("currency_code")]  
public Currency CurrencyCode { get; set; }
```

#### Property Value

| TYPE                     | DESCRIPTION |
|--------------------------|-------------|
| <a href="#">Currency</a> |             |

### CustomFields

#### Declaration

```
[JsonProperty("custom_fields", NullValueHandling = NullValueHandling.Ignore)]  
public CustomFields CustomFields { get; set; }
```

#### Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">CustomFields</a> |             |

## ForeignAmount

### Declaration

```
[JsonProperty("foreign_amount", NullValueHandling = NullValueHandling.Ignore)]
[JsonConverter(typeof(FluffyMinMaxValueCheckConverter))]
public double? ForeignAmount { get; set; }
```

### Property Value

| TYPE                           | DESCRIPTION |
|--------------------------------|-------------|
| System.Nullable<System.Double> |             |

## Name

### Declaration

```
[JsonProperty("name", NullValueHandling = NullValueHandling.Ignore)]
[JsonConverter(typeof(FluffyMinMaxLengthCheckConverter))]
public string Name { get; set; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Type

### Declaration

```
[JsonProperty("type")]
public TypeEnum Type { get; set; }
```

### Property Value

| TYPE                     | DESCRIPTION |
|--------------------------|-------------|
| <a href="#">TypeEnum</a> |             |

# Class FinishTransaction

## Inheritance

System.Object  
FinishTransaction

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class FinishTransaction
```

## Properties

### LogTime

Die Log-Time der FinishTransaction-Operation der TSE nach ISO 8601 und RFC3339 - die Log-Time muss mindestens so genau wiedergegeben werden, wie sie die TSE zur Signierung verwendet hat

## Declaration

```
[JsonProperty("log_time")]  
public DateTimeOffset LogTime { get; set; }
```

## Property Value

| TYPE                  | DESCRIPTION |
|-----------------------|-------------|
| System.DateTimeOffset |             |

### ProcessData

Optional können hier auch die process\_data in mit übergeben werden

## Declaration

```
[JsonProperty("process_data", NullValueHandling = NullValueHandling.Ignore)]  
public string ProcessData { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### ProcessType

Der processType der FinishTransaction-Operation, z.B. 'Kassenbeleg-V1'

## Declaration



```
[JsonProperty("process_type")]
[JsonConverter(typeof(MinMaxLengthCheckConverter2))]
public string ProcessType { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Signature

Die Signatur der TSE für die FinishTransaction-Operation in Base64-Kodierung

#### Declaration

```
[JsonProperty("signature")]
public string Signature { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### SignatureCounter

Der Signaturzähler der TSE für die FinishTransaction-Operation

#### Declaration

```
[JsonProperty("signature_counter")]
public long SignatureCounter { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

# Class FluffyTse

Auf die Transaktion bezogene Daten der Technischen Sicherheitseinrichtung (TSE) im Sinne der deutschen Kassensicherungsverordnung - KassenSichV

## Inheritance

System.Object

FluffyTse

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class FluffyTse
```

## Properties

### ErrorDescription

Bei TSE-Ausfall oder Fehler sollte hier eine aussagekräftige Fehlerbeschreibung eingetragen werden.

## Declaration

```
[JsonProperty("error_description", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(MinMaxLengthCheckConverter1))]  
public string ErrorDescription { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### FinishTransaction

## Declaration

```
[JsonProperty("finish_transaction", NullValueHandling = NullValueHandling.Ignore)]  
public FinishTransaction FinishTransaction { get; set; }
```

## Property Value

| TYPE                              | DESCRIPTION |
|-----------------------------------|-------------|
| <a href="#">FinishTransaction</a> |             |

## ModuleId

Die Id der für diese Transaktion verwendete TSE

## Declaration

```
[JsonProperty("module_id", NullValueHandling = NullValueHandling.Ignore)]
public long? ModuleId { get; set; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| System.Nullable<System.Int64> |             |

### StartTransaction

#### Declaration

```
[JsonProperty("start_transaction", NullValueHandling = NullValueHandling.Ignore)]
public StartTransaction StartTransaction { get; set; }
```

#### Property Value

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">StartTransaction</a> |             |

### TransactionNumber

Die Transaktionsnummer der TSE-Transaktion

#### Declaration

```
[JsonProperty("transaction_number", NullValueHandling = NullValueHandling.Ignore)]
public long? TransactionNumber { get; set; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| System.Nullable<System.Int64> |             |

# Class Item

Innerhalb des Geschäftsvorfalles bildet der item die Klammer um alle Artikelspezifischen Informationen.

## Inheritance

System.Object

Item

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Item
```

## Properties

### BaseAmountsPerVatId

Der Artikelumsatz pro Steuersatz ohne Berücksichtigung von Rabatt und Aufschlag

#### Declaration

```
[JsonProperty("base_amounts_per_vat_id", NullValueHandling = NullValueHandling.Ignore)]  
public List<VatAmountOnly> BaseAmountsPerVatId { get; set; }
```

#### Property Value

| TYPE                                                             | DESCRIPTION |
|------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">VatAmountOnly</a> > |             |

## CustomFields

#### Declaration

```
[JsonProperty("custom_fields", NullValueHandling = NullValueHandling.Ignore)]  
public CustomFields CustomFields { get; set; }
```

#### Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">CustomFields</a> |             |

### DiscountsPerVatId

Der Artikelrabatt pro Steuersatz

#### Declaration

```
[JsonProperty("discounts_per_vat_id", NullValueHandling = NullValueHandling.Ignore)]  
public List<VatAmountOnly> DiscountsPerVatId { get; set; }
```

#### Property Value

| TYPE                                           | DESCRIPTION |
|------------------------------------------------|-------------|
| System.Collections.Generic.List<VatAmountOnly> |             |

#### ExtraAmountsPerVatId

Der Artikelaufschlag pro Steuersatz

#### Declaration

```
[JsonProperty("extra_amounts_per_vat_id", NullValueHandling = NullValueHandling.Ignore)]  
public List<VatAmountOnly> ExtraAmountsPerVatId { get; set; }
```

#### Property Value

| TYPE                                           | DESCRIPTION |
|------------------------------------------------|-------------|
| System.Collections.Generic.List<VatAmountOnly> |             |

#### GroupId

Eindeutige ID der Warengruppe, z.B. die Warengruppennummer

#### Declaration

```
[JsonProperty("group_id", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(PurpleMinMaxLengthCheckConverter))]  
public string GroupId { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### GroupName

Bezeichnet den Namen der Warengruppe

#### Declaration

```
[JsonProperty("group_name", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string GroupName { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Gtin

Die Global Trade Item Number (GTIN) ist eine internationale, unverwechselbare Nummer zur Kennzeichnung von Produkten. Sie wird weltweit von der GS1 verwaltet und vergeben. Die früher übliche Bezeichnung European Article Number (EAN) wurde 2009 von der GTIN abgelöst.

#### Declaration

```
[JsonProperty("gtin", NullValueHandling = NullValueHandling.Ignore)]
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]
public string Gtin { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Number

Bezeichnet eine eindeutige Nummer, mit der der Artikel, das Produkt bzw. die Warengruppe in den Systemen des Unternehmens gepflegt und verwaltet wird.

#### Declaration

```
[JsonProperty("number")]
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]
public string Number { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### PricePerUnit

PricePerUnit ist der Artikelgrundpreis für Menge quantity\_factor der mit quantity\_measure spezifizierten Maßeinheit.

#### Declaration

```
[JsonProperty("price_per_unit")]
[JsonConverter(typeof(PurpleMinMaxValueCheckConverter))]
public double PricePerUnit { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Double |             |

### Quantity

#### Declaration

```
[JsonProperty("quantity")]
[JsonConverter(typeof(StickyMinMaxValueCheckConverter))]
public double Quantity { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Double |             |

### QuantityFactor

#### Declaration

```
[JsonProperty("quantity_factor", NullValueHandling = NullValueHandling.Ignore)]
public double? QuantityFactor { get; set; }
```

#### Property Value

| TYPE                           | DESCRIPTION |
|--------------------------------|-------------|
| System.Nullable<System.Double> |             |

## QuantityMeasure

Measure bezeichnet die Maßeinheit. Ist das Feld Maßeinheit leer, so gilt automatisch die Einheit Stück

#### Declaration

```
[JsonProperty("quantity_measure", NullValueHandling = NullValueHandling.Ignore)]
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]
public string QuantityMeasure { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## SubItems

Die SubItems schaffen die Möglichkeit, die Zusammensetzung von verkauften Produkten bzw. Warengruppenbezeichnungen auf Artelebene zu erklären. Beispiel: Menü = Cola und Hamburger. Die SubItems müssen nicht gefüllt werden. Sie haben erklärenden Charakter und keine Aussagekraft bezüglich Preis und Umsatzsteuer.

#### Declaration

```
[JsonProperty("sub_items", NullValueHandling = NullValueHandling.Ignore)]
public List<SubItem> SubItems { get; set; }
```

#### Property Value

| TYPE                                                       | DESCRIPTION |
|------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">SubItem</a> > |             |

# Class Line

## Inheritance

System.Object

Line

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Line
```

## Properties

### BusinessCase

#### Declaration

```
[JsonProperty("business_case")]  
public BusinessCaseLine BusinessCase { get; set; }
```

#### Property Value

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">BusinessCaseLine</a> |             |

### CustomFields

#### Declaration

```
[JsonProperty("custom_fields", NullValueHandling = NullValueHandling.Ignore)]  
public CustomFields CustomFields { get; set; }
```

#### Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">CustomFields</a> |             |

### Id

#### Declaration

```
[JsonProperty("id")]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string Id { get; set; }
```

#### Property Value



| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## InHouse

Kennzeichnet einen in\_house Verkauf bzw. außerhausverkauf

Declaration

```
[JsonProperty("in_house", NullValueHandling = NullValueHandling.Ignore)]
public bool? InHouse { get; set; }
```

Property Value

| TYPE                            | DESCRIPTION |
|---------------------------------|-------------|
| System.Nullable<System.Boolean> |             |

## Item

Innerhalb des Geschäftsvorfalles bildet der item die Klammer um alle Artikelspezifischen Informationen.

Declaration

```
[JsonProperty("item", NullValueHandling = NullValueHandling.Ignore)]
public Item Item { get; set; }
```

Property Value

| TYPE                 | DESCRIPTION |
|----------------------|-------------|
| <a href="#">Item</a> |             |

## References

Referenzen auf externe Lieferscheine, Rechnungen oder Transaktionen eines Taxonomie-Kassenabschlusses

Declaration

```
[JsonProperty("references", NullValueHandling = NullValueHandling.Ignore)]
public List<Reference> References { get; set; }
```

Property Value

| TYPE                                                         | DESCRIPTION |
|--------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">Reference</a> > |             |

## SourceCashRegister

Declaration

```
[JsonProperty("source_cash_register", NullValueHandling = NullValueHandling.Ignore)]
public SourceCashRegister SourceCashRegister { get; set; }
```

Property Value

| TYPE               | DESCRIPTION |
|--------------------|-------------|
| SourceCashRegister |             |

## Storno

Kennzeichnet einen Stornovorgang auf Line-Ebene.

Declaration

```
[JsonProperty("storno")]
public bool Storno { get; set; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## Text

Bezeichnung der Line bzw. Name des Items.

Declaration

```
[JsonProperty("text")]
[JsonConverter(typeof(MischievousMinMaxLengthCheckConverter))]
public string Text { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## VoucherId

Declaration

```
[JsonProperty("voucher_id", NullValueHandling = NullValueHandling.Ignore)]
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]
public string VoucherId { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class Location

Unter dem Klammerbegriff Abrechnungsort werden alle Daten zum Abrechnungsort der Kasse vorgehalten. Der Abrechnungsort kann eine Abteilungsbezeichnung, eine Filiale oder ein variabler Punkt sein.

## Inheritance

System.Object

Location

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Location
```

## Properties

### Address

#### Declaration

```
[JsonProperty("address")]  
public AddressStrict Address { get; set; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">AddressStrict</a> |             |

### CashRegister

Die Klammer um alle Angaben zur jeweiligen Kasse.

#### Declaration

```
[JsonProperty("cash_register")]  
public CashRegister CashRegister { get; set; }
```

#### Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">CashRegister</a> |             |

## Name

#### Declaration

```
[JsonProperty("name")]
[JsonConverter(typeof(FluffyMinMaxLengthCheckConverter))]
public string Name { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

VatIdNumber

Declaration

```
[JsonProperty("vat_id_number", NullValueHandling = NullValueHandling.Ignore)]
[JsonConverter(typeof(HilariousMinMaxLengthCheckConverter))]
public string VatIdNumber { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Enum LogTimeFormat

Das von der TSE verwendete Format für die Log-Time - 'utcTime' = YYMMDDhhmmZ, 'utcTimeWithSeconds' = YYMMDDhhmmssZ, 'generalizedTime' = YYYYMMDDhhmmssZ, 'generalizedTimeWithMilliseconds' = YYYYMMDDhhmmss.fffZ

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public enum LogTimeFormat
```

## Fields

| NAME                            | DESCRIPTION |
|---------------------------------|-------------|
| GeneralizedTime                 |             |
| GeneralizedTimeWithMilliseconds |             |
| UnixTime                        |             |
| UtcTime                         |             |
| UtcTimeWithSeconds              |             |

# Class Module

## Inheritance

System.Object

Module

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Module
```

## Properties

### Certificate

Das Zertifikat der TSE in Base64-Kodierung

#### Declaration

```
[JsonProperty("certificate")]  
public string Certificate { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Id

Die ID der TSE - wird nur zur Referenzierung innerhalb eines Kassenabschlusses verwendet.

#### Declaration

```
[JsonProperty("id")]  
public long Id { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

### LogTimeFormat

Das von der TSE verwendete Format für die Log-Time - 'utcTime' = YYMMDDhhmmZ, 'utcTimeWithSeconds' = YYMMDDhhmmssZ, 'generalizedTime' = YYYYMMDDhhmmssZ, 'generalizedTimeWithMilliseconds' = YYYYMMDDhhmmss.fffZ

#### Declaration

```
[JsonProperty("log_time_format")]
public LogTimeFormat LogTimeFormat { get; set; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">LogTimeFormat</a> |             |

### SerialNumber

Die Seriennummer der TSE (Entspricht laut TR-03153 Abschnitt 7.5. dem Hashwert des im Zertifikat enthaltenen Schlüssels in Octet-String-Darstellung)

#### Declaration

```
[JsonProperty("serial_number")]
[JsonConverter(typeof(FriskyMinMaxLengthCheckConverter))]
public string SerialNumber { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### SignatureAlgorithm

Der von der TSE verwendete Signaturalgorithmus

#### Declaration

```
[JsonProperty("signature_algorithm")]
public SignatureAlgorithm SignatureAlgorithm { get; set; }
```

#### Property Value

| TYPE                               | DESCRIPTION |
|------------------------------------|-------------|
| <a href="#">SignatureAlgorithm</a> |             |

# Class Payment

Die Zahlart bildet den zweiten Block des CashStatement und untergliedert den gesamten Zahlungsstrom an einer Kasse in verschiedene Zahlarten.

## Inheritance

System.Object

Payment

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Payment
```

## Properties

### CashAmount

Der Gesamtbetrag aller Bareinnahmen und -ausgaben. Entnimmt der Unternehmer das Geld im Rahmen des Kassenabschlusses, so weist dieses Feld die 0 aus. Entnimmt der Unternehmer im Rahmen des Kassenabschlusses nicht das gesamte Geld, so weist dieses Feld den Kassenendbestand an Bargeld aus.

## Declaration

```
[JsonProperty("cash_amount")]  
[JsonConverter(typeof(FluffyMinMaxValueCheckConverter))]  
public double CashAmount { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Double |             |

### CashAmountsByCurrency

Eine Aufschlüsselung aller Bareinnahmen nach Wahrung

## Declaration

```
[JsonProperty("cash_amounts_by_currency")]  
public List<CashAmountsByCurrency> CashAmountsByCurrency { get; set; }
```

## Property Value

| TYPE                                                                     | DESCRIPTION |
|--------------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">CashAmountsByCurrency</a> > |             |



## FullAmount

Der Gesamtbetrag stellt den Gesamtbetrag des Zahlungsstromes dar.

### Declaration

```
[JsonProperty("full_amount")]  
[JsonConverter(typeof(FluffyMinMaxValueCheckConverter))]  
public double FullAmount { get; set; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Double |             |

## PaymentTypes

### Declaration

```
[JsonProperty("payment_types")]  
public List<PaymentPaymentType> PaymentTypes { get; set; }
```

### Property Value

| TYPE                                                                  | DESCRIPTION |
|-----------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">PaymentPaymentType</a> > |             |

# Class PaymentPaymentType

Jede Kasse muss unterscheiden können zwischen den Zahlarten Bar, Unbar, Keine. Bar kennzeichnet den Gesamtbetrag aller Barzahlungen. Unbar kennzeichnet die Summe aller Zahlungsströme aus Zahlarten die keine Bargeldzahlung darstellen. Verfügt das Kassensystem über die Möglichkeit, einzelne Zahlarten erfassen und darstellen zu können, so müssen diese dargestellt werden. Eine momentane Aufstellung der einzelnen Zahlarten ist hinterlegt. Es ist auch möglich, dass z. Bsp. Lieferscheine an der Kasse erfasst werden. Für diesen Fall wurde u.a. die Zahlart [Keine] eingeführt. Die Zahlart [Keine] darf mit keiner anderen Zahlart kombiniert werden.

## Inheritance

System.Object

PaymentPaymentType

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class PaymentPaymentType
```

## Properties

### Amount

#### Declaration

```
[JsonProperty("amount")]  
[JsonConverter(typeof(FluffyMinMaxValueCheckConverter))]  
public double Amount { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Double |             |

### CurrencyCode

#### Declaration

```
[JsonProperty("currency_code")]  
public Currency CurrencyCode { get; set; }
```

#### Property Value

| TYPE                     | DESCRIPTION |
|--------------------------|-------------|
| <a href="#">Currency</a> |             |

## CustomFields

#### Declaration

```
[JsonProperty("custom_fields", NullValueHandling = NullValueHandling.Ignore)]
public CustomFields CustomFields { get; set; }
```

#### Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">CustomFields</a> |             |

### ForeignAmount

#### Declaration

```
[JsonProperty("foreign_amount", NullValueHandling = NullValueHandling.Ignore)]
[JsonConverter(typeof(FluffyMinMaxValueCheckConverter))]
public double? ForeignAmount { get; set; }
```

#### Property Value

| TYPE                           | DESCRIPTION |
|--------------------------------|-------------|
| System.Nullable<System.Double> |             |

### Name

#### Declaration

```
[JsonProperty("name", NullValueHandling = NullValueHandling.Ignore)]
[JsonConverter(typeof(FluffyMinMaxLengthCheckConverter))]
public string Name { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Type

#### Declaration

```
[JsonProperty("type")]
public TypeEnum Type { get; set; }
```

#### Property Value

| TYPE                     | DESCRIPTION |
|--------------------------|-------------|
| <a href="#">TypeEnum</a> |             |

# Enum ProcessDataEncoding

Das beim Erzeugen der process\_data verwendete Encoding - kann UTF-8 oder ASCII sein

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum ProcessDataEncoding
```

## Fields

| NAME  | DESCRIPTION |
|-------|-------------|
| Ascii |             |
| Utf8  |             |

# Class ProcessingFlags

Die Aktivierung dieses Feldes kennzeichnet, dass diese Kasse eine umsatzsteuerliche Zuordnung zum Zeitpunkt der Forderungsauflösung nicht treffen kann. Soll diese Einstellung geändert werden, so ist zuerst zwingend ein Kassenabschluss zu erstellen. Die umsatzsteuerliche Zuordnung erfolgt somit in jedem Falle zum Zeitpunkt der Lieferung und der Leistung.

## Inheritance

System.Object  
ProcessingFlags

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class ProcessingFlags
```

## Properties

### UmsatzsteuerNichtErmittelbar

#### Declaration

```
[JsonProperty("UmsatzsteuerNichtErmittelbar", NullValueHandling = NullValueHandling.Ignore)]  
public bool? UmsatzsteuerNichtErmittelbar { get; set; }
```

#### Property Value

| TYPE                            | DESCRIPTION |
|---------------------------------|-------------|
| System.Nullable<System.Boolean> |             |

# Class PurchaserAgency

## Inheritance

System.Object  
PurchaserAgency

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class PurchaserAgency
```

## Properties

### Address

#### Declaration

```
[JsonProperty("address")]  
public AddressStrict Address { get; set; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">AddressStrict</a> |             |

### CustomFields

#### Declaration

```
[JsonProperty("custom_fields", NullValueHandling = NullValueHandling.Ignore)]  
public CustomFields CustomFields { get; set; }
```

#### Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">CustomFields</a> |             |

### Id

Die Referenzierung aller Daten eines Agenturgebers für Agenturumsätze auf eine ID wird an dieser Position durchgeführt. Für die ID werden die Zahlen 1 - 99999999999 akzeptiert. Es werden nur ganze Zahlen akzeptiert. Die Reihenfolge muss in 1-er Schritten aufsteigend sein.

#### Declaration

```
[JsonProperty("id")]  
public long Id { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

#### Name

##### Declaration

```
[JsonProperty("name")]  
[JsonConverter(typeof(FluffyMinMaxLengthCheckConverter))]  
public string Name { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### TaxNumber

##### Declaration

```
[JsonProperty("tax_number")]  
[JsonConverter(typeof(IndecentMinMaxLengthCheckConverter))]  
public string TaxNumber { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### VatIdNumber

##### Declaration

```
[JsonProperty("vat_id_number", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(HilariousMinMaxLengthCheckConverter))]  
public string VatIdNumber { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class PurpleTse

Für den gesamten Kassenabschluss gültige Informationen zur Technischen Sicherheitseinrichtung (TSE) im Sinne der deutschen Kassensicherungsverordnung - KassenSichV

## Inheritance

System.Object

PurpleTse

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class PurpleTse
```

## Properties

### Modules

Auflistung der im Kassenabschluss verwendeten TSEs

## Declaration

```
[JsonProperty("modules")]  
public List<Module> Modules { get; set; }
```

## Property Value

| TYPE                                                      | DESCRIPTION |
|-----------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">Module</a> > |             |

### ProcessDataEncoding

Das beim Erzeugen der process\_data verwendete Encoding - kann UTF-8 oder ASCII sein

## Declaration

```
[JsonProperty("process_data_encoding")]  
public ProcessDataEncoding ProcessDataEncoding { get; set; }
```

## Property Value

| TYPE                                | DESCRIPTION |
|-------------------------------------|-------------|
| <a href="#">ProcessDataEncoding</a> |             |



# Class Reference

'Reference' beschreibt eine Referenz auf Taxonomie-Transaktion oder einen Lieferschein bzw. eine Rechnung aus einem Dritt-System

Inheritance

System.Object

Reference

Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public class Reference
```

## Properties

### CashPointClosing

Declaration

```
[JsonProperty("cash_point_closing", NullValueHandling = NullValueHandling.Ignore)]  
public long? CashPointClosing { get; set; }
```

Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| System.Nullable<System.Int64> |             |

### CashRegisterId

Declaration

```
[JsonProperty("cash_register_id", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string CashRegisterId { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Date

Declaration

```
[JsonProperty("date", NullValueHandling = NullValueHandling.Ignore)]  
public DateTimeOffset? Date { get; set; }
```

Property Value

| TYPE                                   | DESCRIPTION |
|----------------------------------------|-------------|
| System.Nullable<System.DateTimeOffset> |             |

## Id

### Declaration

```
[JsonProperty("id")]
[JsonConverter(typeof(PurpleMinMaxLengthCheckConverter))]
public string Id { get; set; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Name

Name zur näheren Spezifikation der externen Referenz

### Declaration

```
[JsonProperty("name", NullValueHandling = NullValueHandling.Ignore)]
[JsonConverter(typeof(PurpleMinMaxLengthCheckConverter))]
public string Name { get; set; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Type

### Declaration

```
[JsonProperty("type")]
public ReferenceType Type { get; set; }
```

### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">ReferenceType</a> |             |

# Enum ReferenceType

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum ReferenceType
```

Fields

| NAME                 | DESCRIPTION |
|----------------------|-------------|
| ExterneRechnung      |             |
| ExternerLieferschein |             |
| ExterneSonstige      |             |
| Transaktion          |             |

# Class Serialize

## Inheritance

System.Object

Serialize

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public static class Serialize
```

## Methods

ToJson(Coordinate)

### Declaration

```
public static string ToJson(this Coordinate self)
```

### Parameters

| TYPE                       | NAME | DESCRIPTION |
|----------------------------|------|-------------|
| <a href="#">Coordinate</a> | self |             |

### Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Enum SignatureAlgorithm

Der von der TSE verwendete Signaturalgorithmus

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum SignatureAlgorithm
```

## Fields

| NAME               | DESCRIPTION |
|--------------------|-------------|
| EcdsaPlainSha224   |             |
| EcdsaPlainSha256   |             |
| EcdsaPlainSha3224  |             |
| EcdsaPlainSha3256  |             |
| EcdsaPlainSha3384  |             |
| EcdsaPlainSha3512  |             |
| EcdsaPlainSha384   |             |
| EcdsaPlainSha512   |             |
| EcsdsaPlainSha224  |             |
| EcsdsaPlainSha256  |             |
| EcsdsaPlainSha3224 |             |
| EcsdsaPlainSha3256 |             |
| EcsdsaPlainSha3384 |             |
| EcsdsaPlainSha3512 |             |
| EcsdsaPlainSha384  |             |
| EcsdsaPlainSha512  |             |

# Class Slave

## Inheritance

System.Object

Slave

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Slave
```

## Properties

### Brand

Bezeichnet die Marke des Kassengeräts.

#### Declaration

```
[JsonProperty("brand", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string Brand { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### CustomFields

#### Declaration

```
[JsonProperty("custom_fields", NullValueHandling = NullValueHandling.Ignore)]  
public CustomFields CustomFields { get; set; }
```

#### Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">CustomFields</a> |             |

### Model

Bezeichnet das Modell der jeweiligen Kasse.

#### Declaration

```
[JsonProperty("model", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string Model { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### SerialNumber

Seriennummer der jeweiligen Slave-Kasse.

#### Declaration

```
[JsonProperty("serial_number")]  
[JsonConverter(typeof(AmbitiousMinMaxLengthCheckConverter))]  
public string SerialNumber { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### SlaveId

Die slave\_id ist zwingend anzugeben, wenn mehr als ein Terminal über eine id abgerechnet werden. Alle kassierenden Kassen müssen hier mit Ihrer id der abrechnenden Kasse zugeordnet werden.

#### Declaration

```
[JsonProperty("slave_id")]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string SlaveId { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Software

#### Declaration

```
[JsonProperty("software", NullValueHandling = NullValueHandling.Ignore)]  
public SlaveSoftware Software { get; set; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">SlaveSoftware</a> |             |

# Class SlaveSoftware

## Inheritance

System.Object

SlaveSoftware

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class SlaveSoftware
```

## Properties

### Brand

Hier wird der Name der jeweiligen Kassensoftware aufgeführt.

### Declaration

```
[JsonProperty("brand", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string Brand { get; set; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Version

Hier erfolgt die Versionsangabe der jeweiligen Software.

### Declaration

```
[JsonProperty("version", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string Version { get; set; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |



# Class SourceCashRegister

## Inheritance

System.Object

SourceCashRegister

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class SourceCashRegister
```

## Properties

### Id

#### Declaration

```
[JsonProperty("id", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string Id { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### SlaveId

#### Declaration

```
[JsonProperty("slave_id", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string SlaveId { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class StartTransaction

## Inheritance

System.Object  
StartTransaction

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class StartTransaction
```

## Properties

### LogTime

Die Log-Time der StartTransaction-Operation der TSE nach ISO 8601 und RFC3339 - die Log-Time muss mindestens so genau wiedergegeben werden, wie sie die TSE zur Signierung verwendet hat

## Declaration

```
[JsonProperty("log_time")]  
public DateTimeOffset LogTime { get; set; }
```

## Property Value

| TYPE                  | DESCRIPTION |
|-----------------------|-------------|
| System.DateTimeOffset |             |

# Class SubItem

Inheritance

System.Object

SubItem

Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public class SubItem
```

## Properties

### AmountPerVatId

Declaration

```
[JsonProperty("amount_per_vat_id")]  
public VatAmountGrossOrNet AmountPerVatId { get; set; }
```

Property Value

| TYPE                                | DESCRIPTION |
|-------------------------------------|-------------|
| <a href="#">VatAmountGrossOrNet</a> |             |

### CustomFields

Declaration

```
[JsonProperty("custom_fields", NullValueHandling = NullValueHandling.Ignore)]  
public CustomFields CustomFields { get; set; }
```

Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">CustomFields</a> |             |

### GroupId

Eindeutige ID der Warengruppe, z.B. die Warengruppennummer

Declaration

```
[JsonProperty("group_id", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(PurpleMinMaxLengthCheckConverter))]  
public string GroupId { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## GroupName

Declaration

```
[JsonProperty("group_name", NullValueHandling = NullValueHandling.Ignore)]
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]
public string GroupName { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Gtin

Declaration

```
[JsonProperty("gtin", NullValueHandling = NullValueHandling.Ignore)]
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]
public string Gtin { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Name

Declaration

```
[JsonProperty("name", NullValueHandling = NullValueHandling.Ignore)]
[JsonConverter(typeof(FluffyMinMaxLengthCheckConverter))]
public string Name { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Number

Declaration

```
[JsonProperty("number")]
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]
public string Number { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Quantity

## Declaration

```
[JsonProperty("quantity")]  
[JsonConverter(typeof(StickyMinMaxValueCheckConverter))]  
public double Quantity { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Double |             |

## QuantityFactor

### Declaration

```
[JsonProperty("quantity_factor", NullValueHandling = NullValueHandling.Ignore)]  
public double? QuantityFactor { get; set; }
```

## Property Value

| TYPE                           | DESCRIPTION |
|--------------------------------|-------------|
| System.Nullable<System.Double> |             |

## QuantityMeasure

Measure bezeichnet die Maßeinheit. Ist das Feld Maßeinheit leer, so gilt automatisch die Einheit Stück

### Declaration

```
[JsonProperty("quantity_measure", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string QuantityMeasure { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class TaxonomyFileStore

Saves the taxonomy files to disk and handles unfinished cash point closings

## Inheritance

System.Object

RetailForce.Common.Logging.LoggingBase

[TaxonomyStore<TaxonomyFileStoreConfiguration>](#)

TaxonomyFileStore

## Inherited Members

[TaxonomyStore<TaxonomyFileStoreConfiguration>.Configuration](#)

RetailForce.Common.Logging.LoggingBase.\_logger

RetailForce.Common.Logging.LoggingBase.\_logSource

RetailForce.Common.Logging.LoggingBase.LogCritical(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogCritical(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogWarning(System.String, System.Object[])

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TaxonomyFileStore : TaxonomyStore<TaxonomyFileStoreConfiguration>
```

## Constructors

**TaxonomyFileStore(ILogger, TaxonomyFileStoreConfiguration)**

Constructor.

## Declaration

```
public TaxonomyFileStore(ILogger logger, TaxonomyFileStoreConfiguration configuration)
```

## Parameters

| TYPE                                           | NAME          | DESCRIPTION                       |
|------------------------------------------------|---------------|-----------------------------------|
| Microsoft.Extensions.Logging.ILogger           | logger        | An instance of an logger          |
| <a href="#">TaxonomyFileStoreConfiguration</a> | configuration | the configuration for the storage |

## Exceptions

| TYPE                         | CONDITION                                            |
|------------------------------|------------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>configuration</code> is set to null. |

## Methods

**CleanCashPointClosing(Guid, Int32)**

cleans / removes all transactions and the cash point closing header

## Declaration

```
public override void CleanCashPointClosing(Guid uniqueClientId, int cashPointClosingNr)
```

## Parameters

| TYPE         | NAME               | DESCRIPTION                                                     |
|--------------|--------------------|-----------------------------------------------------------------|
| System.Guid  | uniqueClientId     | The unique id of the client                                     |
| System.Int32 | cashPointClosingNr | The cash point closing number where the header should be stored |

## Overrides

RetailForce.Fiscalisation.Implementation.Germany.Taxonomy.TaxonomyStore<RetailForce.Fiscalisation.Implementation.Germany.TaxonomyFileStoreConfiguration>.CleanCashPointClosing(System.Guid, System.Int32)

**GetOpenCashPointClosingNumber(Guid)**

Returns the a cash point closing number

## Declaration

```
public int GetOpenCashPointClosingNumber(Guid uniqueClientId)
```

## Parameters

| TYPE        | NAME           | DESCRIPTION                 |
|-------------|----------------|-----------------------------|
| System.Guid | uniqueClientId | The unique id of the client |

Returns

| TYPE         | DESCRIPTION                                                                                                               |
|--------------|---------------------------------------------------------------------------------------------------------------------------|
| System.Int32 | CashPointClosingNumber of an cash point closing which isn't finalized if nothing is open it returns the next valid number |

#### LoadCashPointClosing(Guid, Int32)

Load cash point closing

Declaration

```
public CashPointClosing LoadCashPointClosing(Guid uniqueClientId, int cashPointClosingNr)
```

Parameters

| TYPE         | NAME               | DESCRIPTION                                          |
|--------------|--------------------|------------------------------------------------------|
| System.Guid  | uniqueClientId     | The unique id of the client                          |
| System.Int32 | cashPointClosingNr | The cash point closing number which should be loaded |

Returns

| TYPE                             | DESCRIPTION                   |
|----------------------------------|-------------------------------|
| <a href="#">CashPointClosing</a> | The loaded cash point closing |

#### LoadCashPointClosingHeader(Guid, Int32)

Loads a cash point closing header

Declaration

```
public override CashPointClosingHead LoadCashPointClosingHeader(Guid uniqueClientId, int cashPointClosingNr)
```

Parameters

| TYPE         | NAME               | DESCRIPTION                           |
|--------------|--------------------|---------------------------------------|
| System.Guid  | uniqueClientId     | The unique id of the client           |
| System.Int32 | cashPointClosingNr | The cash point closing number to load |

Returns

| TYPE                                 | DESCRIPTION                   |
|--------------------------------------|-------------------------------|
| <a href="#">CashPointClosingHead</a> | the cash point closing header |

Overrides

RetailForce.Fiscalisation.Implementation.Germany.Taxonomy.TaxonomyStore<RetailForce.Fiscalisation.Implementation.Germany.TaxonomyFileStoreConfiguration>.LoadCashPointClosingHeader(System.Guid, System.Int32)

#### LoadCashPointClosings(Guid, DateTime, DateTime)

Loads all cashpoint closings between the given dates

Declaration

```
public override List<CashPointClosing> LoadCashPointClosings(Guid uniqueClientId, DateTime startDate, DateTime endDateTime)
```

Parameters

| TYPE            | NAME           | DESCRIPTION                                    |
|-----------------|----------------|------------------------------------------------|
| System.Guid     | uniqueClientId | The unique id of the client                    |
| System.DateTime | startDate      | Date with the start date (will be checked >= ) |
| System.DateTime | endDateTime    | Date with the end date                         |

Returns

| TYPE                                                                | DESCRIPTION                   |
|---------------------------------------------------------------------|-------------------------------|
| System.Collections.Generic.List< <a href="#">CashPointClosing</a> > | A list of cash point closings |

Overrides  
RetailForce.Fiscalisation.Implementation.Germany.Taxonomy.TaxonomyStore<RetailForce.Fiscalisation.Implementation.Germany.TaxonomyFileStoreConfiguration>.LoadCashPointClosings(System.Guid, System.DateTime, System.DateTime)

#### LoadLastTransaction(Guid, Int32)

Loads the last transaction of a cash point closing

Declaration

```
public Transaction LoadLastTransaction(Guid uniqueClientId, int cashPointClosingNr)
```

Parameters

| TYPE         | NAME               | DESCRIPTION                                                               |
|--------------|--------------------|---------------------------------------------------------------------------|
| System.Guid  | uniqueClientId     | The unique id of the client                                               |
| System.Int32 | cashPointClosingNr | The cash point closing number from which the transaction should be loaded |

Returns

| TYPE                        | DESCRIPTION                                    |
|-----------------------------|------------------------------------------------|
| <a href="#">Transaction</a> | The last transaction of the cash point closing |

#### LoadTransactionReferences(Guid)

loads the transaction references

Declaration

```
public override List<Reference> LoadTransactionReferences(Guid uniqueClientId)
```

Parameters

| TYPE        | NAME           | DESCRIPTION                 |
|-------------|----------------|-----------------------------|
| System.Guid | uniqueClientId | The unique id of the client |

Returns

| TYPE                                                         | DESCRIPTION                                              |
|--------------------------------------------------------------|----------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">Reference</a> > | A list of all References, or null if file doesn't exist. |

Overrides  
RetailForce.Fiscalisation.Implementation.Germany.Taxonomy.TaxonomyStore<RetailForce.Fiscalisation.Implementation.Germany.TaxonomyFileStoreConfiguration>.LoadTransactionReferences(System.Guid)

#### LoadTransactions(Guid, Int32)

Returns all Transactions of an cash point closing

Declaration

```
public override List<Transaction> LoadTransactions(Guid uniqueClientId, int cashPointClosingNr)
```

Parameters

| TYPE         | NAME               | DESCRIPTION                                |
|--------------|--------------------|--------------------------------------------|
| System.Guid  | uniqueClientId     | The unique id of the client                |
| System.Int32 | cashPointClosingNr | The number of the cashpointClosing to load |

Returns

| TYPE                                                           | DESCRIPTION                                                   |
|----------------------------------------------------------------|---------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">Transaction</a> > | Returns a list of transaction from the cash point closing nr. |

Overrides  
RetailForce.Fiscalisation.Implementation.Germany.Taxonomy.TaxonomyStore<RetailForce.Fiscalisation.Implementation.Germany.TaxonomyFileStoreConfiguration>.LoadTransactions(System.Guid, System.Int32)

#### StoreCashPointClosing(Guid, CashPointClosing)

Stores a cashpoint closing

Declaration



```
public override void StoreCashPointClosing(Guid uniqueClientId, CashPointClosing cashPointClosing)
```

#### Parameters

| TYPE                             | NAME             | DESCRIPTION                     |
|----------------------------------|------------------|---------------------------------|
| System.Guid                      | uniqueClientId   | The unique id of the client     |
| <a href="#">CashPointClosing</a> | cashPointClosing | The cash point closing to store |

#### Overrides

RetailForce.Fiscalisation.Implementation.Germany.Taxonomy.TaxonomyStore<RetailForce.Fiscalisation.Implementation.Germany.TaxonomyFileStoreConfiguration>.StoreCashPointClosing(System.Guid, RetailForce.Fiscalisation.Implementation.Germany.Taxonomy.CashPointClosing)

#### StoreCashPointClosingHeader(Guid, Int32, CashPointClosingHead)

stores a cash point closing header

#### Declaration

```
public override void StoreCashPointClosingHeader(Guid uniqueClientId, int cashPointClosingNr, CashPointClosingHead header)
```

#### Parameters

| TYPE                                 | NAME               | DESCRIPTION                                                     |
|--------------------------------------|--------------------|-----------------------------------------------------------------|
| System.Guid                          | uniqueClientId     | The unique id of the client                                     |
| System.Int32                         | cashPointClosingNr | The cash point closing number where the header should be stored |
| <a href="#">CashPointClosingHead</a> | header             | the head object to store                                        |

#### Overrides

RetailForce.Fiscalisation.Implementation.Germany.Taxonomy.TaxonomyStore<RetailForce.Fiscalisation.Implementation.Germany.TaxonomyFileStoreConfiguration>.StoreCashPointClosingHeader(System.Guid, System.Int32, RetailForce.Fiscalisation.Implementation.Germany.Taxonomy.CashPointClosingHead)

#### StoreTransaction(Guid, Int32, Transaction)

Stores a transaction to the storage

#### Declaration

```
public override void StoreTransaction(Guid uniqueClientId, int cashPointClosingNr, Transaction transaction)
```

#### Parameters

| TYPE                        | NAME               | DESCRIPTION                                  |
|-----------------------------|--------------------|----------------------------------------------|
| System.Guid                 | uniqueClientId     | The unique id of the client                  |
| System.Int32                | cashPointClosingNr | The number of the cashpoint closing to store |
| <a href="#">Transaction</a> | transaction        | The transaction to store                     |

#### Overrides

RetailForce.Fiscalisation.Implementation.Germany.Taxonomy.TaxonomyStore<RetailForce.Fiscalisation.Implementation.Germany.TaxonomyFileStoreConfiguration>.StoreTransaction(System.Guid, System.Int32, RetailForce.Fiscalisation.Implementation.Germany.Taxonomy.Transaction)

#### StoreTransactionReferences(Guid, List<Reference>)

stores the reference list to a zip file

#### Declaration

```
public override void StoreTransactionReferences(Guid uniqueClientId, List<Reference> references)
```

#### Parameters

| TYPE                                                         | NAME           | DESCRIPTION |
|--------------------------------------------------------------|----------------|-------------|
| System.Guid                                                  | uniqueClientId |             |
| System.Collections.Generic.List< <a href="#">Reference</a> > | references     |             |

#### Overrides

RetailForce.Fiscalisation.Implementation.Germany.Taxonomy.TaxonomyStore<RetailForce.Fiscalisation.Implementation.Germany.TaxonomyFileStoreConfiguration>.StoreTransactionReferences(System.Guid, System.Collections.Generic.List<RetailForce.Fiscalisation.Implementation.Germany.Taxonomy.Reference>)

#### Remarks

removes the whole zip file if exists and creates a new one!

# Class TaxonomyStore<T>

Represents the local and cloud storage provider for Taxonomy Germany (DSFin-VK, DFKA).

## Inheritance

System.Object

RetailForce.Common.Logging.LoggingBase

TaxonomyStore<T>

[TaxonomyFileStore](#)

## Inherited Members

RetailForce.Common.Logging.LoggingBase.\_logger

RetailForce.Common.Logging.LoggingBase.\_logSource

RetailForce.Common.Logging.LoggingBase.LogCritical(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogCritical(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogWarning(System.String, System.Object[])

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public abstract class TaxonomyStore<T> : LoggingBase where T : TaxonomyStoreConfiguration
```

## Type Parameters

| NAME | DESCRIPTION |
|------|-------------|
| T    |             |

## Constructors

**TaxonomyStore**(ILogger, String, T)

Constructor.

## Declaration

```
protected TaxonomyStore(ILogger logger, string logSource, T configuration)
```

## Parameters

| TYPE                                 | NAME      | DESCRIPTION                |
|--------------------------------------|-----------|----------------------------|
| Microsoft.Extensions.Logging.ILogger | logger    | An instance of an logger   |
| System.String                        | logSource | Name of the logging source |

| TYPE | NAME          | DESCRIPTION                       |
|------|---------------|-----------------------------------|
| T    | configuration | the configuration for the storage |

#### Exceptions

| TYPE                         | CONDITION                                            |
|------------------------------|------------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>configuration</code> is set to null. |

#### Fields

##### Configuration

the configuration type of TaxonomyStoreConfiguration

##### Declaration

```
protected readonly T Configuration
```

##### Field Value

| TYPE | DESCRIPTION |
|------|-------------|
| T    |             |

#### Methods

##### CleanCashPointClosing(Guid, Int32)

cleans / removes all transactions and the cash point closing header

##### Declaration

```
public abstract void CleanCashPointClosing(Guid uniqueClientId, int cashPointClosingNr)
```

##### Parameters

| TYPE         | NAME               | DESCRIPTION                                                     |
|--------------|--------------------|-----------------------------------------------------------------|
| System.Guid  | uniqueClientId     | The unique id of the client                                     |
| System.Int32 | cashPointClosingNr | The cash point closing number where the header should be stored |

##### LoadCashPointClosingHeader(Guid, Int32)

Loads a cash point closing header

##### Declaration

```
public abstract CashPointClosingHead LoadCashPointClosingHeader(Guid uniqueClientId, int cashPointClosingNr)
```

##### Parameters

| TYPE         | NAME               | DESCRIPTION                           |
|--------------|--------------------|---------------------------------------|
| System.Guid  | uniqueClientId     | The unique id of the client           |
| System.Int32 | cashPointClosingNr | The cash point closing number to load |

#### Returns

| TYPE                                 | DESCRIPTION                   |
|--------------------------------------|-------------------------------|
| <a href="#">CashPointClosingHead</a> | the cash point closing header |

#### LoadCashPointClosings(Guid, DateTime, DateTime)

Loads all cashpoint closings between the given dates

#### Declaration

```
public abstract List<CashPointClosing> LoadCashPointClosings(Guid uniqueClientId, DateTime startDate, DateTime endDateTime)
```

#### Parameters

| TYPE            | NAME           | DESCRIPTION                                    |
|-----------------|----------------|------------------------------------------------|
| System.Guid     | uniqueClientId | The unique id of the client                    |
| System.DateTime | startDate      | Date with the start date (will be checked >= ) |
| System.DateTime | endDateTime    | Date with the end date                         |

#### Returns

| TYPE                                                                | DESCRIPTION                   |
|---------------------------------------------------------------------|-------------------------------|
| System.Collections.Generic.List< <a href="#">CashPointClosing</a> > | A list of cash point closings |

#### LoadTransactionReferences(Guid)

loads the transaction references

#### Declaration

```
public abstract List<Reference> LoadTransactionReferences(Guid uniqueClientId)
```

#### Parameters

| TYPE        | NAME           | DESCRIPTION                 |
|-------------|----------------|-----------------------------|
| System.Guid | uniqueClientId | The unique id of the client |

Returns

| TYPE                                                         | DESCRIPTION                                              |
|--------------------------------------------------------------|----------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">Reference</a> > | A list of all References, or null if file doesn't exist. |

### LoadTransactions(Guid, Int32)

Returns all Transactions of an cash point closing

Declaration

```
public abstract List<Transaction> LoadTransactions(Guid uniqueClientId, int cashPointClosingNr)
```

Parameters

| TYPE         | NAME               | DESCRIPTION                                |
|--------------|--------------------|--------------------------------------------|
| System.Guid  | uniqueClientId     | The unique id of the client                |
| System.Int32 | cashPointClosingNr | The number of the cashpointClosing to load |

Returns

| TYPE                                                           | DESCRIPTION                                                   |
|----------------------------------------------------------------|---------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">Transaction</a> > | Returns a list of transaction from the cash point closing nr. |

### StoreCashPointClosing(Guid, CashPointClosing)

Stores a cashpoint closing

Declaration

```
public abstract void StoreCashPointClosing(Guid uniqueClientId, CashPointClosing cashPointClosing)
```

Parameters

| TYPE                             | NAME             | DESCRIPTION                     |
|----------------------------------|------------------|---------------------------------|
| System.Guid                      | uniqueClientId   | The unique id of the client     |
| <a href="#">CashPointClosing</a> | cashPointClosing | The cash point closing to store |

### StoreCashPointClosingHeader(Guid, Int32, CashPointClosingHead)

stores a cash point closing header

Declaration

```
public abstract void StoreCashPointClosingHeader(Guid uniqueClientId, int cashPointClosingNr, CashPointClosingHead header)
```

Parameters

| TYPE                                 | NAME               | DESCRIPTION                                                     |
|--------------------------------------|--------------------|-----------------------------------------------------------------|
| System.Guid                          | uniqueClientId     | The unique id of the client                                     |
| System.Int32                         | cashPointClosingNr | The cash point closing number where the header should be stored |
| <a href="#">CashPointClosingHead</a> | header             | the head object to store                                        |

StoreTransaction(Guid, Int32, Transaction)

Stores a transaction to the storage

Declaration

```
public abstract void StoreTransaction(Guid uniqueClientId, int cashPointClosingNr, Transaction transaction)
```

Parameters

| TYPE                        | NAME               | DESCRIPTION                                  |
|-----------------------------|--------------------|----------------------------------------------|
| System.Guid                 | uniqueClientId     | The unique id of the client                  |
| System.Int32                | cashPointClosingNr | The number of the cashpoint closing to store |
| <a href="#">Transaction</a> | transaction        | The transaction to store                     |

StoreTransactionReferences(Guid, List<Reference>)

stores the reference list to a zip file

Declaration

```
public abstract void StoreTransactionReferences(Guid uniqueClientId, List<Reference> references)
```

Parameters

| TYPE                                                         | NAME           | DESCRIPTION |
|--------------------------------------------------------------|----------------|-------------|
| System.Guid                                                  | uniqueClientId |             |
| System.Collections.Generic.List< <a href="#">Reference</a> > | references     |             |

Remarks

removes the whole zip file if exists and creates a new one!

# Class Transaction

Bildet die Klammer um eine einzige Einzelbewegung. Ist also der Einzelbeleg bzw. der Einzelbon. Auch die Transaktion gliedert sich in Kopf- und Bewegungsdaten.

## Inheritance

System.Object

Transaction

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Transaction
```

## Properties

### Data

Bildet die Klammer um alle Bewegungsdaten eines Einzelbons. TransactionData unterscheiden die Daten in Gesamtbetrag mit Aufteilung in Zahlarten und umsatzsteuerliche Sachverhalte, Zusatznotizen, BonPositionen mit Artikel oder Warengruppenbezug und Bon Positionen ohne Artikel oder Warengruppenbezug.

## Declaration

```
[JsonProperty("data")]  
public Data Data { get; set; }
```

## Property Value

| TYPE                 | DESCRIPTION |
|----------------------|-------------|
| <a href="#">Data</a> |             |

### Head

Der Transaktionskopf beinhaltet alle Stammdaten zur Einzelbewegung.

## Declaration

```
[JsonProperty("head")]  
public TransactionHead Head { get; set; }
```

## Property Value

| TYPE                            | DESCRIPTION |
|---------------------------------|-------------|
| <a href="#">TransactionHead</a> |             |

## Security



Container für Daten von Sicherheitseinrichtungen, die für eine einzelne Transaktion gelten.

#### Declaration

```
[JsonProperty("security", NullValueHandling = NullValueHandling.Ignore)]  
public TransactionSecurity Security { get; set; }
```

#### Property Value

| TYPE                                | DESCRIPTION |
|-------------------------------------|-------------|
| <a href="#">TransactionSecurity</a> |             |

# Class TransactionHead

Der Transaktionskopf beinhaltet alle Stammdaten zur Einzelbewegung.

## Inheritance

System.Object  
TransactionHead

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TransactionHead
```

## Properties

### AllocationGroups

#### Declaration

```
[JsonProperty("allocation_groups", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(DecodeArrayConverter))]  
public List<string> AllocationGroups { get; set; }
```

#### Property Value

| TYPE                                           | DESCRIPTION |
|------------------------------------------------|-------------|
| System.Collections.Generic.List<System.String> |             |

### Buyer

Bildet die Klammer um alle Daten zu einem Käufer. Hintergrund: Ab einem Rechnungsbetrag von 200,00€ ist die sogenannte Kleinbetragsgrenze einer Rechnung überschritten. Dann muss die Käuferadresse erfasst werden. Dazu dienen die Felder unter der Klammer [buyer]. Auch hier gibt es einen Namen und die entsprechende Adresse.

#### Declaration

```
[JsonProperty("buyer", NullValueHandling = NullValueHandling.Ignore)]  
public Buyer Buyer { get; set; }
```

#### Property Value

| TYPE                  | DESCRIPTION |
|-----------------------|-------------|
| <a href="#">Buyer</a> |             |

### ClosingCashRegister

#### Declaration

```
[JsonProperty("closing_cash_register", NullValueHandling = NullValueHandling.Ignore)]
public ClosingCashRegister ClosingCashRegister { get; set; }
```

#### Property Value

| TYPE                                | DESCRIPTION |
|-------------------------------------|-------------|
| <a href="#">ClosingCashRegister</a> |             |

#### CustomFields

##### Declaration

```
[JsonProperty("custom_fields", NullValueHandling = NullValueHandling.Ignore)]
public CustomFields CustomFields { get; set; }
```

#### Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">CustomFields</a> |             |

#### Id

Id der Transaktion, die vom Kassensystem automatisiert und unabänderlich zugewiesen wird. Die Id muss innerhalb eines Kassenabschlusses eindeutig sein.

##### Declaration

```
[JsonProperty("id")]
[JsonConverter(typeof(PurpleMinMaxLengthCheckConverter))]
public string Id { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Name

Optionaler Name der Transaktion (zwingend erforderlich für Transaktionstyp AVSonstige!)

##### Declaration

```
[JsonProperty("name", NullValueHandling = NullValueHandling.Ignore)]
[JsonConverter(typeof(FluffyMinMaxLengthCheckConverter))]
public string Name { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Number

Die Bonnummer ist im Kassenabschluss fortlaufend zu führen. Sie kann sich jedoch im Lebenszyklus einer Kasse wiederholen.

##### Declaration

```
[JsonProperty("number")]
public long Number { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

## References

Referenzen auf externe Lieferscheine, Rechnungen oder Transaktionen eines Taxonomie-Kassenabschlusses

#### Declaration

```
[JsonProperty("references", NullValueHandling = NullValueHandling.Ignore)]
public List<Reference> References { get; set; }
```

#### Property Value

| TYPE                                                         | DESCRIPTION |
|--------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">Reference</a> > |             |

## Storno

Kennzeichnet einen globalen Stornovorgang auf Belegebene.

#### Declaration

```
[JsonProperty("storno")]
public bool Storno { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## TimestampEnd

Der Ende-Zeitstempel bezeichnet den Zeitpunkt des Abschlusses einer Einzelbewegung (Transaction). Er ist der Zeitstempel, der die Ausstellung der Einzelbewegung dokumentiert. Nach §14(4) UStG ist das Ausstellungsdatum eine Pflichtangabe auf der Rechnung. Aus diesem Grund muss der Ende-Zeitstempel für jede Einzelbewegung vorhanden sein.

#### Declaration

```
[JsonProperty("timestamp_end")]
public DateTimeOffset TimestampEnd { get; set; }
```

#### Property Value

| TYPE                  | DESCRIPTION |
|-----------------------|-------------|
| System.DateTimeOffset |             |

## TimestampStart

Der Start-Zeitstempel bezeichnet den Zeitpunkt der ersten Erfassung in einer Einzelbewegung(Transaction). Kassen, die diesen Zeitstempel vergeben, müssen dies auch in der Taxonomie dokumentieren. Kassen, die dies nicht leisten können, füllen dieses

Feld mit dem Wert aus timestamp\_end.

Declaration

```
[JsonProperty("timestamp_start")]  
public DateTimeOffset TimestampStart { get; set; }
```

Property Value

| TYPE                  | DESCRIPTION |
|-----------------------|-------------|
| System.DateTimeOffset |             |

Type

Declaration

```
[JsonProperty("type")]  
public TransactionType Type { get; set; }
```

Property Value

| TYPE                            | DESCRIPTION |
|---------------------------------|-------------|
| <a href="#">TransactionType</a> |             |

User

Der Benutzer ist die Person, die offiziell für die Abrechnung der Einzelbewegung an der Kasse verantwortlich ist. (Bsp.: Bedienung erfasst bzw. boniert, User kassiert)

Declaration

```
[JsonProperty("user", NullValueHandling = NullValueHandling.Ignore)]  
public User User { get; set; }
```

Property Value

| TYPE                 | DESCRIPTION |
|----------------------|-------------|
| <a href="#">User</a> |             |

# Class TransactionSecurity

Container für Daten von Sicherheitseinrichtungen, die für eine einzelne Transaktion gelten.

## Inheritance

System.Object

TransactionSecurity

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TransactionSecurity
```

## Properties

### Tse

Auf die Transaktion bezogene Daten der Technischen Sicherheitseinrichtung (TSE) im Sinne der deutschen Kassensicherungsverordnung - KassenSichV

## Declaration

```
[JsonProperty("tse", NullValueHandling = NullValueHandling.Ignore)]  
public FluffyTse Tse { get; set; }
```

## Property Value

| TYPE                      | DESCRIPTION |
|---------------------------|-------------|
| <a href="#">FluffyTse</a> |             |

# Enum TransactionType

Der Transaktionstyp ordnet und unterteilt alle Vorgänge in Geschäftsvorfälle (Beleg) und andere Vorgänge. Durch diese Zuordnung wird auch die Weiterverarbeitung im Kassenabschluss gesteuert. Ausschließlich Einzelbewegungen mit dem Transaktionstyp Beleg besitzen Relevanz für den Kassenabschluss. Im Beleg werden z. Bsp.: Rechnungen, Lieferscheine, Korrekturen etc. dargestellt. Werden Einzelbewegungen aus anderen Grundaufzeichnungssystemen des Unternehmens heraus weiterverarbeitet, so dürfen diese Einzelbewegungen nicht den Transaktionstypen Beleg erhalten

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public enum TransactionType
```

## Fields

| NAME           | DESCRIPTION |
|----------------|-------------|
| AvBelegabbruch |             |
| AvBelegstorno  |             |
| AvBestellung   |             |
| AvRechnung     |             |
| AvSachbezug    |             |
| AvSonstige     |             |
| AvTraining     |             |
| AvTransfer     |             |
| Beleg          |             |

# Enum TypeEnum

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum TypeEnum
```

Fields

| NAME                    | DESCRIPTION |
|-------------------------|-------------|
| Bar                     |             |
| EckKarte                |             |
| ElZahlungsdienstleister |             |
| GuthabenKarte           |             |
| Keine                   |             |
| Kreditkarte             |             |
| Unbar                   |             |



# Class User

Der Benutzer ist die Person, die offiziell für die Abrechnung der Einzelbewegung an der Kasse verantwortlich ist. (Bsp.: Bedienung erfasst bzw. boniert, User kassiert)

## Inheritance

System.Object

User

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class User
```

## Properties

### Id

Der Benutzer hat eine unternehmensinterne Kennung.

#### Declaration

```
[JsonProperty("id")]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string Id { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Name

Der Benutzer ist mit seinem Namen im Kassensystem hinterlegt.

#### Declaration

```
[JsonProperty("name", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(IndigoMinMaxLengthCheckConverter))]  
public string Name { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class VatAmountGrossAndNet

Einem Geschäftsvorfall können ein oder mehrere Beträge getrennt nach Umsatzsteuersätzen zugewiesen werden.

## Inheritance

System.Object

VatAmountGrossAndNet

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class VatAmountGrossAndNet
```

## Properties

### ExclVat

#### Declaration

```
[JsonProperty("excl_vat")]  
[JsonConverter(typeof(PurpleMinMaxValueCheckConverter))]  
public double ExclVat { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Double |             |

### Id

#### Declaration

```
[JsonProperty("id")]  
public long Id { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

### InclVat

#### Declaration

```
[JsonProperty("incl_vat")]  
[JsonConverter(typeof(PurpleMinMaxValueCheckConverter))]  
public double InclVat { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Double |             |

## Vat

### Declaration

```
[JsonProperty("vat")]  
[JsonConverter(typeof(PurpleMinMaxValueCheckConverter))]  
public double Vat { get; set; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Double |             |

# Class VatAmountGrossAndNetReceipt

Aufteilung des Gesamtbetrages einer Transaktion in die Einzelbeträge nach ausgewiesenen Umsatzsteuersätzen.

## Inheritance

System.Object

VatAmountGrossAndNetReceipt

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class VatAmountGrossAndNetReceipt
```

## Properties

### ExclVat

#### Declaration

```
[JsonProperty("excl_vat")]  
[JsonConverter(typeof(FluffyMinMaxValueCheckConverter))]  
public double ExclVat { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Double |             |

### Id

#### Declaration

```
[JsonProperty("id")]  
public long Id { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

### InclVat

#### Declaration

```
[JsonProperty("incl_vat")]  
[JsonConverter(typeof(FluffyMinMaxValueCheckConverter))]  
public double InclVat { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Double |             |

## Vat

### Declaration

```
[JsonProperty("vat")]  
[JsonConverter(typeof(FluffyMinMaxValueCheckConverter))]  
public double Vat { get; set; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Double |             |

# Class VatAmountGrossOrNet

## Inheritance

System.Object

VatAmountGrossOrNet

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class VatAmountGrossOrNet
```

## Properties

### ExclVat

#### Declaration

```
[JsonProperty("excl_vat", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(PurpleMinMaxValueCheckConverter))]  
public double? ExclVat { get; set; }
```

#### Property Value

| TYPE                           | DESCRIPTION |
|--------------------------------|-------------|
| System.Nullable<System.Double> |             |

### Id

#### Declaration

```
[JsonProperty("id")]  
public long Id { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

### InclVat

#### Declaration

```
[JsonProperty("incl_vat", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(PurpleMinMaxValueCheckConverter))]  
public double? InclVat { get; set; }
```

#### Property Value

| TYPE                           | DESCRIPTION |
|--------------------------------|-------------|
| System.Nullable<System.Double> |             |

## Vat

### Declaration

```
[JsonProperty("vat", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(PurpleMinMaxValueCheckConverter))]  
public double? Vat { get; set; }
```

### Property Value

| TYPE                           | DESCRIPTION |
|--------------------------------|-------------|
| System.Nullable<System.Double> |             |

# Class VatAmountOnly

## Inheritance

System.Object  
VatAmountOnly

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class VatAmountOnly
```

## Properties

### ExclVat

#### Declaration

```
[JsonProperty("excl_vat", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(PurpleMinMaxValueCheckConverter))]  
public double? ExclVat { get; set; }
```

#### Property Value

| TYPE                           | DESCRIPTION |
|--------------------------------|-------------|
| System.Nullable<System.Double> |             |

### Id

#### Declaration

```
[JsonProperty("id")]  
public long Id { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

### InclVat

#### Declaration

```
[JsonProperty("incl_vat", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(PurpleMinMaxValueCheckConverter))]  
public double? InclVat { get; set; }
```

#### Property Value



| TYPE                           | DESCRIPTION |
|--------------------------------|-------------|
| System.Nullable<System.Double> |             |

## Vat

### Declaration

```
[JsonProperty("vat", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(PurpleMinMaxValueCheckConverter))]  
public double? Vat { get; set; }
```

### Property Value

| TYPE                           | DESCRIPTION |
|--------------------------------|-------------|
| System.Nullable<System.Double> |             |

# Class VatDefinition

## Inheritance

System.Object

VatDefinition

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Taxonomy](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class VatDefinition
```

## Properties

### CustomFields

#### Declaration

```
[JsonProperty("custom_fields", NullValueHandling = NullValueHandling.Ignore)]  
public CustomFields CustomFields { get; set; }
```

#### Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">CustomFields</a> |             |

## Description

#### Declaration

```
[JsonProperty("description", NullValueHandling = NullValueHandling.Ignore)]  
[JsonConverter(typeof(CunningMinMaxLengthCheckConverter))]  
public string Description { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Id

#### Declaration

```
[JsonProperty("id")]  
public long Id { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

## Percentage

Declaration

```
[JsonProperty("percentage")]  
[JsonConverter(typeof(TentacledMinMaxValueCheckConverter))]  
public double Percentage { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Double |             |

# Namespace

## RetailForce.Fiscalisation.Implementation.Germany.Tse

### Classes

[ATrustCloud](#)

[FiskalyCloud](#)

Implementation of cloud tse of fiskaly.

[SwissbitHardware](#)

Implementation of swissbit hardware tse.

[TestTse](#)

Class to test tse. Not for productive usage.

[TestTseStatus](#)

[TseBase](#)

Basic class for all tse interfaces.

### Enums

[TseStatus](#)

Represents the status of the connected tse.

# Class ATrustCloud

## Inheritance

System.Object

ATrustCloud

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class ATrustCloud
```

# Class FiskalyCloud

Implementation of cloud tse of fiskaly.

## Inheritance

System.Object

RetailForce.Common.Logging.LoggingBase

[TseBase](#)

FiskalyCloud

## Implements

System.IDisposable

## Inherited Members

[TseBase.Status](#)

[TseBase.StartTransaction\(Guid\)](#)

[TseBase.FinishTransaction\(Guid, TseRequest\)](#)

[TseBase.CancelTransaction\(Guid, Int32, Int32, String\)](#)

[TseBase.UpdateTime\(\)](#)

[TseBase.GetTseDriverInfos\(\)](#)

[TseBase.GetTseDriverInfos\(TseDriver\)](#)

[TseBase.ClientId](#)

RetailForce.Common.Logging.LoggingBase.\_logger

RetailForce.Common.Logging.LoggingBase.\_logSource

RetailForce.Common.Logging.LoggingBase.LogCritical(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogCritical(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogWarning(System.String, System.Object[])

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public sealed class FiskalyCloud : TseBase, IDisposable
```

## Remarks

Interface documentation at: <https://developer.fiskaly.com/api/kassensichv/v1/> Fiskaly dashboard at: <https://dashboard.fiskaly.com/kassensichv/dashboard>.

For more information regarding tse integration information see [TseBase](#).

## Constructors

FiskalyCloud(String, String, Guid, Guid, ILogger)

Constructor.

## Declaration

```
public FiskalyCloud(string apiKey, string apiSecret, Guid tssGuid, Guid clientId, ILogger logger)
```

#### Parameters

| TYPE                                 | NAME      | DESCRIPTION |
|--------------------------------------|-----------|-------------|
| System.String                        | apiKey    |             |
| System.String                        | apiSecret |             |
| System.Guid                          | tssGuid   |             |
| System.Guid                          | clientId  |             |
| Microsoft.Extensions.Logging.ILogger | logger    |             |

#### Exceptions

| TYPE                         | CONDITION |
|------------------------------|-----------|
| System.ArgumentNullException |           |

#### Fields

##### ApiKeyParameterName

The parameter name of the tse configuration parameters for the apiKey.

#### Declaration

```
public const string ApiKeyParameterName = "apiKey"
```

#### Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

##### ApiSecretParameterName

The parameter name of the tse configuration parameters for the apiSecret.

#### Declaration

```
public const string ApiSecretParameterName = "apiSecret"
```

#### Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Properties

##### IsInitialized

Returns whether the tse is initialized for first usage.

#### Declaration

```
public override bool IsInitialized { get; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

#### Overrides

[TseBase.IsInitialized](#)

#### Remarks

This is not the normal initializing during tse startup. This is the initialization for first use.

#### Methods

**CancelTransactionImplementation(Guid, Int32, Int32, String)**

Cancels a transaction on the technical security system (tse) = fiskaly cloud.

#### Declaration

```
protected override TseResponse CancelTransactionImplementation(Guid clientId, int number, int lastRevision, string processType)
```

#### Parameters

| TYPE          | NAME         | DESCRIPTION                                            |
|---------------|--------------|--------------------------------------------------------|
| System.Guid   | clientId     | The client where the transaction should occur.         |
| System.Int32  | number       | The number of the transaction to be canceled.          |
| System.Int32  | lastRevision | The actual revision of the transaction to be canceled. |
| System.String | processType  | The type of the canceled transaction.                  |

#### Returns

| TYPE                        | DESCRIPTION |
|-----------------------------|-------------|
| <a href="#">TseResponse</a> |             |

#### Overrides

[TseBase.CancelTransactionImplementation\(Guid, Int32, Int32, String\)](#)

#### Exceptions

| TYPE                               | CONDITION                                                                                                                        |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| System.ArgumentOutOfRangeException | Thrown if <code>processType</code> is not one of the following values: "Kassenbeleg-V1", "Bestellung-V1" and "SonstigerVorgang". |



## ConnectTest()

Tries to connect to the tse.

Declaration

```
public override void ConnectTest()
```

Overrides

[TseBase.ConnectTest\(\)](#)

## Dispose()

Called when the object is disposed.

Declaration

```
public void Dispose()
```

## FinishTransactionImplementation(Guid, TseRequest)

Finish a transaction on the technical security system (tse) = fiskaly cloud.

Declaration

```
protected override TseResponse FinishTransactionImplementation(Guid clientId, TseRequest request)
```

Parameters

| TYPE                       | NAME     | DESCRIPTION                                                                                                                                                      |
|----------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.Guid                | clientId | The client where the transaction should occur.                                                                                                                   |
| <a href="#">TseRequest</a> | request  | The appropriate request of the transaction. Possible requests are <a href="#">TseReceipt</a> , <a href="#">TseOrder</a> or <a href="#">TseOtherTransaction</a> . |

Returns

| TYPE                        | DESCRIPTION                                                                |
|-----------------------------|----------------------------------------------------------------------------|
| <a href="#">TseResponse</a> | A <a href="#">TseResponse</a> object representing the response of the tse. |

Overrides

[TseBase.FinishTransactionImplementation\(Guid, TseRequest\)](#)

Exceptions

| TYPE                         | CONDITION                                                                                                     |
|------------------------------|---------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>request</code> parameter is set to null or <code>clientId</code> is set to System.Guid.Empty. |

## Initialize(Guid, String, TseConfiguration, Action<TseConfiguration>)

Initializes the tse with the tse configuration.

Declaration

```
public override void Initialize(Guid clientId, [Required] string uniqueCashRegisterId, TseConfiguration configuration, Action<TseConfiguration> storeTseConfiguration)
```

#### Parameters

| TYPE                                              | NAME                  | DESCRIPTION                                                              |
|---------------------------------------------------|-----------------------|--------------------------------------------------------------------------|
| System.Guid                                       | clientId              | The client where the tse configuration should occur.                     |
| System.String                                     | uniqueCashRegisterId  | A unique name for the cash register which will be registered at the tse. |
| <a href="#">TseConfiguration</a>                  | configuration         | The configuration properties to configure the tse.                       |
| System.Action< <a href="#">TseConfiguration</a> > | storeTseConfiguration | An action to store the tse configuration back during initialization.     |

#### Overrides

[TseBase.Initialize\(Guid, String, TseConfiguration, Action<TseConfiguration>\)](#)

#### Exceptions

| TYPE                         | CONDITION                                                                             |
|------------------------------|---------------------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>uniqueCashRegisterId</code> is set to null or empty string. |

#### ListRegisteredClientIds()

Returns all clients which are registered at the tse.

#### Declaration

```
public override List<Guid> ListRegisteredClientIds()
```

#### Returns

| TYPE                                         | DESCRIPTION                                                                  |
|----------------------------------------------|------------------------------------------------------------------------------|
| System.Collections.Generic.List<System.Guid> | A list of System.Guid values representing the registered clients at the tse. |

#### Overrides

[TseBase.ListRegisteredClientIds\(\)](#)

#### ListStartedTransactions(Guid)

Returns a list of transaction numbers (which where started at the tse).

#### Declaration

```
public override List<long> ListStartedTransactions(Guid clientId)
```

#### Parameters

| TYPE        | NAME     | DESCRIPTION                                                |
|-------------|----------|------------------------------------------------------------|
| System.Guid | clientId | The clientId where the started transactions are requested. |

#### Returns

| TYPE                                          | DESCRIPTION                                                     |
|-----------------------------------------------|-----------------------------------------------------------------|
| System.Collections.Generic.List<System.Int64> | A list of transaction numbers (which where started at the tse). |

#### Overrides

[TseBase.ListStartedTransactions\(Guid\)](#)

#### StartTransactionImplementation(Guid)

Starts a transaction on the technical security system (tse) = fiskaly cloud.

#### Declaration

```
protected override TseResponse StartTransactionImplementation(Guid clientId)
```

#### Parameters

| TYPE        | NAME     | DESCRIPTION                                    |
|-------------|----------|------------------------------------------------|
| System.Guid | clientId | The client where the transaction should occur. |

#### Returns

| TYPE                        | DESCRIPTION                                                                |
|-----------------------------|----------------------------------------------------------------------------|
| <a href="#">TseResponse</a> | A <a href="#">TseResponse</a> object representing the response of the tse. |

#### Overrides

[TseBase.StartTransactionImplementation\(Guid\)](#)

#### Exceptions

| TYPE                         | CONDITION                                                    |
|------------------------------|--------------------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>clientId</code> is set to System.Guid.Empty. |

#### Implements

System.IDisposable

# Class SwissbitHardware

Implementation of swissbit hardware tse.

## Inheritance

System.Object

RetailForce.Common.Logging.LoggingBase

[TseBase](#)

SwissbitHardware

## Inherited Members

[TseBase.StartTransaction\(Guid\)](#)

[TseBase.FinishTransaction\(Guid, TseRequest\)](#)

[TseBase.CancelTransaction\(Guid, Int32, Int32, String\)](#)

[TseBase.GetTseDriverInfos\(\)](#)

[TseBase.GetTseDriverInfos\(TseDriver\)](#)

[TseBase.ClientId](#)

RetailForce.Common.Logging.LoggingBase.\_logger

RetailForce.Common.Logging.LoggingBase.\_logSource

RetailForce.Common.Logging.LoggingBase.LogCritical(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogCritical(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogWarning(System.String, System.Object[])

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public sealed class SwissbitHardware : TseBase
```

## Constructors

**SwissbitHardware(String, ILogger, Guid, String, String, String)**

Constructor. To use for "normal" tse usage.

## Declaration

```
public SwissbitHardware(string tseSerial, ILogger logger, Guid clientId, string adminPuk, string adminPin, string timeAdminPin)
```

## Parameters

| TYPE          | NAME      | DESCRIPTION                       |
|---------------|-----------|-----------------------------------|
| System.String | tseSerial | The configured serial of the tse. |
|               |           |                                   |

| TYPE                                 | NAME         | DESCRIPTION                                          |
|--------------------------------------|--------------|------------------------------------------------------|
| Microsoft.Extensions.Logging.ILogger | logger       | The appropriate logger for logging purposes.         |
| System.Guid                          | clientId     | The id of the fiscal client (UniqueClientId).        |
| System.String                        | adminPuk     | The admin puk to access special features of the tse. |
| System.String                        | adminPin     | The admin pin to access special features of the tse. |
| System.String                        | timeAdminPin | The time admin pin to update time.                   |

### SwissbitHardware(String, String, ILogger)

Constructor. To use for initialization when no client is registered.

Declaration

```
public SwissbitHardware(string statusFile, string communicationFile, ILogger logger)
```

Parameters

| TYPE                                 | NAME              | DESCRIPTION |
|--------------------------------------|-------------------|-------------|
| System.String                        | statusFile        |             |
| System.String                        | communicationFile |             |
| Microsoft.Extensions.Logging.ILogger | logger            |             |

Fields

#### AdminPinParameterName

The parameter name of the tse configuration parameters for the adminPin.

Declaration

```
public const string AdminPinParameterName = "adminPin"
```

Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### AdminPukParameterName

The parameter name of the tse configuration parameters for the adminPuk.

Declaration

```
public const string AdminPukParameterName = "adminPuk"
```

Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### DefaultSecuritySeed

The default security seed for swissbit hardware.

Declaration

```
public const string DefaultSecuritySeed = "SwissbitSwissbit"
```

Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### SecuritySeedParameterName

The parameter name of the tse configuration parameters for the security seed to calculate the initial securables (puk, pin, timeadmin pin).

Declaration

```
public const string SecuritySeedParameterName = "securitySeed"
```

Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### TimeAdminPinParameterName

The parameter name of the tse configuration parameters for the time admin pin.

Declaration

```
public const string TimeAdminPinParameterName = "timeAdminPin"
```

Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### TseHashAlgorithm

The hash algorithm of the tse.

Declaration

```
public const string TseHashAlgorithm = "SHA256withECDSA"
```

Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## TseTimeFormat

The time format of the tse.

Declaration

```
public const string TseTimeFormat = "unixTime"
```

Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Properties

### CommandTimeout

Gets or sets the command timeout for tse commands in seconds.

Declaration

```
public uint CommandTimeout { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt32 |             |

Remarks

Default is 240 seconds.

### IsInitialized

Returns whether the tse is initialized for first usage.

Declaration

```
public override bool IsInitialized { get; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

Overrides

[TseBase.IsInitialized](#)

Remarks

This is not the normal initializing during tse startup. This is the initialization for first use.

### Status

Returns the status of the connected tse.

## Declaration

```
public override TseStatus Status { get; protected set; }
```

## Property Value

| TYPE                      | DESCRIPTION |
|---------------------------|-------------|
| <a href="#">TseStatus</a> |             |

## Overrides

[TseBase.Status](#)

## Remarks

For mor information concerning tse status see [TseStatus](#).

## TimeUpdateRequired

True if a time update is required; otherwise false.

## Declaration

```
public bool TimeUpdateRequired { get; }
```

## Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## TseStatus

Returns the current status of the tse.

## Declaration

```
public SwissbitStatus TseStatus { get; }
```

## Property Value

| TYPE                           | DESCRIPTION |
|--------------------------------|-------------|
| <a href="#">SwissbitStatus</a> |             |

## Methods

### CancelTransactionImplementation(Guid, Int32, Int32, String)

## Declaration

```
protected override TseResponse CancelTransactionImplementation(Guid clientId, int transactionNumber, int lastRevision, string processType)
```

## Parameters

| TYPE         | NAME              | DESCRIPTION |
|--------------|-------------------|-------------|
| System.Guid  | clientId          |             |
| System.Int32 | transactionNumber |             |



| TYPE          | NAME         | DESCRIPTION |
|---------------|--------------|-------------|
| System.Int32  | lastRevision |             |
| System.String | processType  |             |

#### Returns

| TYPE                        | DESCRIPTION |
|-----------------------------|-------------|
| <a href="#">TseResponse</a> |             |

#### Overrides

[TseBase.CancelTransactionImplementation\(Guid, Int32, Int32, String\)](#)

#### Command(TseCmdBase, Boolean)

Sends the given command to the tse and returns the command response (or a derived class of command response for special information).

#### Declaration

```
public TseCommandResponse Command(TseCmdBase command, bool raiseException = false)
```

#### Parameters

| TYPE                       | NAME           | DESCRIPTION                                                                                                                                                  |
|----------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">TseCmdBase</a> | command        | The command to execute against the tse.                                                                                                                      |
| System.Boolean             | raiseException | Optional. True if the function should raise an exception when CommandResponse is not <a href="#">ExecutionSuccessful</a> ; otherwise false. Default = false. |

#### Returns

| TYPE                               | DESCRIPTION                                                  |
|------------------------------------|--------------------------------------------------------------|
| <a href="#">TseCommandResponse</a> | The command response ( <a href="#">TseCommandResponse</a> ). |

#### Exceptions

| TYPE                    | CONDITION                                                                                      |
|-------------------------|------------------------------------------------------------------------------------------------|
| System.TimeoutException | Thrown if the command needs more than the time set in <a href="#">CommandTimeout</a> property. |

#### ConnectTest()

#### Declaration

```
public override void ConnectTest()
```

#### Overrides

[TseBase.ConnectTest\(\)](#)

## FinishTransactionImplementation(Guid, TseRequest)

### Declaration

```
protected override TseResponse FinishTransactionImplementation(Guid clientId, TseRequest request)
```

### Parameters

| TYPE                       | NAME     | DESCRIPTION |
|----------------------------|----------|-------------|
| System.Guid                | clientId |             |
| <a href="#">TseRequest</a> | request  |             |

### Returns

| TYPE                        | DESCRIPTION |
|-----------------------------|-------------|
| <a href="#">TseResponse</a> |             |

### Overrides

[TseBase.FinishTransactionImplementation\(Guid, TseRequest\)](#)

## GetInitialAdminPin(String)

### Declaration

```
public string GetInitialAdminPin(string seed)
```

### Parameters

| TYPE          | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.String | seed |             |

### Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## GetInitialAdminPuk(String)

Returns the intial admin puk from factory settings. This value is needed to

### Declaration

```
public string GetInitialAdminPuk(string seed)
```

### Parameters

| TYPE          | NAME | DESCRIPTION       |
|---------------|------|-------------------|
| System.String | seed | The security seed |

### Returns

| TYPE          | DESCRIPTION                     |
|---------------|---------------------------------|
| System.String | The intial admin puk as string. |

### GetInitialTimeAdminPin(String)

Declaration

```
public string GetInitialTimeAdminPin(string seed)
```

Parameters

| TYPE          | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.String | seed |             |

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### GetLocalSecuritySystems()

Returns all attached swissbit tse's.

Declaration

```
public static List<SwissbitHardwareDevice> GetLocalSecuritySystems()
```

Returns

| TYPE                                                                      | DESCRIPTION                          |
|---------------------------------------------------------------------------|--------------------------------------|
| System.Collections.Generic.List< <a href="#">SwissbitHardwareDevice</a> > | A list of swissbit hardware devices. |

### Initialize(Guid, String, TseConfiguration, Action<TseConfiguration>)

Initializes the tse with the tse configuration.

Declaration

```
public override void Initialize(Guid clientId, [Required] string uniqueCashRegisterId, TseConfiguration configuration, Action<TseConfiguration> storeTseConfiguration)
```

Parameters

| TYPE          | NAME                 | DESCRIPTION                                                              |
|---------------|----------------------|--------------------------------------------------------------------------|
| System.Guid   | clientId             | The client where the tse configuration should occur.                     |
| System.String | uniqueCashRegisterId | A unique name for the cash register which will be registered at the tse. |

| TYPE                                              | NAME                  | DESCRIPTION                                                          |
|---------------------------------------------------|-----------------------|----------------------------------------------------------------------|
| <a href="#">TseConfiguration</a>                  | configuration         | The configuration properties to configure the tse.                   |
| System.Action< <a href="#">TseConfiguration</a> > | storeTseConfiguration | An action to store the tse configuration back during initialization. |

Overrides

[TseBase.Initialize\(Guid, String, TseConfiguration, Action<TseConfiguration>\)](#)

Exceptions

| TYPE                         | CONDITION                                                                             |
|------------------------------|---------------------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>uniqueCashRegisterId</code> is set to null or empty string. |

### ListRegisteredClientIds()

Returns all clients which are registered at the tse.

Declaration

```
public override List<Guid> ListRegisteredClientIds()
```

Returns

| TYPE                                         | DESCRIPTION                                                                  |
|----------------------------------------------|------------------------------------------------------------------------------|
| System.Collections.Generic.List<System.Guid> | A list of System.Guid values representing the registered clients at the tse. |

Overrides

[TseBase.ListRegisteredClientIds\(\)](#)

### ListRegisteredClientIds(String)

Returns

Declaration

```
public List<Guid> ListRegisteredClientIds(string adminPin)
```

Parameters

| TYPE          | NAME     | DESCRIPTION |
|---------------|----------|-------------|
| System.String | adminPin |             |

Returns

| TYPE                                         | DESCRIPTION |
|----------------------------------------------|-------------|
| System.Collections.Generic.List<System.Guid> |             |

### ListRegisteredClients(String)

Declaration

```
public List<string> ListRegisteredClients(string adminPin)
```

#### Parameters

| TYPE          | NAME     | DESCRIPTION |
|---------------|----------|-------------|
| System.String | adminPin |             |

#### Returns

| TYPE                                           | DESCRIPTION |
|------------------------------------------------|-------------|
| System.Collections.Generic.List<System.String> |             |

### ListStartedTransactions(Guid)

Returns a list of transaction numbers (which where started at the tse).

#### Declaration

```
public override List<long> ListStartedTransactions(Guid clientId)
```

#### Parameters

| TYPE        | NAME     | DESCRIPTION                                                |
|-------------|----------|------------------------------------------------------------|
| System.Guid | clientId | The clientId where the started transactions are requested. |

#### Returns

| TYPE                                          | DESCRIPTION                                                     |
|-----------------------------------------------|-----------------------------------------------------------------|
| System.Collections.Generic.List<System.Int64> | A list of transaction numbers (which where started at the tse). |

#### Overrides

[TseBase.ListStartedTransactions\(Guid\)](#)

### StartTransactionImplementation(Guid)

Implementation method for [StartTransaction\(Guid\)](#).

#### Declaration

```
protected override TseResponse StartTransactionImplementation(Guid clientId)
```

#### Parameters

| TYPE        | NAME     | DESCRIPTION                                    |
|-------------|----------|------------------------------------------------|
| System.Guid | clientId | The client where the transaction should occur. |

#### Returns

| TYPE | DESCRIPTION |
|------|-------------|
|      |             |

| TYPE                        | DESCRIPTION                                                                |
|-----------------------------|----------------------------------------------------------------------------|
| <a href="#">TseResponse</a> | A <a href="#">TseResponse</a> object representing the response of the tse. |

Overrides

[TseBase.StartTransactionImplementation\(Guid\)](#)

### StringToByteArray(String)

Declaration

```
public static byte[] StringToByteArray(string hex)
```

Parameters

| TYPE          | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.String | hex  |             |

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Byte[] |             |

### UpdateTime()

Updates the time and raises an exception if this is not possible.

Declaration

```
public override void UpdateTime()
```

Overrides

[TseBase.UpdateTime\(\)](#)

### WaitForBoot()

Declaration

```
public void WaitForBoot()
```

# Class TestTse

Class to test tse. Not for productive usage.

## Inheritance

System.Object

RetailForce.Common.Logging.LoggingBase

[TseBase](#)

TestTse

## Inherited Members

[TseBase.Status](#)

[TseBase.StartTransaction\(Guid\)](#)

[TseBase.FinishTransaction\(Guid, TseRequest\)](#)

[TseBase.CancelTransaction\(Guid, Int32, Int32, String\)](#)

[TseBase.UpdateTime\(\)](#)

[TseBase.GetTseDriverInfos\(\)](#)

[TseBase.GetTseDriverInfos\(TseDriver\)](#)

[TseBase.ClientId](#)

RetailForce.Common.Logging.LoggingBase.\_logger

RetailForce.Common.Logging.LoggingBase.\_logSource

RetailForce.Common.Logging.LoggingBase.LogCritical(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogCritical(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogWarning(System.String, System.Object[])

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TestTse : TseBase
```

## Constructors

**TestTse(String, Guid, ILogger)**

Constructor.

## Declaration

```
public TestTse(string storagePath, Guid clientId, ILogger logger)
```

## Parameters

| TYPE          | NAME        | DESCRIPTION |
|---------------|-------------|-------------|
| System.String | storagePath |             |
|               |             |             |

| TYPE                                 | NAME     | DESCRIPTION |
|--------------------------------------|----------|-------------|
| System.Guid                          | clientId |             |
| Microsoft.Extensions.Logging.ILogger | logger   |             |

## Properties

### IsInitialized

Returns whether the tse is initialized for first usage.

#### Declaration

```
public override bool IsInitialized { get; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

#### Overrides

[TseBase.IsInitialized](#)

#### Remarks

This is not the normal initializing during tse startup. This is the initialization for first use.

## Methods

### CancelTransactionImplementation(Guid, Int32, Int32, String)

Implementation method for [CancelTransaction\(Guid, Int32, Int32, String\)](#).

#### Declaration

```
protected override TseResponse CancelTransactionImplementation(Guid clientId, int transactionNumber, int lastRevision, string processType)
```

#### Parameters

| TYPE          | NAME              | DESCRIPTION                                            |
|---------------|-------------------|--------------------------------------------------------|
| System.Guid   | clientId          | The client where the transaction should occur.         |
| System.Int32  | transactionNumber | The number of the transaction to be canceled.          |
| System.Int32  | lastRevision      | The actual revision of the transaction to be canceled. |
| System.String | processType       | The type of the canceled transaction.                  |

#### Returns



| TYPE                        | DESCRIPTION                                                                |
|-----------------------------|----------------------------------------------------------------------------|
| <a href="#">TseResponse</a> | A <a href="#">TseResponse</a> object representing the response of the tse. |

Overrides

[TseBase.CancelTransactionImplementation\(Guid, Int32, Int32, String\)](#)

### ConnectTest()

Tries to connect to the tse.

Declaration

```
public override void ConnectTest()
```

Overrides

[TseBase.ConnectTest\(\)](#)

### FinishTransactionImplementation(Guid, TseRequest)

Implementation method for [FinishTransaction\(Guid, TseRequest\)](#).

Declaration

```
protected override TseResponse FinishTransactionImplementation(Guid clientId, TseRequest request)
```

Parameters

| TYPE                       | NAME     | DESCRIPTION                                                                                                                                                      |
|----------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.Guid                | clientId | The client where the transaction should occur.                                                                                                                   |
| <a href="#">TseRequest</a> | request  | The appropriate request of the transaction. Possible requests are <a href="#">TseReceipt</a> , <a href="#">TseOrder</a> or <a href="#">TseOtherTransaction</a> . |

Returns

| TYPE                        | DESCRIPTION                                                                |
|-----------------------------|----------------------------------------------------------------------------|
| <a href="#">TseResponse</a> | A <a href="#">TseResponse</a> object representing the response of the tse. |

Overrides

[TseBase.FinishTransactionImplementation\(Guid, TseRequest\)](#)

### Initialize(Guid, String, TseConfiguration, Action<TseConfiguration>)

Initializes the tse with the tse configuration.

Declaration

```
public override void Initialize(Guid clientId, string uniqueCashRegisterId, TseConfiguration configuration, Action<TseConfiguration> storeTseConfiguration)
```

Parameters

| TYPE                                              | NAME                  | DESCRIPTION                                                              |
|---------------------------------------------------|-----------------------|--------------------------------------------------------------------------|
| System.Guid                                       | clientId              | The client where the tse configuration should occur.                     |
| System.String                                     | uniqueCashRegisterId  | A unique name for the cash register which will be registered at the tse. |
| <a href="#">TseConfiguration</a>                  | configuration         | The configuration properties to configure the tse.                       |
| System.Action< <a href="#">TseConfiguration</a> > | storeTseConfiguration | An action to store the tse configuration back during initialization.     |

#### Overrides

[TseBase.Initialize\(Guid, String, TseConfiguration, Action<TseConfiguration>\)](#)

#### Exceptions

| TYPE                         | CONDITION                                                                             |
|------------------------------|---------------------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>uniqueCashRegisterId</code> is set to null or empty string. |

#### ListRegisteredClientIds()

Returns all clients which are registered at the tse.

#### Declaration

```
public override List<Guid> ListRegisteredClientIds()
```

#### Returns

| TYPE                                         | DESCRIPTION                                                                  |
|----------------------------------------------|------------------------------------------------------------------------------|
| System.Collections.Generic.List<System.Guid> | A list of System.Guid values representing the registered clients at the tse. |

#### Overrides

[TseBase.ListRegisteredClientIds\(\)](#)

#### ListStartedTransactions(Guid)

#### Declaration

```
public override List<long> ListStartedTransactions(Guid clientId)
```

#### Parameters

| TYPE        | NAME     | DESCRIPTION |
|-------------|----------|-------------|
| System.Guid | clientId |             |

#### Returns

| TYPE                                          | DESCRIPTION |
|-----------------------------------------------|-------------|
| System.Collections.Generic.List<System.Int64> |             |

Overrides

[TseBase.ListStartedTransactions\(Guid\)](#)

**StartTransactionImplementation(Guid)**

Implementation method for [StartTransaction\(Guid\)](#).

Declaration

```
protected override TseResponse StartTransactionImplementation(Guid clientId)
```

Parameters

| TYPE        | NAME     | DESCRIPTION                                    |
|-------------|----------|------------------------------------------------|
| System.Guid | clientId | The client where the transaction should occur. |

Returns

| TYPE                        | DESCRIPTION                                                                |
|-----------------------------|----------------------------------------------------------------------------|
| <a href="#">TseResponse</a> | A <a href="#">TseResponse</a> object representing the response of the tse. |

Overrides

[TseBase.StartTransactionImplementation\(Guid\)](#)

# Class TestTseStatus

## Inheritance

System.Object

TestTseStatus

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TestTseStatus
```

## Properties

### DocumentNr

#### Declaration

```
public int DocumentNr { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### Revision

#### Declaration

```
public int Revision { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

# Class TseBase

Basic class for all tse interfaces.

## Inheritance

System.Object

RetailForce.Common.Logging.LoggingBase

TseBase

[FiskalyCloud](#)

[SwissbitHardware](#)

[TestTse](#)

## Inherited Members

RetailForce.Common.Logging.LoggingBase.\_logger

RetailForce.Common.Logging.LoggingBase.\_logSource

RetailForce.Common.Logging.LoggingBase.LogCritical(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogCritical(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogWarning(System.String, System.Object[])

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public abstract class TseBase : LoggingBase
```

## Constructors

### TseBase(Guid, ILogger)

Constructor.

## Declaration

```
public TseBase(Guid clientId, ILogger logger)
```

## Parameters

| TYPE                                 | NAME     | DESCRIPTION                      |
|--------------------------------------|----------|----------------------------------|
| System.Guid                          | clientId | The assigned client for the tse. |
| Microsoft.Extensions.Logging.ILogger | logger   | The logger to log.               |

## Exceptions

| TYPE                         | CONDITION |
|------------------------------|-----------|
| System.ArgumentNullException |           |

## Properties

### ClientId

The client for this tse.

#### Declaration

```
protected Guid ClientId { get; }
```

#### Property Value

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Guid |             |

### IsInitialized

Returns whether the tse is initialized for first usage.

#### Declaration

```
public abstract bool IsInitialized { get; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

#### Remarks

This is not the normal initializing during tse startup. This is the initialization for first use.

### Status

Returns the status of the connected tse.

#### Declaration

```
public virtual TseStatus Status { get; protected set; }
```

#### Property Value

| TYPE                      | DESCRIPTION |
|---------------------------|-------------|
| <a href="#">TseStatus</a> |             |

#### Remarks

For more information concerning tse status see [TseStatus](#).

## Methods

### CancelTransaction(Guid, Int32, Int32, String)

Cancels a transaction on the technical security system (tse) = fiskaly cloud.

## Declaration

```
public TseResponse CancelTransaction(Guid clientId, int transactionNumber, int lastRevision, string processType)
```

## Parameters

| TYPE          | NAME              | DESCRIPTION                                            |
|---------------|-------------------|--------------------------------------------------------|
| System.Guid   | clientId          | The client where the transaction should occur.         |
| System.Int32  | transactionNumber | The number of the transaction to be canceled.          |
| System.Int32  | lastRevision      | The actual revision of the transaction to be canceled. |
| System.String | processType       | The type of the canceled transaction.                  |

## Returns

| TYPE                        | DESCRIPTION                                                                |
|-----------------------------|----------------------------------------------------------------------------|
| <a href="#">TseResponse</a> | A <a href="#">TseResponse</a> object representing the response of the tse. |

## Exceptions

| TYPE                               | CONDITION                                                                                                                        |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| System.ArgumentException           | Thrown if the supplied <code>clientId</code> does not match <code>ClientId</code> .                                              |
| System.ArgumentOutOfRangeException | Thrown if <code>processType</code> is not one of the following values: "Kassenbeleg-V1", "Bestellung-V1" and "SonstigerVorgang". |
| System.InvalidProgramException     | Thrown if the tse was not initialized yet.                                                                                       |
| System.InvalidOperationException   | Thrown if tse is not in status connected or connectedWarning.                                                                    |

## CancelTransactionImplementation(Guid, Int32, Int32, String)

Implementation method for [CancelTransaction\(Guid, Int32, Int32, String\)](#).

## Declaration

```
protected abstract TseResponse CancelTransactionImplementation(Guid clientId, int transactionNumber, int lastRevision, string processType)
```

## Parameters

| TYPE          | NAME              | DESCRIPTION                                            |
|---------------|-------------------|--------------------------------------------------------|
| System.Guid   | clientId          | The client where the transaction should occur.         |
| System.Int32  | transactionNumber | The number of the transaction to be canceled.          |
| System.Int32  | lastRevision      | The actual revision of the transaction to be canceled. |
| System.String | processType       | The type of the canceled transaction.                  |

#### Returns

| TYPE                        | DESCRIPTION                                                                |
|-----------------------------|----------------------------------------------------------------------------|
| <a href="#">TseResponse</a> | A <a href="#">TseResponse</a> object representing the response of the tse. |

#### ConnectTest()

Tries to connect to the tse.

#### Declaration

```
public abstract void ConnectTest()
```

#### FinishTransaction(Guid, TseRequest)

Finish a transaction on the technical security system (tse).

#### Declaration

```
public TseResponse FinishTransaction(Guid clientId, TseRequest request)
```

#### Parameters

| TYPE                       | NAME     | DESCRIPTION                                                                                                                                                      |
|----------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.Guid                | clientId | The client where the transaction should occur.                                                                                                                   |
| <a href="#">TseRequest</a> | request  | The appropriate request of the transaction. Possible requests are <a href="#">TseReceipt</a> , <a href="#">TseOrder</a> or <a href="#">TseOtherTransaction</a> . |

#### Returns

| TYPE                        | DESCRIPTION                                                                |
|-----------------------------|----------------------------------------------------------------------------|
| <a href="#">TseResponse</a> | A <a href="#">TseResponse</a> object representing the response of the tse. |

#### Exceptions



| TYPE                             | CONDITION                                                                           |
|----------------------------------|-------------------------------------------------------------------------------------|
| System.ArgumentException         | Thrown if the supplied <code>clientId</code> does not match <code>ClientId</code> . |
| System.InvalidOperationException | Thrown if the tse was not initialized yet.                                          |
| System.InvalidOperationException | Thrown if tse is not in status connected or connectedWarning.                       |

### FinishTransactionImplementation(Guid, TseRequest)

Implementation method for [FinishTransaction\(Guid, TseRequest\)](#).

Declaration

```
protected abstract TseResponse FinishTransactionImplementation(Guid clientId, TseRequest request)
```

Parameters

| TYPE                       | NAME     | DESCRIPTION                                                                                                                                                      |
|----------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.Guid                | clientId | The client where the transaction should occur.                                                                                                                   |
| <a href="#">TseRequest</a> | request  | The appropriate request of the transaction. Possible requests are <a href="#">TseReceipt</a> , <a href="#">TseOrder</a> or <a href="#">TseOtherTransaction</a> . |

Returns

| TYPE                        | DESCRIPTION                                                                |
|-----------------------------|----------------------------------------------------------------------------|
| <a href="#">TseResponse</a> | A <a href="#">TseResponse</a> object representing the response of the tse. |

### GetTseDriverInfos()

Returns all driver infos of the possible tse drivers.

Declaration

```
public static List<TseDriverInfo> GetTseDriverInfos()
```

Returns

| TYPE                                                             | DESCRIPTION |
|------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">TseDriverInfo</a> > |             |

### GetTseDriverInfos(TseDriver)

Driver info of the requested tse driver.

Declaration

```
public static TseDriverInfo GetTseDriverInfos(TseDriver driver)
```

#### Parameters

| TYPE                      | NAME   | DESCRIPTION           |
|---------------------------|--------|-----------------------|
| <a href="#">TseDriver</a> | driver | The requested driver. |

#### Returns

| TYPE                          | DESCRIPTION                    |
|-------------------------------|--------------------------------|
| <a href="#">TseDriverInfo</a> | The requested tse driver info. |

### Initialize(Guid, String, TseConfiguration, Action<TseConfiguration>)

Initializes the tse with the tse configuration.

#### Declaration

```
public abstract void Initialize(Guid clientId, [Required] string uniqueCashRegisterId, TseConfiguration configuration, Action<TseConfiguration> storeTseConfiguration)
```

#### Parameters

| TYPE                                              | NAME                  | DESCRIPTION                                                              |
|---------------------------------------------------|-----------------------|--------------------------------------------------------------------------|
| System.Guid                                       | clientId              | The client where the tse configuration should occur.                     |
| System.String                                     | uniqueCashRegisterId  | A unique name for the cash register which will be registered at the tse. |
| <a href="#">TseConfiguration</a>                  | configuration         | The configuration properties to configure the tse.                       |
| System.Action< <a href="#">TseConfiguration</a> > | storeTseConfiguration | An action to store the tse configuration back during initialization.     |

#### Exceptions

| TYPE                         | CONDITION                                                                             |
|------------------------------|---------------------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>uniqueCashRegisterId</code> is set to null or empty string. |

### ListRegisteredClientIds()

Returns all clients which are registered at the tse.

#### Declaration

```
public abstract List<Guid> ListRegisteredClientIds()
```

#### Returns

| TYPE                                         | DESCRIPTION                                                                  |
|----------------------------------------------|------------------------------------------------------------------------------|
| System.Collections.Generic.List<System.Guid> | A list of System.Guid values representing the registered clients at the tse. |

### ListStartedTransactions(Guid)

Returns a list of transaction numbers (which where started at the tse).

Declaration

```
public abstract List<long> ListStartedTransactions(Guid clientId)
```

Parameters

| TYPE        | NAME     | DESCRIPTION                                                |
|-------------|----------|------------------------------------------------------------|
| System.Guid | clientId | The clientId where the started transactions are requested. |

Returns

| TYPE                                          | DESCRIPTION                                                     |
|-----------------------------------------------|-----------------------------------------------------------------|
| System.Collections.Generic.List<System.Int64> | A list of transaction numbers (which where started at the tse). |

### StartTransaction(Guid)

Starts a transaction on the technical security system (tse).

Declaration

```
public TseResponse StartTransaction(Guid clientId)
```

Parameters

| TYPE        | NAME     | DESCRIPTION                                    |
|-------------|----------|------------------------------------------------|
| System.Guid | clientId | The client where the transaction should occur. |

Returns

| TYPE                        | DESCRIPTION                                                                |
|-----------------------------|----------------------------------------------------------------------------|
| <a href="#">TseResponse</a> | A <a href="#">TseResponse</a> object representing the response of the tse. |

Exceptions

| TYPE                     | CONDITION                                                                           |
|--------------------------|-------------------------------------------------------------------------------------|
| System.ArgumentException | Thrown if the supplied <code>clientId</code> does not match <code>ClientId</code> . |

| TYPE                             | CONDITION                                                     |
|----------------------------------|---------------------------------------------------------------|
| System.InvalidProgramException   | Thrown if the tse was not initialized yet.                    |
| System.InvalidOperationException | Thrown if tse is not in status connected or connectedWarning. |

## StartTransactionImplementation(Guid)

Implementation method for [StartTransaction\(Guid\)](#).

Declaration

```
protected abstract TseResponse StartTransactionImplementation(Guid clientId)
```

Parameters

| TYPE        | NAME     | DESCRIPTION                                    |
|-------------|----------|------------------------------------------------|
| System.Guid | clientId | The client where the transaction should occur. |

Returns

| TYPE                        | DESCRIPTION                                                                |
|-----------------------------|----------------------------------------------------------------------------|
| <a href="#">TseResponse</a> | A <a href="#">TseResponse</a> object representing the response of the tse. |

## UpdateTime()

Updates the time on the tse to the actual computer time.

Declaration

```
public virtual void UpdateTime()
```

# Enum TseStatus

Represents the status of the connected tse.

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum TseStatus
```

## Fields

| NAME             | DESCRIPTION                                                                                |
|------------------|--------------------------------------------------------------------------------------------|
| Connected        | Tse is connected or can connected without problems.                                        |
| ConnectedWarning | Tse is connected or can connected without problem, but remaining signature counter is low. |
| Critical         | Tse critical error, for instance: invalid credentials at logon.                            |
| Decommissioned   | Tse is decommissioned.                                                                     |
| Disconnected     | Tse is disconnected or cannot be connected.                                                |
| NotInitialized   | Tse is not initialized.                                                                    |
| Starting         | Tse is booting (starting up), needed for hardware tse's                                    |

# Namespace

## RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly

### Classes

[ClientFactory](#)

[ClientListResponse](#)

Class to get list of clients from fiskaly tse.

[ClientListResponse.ArrayData](#)

[FiskalyConnector](#)

Represents the connection to the fiskaly tse cloud.

[InvalidCredentialsException](#)

[InvalidRequestUriException](#)

[PollyPolicyFactory](#)

[TransactionListResponse](#)

# Class ClientFactory

## Inheritance

System.Object

ClientFactory

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public static class ClientFactory
```

## Methods

Create(String, String, Int32)

Creates an fiskaly http client (with automatic authentication and given timeout).

## Declaration

```
public static ValueTask<HttpClient> Create(string apiKey, string apiSecret, int commandTimeout)
```

## Parameters

| TYPE          | NAME           | DESCRIPTION |
|---------------|----------------|-------------|
| System.String | apiKey         |             |
| System.String | apiSecret      |             |
| System.Int32  | commandTimeout |             |

## Returns

| TYPE                                                         | DESCRIPTION |
|--------------------------------------------------------------|-------------|
| System.Threading.Tasks.ValueTask<System.Net.Http.HttpClient> |             |

# Class ClientListResponse

Class to get list of clients from fiskaly tse.

## Inheritance

System.Object

ClientListResponse

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class ClientListResponse
```

## Properties

### Count

Number of available data items

#### Declaration

```
public int Count { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### Data

Array of data objects.

#### Declaration

```
public ClientListResponse.ArrayData[] Data { get; set; }
```

#### Property Value

| TYPE                                           | DESCRIPTION |
|------------------------------------------------|-------------|
| <a href="#">ClientListResponse.ArrayData[]</a> |             |



# Class ClientListResponse.ArrayData

## Inheritance

System.Object

ClientListResponse.ArrayData

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class ArrayData
```

## Properties

### Id

The id of the client.

#### Declaration

```
[JsonProperty("_id")]  
public Guid Id { get; set; }
```

#### Property Value

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Guid |             |

### SerialNumber

The serial number of the registered client.

#### Declaration

```
[JsonProperty("serial_number")]  
public string SerialNumber { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### TimeCreation

A timestamp / point in time measured in seconds since the Unix epoch

#### Declaration

```
[JsonProperty("time_creation")]
public int TimeCreation { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### TimeUpdate

A timestamp / point in time measured in seconds since the Unix epoch

#### Declaration

```
[JsonProperty("time_update")]
public int TimeUpdate { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### TssId

Identifies a TSS

#### Declaration

```
[JsonProperty("tss_id")]
public Guid TssId { get; set; }
```

#### Property Value

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Guid |             |

# Class FiskalyConnector

Represents the connection to the fiskaly tse cloud.

## Inheritance

System.Object

RetailForce.Common.Logging.LoggingBase

FiskalyConnector

## Implements

System.IDisposable

## Inherited Members

RetailForce.Common.Logging.LoggingBase.\_logger

RetailForce.Common.Logging.LoggingBase.\_logSource

RetailForce.Common.Logging.LoggingBase.LogCritical(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogCritical(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogWarning(System.String, System.Object[])

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public sealed class FiskalyConnector : LoggingBase, IDisposable
```

## Constructors

FiskalyConnector(String, String, ILogger, Int32)

Constructor.

## Declaration

```
public FiskalyConnector(string apiKey, string apiSecret, ILogger logger, int commandTimeout = 3000)
```

## Parameters

| TYPE                                 | NAME      | DESCRIPTION                                    |
|--------------------------------------|-----------|------------------------------------------------|
| System.String                        | apiKey    | The api key for the access to the fiskaly api. |
| System.String                        | apiSecret | The api secret to access the fiskaly api.      |
| Microsoft.Extensions.Logging.ILogger | logger    | The logger for this class.                     |

| TYPE         | NAME           | DESCRIPTION                                                                                            |
|--------------|----------------|--------------------------------------------------------------------------------------------------------|
| System.Int32 | commandTimeout | The command timeout in milliseconds when accessing the fiskaly http api. If set to 0 then it infinite. |

#### Exceptions

| TYPE                                         | CONDITION                                                                                                        |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException                 | Thrown if <code>apiKey</code> , <code>apiSecret</code> or <code>logger</code> are set to null (or empty string). |
| System.InvalidOperationException             | Thrown if no client can be created.                                                                              |
| System.Threading.Tasks.TaskCanceledException | Thrown if the connection to the fiskaly cloud timeouts.                                                          |

#### Methods

##### Dispose()

Disposes the object.

##### Declaration

```
public void Dispose()
```

##### Get<ReturnType>(String)

Sends a get request (async) to fiskaly cloud and waits for response.

##### Declaration

```
public ReturnType Get<ReturnType>(string url)
```

##### Parameters

| TYPE          | NAME | DESCRIPTION                  |
|---------------|------|------------------------------|
| System.String | url  | The url for the put request. |

##### Returns

| TYPE       | DESCRIPTION                                                                            |
|------------|----------------------------------------------------------------------------------------|
| ReturnType | An object of type <code>ReturnType</code> representing the response of the webservice. |

##### Type Parameters

| NAME       | DESCRIPTION                   |
|------------|-------------------------------|
| ReturnType | The type of the return value. |

## Put<ReturnType, PayloadType>(String, PayloadType)

Sends a put request (async) to fiskaly cloud and waits for response.

### Declaration

```
public ReturnType Put<ReturnType, PayloadType>(string url, PayloadType payload)
```

### Parameters

| TYPE          | NAME    | DESCRIPTION                      |
|---------------|---------|----------------------------------|
| System.String | url     | The url for the put request.     |
| PayloadType   | payload | The payload for the put request. |

### Returns

| TYPE       | DESCRIPTION                                                                            |
|------------|----------------------------------------------------------------------------------------|
| ReturnType | An object of type <code>ReturnType</code> representing the response of the webservice. |

### Type Parameters

| NAME        | DESCRIPTION                    |
|-------------|--------------------------------|
| ReturnType  | The type of the return value.  |
| PayloadType | The type of the payload value. |

### Implements

System.IDisposable

# Class InvalidCredentialsException

## Inheritance

System.Object  
System.Exception  
InvalidCredentialsException

## Implements

System.Runtime.Serialization.ISerializable

## Inherited Members

System.Exception.GetBaseException()  
System.Exception.GetObjectData(System.Runtime.Serialization.SerializationInfo, System.Runtime.Serialization.StreamingContext)  
System.Exception.GetType()  
System.Exception.ToString()  
System.Exception.Data  
System.Exception.HelpLink  
System.Exception.HResult  
System.Exception.InnerException  
System.Exception.Message  
System.Exception.Source  
System.Exception.StackTrace  
System.Exception.TargetSite  
System.Exception.SerializeObjectState  
System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
[Serializable]  
public class InvalidCredentialsException : Exception, ISerializable
```

## Constructors

### InvalidCredentialsException(String)

#### Declaration

```
public InvalidCredentialsException(string message)
```

#### Parameters

| TYPE          | NAME    | DESCRIPTION |
|---------------|---------|-------------|
| System.String | message |             |

## Implements

System.Runtime.Serialization.ISerializable

# Class InvalidRequestUriException

## Inheritance

System.Object  
System.Exception  
InvalidRequestUriException

## Implements

System.Runtime.Serialization.ISerializable

## Inherited Members

System.Exception.GetBaseException()  
System.Exception.GetObjectData(System.Runtime.Serialization.SerializationInfo, System.Runtime.Serialization.StreamingContext)  
System.Exception.GetType()  
System.Exception.ToString()  
System.Exception.Data  
System.Exception.HelpLink  
System.Exception.HResult  
System.Exception.InnerException  
System.Exception.Message  
System.Exception.Source  
System.Exception.StackTrace  
System.Exception.TargetSite  
System.Exception.SerializeObjectState  
System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
[Serializable]  
public class InvalidRequestUriException : Exception, ISerializable
```

## Constructors

### InvalidRequestUriException(String)

#### Declaration

```
public InvalidRequestUriException(string message)
```

#### Parameters

| TYPE          | NAME    | DESCRIPTION |
|---------------|---------|-------------|
| System.String | message |             |

## Implements

System.Runtime.Serialization.ISerializable

# Class PollyPolicyFactory

## Inheritance

System.Object  
PollyPolicyFactory

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public static class PollyPolicyFactory
```

## Methods

### CreateAuthPolicy()

#### Declaration

```
public static AsyncPolicyWrap<HttpResponseMessage> CreateAuthPolicy()
```

#### Returns

| TYPE                                                            | DESCRIPTION |
|-----------------------------------------------------------------|-------------|
| Polly.Wrap.AsyncPolicyWrap<System.Net.Http.HttpResponseMessage> |             |

### CreateGeneralPolicy()

#### Declaration

```
public static AsyncPolicyWrap<HttpResponseMessage> CreateGeneralPolicy()
```

#### Returns

| TYPE                                                            | DESCRIPTION |
|-----------------------------------------------------------------|-------------|
| Polly.Wrap.AsyncPolicyWrap<System.Net.Http.HttpResponseMessage> |             |



# Class TransactionListResponse

## Inheritance

System.Object

TransactionListResponse

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TransactionListResponse
```

## Properties

### Data

#### Declaration

```
[JsonProperty("data")]  
public TransactionResponse[] Data { get; set; }
```

#### Property Value

| TYPE                                  | DESCRIPTION |
|---------------------------------------|-------------|
| <a href="#">TransactionResponse[]</a> |             |

# Namespace

## RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly. Model

### Classes

#### [CreateClientRequest](#)

Request body to create a new client at fiskaly.

#### [CreateClientResponse](#)

The response of the client request.

#### [TransactionData](#)

Represents the data for the transaction to fiskaly tse (processData = [Binary](#)).

#### [TransactionPayload](#)

The transaction payload to sign a request with the cloud.

#### [TransactionResponse](#)

Represents the response of the fiskaly cloud tse.

#### [TransactionResponse.SignatureClass](#)

Represents a signature object of the [TransactionResponse](#)

### [Tss](#)

Represents a fiskaly technical security system (tse)

### Enums

#### [TransactionState](#)

# Class CreateClientRequest

Request body to create a new client at fiskaly.

## Inheritance

System.Object

CreateClientRequest

[CreateClientResponse](#)

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CreateClientRequest
```

## Properties

### SerialNumber

The serial number of the client.

## Declaration

```
[JsonProperty("serial_number")]  
public string SerialNumber { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class CreateClientResponse

The response of the client request.

## Inheritance

System.Object

[CreateClientRequest](#)

CreateClientResponse

## Inherited Members

[CreateClientRequest.SerialNumber](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CreateClientResponse : CreateClientRequest
```

## Remarks

Not all fields are mapped.

# Class TransactionData

Represents the data for the transaction to fiskaly tse (processData = [Binary](#)).

## Inheritance

System.Object  
TransactionData

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TransactionData
```

## Constructors

[TransactionData\(TseRequest\)](#)

Constructor.

## Declaration

```
public TransactionData(TseRequest request)
```

## Parameters

| TYPE                       | NAME    | DESCRIPTION                      |
|----------------------------|---------|----------------------------------|
| <a href="#">TseRequest</a> | request | The request for the transaction. |

## Exceptions

| TYPE                         | CONDITION                                      |
|------------------------------|------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>request</code> is set to null. |

## Properties

### Binary

Base 64 encoded utf8 string of the processData element.

## Declaration

```
[JsonProperty("binary")]  
public string Binary { get; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class TransactionPayload

The transaction payload to sign a request with the cloud.

## Inheritance

System.Object

TransactionPayload

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TransactionPayload
```

## Constructors

**TransactionPayload(Guid, TransactionState)**

Constructor. Used to create a transaction.

## Declaration

```
public TransactionPayload(Guid clientId, TransactionState state)
```

## Parameters

| TYPE                             | NAME     | DESCRIPTION                     |
|----------------------------------|----------|---------------------------------|
| System.Guid                      | clientId | The client for the transaction. |
| <a href="#">TransactionState</a> | state    | The state for the transaction.  |

## Exceptions

| TYPE                         | CONDITION                                                    |
|------------------------------|--------------------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>clientId</code> is set to System.Guid.Empty. |

**TransactionPayload(Guid, TransactionState, TseRequest)**

Constructor. Used to finish a transaction.

## Declaration

```
public TransactionPayload(Guid clientId, TransactionState state, TseRequest request = null)
```

## Parameters

| TYPE                             | NAME     | DESCRIPTION                                                                                                                     |
|----------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------|
| System.Guid                      | clientId | The client for the transaction.                                                                                                 |
| <a href="#">TransactionState</a> | state    | The state for the transaction.                                                                                                  |
| <a href="#">TseRequest</a>       | request  | The request for the transaction. Depending on <code>state</code> if necessary. For more information see <a href="#">State</a> . |

#### Exceptions

| TYPE                         | CONDITION                                                    |
|------------------------------|--------------------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>clientId</code> is set to System.Guid.Empty. |

#### TransactionPayload(Guid, TransactionState, String)

Constructor. Used to cancel a transaction.

#### Declaration

```
public TransactionPayload(Guid clientId, TransactionState state, string processType)
```

#### Parameters

| TYPE                             | NAME        | DESCRIPTION                                                                                                       |
|----------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------|
| System.Guid                      | clientId    | The client for the transaction.                                                                                   |
| <a href="#">TransactionState</a> | state       | The state for the transaction.                                                                                    |
| System.String                    | processType | The processType for the transaction. Possible types are "Kassenbeleg-V1", "Bestellung-V1" and "SonstigerVorgang". |

#### Exceptions

| TYPE                               | CONDITION                                                                                                                        |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException       | Thrown if <code>clientId</code> is set to System.Guid.Empty.                                                                     |
| System.ArgumentOutOfRangeException | Thrown if <code>processType</code> is not one of the following values: "Kassenbeleg-V1", "Bestellung-V1" and "SonstigerVorgang". |

#### Properties

##### ClientId

The client id for the transaction.



The structure for the transaction...

#### Declaration

```
[JsonRequired]  
[JsonProperty("client_id")]  
public Guid ClientId { get; }
```

#### Property Value

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Guid |             |

#### Data

The data of the transaction. Binary value (base64 encoded utf8 string). This is the processData according to "Anwendungserlass zu §146a AO".

#### Declaration

```
[JsonProperty("data", NullValueHandling = NullValueHandling.Ignore)]  
public TransactionData Data { get; }
```

#### Property Value

| TYPE                            | DESCRIPTION |
|---------------------------------|-------------|
| <a href="#">TransactionData</a> |             |

#### State

The state for the transaction.

#### Declaration

```
[JsonConverter(typeof(TransactionStateConverter))]  
[JsonProperty("state")]  
[JsonRequired]  
public TransactionState State { get; }
```

#### Property Value

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">TransactionState</a> |             |

#### Remarks

When using [Active](#) do not send a [TseRequest](#) in the constructor. When using [Finished](#) a [TseRequest](#) has to be send in the constructor.

#### Type

The Type of the transaction. This is the processType according to "Anwendungserlass zu §146a AO".

#### Declaration

```
[JsonProperty("type", NullValueHandling = NullValueHandling.Ignore)]  
public string Type { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class TransactionResponse

Represents the response of the fiskaly cloud tse.

## Inheritance

System.Object

TransactionResponse

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TransactionResponse
```

## Fields

### LatestRevision

The actual latest revision of the signed transaction.

## Declaration

```
[JsonProperty("latest_revision")]  
public int LatestRevision
```

## Field Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### Number

The number of the transaction.

## Declaration

```
[JsonProperty("number")]  
public int Number
```

## Field Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### QrCodeDataString

The qr code data string of the transaction response.

## Declaration

```
[JsonProperty("qr_code_data")]
public string QrCodeDataString
```

Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Signature

The signature values of the signed transaction.

Declaration

```
[JsonProperty("signature")]
public TransactionResponse.SignatureClass Signature
```

Field Value

| TYPE                                               | DESCRIPTION |
|----------------------------------------------------|-------------|
| <a href="#">TransactionResponse.SignatureClass</a> |             |

## State

The state of the signed transaction.

Declaration

```
[JsonProperty("state")]
[JsonConverter(typeof(TransactionStateConverter))]
public TransactionState State
```

Field Value

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">TransactionState</a> |             |

## TimeEnd

The end time of the transaction.

Declaration

```
[JsonProperty("time_end")]
public long TimeEnd
```

Field Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

Remarks

A timestamp / point in time measured in seconds since the Unix epoch.

## TimeStart

The start time of the transaction.

Declaration

```
[JsonProperty("time_start")]  
public long TimeStart
```

Field Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

Remarks

A timestamp / point in time measured in seconds since the Unix epoch.

# Class TransactionResponse.SignatureClass

Represents a signature object of the [TransactionResponse](#)

## Inheritance

System.Object

TransactionResponse.SignatureClass

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class SignatureClass
```

## Fields

### Algorithm

The signature algorithm of the signed transaction.

#### Declaration

```
[JsonProperty("algorithm")]  
public string Algorithm
```

#### Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Counter

#### Declaration

```
[JsonProperty("counter")]  
public int Counter
```

#### Field Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### PublicKey

#### Declaration

```
[JsonProperty("public_key")]  
public string PublicKey
```

#### Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Value

The signature value of the signed transaction.

Declaration

```
[JsonProperty("value")]  
public string Value
```

Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Enum TransactionState

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly.Model](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum TransactionState
```

## Fields

| NAME      | DESCRIPTION |
|-----------|-------------|
| Active    |             |
| Cancelled |             |
| Finished  |             |



# Class Tss

Represents a fiskaly technical security system (tse)

## Inheritance

System.Object

Tss

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Fiskaly.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Tss
```

## Properties

### Certificate

Certificate of the tss.

#### Declaration

```
[JsonProperty("certificate")]  
public string Certificate { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### CertificateSerial

Serial number of the certificate of tss.

#### Declaration

```
[JsonProperty("certificate_serial")]  
public string CertificateSerial { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Description

The description of the tss.

#### Declaration

```
[JsonProperty("description")]
public string Description { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### id

The fiskaly id of the tss.

#### Declaration

```
[JsonProperty("_id")]
public string id { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Metadata

Meta properties (string dictionary).

#### Declaration

```
[JsonProperty("metadata")]
public Dictionary<string, string> Metadata { get; set; }
```

#### Property Value

| TYPE                                                                | DESCRIPTION |
|---------------------------------------------------------------------|-------------|
| System.Collections.Generic.Dictionary<System.String, System.String> |             |

#### PublicKey

The cryptographic public key of the tss.

#### Declaration

```
[JsonProperty("public_key")]
public string PublicKey { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### SignatureAlgorithm

The used signature algorithm of the tss.

#### Declaration

```
[JsonProperty("signature_algorithm")]
public string SignatureAlgorithm { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### SignatureCounter

The actual signature counter of the tss.

#### Declaration

```
[JsonProperty("signature_counter")]
public long SignatureCounter { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

### SignatureTimestampFormat

The timestamp format of the signature time stamp.

#### Declaration

```
[JsonProperty("signature_timestamp_format")]
public string SignatureTimestampFormat { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### State

The state of the tss.

#### Declaration

```
[JsonProperty("state")]
public string State { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Remarks

Possible values are: "UNINITIALIZED", "INITIALIZED" and "DISABLED"

### TimeCreation

Creation time of the tss.

## Declaration

```
[JsonProperty("time_creation")]  
public long TimeCreation { get; set; }
```

## Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

## TimeDisable

Time when the tss is disabled.

## Declaration

```
[JsonProperty("time_disable")]  
public long TimeDisable { get; set; }
```

## Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

## TimeInit

Initialisation time of the tss.

## Declaration

```
[JsonProperty("time_init")]  
public long TimeInit { get; set; }
```

## Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

## TransactionCounter

The actual transaction of the tss.

## Declaration

```
[JsonProperty("transaction_counter")]  
public long TransactionCounter { get; set; }
```

## Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

## TransactionDataEncoding

The data encoding of the tss.

## Declaration

```
[JsonProperty("transaction_data_encoding")]  
public string TransactionDataEncoding { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Namespace

## RetailForce.Fiscalisation.Implementation.Germany.Tse.Model

### Classes

#### [TseOrder](#)

Long term order processes/transactions (for example in gastronomy). This transactions have to be realized through this special operation. Just orders are used with this process, creating an invoice or receipt has to be done with [TseReceipt](#).

Type of the process: "Bestellung". ProcessType: "Bestellung-V1".

#### [TseOrder.TseOrderLine](#)

Represents an order line in a [TseOrder](#) request.

#### [TseOtherTransaction](#)

It is possible to use the technical security system (tse/tss) to secure any other data.

#### [TsePayment](#)

Represents the payment data in a tse receipt.

#### [TseReceipt](#)

Represents a receipt which is signed and calculated by the tse. Used for all closed processes which lead to issue a receipt (see §146a Abs. 2 AO)

Type of the process: "Kassenbeleg". ProcessType: "Kassenbeleg-V1".

#### [TseRequest](#)

Base class for a tse request (processData).

#### [TseRequestFormatBase](#)

Base class for tse requests with special functions to format the data.

#### [TseResponse](#)

Represents the return value of the tse after signing the transaction.

# Class TseOrder

Long term order processes/transactions (for example in gastronomy). This transactions have to be realized through this special operation. Just orders are used with this process, creating an invoice or receipt has to be done with [TseReceipt](#).

Type of the process: "Bestellung". ProcessType: "Bestellung-V1".

## Inheritance

System.Object

[TseRequestFormatBase](#)

[TseRequest](#)

TseOrder

## Inherited Members

[TseRequest.TransactionNumber](#)

[TseRequest.TransactionRevision](#)

[TseRequestFormatBase.FormatNumber\(Int32\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseOrder : TseRequest
```

## Remarks

For more information concerning using this type see "Anwendungserlass zu §146a AO" chapter 3.6.6.2 (german law) and actual description of "DSFin-VK, Anhang I Definition "Art" und "Daten" des Vorgangs; QR-Code.

## Constructors

[TseOrder\(Int32, Int32, List<TseOrder.TseOrderLine>\)](#)

Constructor.

## Declaration

```
public TseOrder(int transactionNumber, int transactionRevision, List<TseOrder.TseOrderLine> orderlineList)
```

## Parameters

| TYPE         | NAME                | DESCRIPTION                              |
|--------------|---------------------|------------------------------------------|
| System.Int32 | transactionNumber   | The transaction number of the request.   |
| System.Int32 | transactionRevision | The transaction revision of the request. |

| TYPE                                                                     | NAME          | DESCRIPTION                                                                                            |
|--------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">TseOrder.TseOrderLine</a> > | orderlineList | A list of tse order line objects. A tse order line represents a single order line in an order process. |

## Properties

### OrderlineList

Represents a list of [TseOrder.TseOrderLine](#) objects.

#### Declaration

```
public IReadOnlyList<TseOrder.TseOrderLine> OrderlineList { get; }
```

#### Property Value

| TYPE                                                                              | DESCRIPTION |
|-----------------------------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">TseOrder.TseOrderLine</a> > |             |

### ProcessType

Returns the process type of the request.

#### Declaration

```
public override string ProcessType { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Overrides

[TseRequest.ProcessType](#)

### Separator

Represents the field separator for the string representation of this object.

#### Declaration

```
protected override string Separator { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Overrides

[TseRequestFormatBase.Separator](#)

## Methods

### ToString()

The string representation of this object; Can be used as processData according to TR-03151



([https://www.bsi.bund.de/DE/Publikationen/TechnischeRichtlinien/tr03151/index\\_hm.html](https://www.bsi.bund.de/DE/Publikationen/TechnischeRichtlinien/tr03151/index_hm.html)).

#### Declaration

```
public override string ToString()
```

#### Returns

| TYPE          | DESCRIPTION                                                     |
|---------------|-----------------------------------------------------------------|
| System.String | A string representing the string representation of this object. |

#### Overrides

System.Object.ToString()

# Class TseOrder.TseOrderLine

Represents an order line in a [TseOrder](#) request.

## Inheritance

System.Object

[TseRequestFormatBase](#)

TseOrder.TseOrderLine

## Inherited Members

[TseRequestFormatBase.FormatNumber\(Int32\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseOrderLine : TseRequestFormatBase
```

## Remarks

For more information concerning using this type see "Anwendungserlass zu §146a AO" chapter 3.6.6.2 (german law) and actual description of "DSFin-VK, Anhang I Definition "Art" und "Daten" des Vorgangs; QR-Code.

## Constructors

[TseOrderLine\(Decimal, String, Decimal\)](#)

Constructor.

## Declaration

```
public TseOrderLine(decimal quantity, string itemCaption, decimal grossPrice)
```

## Parameters

| TYPE           | NAME        | DESCRIPTION                                                                                      |
|----------------|-------------|--------------------------------------------------------------------------------------------------|
| System.Decimal | quantity    | The quantity of the order of this item. For more information see <a href="#">Quantity</a> .      |
| System.String  | itemCaption | The caption of the item. For more information see <a href="#">ItemCaption</a> .                  |
| System.Decimal | grossPrice  | The gross price of the order of this item. For more information see <a href="#">GrossPrice</a> . |

## Exceptions

| TYPE | CONDITION |
|------|-----------|
|------|-----------|

| TYPE                               | CONDITION                                                          |
|------------------------------------|--------------------------------------------------------------------|
| System.ArgumentNullException       | Thrown if <code>itemCaption</code> is set to null or empty string. |
| System.ArgumentOutOfRangeException | Thrown if <code>grossPrice</code> is smaller or equal than 0.      |

## Properties

### GrossPrice

The gross price of the order of this item per unit (not the value).

Declaration

```
public decimal GrossPrice { get; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

Remarks

Use Field "BRUTTO" of DSFinV-K. Only 2 digits are transferred.

### ItemCaption

The caption of the item.

Declaration

```
public string ItemCaption { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

Remarks

Use Field "ARTIKELTEXT" of DSFinV-K.

### Quantity

The quantity of the order of this item.

Declaration

```
public decimal Quantity { get; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

Remarks

Use Field "MENGE" of DSFinV-K. Can have more than 2 digits.

## Separator

Represents the field separator for the string representation of this object.

### Declaration

```
protected override string Separator { get; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Overrides

[TseRequestFormatBase.Separator](#)

## Methods

### ToString()

The string representation of this object; Is a part of processData according to TR-03151 ([https://www.bsi.bund.de/DE/Publikationen/TechnischeRichtlinien/tr03151/index\\_hm.html](https://www.bsi.bund.de/DE/Publikationen/TechnischeRichtlinien/tr03151/index_hm.html)).

### Declaration

```
public override string ToString()
```

### Returns

| TYPE          | DESCRIPTION                                                     |
|---------------|-----------------------------------------------------------------|
| System.String | A string representing the string representation of this object. |

### Overrides

[System.Object.ToString\(\)](#)

### Remarks

Format of quantity can have more than 2 digits. Price does not have more than 2 digits.

# Class TseOtherTransaction

It is possible to use the technical security system (tse/tss) to secure any other data.

## Inheritance

System.Object

[TseRequestFormatBase](#)

[TseRequest](#)

TseOtherTransaction

## Inherited Members

[TseRequest.TransactionNumber](#)

[TseRequest.TransactionRevision](#)

[TseRequestFormatBase.FormatNumber\(Int32\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseOtherTransaction : TseRequest
```

## Remarks

This type of process should be used if the system wants to store for instance opening the cash drawer or logon/logoff of an user. There is no regulation concerning the content ([Data](#)) for this element by the fiscal law.

For more information concerning using this type see "Anwendungserlass zu §146a AO" chapter 3.6.6.3 (german law) and actual description of "DSFin-VK, Anhang I Definition "Art" und "Daten" des Vorgangs; QR-Code.

## Constructors

[TseOtherTransaction\(Int32, Int32, String\)](#)

Constructor.

## Declaration

```
public TseOtherTransaction(int transactionNumber, int transactionRevision, string data)
```

## Parameters

| TYPE          | NAME                | DESCRIPTION                                                               |
|---------------|---------------------|---------------------------------------------------------------------------|
| System.Int32  | transactionNumber   | The transaction number of the request.                                    |
| System.Int32  | transactionRevision | The transaction revision of the request.                                  |
| System.String | data                | The data of the transaction, can be every type and defined by the sender. |

## Exceptions

| TYPE                         | CONDITION                                                   |
|------------------------------|-------------------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>data</code> is set to null or empty string. |

## Properties

### Data

The data of the transaction, can be every type and defined by the sender.

#### Declaration

```
public string Data { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### ProcessType

Returns the process Type of the request.

#### Declaration

```
public override string ProcessType { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Overrides

[TseRequest.ProcessType](#)

### Separator

Represents the field separator for the string representation of this object. Not used in this class.

#### Declaration

```
protected override string Separator { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Overrides

[TseRequestFormatBase.Separator](#)

## Methods

### ToString()

The string representation of this object; Can be used as processData according to TR-03151

([https://www.bsi.bund.de/DE/Publikationen/TechnischeRichtlinien/tr03151/index\\_hm.html](https://www.bsi.bund.de/DE/Publikationen/TechnischeRichtlinien/tr03151/index_hm.html)).

#### Declaration

```
public override string ToString()
```

#### Returns

| TYPE          | DESCRIPTION                                                     |
|---------------|-----------------------------------------------------------------|
| System.String | A string representing the string representation of this object. |

#### Overrides

System.Object.ToString()

# Class TsePayment

Represents the payment data in a tse receipt.

## Inheritance

System.Object

[TseRequestFormatBase](#)

TsePayment

## Inherited Members

[TseRequestFormatBase.FormatNumber\(Int32\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TsePayment : TseRequestFormatBase
```

## Constructors

TsePayment(Boolean, Int32, String)

Constructor.

## Declaration

```
public TsePayment(bool cashPayment, int amount, string currencyIsoCode = null)
```

## Parameters

| TYPE           | NAME            | DESCRIPTION                                                                                                           |
|----------------|-----------------|-----------------------------------------------------------------------------------------------------------------------|
| System.Boolean | cashPayment     | True if the payment was done in cash; otherwise false.                                                                |
| System.Int32   | amount          | The amount of the payment (in the respective currency). The amount is multiplied by 100 (cent representation in eur). |
| System.String  | currencyIsoCode | The currency iso code for the payment. This must be an iso 4217 currency code. Can be omitted.                        |

## Exceptions

| TYPE                               | CONDITION                                                               |
|------------------------------------|-------------------------------------------------------------------------|
| System.ArgumentOutOfRangeException | Thrown if <code>currencyIsoCode</code> is not a standard iso 4217 code. |

## Properties

Amount



The amount of the payment.

Declaration

```
public int Amount { get; }
```

Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

## CashPayment

True if the payment was done in cash (also foreign currency); otherwise false (creditcards, debitcards, vouchers, etc.)

Declaration

```
public bool CashPayment { get; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## CurrencyIsoCode

The currency iso code for this payment. This must be an iso 4217 currency code.

Declaration

```
public string CurrencyIsoCode { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Separator

Represents the field separator for the string representation of this object.

Declaration

```
protected override string Separator { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

Overrides

[TseRequestFormatBase.Separator](#)

## Methods

### ToString()

The string representation of this object; Can be used as processData according to TR-03151

([https://www.bsi.bund.de/DE/Publikationen/TechnischeRichtlinien/tr03151/index\\_hm.html](https://www.bsi.bund.de/DE/Publikationen/TechnischeRichtlinien/tr03151/index_hm.html)).

#### Declaration

```
public override string ToString()
```

#### Returns

| TYPE          | DESCRIPTION                                                     |
|---------------|-----------------------------------------------------------------|
| System.String | A string representing the string representation of this object. |

#### Overrides

System.Object.ToString()

# Class TseReceipt

Represents a receipt which is signed and calculated by the tse. Used for all closed processes which lead to issue a receipt (see §146a Abs. 2 AO)

Type of the process: "Kassenbeleg". ProcessType: "Kassenbeleg-V1".

## Inheritance

System.Object

[TseRequestFormatBase](#)

[TseRequest](#)

TseReceipt

## Inherited Members

[TseRequest.TransactionNumber](#)

[TseRequest.TransactionRevision](#)

[TseRequestFormatBase.FormatNumber\(Int32\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseReceipt : TseRequest
```

## Remarks

For more information concerning using this type see "Anwendungserlass zu §146a AO" chapter 3.6.6.1 (german law) and actual description of "DSFin-VK, Anhang I Definition "Art" und "Daten" des Vorgangs; QR-Code.

## Constructors

`TseReceipt(Int32, Int32, TransactionType, Int32, Int32, Int32, Int32, Int32, TsePayment[])`

Constructor.

## Declaration

```
public TseReceipt(int transactionNumber, int transactionRevision, TransactionType transactionType, int tax1, int tax2, int tax3, int tax4, int tax5, TsePayment[] payments = null)
```

## Parameters

| TYPE         | NAME                | DESCRIPTION                              |
|--------------|---------------------|------------------------------------------|
| System.Int32 | transactionNumber   | The transaction number of the request.   |
| System.Int32 | transactionRevision | The transaction revision of the request. |
|              |                     |                                          |

| TYPE                            | NAME            | DESCRIPTION                                                                                                         |
|---------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------|
| <a href="#">TransactionType</a> | transactionType | The type of the transaction according to regulation of type "Vorgang" of DSFin-VK.                                  |
| System.Int32                    | tax1            | Gross value according to tax rate 19% (common tax rate). EuroCent representation (multiple with 100).               |
| System.Int32                    | tax2            | Gross value according to tax rate 7% (reduced tax rate). EuroCent representation (multiple with 100).               |
| System.Int32                    | tax3            | Gross value according to "Durchschnittsatz (§24(1)Nr.3 UStG) (10.7%)". EuroCent representation (multiple with 100). |
| System.Int32                    | tax4            | Gross value according to "Durchschnittsatz (§24(1)Nr.1 UStG) (5.5%)". EuroCent representation (multiple with 100).  |
| System.Int32                    | tax5            | Gross value according to 0% tax. EuroCent representation (multiple with 100).                                       |
| <a href="#">TsePayment[]</a>    | payments        | A list of <a href="#">TsePayment</a> objects representing the payments for this transaction.                        |

#### Exceptions

| TYPE                               | CONDITION                                                                                                                                              |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.ArgumentOutOfRangeException | Thrown if <code>transactionNumber</code> or <code>transactionRevision</code> is less 0. Also thrown when <code>transactionType</code> is out of range. |

#### Properties

##### ProcessType

Returns the process Type of the request.

#### Declaration

```
public override string ProcessType { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Overrides

[TseRequest.ProcessType](#)

#### Separator

Represents the main separator for formatting the request data (ToString method).

#### Declaration

```
protected override string Separator { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Overrides

[TseRequestFormatBase.Separator](#)

## TransactionType

The type of the transaction according to DFKA Taxonomy / DSFin-VK.

#### Declaration

```
public TransactionType TransactionType { get; }
```

#### Property Value

| TYPE                            | DESCRIPTION |
|---------------------------------|-------------|
| <a href="#">TransactionType</a> |             |

#### Remarks

Allowed transaction types are:

#### Methods

### AddPayment(Boolean, Int32, String)

Adds a payment to the payment collection.

#### Declaration

```
public void AddPayment(bool cashPayment, int amount, string currencyIsoCode = null)
```

#### Parameters

| TYPE           | NAME            | DESCRIPTION                                                                                                  |
|----------------|-----------------|--------------------------------------------------------------------------------------------------------------|
| System.Boolean | cashPayment     | True if this payment was done by cash; otherwise false.                                                      |
| System.Int32   | amount          | The amount of the payment (multiplied with 100, eg. in EUR this is the cent representation: 3,54 EUR = 354). |
| System.String  | currencyIsoCode | The currency iso code for the payment.                                                                       |

#### Remarks

Foreign currency values have to be sent with the foreign currency value.

## ToString()

The string representation of this object; Can be used as processData according to TR-03151 ([https://www.bsi.bund.de/DE/Publikationen/TechnischeRichtlinien/tr03151/index\\_htm.html](https://www.bsi.bund.de/DE/Publikationen/TechnischeRichtlinien/tr03151/index_htm.html)).

### Declaration

```
public override string ToString()
```

### Returns

| TYPE          | DESCRIPTION                                                     |
|---------------|-----------------------------------------------------------------|
| System.String | A string representing the string representation of this object. |

### Overrides

System.Object.ToString()

# Class TseRequest

Base class for a tse request (processData).

## Inheritance

System.Object

[TseRequestFormatBase](#)

TseRequest

[TseOrder](#)

[TseOtherTransaction](#)

[TseReceipt](#)

## Inherited Members

[TseRequestFormatBase.FormatNumber\(Int32\)](#)

[TseRequestFormatBase.Separator](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public abstract class TseRequest : TseRequestFormatBase
```

## Constructors

**TseRequest(Int32, Int32)**

Constructor.

## Declaration

```
public TseRequest(int transactionNumber, int transactionRevision)
```

## Parameters

| TYPE         | NAME                | DESCRIPTION                              |
|--------------|---------------------|------------------------------------------|
| System.Int32 | transactionNumber   | The transaction number of the request.   |
| System.Int32 | transactionRevision | The transaction revision of the request. |

## Exceptions

| TYPE                               | CONDITION                                                                               |
|------------------------------------|-----------------------------------------------------------------------------------------|
| System.ArgumentOutOfRangeException | Thrown if <code>transactionNumber</code> or <code>transactionRevision</code> is less 0. |

## Properties

## ProcessType

The process type for this request. Possible types are "Kassenbeleg-V1", "Bestellung-V1" and "SonstigerVorgang"

Declaration

```
public abstract string ProcessType { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## TransactionNumber

The transaction number of the request.

Declaration

```
public int TransactionNumber { get; }
```

Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

## TransactionRevision

The transaction revision of the request.

Declaration

```
public int TransactionRevision { get; }
```

Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |



# Class TseRequestFormatBase

Base class for tse requests with special functions to format the data.

## Inheritance

System.Object

TseRequestFormatBase

[TseOrder.TseOrderLine](#)

[TsePayment](#)

[TseRequest](#)

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public abstract class TseRequestFormatBase
```

## Properties

### Separator

Represents the main separator for formatting the request data (ToString method).

## Declaration

```
protected abstract string Separator { get; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Methods

### FormatNumber(Int32)

Formats a number in following format.

## Declaration

```
protected string FormatNumber(int number)
```

## Parameters

| TYPE         | NAME   | DESCRIPTION                                                                        |
|--------------|--------|------------------------------------------------------------------------------------|
| System.Int32 | number | An integer representing the number to format. The number will be divided by 100 to |

## Returns

| TYPE          | DESCRIPTION                     |
|---------------|---------------------------------|
| System.String | The formatted number as string. |

# Class TseResponse

Represents the return value of the tse after signing the transaction.

## Inheritance

System.Object

TseResponse

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseResponse
```

## Constructors

TseResponse(Int32, Int32, String, String, String, Int64, Int64, Int64, String, String, String, String, String)

Constructor.

## Declaration

```
public TseResponse(int transactionNumber, int lastTransactionRevision, string processData, string processType, string signature, long signatureCounter, long timeStart, long timeEnd, string errorDescription, string tseSerial, string tseTimeFormat, string tseHashAlgorithm, string tsePublicKey, string qrCodeDataString)
```

## Parameters

| TYPE          | NAME                    | DESCRIPTION                                                                                                                                                 |
|---------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.Int32  | transactionNumber       | The transaction number of the currently signed transaction.                                                                                                 |
| System.Int32  | lastTransactionRevision | The transaction revision of the currently signed transaction.                                                                                               |
| System.String | processData             | The process data of the signed transaction. Binary value (base64 encoded utf8 string). This is the processData according to "Anwendungserlass zu §146a AO". |
| System.String | processType             | The process type of signed transaction. This is the processType according to "Anwendungserlass zu §146a AO".                                                |
| System.String | signature               | The signature of the tss for the signed transaction.                                                                                                        |

| TYPE          | NAME             | DESCRIPTION                                                                                              |
|---------------|------------------|----------------------------------------------------------------------------------------------------------|
| System.Int64  | signatureCounter | The actual signature counter of the tss after signing the transaction.                                   |
| System.Int64  | timeStart        | The start time of the transaction. A timestamp / point in time measured in seconds since the Unix epoch. |
| System.Int64  | timeEnd          | The end time of the transaction. A timestamp / point in time measured in seconds since the Unix epoch.   |
| System.String | errorDescription | The error description if the fiscalisation process failed. Empty if everything went well.                |
| System.String | tseSerial        | The serialnumber of the tss module.                                                                      |
| System.String | tseTimeFormat    | The time format which is used by the tss.                                                                |
| System.String | tseHashAlgorithm | The hash algorithm which is used by the tss.                                                             |
| System.String | tsePublicKey     | The public key of the tss.                                                                               |
| System.String | qrCodeDataString | The qrcode data string (for printing a qr code at the receipt).                                          |

## Properties

### ErrorDescription

The error description if the fiscalisation process failed. Empty if everything went well.

#### Declaration

```
public string ErrorDescription { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### LastTransactionRevision

The transaction revision of the currently signed transaction.

#### Declaration

```
public int LastTransactionRevision { get; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

#### ProcessData

The process data of the signed transaction. Binary value (base64 encoded utf8 string). This is the processData according to "Anwendungserlass zu §146a AO".

#### Declaration

```
public string ProcessData { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### ProcessType

The process type of signed transaction. This is the processType according to "Anwendungserlass zu §146a AO". May not be null.

#### Declaration

```
public string ProcessType { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### QrCodeDataString

The qrcode data string (for printing a qr code at the receipt).

#### Declaration

```
public string QrCodeDataString { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Signature

The signature of the tss for the signed transaction.

#### Declaration

```
public string Signature { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### TransactionEndTime

The end time of the transaction. A timestamp / point in time measured in seconds since the Unix epoch.

Declaration

```
public long TransactionEndTime { get; }
```

Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

### TransactionNumber

The transaction number of the currently signed transaction.

Declaration

```
public int TransactionNumber { get; }
```

Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### TransactionStartTime

The start time of the transaction. A timestamp / point in time measured in seconds since the Unix epoch.

Declaration

```
public long TransactionStartTime { get; }
```

Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

### TseHashAlgorithm

The hash algorithm which is used by the tss.

Declaration

```
public string TseHashAlgorithm { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## TsePublicKey

The public key of the tss.

Declaration

```
public string TsePublicKey { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## TseSerial

The serialnumber of the tss module.

Declaration

```
public string TseSerial { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## TseSignatureCounter

The actual signature counter of the tss after signing the transaction.

Declaration

```
public long TseSignatureCounter { get; }
```

Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int64 |             |

## TseTimeFormat

The time format which is used by the tss.

Declaration

```
public string TseTimeFormat { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Namespace

## RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit

### Classes

#### [ByteArrayConverterBase](#)

Basic class to convert data from or to a 512 byte bytearray.

#### [SwissbitCommandException](#)

Represents a swissbit command exception (Raised if command fails).

#### [SwissbitHardwareDevice](#)

Represents a local swissbit information class.

### Enums

#### [TransactionType](#)

The transaction type for sending transactions to the tse (Start, Update, Finish).



# Class ByteArrayConverterBase

Basic class to convert data from or to a 512 byte bytearray.

## Inheritance

System.Object

ByteArrayConverterBase

[TseCommandResponse](#)

[SwissbitStatus](#)

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public abstract class ByteArrayConverterBase
```

## Constructors

**ByteArrayConverterBase(Byte[])**

Constructor.

## Declaration

```
public ByteArrayConverterBase(byte[] byteArray)
```

## Parameters

| TYPE          | NAME      | DESCRIPTION                                  |
|---------------|-----------|----------------------------------------------|
| System.Byte[] | byteArray | The byte array for the conversion functions. |

## Fields

**ByteArray**

## Declaration

```
protected byte[] ByteArray
```

## Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Byte[] |             |

## Methods

**DecodeAscii(Byte[])**

Decodes the given byte array to ascii null terminated string.

#### Declaration

```
protected string DecodeAscii(byte[] buffer)
```

#### Parameters

| TYPE          | NAME   | DESCRIPTION               |
|---------------|--------|---------------------------|
| System.Byte[] | buffer | The byte array to decode. |

#### Returns

| TYPE          | DESCRIPTION                                                   |
|---------------|---------------------------------------------------------------|
| System.String | The given byte array decoded to ascii null terminated string. |

#### Exceptions

| TYPE                         | CONDITION                                               |
|------------------------------|---------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>buffer</code> is set to null. |

### DecodeAscii(Int32, Int32)

Decodes the internal byte array at offset with size to ascii string. String is null terminated.

#### Declaration

```
protected string DecodeAscii(int offset, int size)
```

#### Parameters

| TYPE         | NAME   | DESCRIPTION                            |
|--------------|--------|----------------------------------------|
| System.Int32 | offset | The offset in the byte array to start. |
| System.Int32 | size   | The size of the string.                |

#### Returns

| TYPE          | DESCRIPTION                                                                             |
|---------------|-----------------------------------------------------------------------------------------|
| System.String | The internal byte array at offset with size to ascii string. String is null terminated. |

#### Exceptions

| TYPE | CONDITION |
|------|-----------|
|------|-----------|

| TYPE                               | CONDITION                                                           |
|------------------------------------|---------------------------------------------------------------------|
| System.ArgumentOutOfRangeException | Thrown if offset is smaller 0 or greater the internal array length. |

### GetByteArrayFromNumber(UInt16, Boolean)

Converts the given value to big endian formatted byte array.

Declaration

```
public static byte[] GetByteArrayFromNumber(ushort value, bool isLittleEndian)
```

Parameters

| TYPE           | NAME           | DESCRIPTION                                                                                                |
|----------------|----------------|------------------------------------------------------------------------------------------------------------|
| System.UInt16  | value          | The value to convert.                                                                                      |
| System.Boolean | isLittleEndian | True if the exported bytes should be interpreted as little endian (default); otherwise false (big endian). |

Returns

| TYPE          | DESCRIPTION               |
|---------------|---------------------------|
| System.Byte[] | The requested byte array. |

### GetByteArrayFromNumber(UInt32, Boolean)

Converts the given value to big endian formatted byte array.

Declaration

```
public static byte[] GetByteArrayFromNumber(uint value, bool isLittleEndian)
```

Parameters

| TYPE           | NAME           | DESCRIPTION                                                                                                |
|----------------|----------------|------------------------------------------------------------------------------------------------------------|
| System.UInt32  | value          | The value to convert.                                                                                      |
| System.Boolean | isLittleEndian | True if the exported bytes should be interpreted as little endian (default); otherwise false (big endian). |

Returns

| TYPE          | DESCRIPTION               |
|---------------|---------------------------|
| System.Byte[] | The requested byte array. |

### GetByteArrayFromNumber(UInt64, Boolean)

Converts the given value to formatted byte array.

Declaration

```
public static byte[] GetByteArrayFromNumber(ulong value, bool isLittleEndian = true)
```

Parameters

| TYPE           | NAME           | DESCRIPTION                                                                                                |
|----------------|----------------|------------------------------------------------------------------------------------------------------------|
| System.UInt64  | value          | The value to convert.                                                                                      |
| System.Boolean | isLittleEndian | True if the exported bytes should be interpreted as little endian (default); otherwise false (big endian). |

Returns

| TYPE          | DESCRIPTION               |
|---------------|---------------------------|
| System.Byte[] | The requested byte array. |

### GetBytesUntilZero(Byte[])

Returns the bytes in the given array until 0 value is found. If no 0 value is found, whole array is returned.

Declaration

```
protected byte[] GetBytesUntilZero(byte[] byteArray)
```

Parameters

| TYPE          | NAME      | DESCRIPTION                                            |
|---------------|-----------|--------------------------------------------------------|
| System.Byte[] | byteArray | The byte array to shorten up if 0 values are included. |

Returns

| TYPE          | DESCRIPTION                                                                                           |
|---------------|-------------------------------------------------------------------------------------------------------|
| System.Byte[] | The bytes in the given array until 0 value is found. If no 0 value is found, whole array is returned. |

Exceptions

| TYPE                         | CONDITION                                                  |
|------------------------------|------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>byteArray</code> is set to null. |

### GetIntFromByteArray(Int32, Boolean)

Returns the uint interpretation in little endian (or big endian) of the given byte array with offset and size.

Declaration

```
protected uint GetIntFromByteArray(int offset, bool isLittleEndian = true)
```

#### Parameters

| TYPE           | NAME           | DESCRIPTION                                                                                       |
|----------------|----------------|---------------------------------------------------------------------------------------------------|
| System.Int32   | offset         | The offset in the internal <a href="#">ByteArray</a> .                                            |
| System.Boolean | isLittleEndian | True if the bytes should be interpreted as little endian (default); otherwise false (big endian). |

#### Returns

| TYPE          | DESCRIPTION                                                                            |
|---------------|----------------------------------------------------------------------------------------|
| System.UInt32 | The uint interpretation in little endian of the given byte array with offset and size. |

#### Exceptions

| TYPE                               | CONDITION                                                                                        |
|------------------------------------|--------------------------------------------------------------------------------------------------|
| System.ArgumentOutOfRangeException | Thrown if the internal byte array would be exceeded by the access (byte array is 512 bytes big). |

### GetLongFromByteArray(Int32, Boolean)

Returns the ulong interpretation in little endian (or big endian) of the given byte array with offset and size.

#### Declaration

```
protected ulong GetLongFromByteArray(int offset, bool isLittleEndian = true)
```

#### Parameters

| TYPE           | NAME           | DESCRIPTION                                                                                       |
|----------------|----------------|---------------------------------------------------------------------------------------------------|
| System.Int32   | offset         | The offset in the internal <a href="#">ByteArray</a> .                                            |
| System.Boolean | isLittleEndian | True if the bytes should be interpreted as little endian (default); otherwise false (big endian). |

#### Returns

| TYPE          | DESCRIPTION                                                                             |
|---------------|-----------------------------------------------------------------------------------------|
| System.UInt64 | The ulong interpretation in little endian of the given byte array with offset and size. |

#### Exceptions

| TYPE | CONDITION |
|------|-----------|
|------|-----------|

| TYPE                               | CONDITION                                                                                        |
|------------------------------------|--------------------------------------------------------------------------------------------------|
| System.ArgumentOutOfRangeException | Thrown if the internal byte array would be exceeded by the access (byte array is 512 bytes big). |

### GetShortFromByteArray(Int32, Boolean)

Returns the ushort interpretation in little endian (or big endian) of the given byte array with offset and size.

#### Declaration

```
protected ushort GetShortFromByteArray(int offset, bool isLittleEndian = true)
```

#### Parameters

| TYPE           | NAME           | DESCRIPTION                                                                                       |
|----------------|----------------|---------------------------------------------------------------------------------------------------|
| System.Int32   | offset         | The offset in the internal <a href="#">ByteArray</a> .                                            |
| System.Boolean | isLittleEndian | True if the bytes should be interpreted as little endian (default); otherwise false (big endian). |

#### Returns

| TYPE          | DESCRIPTION                                                                              |
|---------------|------------------------------------------------------------------------------------------|
| System.UInt16 | The ushort interpretation in little endian of the given byte array with offset and size. |

#### Exceptions

| TYPE                               | CONDITION                                                                                        |
|------------------------------------|--------------------------------------------------------------------------------------------------|
| System.ArgumentOutOfRangeException | Thrown if the internal byte array would be exceeded by the access (byte array is 512 bytes big). |

# Class SwissbitCommandException

Represents a swissbit command exception (Raised if command fails).

## Inheritance

System.Object  
System.Exception  
SwissbitCommandException

## Implements

System.Runtime.Serialization.ISerializable

## Inherited Members

System.Exception.GetBaseException()  
System.Exception.GetObjectData(System.Runtime.Serialization.SerializationInfo, System.Runtime.Serialization.StreamingContext)  
System.Exception.GetType()  
System.Exception.ToString()  
System.Exception.Data  
System.Exception.HelpLink  
System.Exception.HResult  
System.Exception.InnerException  
System.Exception.Message  
System.Exception.Source  
System.Exception.StackTrace  
System.Exception.TargetSite  
System.Exception.SerializeObjectState  
System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class SwissbitCommandException : Exception, ISerializable
```

## Constructors

**SwissbitCommandException(TseCommandStatusResponse)**

## Declaration

```
public SwissbitCommandException(TseCommandStatusResponse statusResponse)
```

## Parameters

| TYPE                                     | NAME           | DESCRIPTION |
|------------------------------------------|----------------|-------------|
| <a href="#">TseCommandStatusResponse</a> | statusResponse |             |

## Implements

System.Runtime.Serialization.ISerializable

# Class SwissbitHardwareDevice

Represents a local swissbit information class.

## Inheritance

System.Object

ByteArrayConverterBase

SwissbitStatus

SwissbitHardwareDevice

## Inherited Members

SwissbitStatus.FirmwareType

SwissbitStatus.FirmwareId

SwissbitStatus.TseCapacity

SwissbitStatus.TseCurrentSize

SwissbitStatus.TseSecurity

SwissbitStatus.TseSecurityValidTimeSet

SwissbitStatus.TseSecuritySelfTestPassed

SwissbitStatus.TseSecurityCtssInterfaceActive

SwissbitStatus.TseTsecurityExportAllowedIfCspTestFails

SwissbitStatus.TseInitializationState

SwissbitStatus.DataImportInitialized

SwissbitStatus.InitialPukChanged

SwissbitStatus.InitialAdminPinChanged

SwissbitStatus.InitialTimeAdminPinChanged

SwissbitStatus.TimeUntilNextSelftest

SwissbitStatus.StartedTransactions

SwissbitStatus.MaxStartedTransactions

SwissbitStatus.CreatedSignatures

SwissbitStatus.MaxSignatures

SwissbitStatus.RegisteredClients

SwissbitStatus.MaxRegisteredClients

SwissbitStatus.CertificateExpirationDate

SwissbitStatus.CertificateExpirationDateTimeOffset

SwissbitStatus.TseExportSize

SwissbitStatus.TseHardwareVersion

SwissbitStatus.TseSoftwareVersion

SwissbitStatus.TseFormFactor

SwissbitStatus.MaxTimeSynchronizationDelay

SwissbitStatus.MaxUpdateDelay

SwissbitStatus.LastHeaderBlockIndex

SwissbitStatus.TsePublicKeyLength

SwissbitStatus.TsePublicKey

SwissbitStatus.TsePublicKeyString

SwissbitStatus.TseSerial

SwissbitStatus.TseDescription

ByteArrayConverterBase.ByteArray

ByteArrayConverterBase.GetByteArrayFromNumber(UInt64, Boolean)

ByteArrayConverterBase.GetByteArrayFromNumber(UInt32, Boolean)

ByteArrayConverterBase.GetByteArrayFromNumber(UInt16, Boolean)

ByteArrayConverterBase.GetLongFromByteArray(Int32, Boolean)

ByteArrayConverterBase.GetIntFromByteArray(Int32, Boolean)

ByteArrayConverterBase.GetShortFromByteArray(Int32, Boolean)



[ByteArrayConverterBase.GetBytesUntilZero\(Byte\[\]\)](#)  
[ByteArrayConverterBase.DecodeAscii\(Int32, Int32\)](#)  
[ByteArrayConverterBase.DecodeAscii\(Byte\[\]\)](#)  
System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit](#)

Assembly: RetailForce.Fiscalisation.dll

#### Syntax

```
public class SwissbitHardwareDevice : SwissbitStatus
```

#### Constructors

**SwissbitHardwareDevice(String, String, Byte[])**

Constructor.

#### Declaration

```
public SwissbitHardwareDevice(string statusFilePath, string communicationFilePath, byte[] statusBytes)
```

#### Parameters

| TYPE          | NAME                  | DESCRIPTION                                              |
|---------------|-----------------------|----------------------------------------------------------|
| System.String | statusFilePath        | The path to the status file (include path and filename). |
| System.String | communicationFilePath |                                                          |
| System.Byte[] | statusBytes           |                                                          |

#### Properties

##### CommunicationFilePath

The path to the swissbit communication file (include path and filename).

#### Declaration

```
public string CommunicationFilePath { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

##### StatusFilePath

The path to the status file (include path and filename).

#### Declaration

```
public string StatusFilePath { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Methods

##### CreateInterface(ILogger)

Creates a new swiss bit device interface using the given paths.

#### Declaration

```
public SwissbitHardware CreateInterface(ILogger logger)
```

#### Parameters

| TYPE                                 | NAME   | DESCRIPTION       |
|--------------------------------------|--------|-------------------|
| Microsoft.Extensions.Logging.ILogger | logger | The logger to log |

#### Returns

| TYPE                             | DESCRIPTION |
|----------------------------------|-------------|
| <a href="#">SwissbitHardware</a> |             |

##### ToString()

#### Declaration

```
public override string ToString()
```

#### Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Overrides

[SwissbitStatus.ToString\(\)](#)

# Enum TransactionType

The transaction type for sending transactions to the tse (Start, Update, Finish).

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum TransactionType : byte
```

## Fields

| NAME              | DESCRIPTION                        |
|-------------------|------------------------------------|
| TransactionFinish | Finishes a transaction on the tse. |
| TransactionStart  | Starts a transaction on the tse.   |
| TransactionUpdate | Updates a transaction on the tse.  |

# Namespace

## RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.

### Commands

#### Classes

##### [TseCmdAbortFilteredExport](#)

Aborts a currently running filtered export.

##### [TseCmdAcknowledgeExport](#)

Acknowledge of the data export to delete the data on the tse.

##### [TseCmdBase](#)

Base class for all tse commands

##### [TseCmdChangePin](#)

Changes the PIN of the given user.

##### [TseCmdChangePuk](#)

This command can be used to change the Admin PUK.

##### [TseCmdDataImportFinalize](#)

Command to finish up transfer data to the tse.

##### [TseCmdDataImportFinalize.Response](#)

Response class for command [TseCmdDataImportFinalize](#).

##### [TseCmdDataImportInitialize](#)

Initializes a Data Import.

##### [TseCmdDataImportInitialize.Response](#)

Response class for the command [TseCmdDataImportInitialize](#).

##### [TseCmdDataImportRollback](#)

Performs a rollback of the actual data import.

##### [TseCmdDecommissionTse](#)

When the TOE should not be used anymore, it must be decommissioned with this command.

##### [TseCmdDeleteExportedData](#)

Deletes all data that has been successfully exported before.

##### [TseCmdDeregisterClient](#)

Removes a client from the list of authorized clients.

##### [TseCmdDisableCtssInterface](#)

This command can be used to disable the CTSS Interface.

##### [TseCmdDisableExportIfCspTestFails](#)

Disables export if csp test fails.

## [TseCmdEnableCtssInterface](#)

This command can be used to enable the CTSS Interface.

## [TseCmdEnableExportIfCspTestFails](#)

The TOE allows to determine the behavior of the TOE with respect to the export of data if the CSP test fails during the self test.

## [TseCmdFetchCommandResponse](#)

This command must be used if and only if the Result Code of a previously executed command is 0xFD. It will then deliver the response of the previously issued command.

## [TseCmdFirmwareUpdateApply](#)

Applies a firmware update that was previously transferred to the TOE with command TSE Firmware Update Transfer.

## [TseCmdGetLastTransactionResponse](#)

This command can be used to query the last transaction's response.

## [TseCmdGetLogMessageCertificate](#)

Returns the certificate that is associated with the signatures created by the TOE.

## [TseCmdGetLogMessageCertificate.Response](#)

Response class for command [TseCmdGetLogMessageCertificate](#).

## [TseCmdInitializeTse](#)

Command to initialize the tse.

## [TseCmdListRegisteredClients](#)

Lists all registered clients in chunks of 16 clients.

## [TseCmdListRegisteredClients.Response](#)

Response class for command list registered clients.

## [TseCmdListStartedTransactions](#)

Lists all started transaction numbers in chunks of 62 transactions.

## [TseCmdListStartedTransactions.Response](#)

Response class for command [TseCmdListStartedTransactions](#).

## [TseCmdLogin](#)

Authenticates users of the TOE based on their PIN.

## [TseCmdLogout](#)

Logs out the given user. The user must be logged in, otherwise the command will fail with [0x1202: Given user is not authenticated].

## [TseCmdPollFilteredExport](#)

After a filtered export has been initiated with Start Filtered Export, the actual data must be queried in small chunks by repeatedly calling this command.

## [TseCmdPollFilteredExport.Response](#)

The response for the command [TseCmdPollFilteredExport](#).

## [TseCmdRegisterClient](#)

Registers a client (i.e. an ERS) as a valid system for self tests and transactions.

## [TseCmdSelfTestRun](#)

Runs a self test for the tse.

## [TseCmdStartFilteredExport](#)

This command starts a filtered export of stored Log Messages by supplying a filter.

## [TseCmdTseFirmwareUpdateTransfer](#)

Transfers a firmware update package to the TOE.

## [TseCmdTseFlashInformation](#)

Provides low level information about the flash storage.

## [TseCmdTseFlashInformation.Response](#)

Response class for the command [TseCmdTseFlashInformation](#).

## [TseCmdUnblockUser](#)

Unblocks a user or change the user pin if forgotten.

## [TseCmdUpdateTime](#)

Updates the time on the tse.

## [TseCommandResponse](#)

Represents a tse command response.

## **Enums**

### [TseCommandResultCode](#)

### [TseCommandStatusResponse](#)

# Class TseCmdAbortFilteredExport

Aborts a currently running filtered export.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdAbortFilteredExport

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

[TseCmdBase.FormatCommandBytes\(\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdAbortFilteredExport : TseCmdBase
```

## Remarks

If no filtered export is in progress, the command also succeeds without errors.

## Constructors

[TseCmdAbortFilteredExport\(\)](#)

Constructor.

## Declaration

```
public TseCmdAbortFilteredExport()
```

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

## Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

## Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

## Overrides





# Class TseCmdAcknowledgeExport

Acknowledge of the data export to delete the data on the tse.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdAcknowledgeExport

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdAcknowledgeExport : TseCmdBase
```

## Remarks

After doing an unfiltered export, the host application can notify the TOE that it successfully received the exported data in order to allow execution of the Delete Exported Data command.

## Constructors

**TseCmdAcknowledgeExport(UInt64)**

Constructor.

## Declaration

```
public TseCmdAcknowledgeExport(ulong exportSize)
```

## Parameters

| TYPE          | NAME       | DESCRIPTION                                                     |
|---------------|------------|-----------------------------------------------------------------|
| System.UInt64 | exportSize | Size of successfully received export data in bytes. Big Endian. |

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

## Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

## Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

## Overrides

[TseCmdBase.PossibleErrorCodes](#)

## Methods

**FormatCommandBytes()**

## Declaration

```
protected override void FormatCommandBytes()
```

## Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

# Class TseCmdBase

Base class for all tse commands

## Inheritance

System.Object

TseCmdBase

[TseCmdAbortFilteredExport](#)

[TseCmdAcknowledgeExport](#)

[TseCmdChangePin](#)

[TseCmdChangePuk](#)

[TseCmdDataImportFinalize](#)

[TseCmdDataImportInitialize](#)

[TseCmdDataImportRollback](#)

[TseCmdDecommissionTse](#)

[TseCmdDeleteExportedData](#)

[TseCmdDeregisterClient](#)

[TseCmdDisableCtssInterface](#)

[TseCmdDisableExportIfCspTestFails](#)

[TseCmdEnableCtssInterface](#)

[TseCmdEnableExportIfCspTestFails](#)

[TseCmdFetchCommandResponse](#)

[TseCmdFirmwareUpdateApply](#)

[TseCmdGetLastTransactionResponse](#)

[TseCmdGetLogMessageCertificate](#)

[TseCmdInitializeTse](#)

[TseCmdListRegisteredClients](#)

[TseCmdListStartedTransactions](#)

[TseCmdLogin](#)

[TseCmdLogout](#)

[TseCmdPollFilteredExport](#)

[TseCmdRegisterClient](#)

[TseCmdSelfTestRun](#)

[TseCmdStartFilteredExport](#)

[TseCmdTseFirmwareUpdateTransfer](#)

[TseCmdTseFlashInformation](#)

[TseCmdUnblockUser](#)

[TseCmdUpdateTime](#)

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: [RetailForce.Fiscalisation.dll](#)

## Syntax

```
public abstract class TseCmdBase
```

## Constructors

### TseCmdBase(Int32)

Constructor.

Declaration

```
public TseCmdBase(int command)
```

Parameters

| TYPE         | NAME    | DESCRIPTION |
|--------------|---------|-------------|
| System.Int32 | command |             |

## Fields

### ByteStore

Declaration

```
protected List<byte> ByteStore
```

Field Value

| TYPE                                         | DESCRIPTION |
|----------------------------------------------|-------------|
| System.Collections.Generic.List<System.Byte> |             |

## Command

Declaration

```
protected readonly int Command
```

Field Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

## Properties

### CommandBytes

Returns the command as 512 byte formatted array.

Declaration

```
public byte[] CommandBytes { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Byte[] |             |

## PossibleErrorCodes

Returns the possible error codes for this command.

Declaration

```
public abstract TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

#### Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

#### Methods

##### FormatCommandBytes()

###### Declaration

```
protected virtual void FormatCommandBytes()
```

##### GetResponseType(Byte[])

Returns the command response for this command (with payload).

###### Declaration

```
public virtual TseCommandResponse GetResponseType(byte[] payload)
```

###### Parameters

| TYPE          | NAME    | DESCRIPTION                   |
|---------------|---------|-------------------------------|
| System.Byte[] | payload | The payload for the response. |

###### Returns

| TYPE                               | DESCRIPTION                            |
|------------------------------------|----------------------------------------|
| <a href="#">TseCommandResponse</a> | The command response for this command. |

###### Remarks

Most of the commands return [TseCommandResponse](#), certain commands have on command responses. Override this method to return the command specific command response.

# Class TseCmdChangePin

Changes the PIN of the given user.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdChangePin

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdChangePin : TseCmdBase
```

## Remarks

The user must have been logged in before with command Login User, otherwise the command will fail with [0x1202: Given user is not authenticated]. In order to change the PIN, the current PIN must be provided as well as the new PIN, which must be different from the current PIN (otherwise the command fails with [0x1007: Invalid parameter]).

The PIN has an associated retry counter. In case the provided PIN is wrong, the response SW is [0x11xx: Authentication failed, xx give the number of remaining retries] and the retry counter is decreased. If the retry counter is currently 1 and the wrong PIN is used (thus the retry counter reaches 0), the number of remaining retries will be set to 0 and the SW will be 0x1100. Afterwards, a PIN change with and without a valid PIN will return [0x1201: PIN is blocked].

If users were blocked by this command, they can be unblocked with command Unblock User.

## Constructors

TseCmdChangePin(Int32, String, String)

Constructor.

## Declaration

```
public TseCmdChangePin(int userId, string currentPin, string newPin)
```

## Parameters

| TYPE         | NAME   | DESCRIPTION                                                                               |
|--------------|--------|-------------------------------------------------------------------------------------------|
| System.Int32 | userId | The userid of the user to change the pin. 0 = unidentified user, 1 = admin, 2 = timeAdmin |

| TYPE          | NAME       | DESCRIPTION      |
|---------------|------------|------------------|
| System.String | currentPin | The current pin. |
| System.String | newPin     | The new pin.     |

#### Exceptions

| TYPE                               | CONDITION                                                                                               |
|------------------------------------|---------------------------------------------------------------------------------------------------------|
| System.ArgumentOutOfRangeException | Thrown if parameter <code>userId</code> is not one of this values: 0, 1, 2.                             |
| System.ArgumentException           | Thrown if parameter <code>currentPin</code> or parameter <code>newPin</code> are not 5 characters long. |
| System.ArgumentNullException       | Thrown if <code>currentPin</code> or parameter <code>newPin</code> are set to null or empty string.     |

#### Properties

##### PossibleErrorCodes

Returns the possible error codes for this command.

##### Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

##### Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

##### Overrides

[TseCmdBase.PossibleErrorCodes](#)

#### Methods

##### FormatCommandBytes()

##### Declaration

```
protected override void FormatCommandBytes()
```

##### Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

# Class TseCmdChangePuk

This command can be used to change the Admin PUK.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdChangePuk

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdChangePuk : TseCmdBase
```

## Remarks

The new PUK must be different from the previous PUK, otherwise the command fails with [0x1007: Invalid parameter].

The PUK has an associated retry counter. In case the provided PUK is wrong, the response SW is [0x11xx: Authentication failed, xx give the number of remaining retries] and the retry counter is decreased. If the retry counter is currently 1 and the wrong PUK is used (thus the retry counter reaches 0), the number of remaining retries will be set to 0 and the SW will be 0x1100. Afterwards, both an authentication with and without a valid PUK will return [0x1201: PUK is blocked]. As a blocked PUK can not be recovered from, it is recommended to export all data and decommission the TOE. Afterwards, a new TSE should be used.

## Constructors

TseCmdChangePuk(String, String)

## Constructor

## Declaration

```
public TseCmdChangePuk(string currentPuk, string newPuk)
```

## Parameters

| TYPE          | NAME       | DESCRIPTION      |
|---------------|------------|------------------|
| System.String | currentPuk | The current puk. |
| System.String | newPuk     | The new puk.     |



## Exceptions

| TYPE                         | CONDITION                                                                                                                       |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>currentPuk</code> or parameter <code>newPuk</code> are set to null or empty string.                   |
| System.ArgumentException     | Thrown if parameter <code>currentPuk</code> or parameter <code>newPuk</code> having a length of less or more than 6 characters. |

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

#### Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

#### Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

#### Overrides

[TseCmdBase.PossibleErrorCodes](#)

## Methods

### FormatCommandBytes()

#### Declaration

```
protected override void FormatCommandBytes()
```

#### Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

# Class TseCmdDataImportFinalize

Command to finish up transfer data to the tse.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdDataImportFinalize

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.FormatCommandBytes\(\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdDataImportFinalize : TseCmdBase
```

## Remarks

After the TSE has received Process Data Length bytes as announced during Data Import Initialize, the transaction can be finalized, which will generate a signed Log Message of the transaction. Please note that after calling this command, the data that has been sent in Section 4.5.2 will not be readable again from the same addresses, because it will be copied into a Log Message.

## Constructors

TseCmdDataImportFinalize()

Constructor.

## Declaration

```
public TseCmdDataImportFinalize()
```

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

## Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

## Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

Overrides

[TseCmdBase.PossibleErrorCodes](#)

## Methods

### GetResponseType(Byte[])

Returns the command response for this command (with payload).

Declaration

```
public override TseCommandResponse GetResponseType(byte[] payload)
```

Parameters

| TYPE          | NAME    | DESCRIPTION                   |
|---------------|---------|-------------------------------|
| System.Byte[] | payload | The payload for the response. |

Returns

| TYPE                               | DESCRIPTION                            |
|------------------------------------|----------------------------------------|
| <a href="#">TseCommandResponse</a> | The command response for this command. |

Overrides

[TseCmdBase.GetResponseType\(Byte\[\]\)](#)

Remarks

Most of the commands return [TseCommandResponse](#), certain commands have on command responses. Override this method to return the command specific command response.

# Class TseCmdDataImportFinalize.Response

Response class for command [TseCmdDataImportFinalize](#).

## Inheritance

System.Object

[ByteArrayConverterBase](#)

[TseCommandResponse](#)

TseCmdDataImportFinalize.Response

## Inherited Members

[TseCommandResponse.ResultCode](#)

[TseCommandResponse.CommandLength](#)

[TseCommandResponse.CommandResponse](#)

[TseCommandResponse.Payload](#)

[TseCommandResponse.ResponseBytes](#)

[ByteArrayConverterBase.ByteArray](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt64, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt32, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt16, Boolean\)](#)

[ByteArrayConverterBase.GetLongFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetIntFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetShortFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetBytesUntilZero\(Byte\[\]\)](#)

[ByteArrayConverterBase.DecodeAscii\(Int32, Int32\)](#)

[ByteArrayConverterBase.DecodeAscii\(Byte\[\]\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Response : TseCommandResponse
```

## Constructors

[Response\(Byte\[\]\)](#)

Constructor.

## Declaration

```
public Response(byte[] payload)
```

## Parameters

| TYPE          | NAME    | DESCRIPTION                           |
|---------------|---------|---------------------------------------|
| System.Byte[] | payload | The payload of the response in bytes. |

## Properties

### LogTime

Timestamp as seconds since Unix Epoch. The timestamp will be interpreted as an unsigned number, which means only dates after 1970 are supported. Big Endian.

#### Declaration

```
public ulong LogTime { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt64 |             |

### LogTimeDateTimeOffset

Timestamp for signature creation as System.DateTimeOffset.

#### Declaration

```
public DateTimeOffset LogTimeDateTimeOffset { get; }
```

#### Property Value

| TYPE                  | DESCRIPTION |
|-----------------------|-------------|
| System.DateTimeOffset |             |

### SerialNumber

Serial Number of the recording device. This is a hash over the public key / certificate of the Smart Card.

#### Declaration

```
public byte[] SerialNumber { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Byte[] |             |

### Signature

The signature for the import.

#### Declaration

```
public byte[] Signature { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Byte[] |             |

### SignatureCounter

The signature counter for this signature.

#### Declaration

```
public ulong SignatureCounter { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt64 |             |

#### SignatureLength

The length of the signature.

#### Declaration

```
public ulong SignatureLength { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt64 |             |

#### SignatureString

The signature as ascii string.

#### Declaration

```
public string SignatureString { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### TransactionNumber

For Transaction Start: the newly assigned transaction number. For other types: the same transaction number that was used in the Initialize step.

#### Declaration

```
public ulong TransactionNumber { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt64 |             |

# Class TseCmdDataImportInitialize

Initializes a Data Import.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdDataImportInitialize

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdDataImportInitialize : TseCmdBase
```

## Remarks

By using command 90 00, the Data Import will be performed in High-Speed mode (preferred), with command 91 00 Simple Mode will be used. The parameter Transaction Type selects whether this Data Import shall start, update, or finish a transaction. For updating or finishing a transaction, the Transaction Number of a started transaction must be provided, otherwise this value must be set to 0. If the provided Transaction Number is not in the started state, the command will fail with[0x1008: Given transaction is not started]. The provided Client ID must have been previously registered (see Section 4.2.2), otherwise the operation will be rejected. All registered clients can update or finish transactions, even transactions that have been started by another client. In case a transaction gets updated by another client as the last update (or the start of the transaction if the transaction has never been updated before), ownership of the transaction gets transferred to the new client. The actual Process Data is omitted from the command and will be supplied afterwards(see Section 4.5.2). However, its length must be provided as Process Data Length. The allowed values for Process Type will be defined by Kassensicherungsverordnung.They are not evaluated by the TOE and will be transparently copied into the generated Log Message. The response field Transaction Payload Offset gives the sector offset in the TSE Store where the Process Data must be written during phase Data Import Transfer afterwards.

## Constructors

TseCmdDataImportInitialize(TransactionType, String, UInt64, UInt64, UInt64, String, Boolean)

Constructor.

## Declaration

```
public TseCmdDataImportInitialize(TransactionType transactionType, string clientId, ulong transactionNumber,
ulong processDataLength, ulong processTypeLength, string processType, bool highspeed = true)
```

## Parameters

| TYPE                            | NAME              | DESCRIPTION                                                       |
|---------------------------------|-------------------|-------------------------------------------------------------------|
| <a href="#">TransactionType</a> | transactionType   | The type of the transaction.                                      |
| System.String                   | clientId          | The client id (register) for the transaction.                     |
| System.UInt64                   | transactionNumber | The transaction number                                            |
| System.UInt64                   | processDataLength | The length of the process data to store.                          |
| System.UInt64                   | processTypeLength | The length of the process type to store.                          |
| System.String                   | processType       | The process type of the process.                                  |
| System.Boolean                  | highspeed         | True if highspeed mode should be used (default); otherwise false. |

#### Exceptions

| TYPE                               | CONDITION                                                                                                                                                             |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.ArgumentNullException       | Thrown if parameter <code>clientId</code> or parameter <code>processType</code> are set to null or empty string.                                                      |
| System.ArgumentException           | Thrown if length of parameter exceeds 30 characters or if transaction type is <a href="#">TransactionStart</a> and parameter <code>transactionNumber</code> is not 0. |
| System.ArgumentOutOfRangeException | Thrown if <code>processType</code> is not one of the following values: "Kassenbeleg-V1", "Bestellung-V1" and "SonstigerVorgang".                                      |

#### Properties

##### PossibleErrorCodes

Returns the possible error codes for this command.

#### Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

#### Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |



Overrides

[TseCmdBase.PossibleErrorCodes](#)

## Methods

### FormatCommandBytes()

Declaration

```
protected override void FormatCommandBytes()
```

Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

### GetResponseType(Byte[])

Returns the command response for this command (with payload).

Declaration

```
public override TseCommandResponse GetResponseType(byte[] payload)
```

Parameters

| TYPE          | NAME    | DESCRIPTION                   |
|---------------|---------|-------------------------------|
| System.Byte[] | payload | The payload for the response. |

Returns

| TYPE                               | DESCRIPTION                            |
|------------------------------------|----------------------------------------|
| <a href="#">TseCommandResponse</a> | The command response for this command. |

Overrides

[TseCmdBase.GetResponseType\(Byte\[\]\)](#)

Remarks

Most of the commands return [TseCommandResponse](#), certain commands have on command responses. Override this method to return the command specific command response.

# Class TseCmdDataImportInitialize.Response

Response class for the command [TseCmdDataImportInitialize](#).

## Inheritance

System.Object

[ByteArrayConverterBase](#)

[TseCommandResponse](#)

TseCmdDataImportInitialize.Response

## Inherited Members

[TseCommandResponse.ResultCode](#)

[TseCommandResponse.CommandLength](#)

[TseCommandResponse.CommandResponse](#)

[TseCommandResponse.Payload](#)

[TseCommandResponse.ResponseBytes](#)

[ByteArrayConverterBase.ByteArray](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt64, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt32, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt16, Boolean\)](#)

[ByteArrayConverterBase.GetLongFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetIntFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetShortFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetBytesUntilZero\(Byte\[\]\)](#)

[ByteArrayConverterBase.DecodeAscii\(Int32, Int32\)](#)

[ByteArrayConverterBase.DecodeAscii\(Byte\[\]\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Response : TseCommandResponse
```

## Constructors

[Response\(Byte\[\]\)](#)

Constructor.

## Declaration

```
public Response(byte[] payload)
```

## Parameters

| TYPE          | NAME    | DESCRIPTION                           |
|---------------|---------|---------------------------------------|
| System.Byte[] | payload | The payload of the response in bytes. |

## Properties

TransactionPayloadSectorOffset

Transaction Payload-Sector Offset

### Declaration

```
public ulong TransactionPayloadSectorOffset { get; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt64 |             |

# Class TseCmdDataImportRollback

Performs a rollback of the actual data import.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdDataImportRollback

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

[TseCmdBase.FormatCommandBytes\(\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdDataImportRollback : TseCmdBase
```

## Remarks

In case there are any errors on the host while performing a Data Import (e.g. the host application crashes), host and TOE might go out of sync and the import cannot be completed successfully.

In that case, the import can be rolled back, which clears all pending data from the TSE Store and allows a new import to be started. The TOE will behave as if Data Import Initialize was never called.

Rolling back a Data Import is only possible before the Log Messages has been generated and signed during Data Import Finalize. Afterwards, the Data Import was already persisted and is thus not allowed to be rolled back. If there is no Data Import in progress while calling this command, it will still return with [0x0000: Execution successful], but have no effect.

## Constructors

TseCmdDataImportRollback()

Constructor.

## Declaration

```
public TseCmdDataImportRollback()
```

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

## Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

Overrides

[TseCmdBase.PossibleErrorCodes](#)

# Class TseCmdDecommissionTse

When the TOE should not be used anymore, it must be decommissioned with this command.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdDecommissionTse

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

[TseCmdBase.FormatCommandBytes\(\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdDecommissionTse : TseCmdBase
```

## Remarks

Successful execution of this command will permanently remove the ability to store new transactions in the TOE as the CSP can no longer perform signatures afterwards. After issuing this command, the TSEInitialized state (see Section 4.1) will be deactivated permanently and command Initialize TSE will be blocked to prevent reinitialization of the TSE.

Decommissioning is only allowed if there are no unfinished transactions, otherwise the command will fail with [0x1014: TSE contains unfinished transactions].

## Constructors

TseCmdDecommissionTse()

Constructor.

## Declaration

```
public TseCmdDecommissionTse()
```

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

## Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

## Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

Overrides

[TseCmdBase.PossibleErrorCodes](#)

# Class TseCmdDeleteExportedData

Deletes all data that has been successfully exported before.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdDeleteExportedData

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

[TseCmdBase.FormatCommandBytes\(\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdDeleteExportedData : TseCmdBase
```

## Remarks

This command requires a complete, unfiltered export and acknowledgement of the ERS (see Section 4.6.5) before data can be deleted.

No new data must have been generated since the last export in order to successfully execute this command.

Please note that after the TSE Store has been filled with more than 3gb of data, the next deletion might take up to 15 minutes, because the TSE runs an internal garbage collection to restore flash health and performance. This limitation does not apply if the deletion is performed with a TSE Store that is not filled with so much data.

## Constructors

[TseCmdDeleteExportedData\(\)](#)

Constructor.

## Declaration

```
public TseCmdDeleteExportedData()
```

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

## Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```



Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

Overrides

[TseCmdBase.PossibleErrorCodes](#)

# Class TseCmdDeregisterClient

Removes a client from the list of authorized clients.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdDeregisterClient

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdDeregisterClient : TseCmdBase
```

## Remarks

In case the client is not registered, this command will fail with [0x1011: Client not registered]. Before a client can be deregistered, all transactions belonging to that client must be finished first, otherwise the command will fail with [0x1013: Client has unfinished transactions].

An unfinished transaction always belongs to the client that updated it most recently (or started the transaction in case it was never updated at all). Please be aware that for passing the self test (see Section 4.2.1) at least one client must be registered.

## Constructors

TseCmdDeregisterClient(String)

Constructor.

## Declaration

```
public TseCmdDeregisterClient(string clientId)
```

## Parameters

| TYPE          | NAME     | DESCRIPTION                                                                   |
|---------------|----------|-------------------------------------------------------------------------------|
| System.String | clientId | ASCII string representing the unique serial number of the client to register. |

## Exceptions

| TYPE                         | CONDITION                                                                 |
|------------------------------|---------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>clientId</code> is set to null or empty string. |
| System.ArgumentException     | Thrown if parameter <code>clientId</code> is longer than 30 characters.   |

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

#### Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

#### Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

#### Overrides

[TseCmdBase.PossibleErrorCodes](#)

## Methods

### FormatCommandBytes()

#### Declaration

```
protected override void FormatCommandBytes()
```

#### Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

# Class TseCmdDisableCtssInterface

This command can be used to disable the CTSS Interface.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdDisableCtssInterface

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

[TseCmdBase.FormatCommandBytes\(\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdDisableCtssInterface : TseCmdBase
```

## Remarks

An enabled CTSS interface is a pre-requisite for many other commands that are described in this specification. The current status of the CTSS interface can be obtained by reading bit 2 from the TSE Security value from TSE Status.

After disabling the interface, commands that require the CTSSInterfaceState to be active can not be executed anymore. Thus, when sending the TSE to maintenance, it is recommended to disable the CTSS interface in order to prevent reading the recorded transactions.

The setting that is changed by this command is persisted across power cycles.

## Constructors

[TseCmdDisableCtssInterface\(\)](#)

Constructor.

## Declaration

```
public TseCmdDisableCtssInterface()
```

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

## Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

Overrides

[TseCmdBase.PossibleErrorCodes](#)

# Class TseCmdDisableExportIfCspTestFails

Disables export if csp test fails.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdDisableExportIfCspTestFails

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

[TseCmdBase.FormatCommandBytes\(\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdDisableExportIfCspTestFails : TseCmdBase
```

## Remarks

The TOE allows to determine the behavior of the TOE with respect to the export of data if the CSP test fails during the self test.

To disable the functionality of export and prevent any data from being exported if the CSP test fails, use this command. Please note that in case of a broken CSP, the data on the TOE is then lost and can not be recovered. This is the factory default behavior.

This setting can only be changed while the CSP test is still passing. As soon as the test fails, it is too late to change this setting and this command will fail. This setting is persisted across power cycles.

## Constructors

[TseCmdDisableExportIfCspTestFails\(\)](#)

Constructor.

## Declaration

```
public TseCmdDisableExportIfCspTestFails()
```

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

## Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

## Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

Overrides

[TseCmdBase.PossibleErrorCodes](#)

# Class TseCmdEnableCtssInterface

This command can be used to enable the CTSS Interface.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdEnableCtssInterface

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

[TseCmdBase.FormatCommandBytes\(\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdEnableCtssInterface : TseCmdBase
```

## Remarks

An enabled CTSS interface is a pre-requisite for many other commands that are described in this specification. The current status of the CTSS interface can be obtained by reading bit 2 from the TSE Security value from TSE Status.

## Constructors

[TseCmdEnableCtssInterface\(\)](#)

Constructor.

## Declaration

```
public TseCmdEnableCtssInterface()
```

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

## Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

## Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |



Overrides

[TseCmdBase.PossibleErrorCodes](#)

# Class TseCmdEnableExportIfCspTestFails

The TOE allows to determine the behavior of the TOE with respect to the export of data if the CSP test fails during the self test.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdEnableExportIfCspTestFails

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

[TseCmdBase.FormatCommandBytes\(\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdEnableExportIfCspTestFails : TseCmdBase
```

## Remarks

By default, no data can be exported anymore if the CSP test fails due to a broken security module. To allow data to be exportable if the CSP test fails, this command can be used. Please note that this command will only allow to do a complete export (see Section 3.3) of the tar archive; the export commands given in Section 4.6 will still be disabled. Also, all commands of the TOE that require a successful self test for their execution will still be inaccessible. This command can only be used while the CSP self test is still passing. As soon as the test fails, it is too late to change this setting and this command will fail.

This setting is persisted across power cycles.

## Constructors

**TseCmdEnableExportIfCspTestFails()**

Constructor.

## Declaration

```
public TseCmdEnableExportIfCspTestFails()
```

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

## Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

## Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

Overrides

[TseCmdBase.PossibleErrorCodes](#)

# Class TseCmdFetchCommandResponse

This command must be used if and only if the Result Code of a previously executed command is 0xFD. It will then deliver the response of the previously issued command.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdFetchCommandResponse

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

[TseCmdBase.FormatCommandBytes\(\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdFetchCommandResponse : TseCmdBase
```

## Remarks

No further commands will be accepted by the TOE if the last command's Result Code was 0xFD until Fetch Command Response is issued. In that case, any other command will simply be ignored, which can be detected as the Write Index in the command response is not increased then.

## Constructors

TseCmdFetchCommandResponse()

## Constructor

## Declaration

```
public TseCmdFetchCommandResponse()
```

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

## Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

## Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

Overrides

[TseCmdBase.PossibleErrorCodes](#)

# Class TseCmdFirmwareUpdateApply

Applies a firmware update that was previously transferred to the TOE with command TSE Firmware Update Transfer.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdFirmwareUpdateApply

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdFirmwareUpdateApply : TseCmdBase
```

## Remarks

The firmware will be checked by the CSP for authenticity and integrity before being applied. Please note that this is a long running operation, which – depending on the size of the firmware update – might take several minutes to complete. It must be ensured that there is no power loss while applying the firmware update, as this might brick the device and make it unusable. Therefore it is recommended to export all data before applying a firmware update. However, only the last seconds of the firmware update process are critical and must not be interrupted, losing power anywhere prior does not affect the TOE at all.

In case the firmware update succeeds, the TSE automatically performs a power cycle. In that case the Write Index in the response will be set to 0. Since this situation can not be distinguished from a power cycle that happened randomly during the update process, the ERS should read the currently installed TSE Software Version (see Section 3.2) before applying the update and read it again after the update has been completed. If the new value is numerical bigger than the old value, the update was successfully applied.

If the Firmware Update Package Size is 0 or not a multiple of 512, this command will fail with [0x1007: Invalid parameter]. If the decrypted firmware package can not be parsed, this command will fail with [0x1064: Firmware Update: Wrong format]. If the firmware package to be installed does not have a higher version number as the one currently installed, this command will fail with [0x1067: Firmware Update: downgrade prohibited] to prevent downgrading the TOE to an earlier version.

## Constructors

**TseCmdFirmwareUpdateApply(UInt32)**

Constructor.

## Declaration

```
public TseCmdFirmwareUpdateApply(uint firmwareUpdatePackageSize)
```

## Parameters

| TYPE          | NAME                      | DESCRIPTION                                                                                                 |
|---------------|---------------------------|-------------------------------------------------------------------------------------------------------------|
| System.UInt32 | firmwareUpdatePackageSize | Total size of the firmware package that has been transferred with TSE Firmware Update Transfer. Big Endian. |

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

#### Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

#### Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

#### Overrides

[TseCmdBase.PossibleErrorCodes](#)

## Methods

### FormatCommandBytes()

#### Declaration

```
protected override void FormatCommandBytes()
```

#### Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

# Class TseCmdGetLastTransactionResponse

This command can be used to query the last transaction's response.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdGetLastTransactionResponse

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdGetLastTransactionResponse : TseCmdBase
```

## Remarks

Optionally, instead of returning the newest transaction response, the last transaction response that was created by a specific client can be queried by providing a non zero-length Client ID to filter for.

This command is useful in case the ERS loses track of the last transaction result(e.g.because it crashes or loses power). In that case, the ERS might not know if the last executed transaction was properly finalized or not and can query the last transaction's response with this command to sync its internal state with the TOE state.

## Constructors

[TseCmdGetLastTransactionResponse\(String\)](#)

Constructor.

## Declaration

```
public TseCmdGetLastTransactionResponse(string clientId)
```

## Parameters

| TYPE          | NAME     | DESCRIPTION                                                                   |
|---------------|----------|-------------------------------------------------------------------------------|
| System.String | clientId | ASCII string representing the unique serial number of the client to register. |

## Exceptions



| TYPE                         | CONDITION                                                                 |
|------------------------------|---------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>clientId</code> is set to null or empty string. |
| System.ArgumentException     | Thrown if parameter <code>clientId</code> is longer than 30 characters.   |

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

#### Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

#### Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

#### Overrides

[TseCmdBase.PossibleErrorCodes](#)

## Methods

### FormatCommandBytes()

#### Declaration

```
protected override void FormatCommandBytes()
```

#### Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

# Class TseCmdGetLogMessageCertificate

Returns the certificate that is associated with the signatures created by the TOE.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdGetLogMessageCertificate

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdGetLogMessageCertificate : TseCmdBase
```

## Remarks

This certificate can be used to verify the signatures of all Log Messages created by the TOE.

The returned data is a single PEM file, which contains the complete certificate chain.

To verify a signature, only the leaf certificate(the first one in the PEM file) is required.However, in order to ensure that the certificate whose key has been used stems from the correct PKI, the certificate chain shall be verified back to the root of the PKI.Please refer to [AGD] for more details on how the root key of the PKI can be obtained. Since the whole data might not fit into one response block, a Data Offset must be provided to select which parts of the certificate file should be returned.In case this number is equal to or bigger than the stored certificate file, the command will fail with[0x1007: Invalid parameter].

## Constructors

TseCmdGetLogMessageCertificate(UInt32)

Constructor.

## Declaration

```
public TseCmdGetLogMessageCertificate(uint dataOffset)
```

## Parameters

| TYPE          | NAME       | DESCRIPTION                                                        |
|---------------|------------|--------------------------------------------------------------------|
| System.UInt32 | dataOffset | Selects from which offset the certificate data should be returned. |

## Properties

## PossibleErrorCodes

Returns the possible error codes for this command.

Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

Overrides

[TseCmdBase.PossibleErrorCodes](#)

Methods

FormatCommandBytes()

Declaration

```
protected override void FormatCommandBytes()
```

Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

GetResponseType(Byte[])

Returns the command response for this command (with payload).

Declaration

```
public override TseCommandResponse GetResponseType(byte[] payload)
```

Parameters

| TYPE          | NAME    | DESCRIPTION                   |
|---------------|---------|-------------------------------|
| System.Byte[] | payload | The payload for the response. |

Returns

| TYPE                               | DESCRIPTION                            |
|------------------------------------|----------------------------------------|
| <a href="#">TseCommandResponse</a> | The command response for this command. |

Overrides

[TseCmdBase.GetResponseType\(Byte\[\]\)](#)

Remarks

Most of the commands return [TseCommandResponse](#), certain commands have on command responses. Override this method to return the command specific command response.

# Class TseCmdGetLogMessageCertificate.Response

Response class for command [TseCmdGetLogMessageCertificate](#).

## Inheritance

System.Object

[ByteArrayConverterBase](#)

[TseCommandResponse](#)

TseCmdGetLogMessageCertificate.Response

## Inherited Members

[TseCommandResponse.ResultCode](#)

[TseCommandResponse.CommandLength](#)

[TseCommandResponse.CommandResponse](#)

[TseCommandResponse.Payload](#)

[TseCommandResponse.ResponseBytes](#)

[ByteArrayConverterBase.ByteArray](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt64, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt32, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt16, Boolean\)](#)

[ByteArrayConverterBase.GetLongFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetIntFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetShortFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetBytesUntilZero\(Byte\[\]\)](#)

[ByteArrayConverterBase.DecodeAscii\(Int32, Int32\)](#)

[ByteArrayConverterBase.DecodeAscii\(Byte\[\]\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Response : TseCommandResponse
```

## Constructors

[Response\(Byte\[\]\)](#)

Constructor.

## Declaration

```
public Response(byte[] payload)
```

## Parameters

| TYPE          | NAME    | DESCRIPTION                           |
|---------------|---------|---------------------------------------|
| System.Byte[] | payload | The payload of the response in bytes. |

## Properties

### CertificateData

Returns the certificate data.

#### Declaration

```
public byte[] CertificateData { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Byte[] |             |

### CertificateDataLength

Length of the certificate data in this response block.

#### Declaration

```
public ushort CertificateDataLength { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt16 |             |

# Class TseCmdInitializeTse

Command to initialize the tse.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdInitializeTse

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

[TseCmdBase.FormatCommandBytes\(\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdInitializeTse : TseCmdBase
```

## Remarks

By initializing the TOE, the user takes ownership of the TOE and activates the TSEInitialized state (see Section 4.1), which allows commands that need this state to be active to be executed.

## Constructors

[TseCmdInitializeTse\(\)](#)

Constructor.

## Declaration

```
public TseCmdInitializeTse()
```

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

## Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

## Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

Overrides

[TseCmdBase.PossibleErrorCodes](#)

# Class TseCmdListRegisteredClients

Lists all registered clients in chunks of 16 clients.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdListRegisteredClients

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdListRegisteredClients : TseCmdBase
```

## Remarks

By providing a non-zero value for Client Offset, this amount of clients can be skipped from the beginning of the returned list. For example, a value of 0 will return the first 16 registered clients and a value of 3 will return the 4th to 19th registered clients.

The Amount field in the response gives the amount of client IDs that are stored in the response. If this is smaller than 16, then there are no further clients registered.

## Constructors

TseCmdListRegisteredClients(Int32)

Constructor.

## Declaration

```
public TseCmdListRegisteredClients(int clientOffset)
```

## Parameters

| TYPE         | NAME         | DESCRIPTION                                       |
|--------------|--------------|---------------------------------------------------|
| System.Int32 | clientOffset | The offset from where the clients should be read. |

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

## Declaration



```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

#### Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

#### Overrides

[TseCmdBase.PossibleErrorCodes](#)

#### Methods

##### FormatCommandBytes()

#### Declaration

```
protected override void FormatCommandBytes()
```

#### Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

##### GetResponseType(Byte[])

Returns the command response for this command (with payload).

#### Declaration

```
public override TseCommandResponse GetResponseType(byte[] payload)
```

#### Parameters

| TYPE          | NAME    | DESCRIPTION                   |
|---------------|---------|-------------------------------|
| System.Byte[] | payload | The payload for the response. |

#### Returns

| TYPE                               | DESCRIPTION                            |
|------------------------------------|----------------------------------------|
| <a href="#">TseCommandResponse</a> | The command response for this command. |

#### Overrides

[TseCmdBase.GetResponseType\(Byte\[\]\)](#)

#### Remarks

Most of the commands return [TseCommandResponse](#), certain commands have on command responses. Override this method to return the command specific command response.

# Class TseCmdListRegisteredClients.Response

Response class for command list registered clients.

## Inheritance

System.Object

[ByteArrayConverterBase](#)

[TseCommandResponse](#)

TseCmdListRegisteredClients.Response

## Inherited Members

[TseCommandResponse.ResultCode](#)

[TseCommandResponse.CommandLength](#)

[TseCommandResponse.CommandResponse](#)

[TseCommandResponse.Payload](#)

[TseCommandResponse.ResponseBytes](#)

[ByteArrayConverterBase.ByteArray](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt64, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt32, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt16, Boolean\)](#)

[ByteArrayConverterBase.GetLongFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetIntFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetShortFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetBytesUntilZero\(Byte\[\]\)](#)

[ByteArrayConverterBase.DecodeAscii\(Int32, Int32\)](#)

[ByteArrayConverterBase.DecodeAscii\(Byte\[\]\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Response : TseCommandResponse
```

## Constructors

[Response\(Byte\[\]\)](#)

Constructor.

## Declaration

```
public Response(byte[] payload)
```

## Parameters

| TYPE          | NAME    | DESCRIPTION                           |
|---------------|---------|---------------------------------------|
| System.Byte[] | payload | The payload of the response in bytes. |

## Properties

### ClientCount

Returns the count of returned clients with this command.

#### Declaration

```
public int ClientCount { get; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### Clients

Returns the client as maximum 30 characters strings in a list.

#### Declaration

```
public List<string> Clients { get; }
```

#### Property Value

| TYPE                                           | DESCRIPTION |
|------------------------------------------------|-------------|
| System.Collections.Generic.List<System.String> |             |

# Class TseCmdListStartedTransactions

Lists all started transaction numbers in chunks of 62 transactions.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdListStartedTransactions

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdListStartedTransactions : TseCmdBase
```

## Remarks

By providing a non-zero value for Transaction Offset, this amount of transaction numbers can be skipped from the beginning of the returned list. For example, a value of 0 will return the first 62 started transaction numbers and a value of 3 will return the 4th to 65th transaction numbers.

The Amount field in the response gives the amount of transaction numbers that are stored in the response. If this is smaller than 62, then there are no further started transactions.

Optionally, only transactions belonging to a specific client can be queried by providing a non zero-length Client ID to filter for. An unfinished transaction always belongs to the client that updated it most recently (or started the transaction in case it was never updated at all). That means that if a transaction is started by client A and then updated by client B, this command will return this specific transaction number only when filtering for transactions belonging to client B (or when not filtering at all), not when filtering for transactions belonging to client A, because client B was the last client that updated the transaction.

## Constructors

TseCmdListStartedTransactions(UInt32, String)

Constructor.

## Declaration

```
public TseCmdListStartedTransactions(uint skipTransactionOffset, string clientId)
```

## Parameters

| TYPE          | NAME                  | DESCRIPTION |
|---------------|-----------------------|-------------|
| System.UInt32 | skipTransactionOffset |             |
|               |                       |             |

| TYPE          | NAME     | DESCRIPTION                                                                   |
|---------------|----------|-------------------------------------------------------------------------------|
| System.String | clientId | ASCII string representing the unique serial number of the client to register. |

#### Exceptions

| TYPE                         | CONDITION                                                                 |
|------------------------------|---------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>clientId</code> is set to null or empty string. |
| System.ArgumentException     | Thrown if parameter <code>clientId</code> is longer than 30 characters.   |

#### Properties

##### PossibleErrorCodes

Returns the possible error codes for this command.

##### Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

##### Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

##### Overrides

[TseCmdBase.PossibleErrorCodes](#)

#### Methods

##### FormatCommandBytes()

##### Declaration

```
protected override void FormatCommandBytes()
```

##### Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

##### GetResponseType(Byte[])

Returns the command response for this command (with payload).

##### Declaration

```
public override TseCommandResponse GetResponseType(byte[] payload)
```

##### Parameters

| TYPE          | NAME    | DESCRIPTION                   |
|---------------|---------|-------------------------------|
| System.Byte[] | payload | The payload for the response. |

#### Returns

| TYPE                               | DESCRIPTION                            |
|------------------------------------|----------------------------------------|
| <a href="#">TseCommandResponse</a> | The command response for this command. |

#### Overrides

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

#### Remarks

Most of the commands return [TseCommandResponse](#), certain commands have on command responses. Override this method to return the command specific command response.

# Class TseCmdListStartedTransactions.Response

Response class for command [TseCmdListStartedTransactions](#).

## Inheritance

System.Object

[ByteArrayConverterBase](#)

[TseCommandResponse](#)

TseCmdListStartedTransactions.Response

## Inherited Members

[TseCommandResponse.ResultCode](#)

[TseCommandResponse.CommandLength](#)

[TseCommandResponse.CommandResponse](#)

[TseCommandResponse.Payload](#)

[TseCommandResponse.ResponseBytes](#)

[ByteArrayConverterBase.ByteArray](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt64, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt32, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt16, Boolean\)](#)

[ByteArrayConverterBase.GetLongFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetIntFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetShortFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetBytesUntilZero\(Byte\[\]\)](#)

[ByteArrayConverterBase.DecodeAscii\(Int32, Int32\)](#)

[ByteArrayConverterBase.DecodeAscii\(Byte\[\]\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Response : TseCommandResponse
```

## Constructors

[Response\(Byte\[\]\)](#)

Constructor.

## Declaration

```
public Response(byte[] payload)
```

## Parameters

| TYPE          | NAME    | DESCRIPTION                           |
|---------------|---------|---------------------------------------|
| System.Byte[] | payload | The payload of the response in bytes. |

## Properties

### Count

Returns the number of started transactions in the response. Maximum is 61.

#### Declaration

```
public int Count { get; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### TransactionList

Returns the list of open transactions.

#### Declaration

```
public List<ulong> TransactionList { get; }
```

#### Property Value

| TYPE                                           | DESCRIPTION |
|------------------------------------------------|-------------|
| System.Collections.Generic.List<System.UInt64> |             |



# Class TseCmdLogin

Authenticates users of the TOE based on their PIN.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdLogin

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdLogin : TseCmdBase
```

## Remarks

After successful execution of this command by a user, the corresponding role will be added to the set of active roles, which might allow to execute privileged commands. For example: if the command is called with the Admin's User ID and is successfully executed, the user will be allowed to execute commands that require the Admin role afterwards. These changes to the role context are applied immediately after the command returns. If the command fails, the roles that are associated with the current user context do not change. In this case, the command returns [0x11xx: Authentication failed, xx give the number of remaining retries].

The current user context can be associated with multiple roles at the same time. If multiple users with different roles are logged in, the effective privileges are the union of all logged in roles (e.g. if Admin and TimeAdmin are logged in, the time can be set and administrative commands can be sent).

After a reboot of the TOE, all users are logged out again.

In case the provided PIN is wrong, the command will respond with [0x11xx: Authentication failed, xx give the number of remaining retries] and the retry counter is decreased. If the retry counter is currently 1 and the wrong PIN is used (thus the retry counter reaches 0), the number of remaining retries will be set to 0 and the SW will be 0x1100. Afterwards, both an authentication with and without a valid PIN will return [0x1201: PIN is blocked]. In order to login the user again, the user must be unblocked with command Unblock User. This command causes a Log Message to be signed and thus can only be executed if the CSP is still operational.

## Constructors

TseCmdLogin(Int32, String)

Constructor.

## Declaration

```
public TseCmdLogin(int userId, string pin)
```

## Parameters

| TYPE          | NAME   | DESCRIPTION                                                                                                    |
|---------------|--------|----------------------------------------------------------------------------------------------------------------|
| System.Int32  | userId | The userid of the user to login. Must be one of this values: 0, 1, 2. (0 = normal, 1 = admin, 2 = time admin). |
| System.String | pin    | The pin of the user for logon.                                                                                 |

## Exceptions

| TYPE                               | CONDITION                                                                   |
|------------------------------------|-----------------------------------------------------------------------------|
| System.ArgumentOutOfRangeException | Thrown if parameter <code>userId</code> is not one of this values: 0, 1, 2. |
| System.ArgumentException           | Thrown if parameter <code>pin</code> is not 5 characters long.              |

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

#### Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

#### Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

#### Overrides

[TseCmdBase.PossibleErrorCodes](#)

## Methods

### FormatCommandBytes()

#### Declaration

```
protected override void FormatCommandBytes()
```

#### Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

# Class TseCmdLogout

Logs out the given user. The user must be logged in, otherwise the command will fail with [0x1202: Given user is not authenticated].

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdLogout

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdLogout : TseCmdBase
```

## Remarks

On successful execution, the user's role will be immediately removed from the active roles and privileged commands might not be executable anymore. Please refer to Login User for more details about the relationship between users and their roles.

This command causes a Log Message to be signed and thus can only be executed if the CSP is still operational.

## Constructors

**TseCmdLogout(Int32)**

Constructor.

## Declaration

```
public TseCmdLogout(int userId)
```

## Parameters

| TYPE         | NAME   | DESCRIPTION            |
|--------------|--------|------------------------|
| System.Int32 | userId | The userid for logout. |

## Exceptions

| TYPE | CONDITION |
|------|-----------|
|------|-----------|

| TYPE                               | CONDITION                                                                   |
|------------------------------------|-----------------------------------------------------------------------------|
| System.ArgumentOutOfRangeException | Thrown if parameter <code>userId</code> is not one of this values: 0, 1, 2. |

## Fields

### `_userId`

Declaration

```
protected readonly int _userId
```

Field Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

## Properties

### `PossibleErrorCodes`

Returns the possible error codes for this command.

Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

Overrides

[TseCmdBase.PossibleErrorCodes](#)

## Methods

### `FormatCommandBytes()`

Declaration

```
protected override void FormatCommandBytes()
```

Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

# Class TseCmdPollFilteredExport

After a filtered export has been initiated with Start Filtered Export, the actual data must be queried in small chunks by repeatedly calling this command.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdPollFilteredExport

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.FormatCommandBytes\(\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdPollFilteredExport : TseCmdBase
```

## Remarks

The returned data must be concatenated to form the final TAR archive.

The export is complete if this command returns a zero length chunk.

A filtered export is a very time consuming operation. The TSE will collect the data that matches the filter in the background and waits for the ERS to collect them. If the TOE did not find new matching data since the last call, the command will fail with [0x2002: Filtered Export: no new data, keep polling]. In that case, the ERS should repeat the command after a short delay to give the TOE some time to search for new data.

A filtered export either completely finishes by returning a zero length chunk, fails because of an error, or must be aborted with Abort Filtered Export. If the TSE loses power during a filtered export, the export will be aborted automatically and must be restarted from scratch.

If no data could be found that matches the supplied filter, this command will fail with [0x2003: Filtered Export: no matching entries, export would be empty].

## Constructors

TseCmdPollFilteredExport()

Constructor.

## Declaration

```
public TseCmdPollFilteredExport()
```

## Properties

## PossibleErrorCodes

Returns the possible error codes for this command.

Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

Overrides

[TseCmdBase.PossibleErrorCodes](#)

## Methods

### GetResponseType(Byte[])

Returns the command response for this command (with payload).

Declaration

```
public override TseCommandResponse GetResponseType(byte[] payload)
```

Parameters

| TYPE          | NAME    | DESCRIPTION                   |
|---------------|---------|-------------------------------|
| System.Byte[] | payload | The payload for the response. |

Returns

| TYPE                               | DESCRIPTION                            |
|------------------------------------|----------------------------------------|
| <a href="#">TseCommandResponse</a> | The command response for this command. |

Overrides

[TseCmdBase.GetResponseType\(Byte\[\]\)](#)

Remarks

Most of the commands return [TseCommandResponse](#), certain commands have on command responses. Override this method to return the command specific command response.

# Class TseCmdPollFilteredExport.Response

The response for the command [TseCmdPollFilteredExport](#).

## Inheritance

System.Object

[ByteArrayConverterBase](#)

[TseCommandResponse](#)

TseCmdPollFilteredExport.Response

## Inherited Members

[TseCommandResponse.ResultCode](#)

[TseCommandResponse.CommandLength](#)

[TseCommandResponse.CommandResponse](#)

[TseCommandResponse.Payload](#)

[TseCommandResponse.ResponseBytes](#)

[ByteArrayConverterBase.ByteArray](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt64, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt32, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt16, Boolean\)](#)

[ByteArrayConverterBase.GetLongFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetIntFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetShortFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetBytesUntilZero\(Byte\[\]\)](#)

[ByteArrayConverterBase.DecodeAscii\(Int32, Int32\)](#)

[ByteArrayConverterBase.DecodeAscii\(Byte\[\]\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Response : TseCommandResponse
```

## Constructors

[Response\(Byte\[\]\)](#)

Constructor.

## Declaration

```
public Response(byte[] payload)
```

## Parameters

| TYPE          | NAME    | DESCRIPTION                           |
|---------------|---------|---------------------------------------|
| System.Byte[] | payload | The payload of the response in bytes. |

## Properties

### ExportData

Export data.

Declaration

```
public byte[] ExportData { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Byte[] |             |

### ExportDataLength

Length of the exported data in this response block. If this is 0, the end of the exported data has been reached and the export is complete. Big Endian.

Declaration

```
public ushort ExportDataLength { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt16 |             |



# Class TseCmdRegisterClient

Registers a client (i.e. an ERS) as a valid system for self tests and transactions.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdRegisterClient

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdRegisterClient : TseCmdBase
```

## Remarks

A client is identified by its ID, which shall be a unique string (e.g.its serial number). If the same client is already registered, the command will be successful, but the client will not be registered twice.

The amount of currently and maximally registered clients can be obtained from TSE Status.If this number has been reached and the command is executed again, it will fail with [0x1010: Maximum registered clients reached].

## Constructors

[TseCmdRegisterClient\(String\)](#)

Constructor.

## Declaration

```
public TseCmdRegisterClient(string clientId)
```

## Parameters

| TYPE          | NAME     | DESCRIPTION                                                                   |
|---------------|----------|-------------------------------------------------------------------------------|
| System.String | clientId | ASCII string representing the unique serial number of the client to register. |

## Exceptions

| TYPE | CONDITION |
|------|-----------|
|------|-----------|

| TYPE                         | CONDITION                                                                 |
|------------------------------|---------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>clientId</code> is set to null or empty string. |
| System.ArgumentException     | Thrown if parameter <code>clientId</code> is longer than 30 characters.   |

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

Overrides

[TseCmdBase.PossibleErrorCodes](#)

## Methods

### FormatCommandBytes()

Declaration

```
protected override void FormatCommandBytes()
```

Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

# Class TseCmdSelfTestRun

Runs a self test for the tse.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdSelfTestRun

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdSelfTestRun : TseCmdBase
```

## Remarks

After each power cycle, the TOE runs a self test to ensure proper operation of its internal modules. The self test consists of three parts:

1. Test of the TOE itself (e.g. data consistency). This part of the self test includes a health test of the random number generator. If this test fails, the command fails with [0x1300: Self test of FW failed] or with [0x1320: Self test of RNG failed] in the case that the source of the error is the RNG.
2. Test of the CSP. If this test fails, the command fails with [0x1310: Self test of CSP failed].
3. Test of the ERS. If this test fails, the command fails with [0x1011: Client not registered].

Since the self test depends on the Client ID provided by the ERS, the self test can only be completed successfully by issuing this command and thus must be run as first command after the TOE boots, otherwise no other command can be executed. The client must have been registered before with command Register Client, otherwise this command will fail with [0x1011: Client not registered].

The self test can be repeated whenever it is desired by the ERS, but it must be run at least once every 25 hours. Otherwise, the TOE will set the state selfTestRun to inactive, which makes all future commands fail until the self test is run successfully again. The time until the selfTestRun state will be made inactive can be retrieved as Time Until Next Selftest from TSE Status.

The self test is a potentially long running operation that might take up to 60 seconds to complete.

Please note that the CSP gets power cycled during the self test and thus the internal time will be set back to zero and must be set again after a successful self test.

## Constructors

TseCmdSelfTestRun(String)

Constructor.

## Declaration

```
public TseCmdSelfTestRun(string clientId)
```

## Parameters

| TYPE          | NAME     | DESCRIPTION                                                                                 |
|---------------|----------|---------------------------------------------------------------------------------------------|
| System.String | clientId | ASCII string representing the unique serial number of the client. Maximum of 30 characters. |

## Exceptions

| TYPE                         | CONDITION                                                                 |
|------------------------------|---------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>clientId</code> is set to null or empty string. |
| System.ArgumentException     | Thrown if parameter <code>clientId</code> is longer than 30 characters.   |

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

## Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

## Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

## Overrides

[TseCmdBase.PossibleErrorCodes](#)

## Methods

### FormatCommandBytes()

## Declaration

```
protected override void FormatCommandBytes()
```

## Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

# Class TseCmdStartFilteredExport

This command starts a filtered export of stored Log Messages by supplying a filter.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdStartFilteredExport

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdStartFilteredExport : TseCmdBase
```

## Remarks

The Log Messages are collected in the background and can be fetched by repeatedly calling Poll Filtered Export.

The exported Log Messages can be filtered based on their timestamp, transaction number, and the client that created the transaction. Filter criteria can be combined as defined in [BSI - TR - 03153]. It is possible to filter based on • Transaction Number and Client-ID • StartTransactionNumber to EndTransactionNumber and Client-ID • TimeStampStart to TimeStampEnd and Client-ID

All System and Audit Log Messages that were created between the first included Log Message belonging to a transaction start and the last included Log Message belonging to a transaction finish, will also be included in the exported data.

If the supplied filter is inconsistent, i.e. Timestamp End is lower than Timestamp Start or Transaction Number End is lower than Transaction Number Start, this command will fail with [0x1007: Invalid parameter].

## Constructors

TseCmdStartFilteredExport(UInt64, UInt64, UInt64, UInt64, String)

Constructor.

## Declaration

```
public TseCmdStartFilteredExport(ulong timestampStart, ulong timestampEnd, ulong transactionNumberStart, ulong transactionNumberNumberEnd, string clientId)
```

## Parameters

| TYPE | NAME | DESCRIPTION |
|------|------|-------------|
|      |      |             |

| TYPE          | NAME                       | DESCRIPTION                                                                                                                                                                                                                             |
|---------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System.UInt64 | timestampStart             | Timestamp as seconds since Unix Epoch. The timestamp will be interpreted as an unsigned number, which means only dates after 1970 are supported. If 0, it will be treated as the beginning of time. Big Endian.                         |
| System.UInt64 | timestampEnd               | Timestamp as seconds since Unix Epoch. The timestamp will be interpreted as an unsigned number, which means only dates after 1970 are supported. If 0xFFFFFFFFFFFFFFFF, it will be treated as infinity. Big Endian.                     |
| System.UInt64 | transactionNumberStart     | Start transaction number (inclusive). Big Endian.                                                                                                                                                                                       |
| System.UInt64 | transactionNumberNumberEnd | End transaction number (inclusive). If 0xFFFFFFFFFFFFFFFF, all transactions will be returned. If this is the same as Transaction Number Start, only transaction data belonging to this single transaction will be exported. Big Endian. |
| System.String | clientId                   | ASCII string representing the unique serial number of the client. Use a zero length string to not filter for a client ID.                                                                                                               |

#### Exceptions

| TYPE                         | CONDITION                                                                 |
|------------------------------|---------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>clientId</code> is set to null or empty string. |
| System.ArgumentException     | Thrown if parameter <code>clientId</code> is longer than 30 characters.   |

#### Properties

##### PossibleErrorCodes

Returns the possible error codes for this command.

##### Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

##### Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

##### Overrides

[TseCmdBase.PossibleErrorCodes](#)

#### Methods

##### FormatCommandBytes()

##### Declaration

```
protected override void FormatCommandBytes()
```

Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

# Class TseCmdTseFirmwareUpdateTransfer

Transfers a firmware update package to the TOE.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdTseFirmwareUpdateTransfer

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdTseFirmwareUpdateTransfer : TseCmdBase
```

## Remarks

Since the firmware package can be quite large, it must be transferred in multiple chunks. The first chunk will be transmitted with a Chunk Offset set to 0 and an arbitrary Chunk Length L1. The next chunk will be transmitted with a Chunk Offset equal to L1 and a Chunk Length of L2. Another chunk will be transferred with a Chunk Offset of L1 + L2 and a Chunk Length of L3 and so on until the final chunk has been transferred. To then apply the update, call command TSE Firmware Update Apply. If the Chunk Offset is bigger than the reserved space for a firmware update package, this command will fail with [0x1007: Invalid parameter]. Additionally, Chunk Offset and Chunk Length must be multiples of 16, otherwise this command will fail with [0x1007: Invalid parameter].

## Constructors

TseCmdTseFirmwareUpdateTransfer(UInt32, UInt16, Byte[])

Constructor.

## Declaration

```
public TseCmdTseFirmwareUpdateTransfer(uint chunkOffset, ushort chunkLength, byte[] chunkData)
```

## Parameters

| TYPE          | NAME        | DESCRIPTION                                                            |
|---------------|-------------|------------------------------------------------------------------------|
| System.UInt32 | chunkOffset | Offset in the firmware package where Chunk Data is stored. Big Endian. |
| System.UInt16 | chunkLength | Size of the current chunk in bytes. Big Endian.                        |



| TYPE          | NAME      | DESCRIPTION                    |
|---------------|-----------|--------------------------------|
| System.Byte[] | chunkData | Raw data of the current chunk. |

#### Exceptions

| TYPE                         | CONDITION                                                     |
|------------------------------|---------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>chunkData</code> is set to null.    |
| System.ArgumentException     | Thrown if parameter <code>chunkData</code> is an empty array. |

#### Properties

##### PossibleErrorCodes

Returns the possible error codes for this command.

##### Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

##### Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

##### Overrides

[TseCmdBase.PossibleErrorCodes](#)

#### Methods

##### FormatCommandBytes()

##### Declaration

```
protected override void FormatCommandBytes()
```

##### Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

# Class TseCmdTseFlashInformation

Provides low level information about the flash storage.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdTseFlashInformation

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.FormatCommandBytes\(\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdTseFlashInformation : TseCmdBase
```

## Remarks

This command can be used to monitor the flash storage health and detect possible future defects before they occur and apply predictive maintenance.

As a recommendation, the following simple guidance is provided:

1. If Uncorrectable ECC errors is different from 0, the TSE should be replaced.
2. If Percentage Remaining Spare Blocks All gets below 25%, the TSE should be replaced.
3. If the average erase count (calculated as Block Erases / (Flash Block Count \* 256)) is bigger than 2940, the TSE should be replaced.

Please note that based on the use case of the TSE, which does not involve many flash read or write operations compared to other use cases, it is not expected that any of these conditions will ever be fulfilled during the lifetime of the TSE.

The lowest wear level class (WL) and highest wear level class (WH) fields give the range of wear level classes that are currently in use. Blocks that are not subject to the wear leveling are not counted. The wear level threshold (T) gives the size of a wear level class, minus 1, in units of flash memory block erases. Thus, the number of block erases that the flash blocks have seen is between  $WL(T+1)$  and  $WH(T+1)-1$ .

A spare block is a flash block that will be used as a replacement for defect blocks.

## Constructors

[TseCmdTseFlashInformation\(\)](#)

Constructor.

## Declaration

```
public TseCmdTseFlashInformation()
```

## Properties

### PossibleErrorCodes

Returns the possible error codes for this command.

#### Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

#### Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

#### Overrides

[TseCmdBase.PossibleErrorCodes](#)

## Methods

### GetResponseType(Byte[])

Returns the command response for this command (with payload).

#### Declaration

```
public override TseCommandResponse GetResponseType(byte[] payload)
```

#### Parameters

| TYPE          | NAME    | DESCRIPTION                   |
|---------------|---------|-------------------------------|
| System.Byte[] | payload | The payload for the response. |

#### Returns

| TYPE                               | DESCRIPTION                            |
|------------------------------------|----------------------------------------|
| <a href="#">TseCommandResponse</a> | The command response for this command. |

#### Overrides

[TseCmdBase.GetResponseType\(Byte\[\]\)](#)

#### Remarks

Most of the commands return [TseCommandResponse](#), certain commands have on command responses. Override this method to return the command specific command response.

# Class TseCmdTseFlashInformation.Response

Response class for the command [TseCmdTseFlashInformation](#).

## Inheritance

System.Object

[ByteArrayConverterBase](#)

[TseCommandResponse](#)

TseCmdTseFlashInformation.Response

## Inherited Members

[TseCommandResponse.ResultCode](#)

[TseCommandResponse.CommandLength](#)

[TseCommandResponse.CommandResponse](#)

[TseCommandResponse.Payload](#)

[TseCommandResponse.ResponseBytes](#)

[ByteArrayConverterBase.ByteArray](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt64, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt32, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt16, Boolean\)](#)

[ByteArrayConverterBase.GetLongFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetIntFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetShortFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetBytesUntilZero\(Byte\[\]\)](#)

[ByteArrayConverterBase.DecodeAscii\(Int32, Int32\)](#)

[ByteArrayConverterBase.DecodeAscii\(Byte\[\]\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Response : TseCommandResponse
```

## Constructors

[Response\(Byte\[\]\)](#)

Constructor.

## Declaration

```
public Response(byte[] payload)
```

## Parameters

| TYPE          | NAME    | DESCRIPTION                           |
|---------------|---------|---------------------------------------|
| System.Byte[] | payload | The payload of the response in bytes. |

## Properties

### BlockErases

Total number of block erases. Big Endian.

#### Declaration

```
public ulong BlockErases { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt64 |             |

### CorrectableEccErrors

Number of correctable ECC errors(not including startup ECC errors). Big Endian.

#### Declaration

```
public uint CorrectableEccErrors { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt32 |             |

### DefectBlocks

Number of manufacturer marked defect blocks. Big Endian.

#### Declaration

```
public ushort DefectBlocks { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt16 |             |

### EraseCountTarget

Maximum flash block erase count target, in wear level class units. Big Endian.

#### Declaration

```
public ushort EraseCountTarget { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt16 |             |

### FlashBlockCount

Number of flash blocks, in units of 256 blocks. Big Endian.

#### Declaration

```
public ushort FlashBlockCount { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt16 |             |

#### HighestWearLevelClass

Big Endian.

#### Declaration

```
public ushort HighestWearLevelClass { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt16 |             |

#### InitialSpareBlocksSum

Number of initial spare blocks (sum over all interleave units). Big Endian.

#### Declaration

```
public ushort InitialSpareBlocksSum { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt16 |             |

#### InitialSpareBlocksWorst

Number of initial spare blocks (worst interleave unit). Big Endian.

#### Declaration

```
public ushort InitialSpareBlocksWorst { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt16 |             |

#### LowestWearLevelClass

Big Endian-

#### Declaration

```
public ushort LowestWearLevelClass { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt16 |             |

### PercentageRemainingSpareBlocksAll

Percentage of remaining spare blocks(all interleave units).

Declaration

```
public byte PercentageRemainingSpareBlocksAll { get; }
```

Property Value

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Byte |             |

### PercentageRemainingSpareBlocksWorst

Percentage of remaining spare blocks(worst interleave unit).

Declaration

```
public byte PercentageRemainingSpareBlocksWorst { get; }
```

Property Value

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Byte |             |

### PowerOnCount

Big Endian.

Declaration

```
public uint PowerOnCount { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt32 |             |

### UncorrectableEccErrors

Number of uncorrectable ECC errors(not including startup ECC errors). Big Endian.

Declaration

```
public ushort UncorrectableEccErrors { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt16 |             |

## WearLevelThreshold

Big Endian.

Declaration

```
public ushort WearLevelThreshold { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt16 |             |



# Class TseCmdUnblockUser

Unblocks a user or change the user pin if forgotten.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdUnblockUser

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdUnblockUser : TseCmdBase
```

## Remarks

This command serves two distinct purposes: On the one hand, the command can be used to unblock a user that has been blocked due to too many unsuccessful authentication attempts. On the other hand, the command can be used to change the PIN of a user. Therefore, it can be used to recover the credentials of a user in case of a forgotten PIN.

As both commands are administrative commands, the PUK must be provided.

The new PIN must be different from the previous one (even when just unblocking the user), otherwise the command will fail with [0x1007: Invalid parameter].

The PUK has an associated retry counter. In case the provided PUK is wrong, the response SW is [0x11xx: Authentication failed, xx give the number of remaining retries] and the retry counter is decreased. If the retry counter is currently 1 and the wrong PUK is used (thus the retry counter reaches 0), the number of remaining retries will be set to 0 and the SW will be 0x1100. Afterwards, both an authentication with and without a valid PUK will return [0x1201: PUK is blocked]. As a blocked PUK can not be recovered from, it is recommended to export all data and decommission the TOE. Afterwards, a new TSE should be used.

This command causes a Log Message to be signed and thus can only be executed if the CSP is still operational.

## Constructors

`TseCmdUnblockUser(Int32, String, String)`

## Constructor

## Declaration

```
public TseCmdUnblockUser(int userId, string puk, string pin)
```

## Parameters

| TYPE          | NAME   | DESCRIPTION                                           |
|---------------|--------|-------------------------------------------------------|
| System.Int32  | userId | The user to unblock.                                  |
| System.String | puk    | The administrative puk to authorise this transaction. |
| System.String | pin    | The new pin for the user.                             |

#### Exceptions

| TYPE                               | CONDITION                                                                                           |
|------------------------------------|-----------------------------------------------------------------------------------------------------|
| System.ArgumentOutOfRangeException | Thrown if parameter <code>userId</code> is not one of this values: 0, 1, 2.                         |
| System.ArgumentNullException       | Thrown if parameter <code>puk</code> or parameter <code>pin</code> are set to null or empty string. |

#### Properties

##### PossibleErrorCodes

Returns the possible error codes for this command.

#### Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

#### Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

#### Overrides

[TseCmdBase.PossibleErrorCodes](#)

#### Methods

##### FormatCommandBytes()

#### Declaration

```
protected override void FormatCommandBytes()
```

#### Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

# Class TseCmdUpdateTime

Updates the time on the tse.

## Inheritance

System.Object

[TseCmdBase](#)

TseCmdUpdateTime

## Inherited Members

[TseCmdBase.Command](#)

[TseCmdBase.ByteStore](#)

[TseCmdBase.CommandBytes](#)

[TseCmdBase.GetResponseTypes\(Byte\[\]\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCmdUpdateTime : TseCmdBase
```

## Remarks

After each power cycle, the TSE Store is locked and no transactions are possible until the time of the ERS has been synchronized with the time of the TOE using this command.

The TOE will forward the timestamp to its CSP and will use this time to properly timestamp Log Messages. Depending on the accuracy of the CSP's internal clock, this command must also be called regularly to keep the host and TOE time synchronized. How often the time must be synchronized is announced in TSE Status. Applications should take care to not synchronize the time too frequently as this negatively affects the endurance of the CSP. It is thus recommended to synchronize the time as close as possible to the interval that is announced in TSE Status.

## Constructors

**TseCmdUpdateTime()**

Constructor. Sets the timestamp to now.

## Declaration

```
public TseCmdUpdateTime()
```

**TseCmdUpdateTime(DateTimeOffset)**

Constructor.

## Declaration

```
public TseCmdUpdateTime(DateTimeOffset timeStamp)
```

## Parameters

| TYPE                  | NAME      | DESCRIPTION                                                                                                                                      |
|-----------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| System.DateTimeOffset | timeStamp | Timestamp as seconds since Unix Epoch. The timestamp will be interpreted as an unsigned number, which means only dates after 1970 are supported. |

#### Exceptions

| TYPE                               | CONDITION                                          |
|------------------------------------|----------------------------------------------------|
| System.ArgumentOutOfRangeException | Thrown if timestamp represents a year before 1970. |

#### Properties

##### PossibleErrorCodes

Returns the possible error codes for this command.

#### Declaration

```
public override TseCommandStatusResponse[] PossibleErrorCodes { get; }
```

#### Property Value

| TYPE                                       | DESCRIPTION |
|--------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse[]</a> |             |

#### Overrides

[TseCmdBase.PossibleErrorCodes](#)

#### Methods

##### FormatCommandBytes()

#### Declaration

```
protected override void FormatCommandBytes()
```

#### Overrides

[TseCmdBase.FormatCommandBytes\(\)](#)

# Class TseCommandResponse

Represents a tse command response.

## Inheritance

System.Object

[ByteArrayConverterBase](#)

TseCommandResponse

[TseCmdDataImportFinalize.Response](#)

[TseCmdDataImportInitialize.Response](#)

[TseCmdGetLogMessageCertificate.Response](#)

[TseCmdListRegisteredClients.Response](#)

[TseCmdListStartedTransactions.Response](#)

[TseCmdPollFilteredExport.Response](#)

[TseCmdTseFlashInformation.Response](#)

## Inherited Members

[ByteArrayConverterBase.ByteArray](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt64, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt32, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt16, Boolean\)](#)

[ByteArrayConverterBase.GetLongFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetIntFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetShortFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetBytesUntilZero\(Byte\[\]\)](#)

[ByteArrayConverterBase.DecodeAscii\(Int32, Int32\)](#)

[ByteArrayConverterBase.DecodeAscii\(Byte\[\]\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class TseCommandResponse : ByteArrayConverterBase
```

## Constructors

[TseCommandResponse\(Byte\[\]\)](#)

Constructor.

## Declaration

```
public TseCommandResponse(byte[] responseBytes)
```

## Parameters

| TYPE | NAME | DESCRIPTION |
|------|------|-------------|
|      |      |             |

| TYPE          | NAME          | DESCRIPTION                                                |
|---------------|---------------|------------------------------------------------------------|
| System.Byte[] | responseBytes | Response bytes of the tse. Must be an array of length 512. |

#### Exceptions

| TYPE                         | CONDITION                                                      |
|------------------------------|----------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>responseBytes</code> is set to null. |
| System.ArgumentException     | Thrown if byte array is not of 512 bytes long.                 |

#### Properties

##### CommandLength

The length of the command response in bytes.

#### Declaration

```
public int CommandLength { get; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

##### CommandResponse

Returns the command response as [TseCommandStatusResponse](#)

#### Declaration

```
public TseCommandStatusResponse CommandResponse { get; }
```

#### Property Value

| TYPE                                     | DESCRIPTION |
|------------------------------------------|-------------|
| <a href="#">TseCommandStatusResponse</a> |             |

##### Payload

The payload of the response (not including first 7 bytes) and not including status word.

#### Declaration

```
public byte[] Payload { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Byte[] |             |

## ResponseBytes

Full response bytes of the command response.

Declaration

```
public byte[] ResponseBytes { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Byte[] |             |

## ResultCode

Returns the result code of the command. Just for program flow. Please use [CommandResponse](#) for detailed command response information.

Declaration

```
public TseCommandResultCode ResultCode { get; }
```

Property Value

| TYPE                                 | DESCRIPTION |
|--------------------------------------|-------------|
| <a href="#">TseCommandResultCode</a> |             |

# Enum TseCommandResultCode

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum TseCommandResultCode
```

Fields

| NAME                     | DESCRIPTION |
|--------------------------|-------------|
| CommandCompleted         |             |
| CommandNotCompleted      |             |
| CommandResponseAvailable |             |



# Enum TseCommandStatusResponse

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Commands](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum TseCommandStatusResponse
```

## Fields

| NAME                                    | DESCRIPTION                                                            |
|-----------------------------------------|------------------------------------------------------------------------|
| AuthenticationFailedRemainingRetries0   | Authentication failed, 0x11xx: xx give the number of remaining retries |
| AuthenticationFailedRemainingRetries1   | Authentication failed, 0x11xx: xx give the number of remaining retries |
| AuthenticationFailedRemainingRetries2   | Authentication failed, 0x11xx: xx give the number of remaining retries |
| AuthenticationFailedRemainingRetries3   | Authentication failed, 0x11xx: xx give the number of remaining retries |
| AuthenticationFailedRemainingRetries4   | Authentication failed, 0x11xx: xx give the number of remaining retries |
| AuthenticationFailedRemainingRetries5   | Authentication failed, 0x11xx: xx give the number of remaining retries |
| AuthenticationFailedRemainingRetries6   | Authentication failed, 0x11xx: xx give the number of remaining retries |
| CertificateExpired                      | Certificate expired                                                    |
| ClientHasUnfinishedTransactions         | Client has unfinished transactions                                     |
| ClientNotRegistered                     | Client not registered                                                  |
| CommandNotFound                         | Command not found                                                      |
| ExecutionSuccessful                     | Execution successful                                                   |
| FailedToDeleteDataNotCompletelyExported | Failed to delete, data not completely exported                         |

| NAME                                 | DESCRIPTION                                                 |
|--------------------------------------|-------------------------------------------------------------|
| FilteredExportNoExportInProgress     | Filtered Export: no export in progress                      |
| FilteredExportNoMatchingEntries      | Filtered Export: no matching entries, export would be empty |
| FilteredExportNoNewDataKeepPolling   | Filtered Export: no new data, keep polling                  |
| FirmwareUpdateBaseFwUpdateError      | Firmware Update: Base FW update error                       |
| FirmwareUpdateCspUpdateError         | Firmware Update: CSP update error                           |
| FirmwareUpdateDecryptionFailed       | Firmware Update: Decryption failed                          |
| FirmwareUpdateDowngradeProhibited    | Firmware Update: downgrade prohibited                       |
| FirmwareUpdateFwExtensionUpdateError | Firmware Update: FW Extension update error                  |
| FirmwareUpdateIntegrityCheckFailed   | Firmware Update: Integrity check failed                     |
| FirmwareUpdateInternalError          | Firmware Update: Internal error                             |
| FirmwareUpdateWrongFormat            | Firmware Update: Wrong format                               |
| GivenTransactionNotStarted           | Given transaction is not started                            |
| GivenUserIsNotAuthenticated          | Given user is not authenticated                             |
| InvalidCommandSyntax                 | Invalid command syntax                                      |
| InvalidParameter                     | Invalid parameter                                           |
| MaximumParallelTransactionsReached   | Maximum parallel transactions reached                       |

| NAME                                      | DESCRIPTION                                                  |
|-------------------------------------------|--------------------------------------------------------------|
| MaximumRegisteredClientsReached           | Maximum registered clients reached                           |
| NoLastTransactionToFetch                  | No last transaction to fetch                                 |
| NotAuthorized                             | Not authorized                                               |
| NotEnoughDataWrittenDuringTransaction     | Not enough data written during transaction                   |
| NoTransactionInProgress                   | No transaction in progress                                   |
| NotSupported                              | Status word is not supported by the interface.               |
| OperationFailedNotEnoughRemainingCapacity | Operation failed, not enough remaining capacity in TSE Store |
| PinIsBlocked                              | PIN/PUK is blocked                                           |
| SelfTestCspFailed                         | Self test of CSP failed                                      |
| SelfTestFwFailed                          | Self test of FW failed                                       |
| SelfTestRngFailed                         | Self test of RNG failed                                      |
| SignatureCreationError                    | Signature creation error                                     |
| SignaturesExceeded                        | Signatures exceeded                                          |
| TimeNotSet                                | Time not set                                                 |
| TseContainsUnfinishedTransactions         | TSE contains unfinished transactions                         |
| UnspecifiedInternalProcessError           | Unspecified, internal processing error                       |

| NAME                                          | DESCRIPTION                                                                          |
|-----------------------------------------------|--------------------------------------------------------------------------------------|
| WrongStateActiveCtssInterfaceRequired         | Wrong state, active CTSS interface required                                          |
| WrongStateChangedPinRequired                  | Wrong state, changed PIN required                                                    |
| WrongStateChangedPukRequired                  | Wrong state, changed PUK required                                                    |
| WrongStateNoCommandResponseToFetch            | Wrong state, no command response to fetch                                            |
| WrongStateOnGoingDataImportMustBeFinished     | Wrong state, ongoing Data Import must be finished before this command is allowed.    |
| WrongStateOnGoingFilteredExportMustBeFinished | Wrong state, ongoing Filtered Export must be finished before this command is allowed |
| WrongStatePassedSelfTestRequired              | Wrong state, passed self test required                                               |
| WrongStateSelfTestMustBeRunFirst              | Wrong state, self test must be run first                                             |
| WrongStateTseAlreadyInitialized               | Wrong state, TSE already initialized                                                 |
| WrongStateTseDecomissioned                    | Wrong state, TSE decomissioned                                                       |
| WrongStateTseNotInitialized                   | Wrong state, TSE not initialized                                                     |

# Namespace

RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.

## Status

### Classes

[SwissbitStatus](#)

Represents the status of the swissbit tse.

### Enums

[TseInitializationState](#)

# Class SwissbitStatus

Represents the status of the swissbit tse.

## Inheritance

System.Object

[ByteArrayConverterBase](#)

SwissbitStatus

[SwissbitHardwareDevice](#)

## Inherited Members

[ByteArrayConverterBase.ByteArray](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt64, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt32, Boolean\)](#)

[ByteArrayConverterBase.GetByteArrayFromNumber\(UInt16, Boolean\)](#)

[ByteArrayConverterBase.GetLongFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetIntFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetShortFromByteArray\(Int32, Boolean\)](#)

[ByteArrayConverterBase.GetBytesUntilZero\(Byte\[\]\)](#)

[ByteArrayConverterBase.DecodeAscii\(Int32, Int32\)](#)

[ByteArrayConverterBase.DecodeAscii\(Byte\[\]\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Status](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class SwissbitStatus : ByteArrayConverterBase
```

## Constructors

### SwissbitStatus(Byte[])

#### Declaration

```
public SwissbitStatus(byte[] statusBytes)
```

#### Parameters

| TYPE          | NAME        | DESCRIPTION |
|---------------|-------------|-------------|
| System.Byte[] | statusBytes |             |

## Properties

### CertificateExpirationDate

Timestamp (as seconds since Unix Epoch) after which the certificate of this TSE will be invalid. The timestamp will be interpreted as an unsigned number, which means only dates after 1970 are supported. Big Endian.

#### Declaration

```
public ulong CertificateExpirationDate { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt64 |             |

#### CertificateExpirationDateTimeOffset

Timestamp (as DateTimeOffset) after which the certificate of this TSE will be invalid. The timestamp will be interpreted as an unsigned number, which means only dates after 1970 are supported. Big Endian.

#### Declaration

```
public DateTimeOffset CertificateExpirationDateTimeOffset { get; }
```

#### Property Value

| TYPE                  | DESCRIPTION |
|-----------------------|-------------|
| System.DateTimeOffset |             |

#### CreatedSignatures

Amount of signatures that have been created with this TSE. Please note that this value might exceed Max Signatures, since Max Signatures is only a soft-cap and it might be possible to actually create more signatures. Big Endian.

#### Declaration

```
public uint CreatedSignatures { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt32 |             |

#### DataImportInitialized

False is not data import is initialized; true if a data import is initialized.

#### Declaration

```
public bool DataImportInitialized { get; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

#### FirmwareId

If Firmware Type is "TST", then this contains an internal id that identifies the test build. Otherwise, this field is set to 0.

#### Declaration

```
public uint FirmwareId { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt32 |             |

### FirmwareType

Either "RLS" for production ready FW, "DEV" for development FW that can be used by ECR vendors, or "TST" for internal test revisions. The string is null-terminated, i.e. the last byte is set to 0.

Declaration

```
public string FirmwareType { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### InitialAdminPinChanged

True if the initial admin pin (from factory) was changed; otherwise false.

Declaration

```
public bool InitialAdminPinChanged { get; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

### InitialPukChanged

True if the initial puk (from factory) was changed; otherwise false.

Declaration

```
public bool InitialPukChanged { get; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

### InitialTimeAdminPinChanged

True if the initial time admin pin (from factory) was changed; otherwise false.

Declaration

```
public bool InitialTimeAdminPinChanged { get; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |



| TYPE | DESCRIPTION |
|------|-------------|
|      |             |

### LastHeaderBlockIndex

Sector offset of last TSE entry. This allows to read the TSE Store starting from the end. Only valid if the TSE Store is readable(see Section 3.3), otherwise 0. Big Endian.

Declaration

```
public uint LastHeaderBlockIndex { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt32 |             |

### MaxRegisteredClients

Maximum number of clients that can be registered. In the current revision, this is 100. Big Endian.

Declaration

```
public uint MaxRegisteredClients { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt32 |             |

### MaxSignatures

Maximum amount of signatures that can be created with this TSE. Big Endian.

Declaration

```
public uint MaxSignatures { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt32 |             |

### MaxStartedTransactions

Maximum number of started transactions, i.e. amount of transactions that can be started in parallel. In the current revision, this is 512. Big Endian.

Declaration

```
public uint MaxStartedTransactions { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt32 |             |

### MaxTimeSynchronizationDelay

Interval (in seconds) after which command Update Time must be sent. Big endian.

Declaration

```
public uint MaxTimeSynchronizationDelay { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt32 |             |

### MaxUpdateDelay

Interval (in seconds) after which a started transaction must have received an update in case new data is available on the cash register. This is currently set to 45 seconds according to MAX\_UPDATE\_DELAY from [BSI - TR - 03116 - 5]. Big endian.

Declaration

```
public uint MaxUpdateDelay { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt32 |             |

### RegisteredClients

Number of currently registered clients (see Section 4.2.2). Big Endian.

Declaration

```
public uint RegisteredClients { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt32 |             |

### StartedTransactions

Number of transactions that have not been finished, yet. If this equals Max Started Transactions, no new transactions can be started until at least one transaction has been finished. Only valid if the TSE Store is readable (see Section 3.3), otherwise 0. Big Endian.

Declaration

```
public uint StartedTransactions { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt32 |             |

### TimeUntilNextSelftest

Timeout in seconds after which the state selfTestRun will automatically be made inactive. Please see Section 4.2.1 for details.

Declaration

```
public uint TimeUntilNextSelftest { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt32 |             |

### TseCapacity

Size of TSE Store in sectors. Big endian.

Declaration

```
public uint TseCapacity { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt32 |             |

### TseCurrentSize

Used size of TSE Store. Only valid if the TSE Store is readable (see Section 3.3), otherwise 0. Big endian.

Declaration

```
public uint TseCurrentSize { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt32 |             |

### TseDescription

NULL terminated ASCII string containing a short description of the TSE.

Declaration

```
public string TseDescription { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## TseExportSize

Size of the whole TSE Store in bytes, if exported (see Section 3.4). Only valid if the TSE Store is readable(see Section 3.3), otherwise 0. Big Endian.

### Declaration

```
public ulong TseExportSize { get; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt64 |             |

## TseFormFactor

Either "uSD", "SD", or "USB" as null-terminated string. The remaining bytes are filled with zeros.

### Declaration

```
public string TseFormFactor { get; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## TseHardwareVersion

Returns the hardware version of the tse.

### Declaration

```
public Version TseHardwareVersion { get; }
```

### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Version |             |

## TseInitializationState

0: Uninitialized, 1: Initialized, 2: Decommissioned

### Declaration

```
public TseInitializationState TseInitializationState { get; }
```

### Property Value

| TYPE                                   | DESCRIPTION |
|----------------------------------------|-------------|
| <a href="#">TseInitializationState</a> |             |

## TsePublicKey

Public key that belongs to the private key generating signatures, formatted according to [BSI - TR - 03111] 3.2.1 Uncompressed Encoding.Bytes after TSE Public Key Length are filled with 0x0 and can be discarded. This key can be used to verify all signatures

created by the TSE.

Declaration

```
public byte[] TsePublicKey { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Byte[] |             |

### TsePublicKeyLength

Usable length of TSE Public Key. Maximum length is 100 Bytes.

Declaration

```
public ushort TsePublicKeyLength { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.UInt16 |             |

### TsePublicKeyString

Public key that belongs to the private key generating signatures, formatted according to [BSI - TR - 03111] 3.2.1 Uncompressed Encoding. Bytes after TSE Public Key Length are filled with 0x0 and can be discarded. This key can be used to verify all signatures created by the TSE.

Declaration

```
public string TsePublicKeyString { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### TseSecurity

Security byte of tse status

Declaration

```
public byte TseSecurity { get; }
```

Property Value

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Byte |             |

### TseSecurityCtssInterfaceActive

Returns whether the ctss interface is active.

Declaration

```
public bool TseSecurityCtssInterfaceActive { get; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

### TseSecuritySelfTestPassed

Returns whether the last self test was passed.

Declaration

```
public bool TseSecuritySelfTestPassed { get; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

### TseSecurityValidTimeSet

Returns whether the time is set.

Declaration

```
public bool TseSecurityValidTimeSet { get; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

### TseSerial

Raw SHA-256 hash over the public key that belongs to the private key generating signatures. This can be used as TSE unique ID.

Declaration

```
public string TseSerial { get; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### TseSoftwareVersion

Returns the software version of the tse.

Declaration

```
public Version TseSoftwareVersion { get; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Version |             |

### TseTsecurityExportAllowedIfCspTestFails

Returns wether the export is allowed (if csp test failed).

Declaration

```
public bool TseTsecurityExportAllowedIfCspTestFails { get; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

### Methods

#### ToString()

Declaration

```
public override string ToString()
```

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

Overrides

System.Object.ToString()

# Enum TseInitializationState

Namespace: [RetailForce.Fiscalisation.Implementation.Germany.Tse.Swissbit.Status](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum TseInitializationState
```

## Fields

| NAME           | DESCRIPTION |
|----------------|-------------|
| Decommissioned |             |
| Initialized    |             |
| Uninitialized  |             |



# Namespace RetailForce.Fiscalisation.Model

## Classes

### [DocumentJsonConverter](#)

Json Converter to read document json.

### [DocumentValidationBase](#)

Basic class for all document classes for validation.

### [FiscalClientStatus](#)

Returns the fiscal client status.

### [Partner](#)

The partner for a document.

### [Payment](#)

Payment for payment stock.

### [User](#)

The user for a document.

### [Vat](#)

Represents the value added tax for document and document positions.

## Enums

### [BusinessTransactionType](#)

The type for the business transaction.

### [FiscalClientState](#)

### [PartnerType](#)

The type of the partner.

# Enum BusinessTransactionType

The type for the business transaction.

Namespace: [RetailForce.Fiscalisation.Model](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum BusinessTransactionType
```

Remarks

When adding a new business transaction type add validation for the new type at .

Fields

| NAME           | DESCRIPTION                                                              |
|----------------|--------------------------------------------------------------------------|
| CashDifference | Cash difference of the cash register when checking the cash stock.       |
| Discount       | Discount of line item of the cash register system.                       |
| MoneyTransfer  | Money Transfer from or to the cash register (for instance from/to bank). |
| PayIn          | Pay in to the cash register system.                                      |
| PayOut         | Pay out for the cash register system.                                    |
| Revenue        | Revenue of the cash register system.                                     |

# Class DocumentJsonConverter

Json Converter to read document json.

## Inheritance

System.Object

Newtonsoft.Json.JsonConverter

DocumentJsonConverter

## Inherited Members

Newtonsoft.Json.JsonConverter.CanRead

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class DocumentJsonConverter : JsonConverter
```

## Properties

### CanWrite

#### Declaration

```
public override bool CanWrite { get; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## Overrides

Newtonsoft.Json.JsonConverter.CanWrite

## Methods

### CanConvert(Type)

#### Declaration

```
public override bool CanConvert(Type objectType)
```

#### Parameters

| TYPE        | NAME       | DESCRIPTION |
|-------------|------------|-------------|
| System.Type | objectType |             |

## Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

Overrides

Newtonsoft.Json.JsonConverter.CanConvert(System.Type)

ReadJson(JsonReader, Type, Object, JsonSerializer)

Declaration

```
public override object ReadJson(JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer)
```

Parameters

| TYPE                           | NAME          | DESCRIPTION |
|--------------------------------|---------------|-------------|
| Newtonsoft.Json.JsonReader     | reader        |             |
| System.Type                    | objectType    |             |
| System.Object                  | existingValue |             |
| Newtonsoft.Json.JsonSerializer | serializer    |             |

Returns

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.Object |             |

Overrides

Newtonsoft.Json.JsonConverter.ReadJson(Newtonsoft.Json.JsonReader, System.Type, System.Object, Newtonsoft.Json.JsonSerializer)

WriteJson(JsonWriter, Object, JsonSerializer)

Declaration

```
public override void WriteJson(JsonWriter writer, object value, JsonSerializer serializer)
```

Parameters

| TYPE                           | NAME       | DESCRIPTION |
|--------------------------------|------------|-------------|
| Newtonsoft.Json.JsonWriter     | writer     |             |
| System.Object                  | value      |             |
| Newtonsoft.Json.JsonSerializer | serializer |             |

Overrides

Newtonsoft.Json.JsonConverter.WriteJson(Newtonsoft.Json.JsonWriter, System.Object, Newtonsoft.Json.JsonSerializer)

# Class DocumentValidationBase

Basic class for all document classes for validation.

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<DocumentValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<DocumentValidationError>

DocumentValidationBase

[Discount](#)

[Document](#)

[DocumentPayment](#)

[DocumentPositionBase](#)

[DocumentReference](#)

## Inherited Members

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate()

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateProperties(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>(System.Boolean)

RetailForce.Common.Validation.ValidationBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateElement()

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
[Serializable]
public abstract class DocumentValidationBase : ValidationPropertyBase<DocumentValidationError>
```

## Properties

### DocumentLevel

The level for the document.

#### Declaration

```
protected abstract DocumentLevel DocumentLevel { get; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">DocumentLevel</a> |             |

### VALIDATION\_ERROR\_SOURCE

The validation error source for all classes derived from this class.

#### Declaration

```
protected override string VALIDATION_ERROR_SOURCE { get; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Overrides

RetailForce.Common.Validation.ValidationBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.VALIDATION\_ERROR\_SOURCE

## Methods

AddPropertyError(ErrorLevel, String, String, String)

Adds a property attribute error with to correct implementation of ValidationErrorType.

#### Declaration

```
protected override DocumentValidationError AddPropertyError(ErrorLevel level, string declaringTypeName, string propertyName, string errorString)
```

#### Parameters

| TYPE | NAME | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

| TYPE                                     | NAME              | DESCRIPTION                                                               |
|------------------------------------------|-------------------|---------------------------------------------------------------------------|
| RetailForce.Common.Validation.ErrorLevel | level             | The level of the property error.                                          |
| System.String                            | declaringTypeName | The name of the declaring type of the property with the validation error. |
| System.String                            | propertyName      | The name of the property with the validation error.                       |
| System.String                            | errorString       | The error description of the property error.                              |

Returns

| TYPE                                    | DESCRIPTION                                                                  |
|-----------------------------------------|------------------------------------------------------------------------------|
| <a href="#">DocumentValidationError</a> | An <a href="#">DocumentValidationError</a> representing the ValidationError. |

Overrides

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.AddPropertyError(RetailForce.Common.Validation.ErrorLevel, System.String, System.String, System.String)

# Enum FiscalClientState

Namespace: [RetailForce.Fiscalisation.Model](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum FiscalClientState
```

Fields

| NAME           | DESCRIPTION |
|----------------|-------------|
| Decommissioned |             |
| Initialized    |             |
| NotInitialized |             |

# Class FiscalClientStatus

Returns the fiscal client status.

## Inheritance

System.Object

FiscalClientStatus

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class FiscalClientStatus
```

## Properties

### Alert

True if an alert exists on the fiscal system.

#### Declaration

```
public bool Alert { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

### CloudMessagesQueued

Represents the number of the queued cloud messages (receipts).

#### Declaration

```
public int CloudMessagesQueued { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### FiscalCountry

Represents the fiscal country of the client.

#### Declaration

```
public FiscalCountry FiscalCountry { get; set; }
```



Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| FiscalCountry |             |

### FiscalIdentification

Represents the identification of the cash register

Declaration

```
public string FiscalIdentification { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

Remarks

Austria: unique "KassenID" announced to Finanzonline.

### FiscalSoftwareVersion

Represents the software version of the fiscal system.

Declaration

```
public string FiscalSoftwareVersion { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Online

Represents if the fiscal system is online with the cloud system (online if applicable license available).

Declaration

```
public bool Online { get; set; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

### State

The state of the fiscal client.

Declaration

```
public FiscalClientState State { get; set; }
```

Property Value

| TYPE                              | DESCRIPTION |
|-----------------------------------|-------------|
| <a href="#">FiscalClientState</a> |             |

### StoreNumber

Represents the store number of the cash register.

Declaration

```
public string StoreNumber { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### TerminalNumber

Represents the terminal number of the cash register.

Declaration

```
public string TerminalNumber { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### VatNumber

Represents the vat number

Declaration

```
public string VatNumber { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class Partner

The partner for a document.

## Inheritance

System.Object

[Address](#)

Partner

## Inherited Members

[Address.Street](#)

[Address.StreetNumber](#)

[Address.PostalCode](#)

[Address.City](#)

[Address.CountryCode](#)

[Address.FullStreet](#)

[Address.FromAddress\(Address\)](#)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Partner : Address
```

## Remarks

Possible examples for a document partner: Customer, Supplier, Store, ...

## Properties

### Address

The address of the partner

## Declaration

```
public Address Address { get; set; }
```

## Property Value

| TYPE                    | DESCRIPTION |
|-------------------------|-------------|
| <a href="#">Address</a> |             |

## Caption

The caption (=name) of the partner.

## Declaration

```
public string Caption { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

**Id**

The id of the partner.

Declaration

```
public string Id { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

**PartnerClassification**

The classification of group or type of the partner (not the [PartnerType](#)).

Declaration

```
public string PartnerClassification { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

Remarks

This field can be used for subclassing customers (for instance). Therefore it can be used for customer groups, supplier groups etc.

**PartnerType**

The type of this partner. For possible types see [PartnerType](#).

Declaration

```
public PartnerType PartnerType { get; set; }
```

Property Value

| TYPE                        | DESCRIPTION |
|-----------------------------|-------------|
| <a href="#">PartnerType</a> |             |

**VatNumber**

The vat number of the partner

Declaration

```
public string VatNumber { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Enum PartnerType

The type of the partner.

Namespace: [RetailForce.Fiscalisation.Model](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum PartnerType
```

Fields

| NAME     | DESCRIPTION                    |
|----------|--------------------------------|
| Customer | Represents a customer (buyer). |

# Class Payment

Payment for payment stock.

Inheritance

System.Object

Payment

Implements

System.IEquatable<Payment>

Inherited Members

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Model](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public class Payment : IEquatable<Payment>
```

Properties

Amount

The amount of the payment in currency of the fiscal client.

Declaration

```
public decimal Amount { get; set; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

Caption

The caption of the payment.

Declaration

```
public string Caption { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

CurrencyIsoCode

The currency code of the payment.

Declaration

```
public string CurrencyIsoCode { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Remarks

It is not allowed to have 2 different currency codes on the same [UniqueReadablePaymentIdentifier](#) within one fiscal client closing report.

#### ForeignAmount

The foreign amount of the payment (according to [CurrencyIsoCode](#)).

#### Declaration

```
public decimal ForeignAmount { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

#### ForeignAmountExchangeRate

The exchange rate for the foreign amount to the currency of the [FiscalClient](#).

#### Declaration

```
public decimal ForeignAmountExchangeRate { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

#### IsCash

True if it is an cash payment; otherwise false (electronic, voucher, etc.)

#### Declaration

```
public bool IsCash { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

#### UniqueReadablePaymentIdentifier

The unique identifier for this payment.

#### Declaration



```
public string UniqueReadablePaymentIdentifier { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Methods

##### Equals(DocumentPayment)

#### Declaration

```
public bool Equals(DocumentPayment payment)
```

#### Parameters

| TYPE                            | NAME    | DESCRIPTION |
|---------------------------------|---------|-------------|
| <a href="#">DocumentPayment</a> | payment |             |

#### Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

##### Equals(Payment)

#### Declaration

```
public bool Equals(Payment other)
```

#### Parameters

| TYPE                    | NAME  | DESCRIPTION |
|-------------------------|-------|-------------|
| <a href="#">Payment</a> | other |             |

#### Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

##### Equals(Object)

#### Declaration

```
public override bool Equals(object obj)
```

#### Parameters

| TYPE          | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.Object | obj  |             |

#### Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

Overrides

System.Object.Equals(System.Object)

Invert()

Inverts the payment (amount will be turned negative).

Declaration

```
public Payment Invert()
```

Returns

| TYPE                    | DESCRIPTION           |
|-------------------------|-----------------------|
| <a href="#">Payment</a> | The inverted payment. |

ToDocumentPayment()

Returns a [DocumentPayment](#) position out of this payment.

Declaration

```
public DocumentPayment ToDocumentPayment()
```

Returns

| TYPE                            | DESCRIPTION                                           |
|---------------------------------|-------------------------------------------------------|
| <a href="#">DocumentPayment</a> | A converted <a href="#">DocumentPayment</a> position. |

Operators

Equality(DocumentPayment, Payment)

Declaration

```
public static bool operator ==(DocumentPayment payment, Payment payment1)
```

Parameters

| TYPE                            | NAME     | DESCRIPTION |
|---------------------------------|----------|-------------|
| <a href="#">DocumentPayment</a> | payment  |             |
| <a href="#">Payment</a>         | payment1 |             |

Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## Equality(Payment, DocumentPayment)

### Declaration

```
public static bool operator ==(Payment payment1, DocumentPayment payment)
```

### Parameters

| TYPE                            | NAME     | DESCRIPTION |
|---------------------------------|----------|-------------|
| <a href="#">Payment</a>         | payment1 |             |
| <a href="#">DocumentPayment</a> | payment  |             |

### Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## Equality(Payment, Payment)

### Declaration

```
public static bool operator ==(Payment payment1, Payment payment2)
```

### Parameters

| TYPE                    | NAME     | DESCRIPTION |
|-------------------------|----------|-------------|
| <a href="#">Payment</a> | payment1 |             |
| <a href="#">Payment</a> | payment2 |             |

### Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## Inequality(DocumentPayment, Payment)

### Declaration

```
public static bool operator !=(DocumentPayment payment, Payment payment1)
```

### Parameters

| TYPE                            | NAME     | DESCRIPTION |
|---------------------------------|----------|-------------|
| <a href="#">DocumentPayment</a> | payment  |             |
| <a href="#">Payment</a>         | payment1 |             |

### Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## Inequality(Payment, DocumentPayment)

### Declaration

```
public static bool operator !=(Payment payment1, DocumentPayment payment)
```

### Parameters

| TYPE                            | NAME     | DESCRIPTION |
|---------------------------------|----------|-------------|
| <a href="#">Payment</a>         | payment1 |             |
| <a href="#">DocumentPayment</a> | payment  |             |

### Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## Inequality(Payment, Payment)

### Declaration

```
public static bool operator !=(Payment payment1, Payment payment2)
```

### Parameters

| TYPE                    | NAME     | DESCRIPTION |
|-------------------------|----------|-------------|
| <a href="#">Payment</a> | payment1 |             |
| <a href="#">Payment</a> | payment2 |             |

### Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

## Implements

System.IEquatable<T>

# Class User

The user for a document.

## Inheritance

System.Object

User

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class User
```

## Properties

### Caption

The caption / name of the user.

#### Declaration

```
public string Caption { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Id

The id of the user.

#### Declaration

```
public string Id { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Class Vat

Represents the value added tax for document and document positions.

## Inheritance

System.Object

Vat

## Implements

System.ICloneable

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Model](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
[Serializable]  
public class Vat : ICloneable
```

## Properties

### Caption

The caption for this tax item.

#### Declaration

```
public string Caption { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### SkipVatPercentageValidation

if true the percentage validation for this vat entry will be skipped default value is false

#### Declaration

```
[Required]  
public bool SkipVatPercentageValidation { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

### ValidFrom

defines the start date from when the vat object is valid default value is

defines the start date from when the vat object is valid default value is  
RetailForce.Fiscalisation.Constants.CommonConstants.MinDate

Declaration

```
[Required]  
public DateTime ValidFrom { get; set; }
```

Property Value

| TYPE            | DESCRIPTION |
|-----------------|-------------|
| System.DateTime |             |

### ValidTo

defines the end date from when the vat object is valid default value is  
RetailForce.Fiscalisation.Constants.CommonConstants.MaxDate

Declaration

```
[Required]  
public DateTime ValidTo { get; set; }
```

Property Value

| TYPE            | DESCRIPTION |
|-----------------|-------------|
| System.DateTime |             |

### VatIdentification

The vat identification number.

Declaration

```
[Required]  
public int VatIdentification { get; set; }
```

Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### VatPercents

The percentage for this item.

Declaration

```
[Required]  
public List<decimal> VatPercents { get; set; }
```

Property Value

| TYPE                                            | DESCRIPTION |
|-------------------------------------------------|-------------|
| System.Collections.Generic.List<System.Decimal> |             |

### Methods

## Clone()

Clones the current object.

Declaration

```
public object Clone()
```

Returns

| TYPE          | DESCRIPTION            |
|---------------|------------------------|
| System.Object | A copy of this object. |

## GetGrossValue(Decimal, Decimal)

Returns the gross value out of the given net value.

Declaration

```
public static decimal GetGrossValue(decimal vatPercent1, decimal netValue)
```

Parameters

| TYPE           | NAME        | DESCRIPTION                     |
|----------------|-------------|---------------------------------|
| System.Decimal | vatPercent1 | The percentage for calculation. |
| System.Decimal | netValue    | The net value for calculation.  |

Returns

| TYPE           | DESCRIPTION                 |
|----------------|-----------------------------|
| System.Decimal | The calculated gross value. |

## GetNetValue(Decimal, Decimal)

Returns the net value out of the given gross value.

Declaration

```
public static decimal GetNetValue(decimal vatPercent1, decimal grossValue)
```

Parameters

| TYPE           | NAME        | DESCRIPTION                      |
|----------------|-------------|----------------------------------|
| System.Decimal | vatPercent1 | The percentage for calculation.  |
| System.Decimal | grossValue  | The gross value for calculation. |

Returns



| TYPE           | DESCRIPTION               |
|----------------|---------------------------|
| System.Decimal | The calculated net value. |

### Implements

System.ICloneable

# Namespace RetailForce.Fiscalisation.Model.Document

## Classes

### [Discount](#)

Represents a discount of a position.

### [Document](#)

Represents a fiscal document.

### [DocumentExtension](#)

### [DocumentPayment](#)

Payment position of the document.

### [DocumentPositionBase](#)

Base class for all positions.

### [DocumentPositionBooking](#)

Represents a booking position. A booking position can be used for booking values (instead of items).

### [DocumentPositionItem](#)

One position of one document. Document positions can have multiple types.

### [DocumentPositionItemBase](#)

Base class for item and subitem.

### [DocumentPositionReference](#)

A document position reference.

### [DocumentPositionSubItem](#)

Represents a sub item (like a set)

### [DocumentPositionText](#)

Represents a text position.

### [DocumentPositionTotal](#)

Total position. Must be the last position.

### [DocumentPositionVatPosition](#)

Base class for all positions having vat.

### [DocumentReference](#)

A document reference used for referencing other documents (when canceling, linking, etc.).

### [DocumentTaxPosition](#)

Represents a tax position (summary for all tax items on a document).

### [DocumentTypeExtensions](#)

### [DocumentValidationError](#)

Represents a document validation error.

## QuantityUnit

Represents a quantity unit of a position.

## Interfaces

### IBusinessTransactionTypePosition

Interface for all positions containing a business transaction type.

### IVatPosition

Interface for all positions having vat.

## Enums

### DiscountType

The type of the discount.

### DocumentLevel

The level of the error in the document.

### DocumentPositionType

Represents the possible types of a document position.

### DocumentType

The type of the document.

### ReferenceType

The reference type of the document (position) reference.

# Class Discount

Represents a discount of a position.

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<DocumentValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<DocumentValidationError>

[DocumentValidationBase](#)

Discount

## Inherited Members

[DocumentValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[DocumentValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateProperties\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>\(System.Boolean\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
[Serializable]
public class Discount : DocumentValidationBase
```

## Properties

### Caption

The name of the discount.

#### Declaration

```
public string Caption { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### DiscountOrder

The order of the discount.

#### Declaration

```
public int DiscountOrder { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

## Remarks

This is the order of the discount calculation. First calculated discount is 0.

### DiscountValue

The calculated value of the discount.

#### Declaration

```
[Required]
public decimal DiscountValue { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

#### Remarks

The calculated value means a discount if sign is positive. 2 means a discount of 2 and -2 means an extra charge of 2.

#### DocumentLevel

The validation level for this element.

#### Declaration

```
protected override DocumentLevel DocumentLevel { get; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">DocumentLevel</a> |             |

#### Overrides

[DocumentValidationBase.DocumentLevel](#)

#### Type

The type of the discount.

#### Declaration

```
[Required]  
public DiscountType Type { get; set; }
```

#### Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">DiscountType</a> |             |

#### TypeValue

The type value of the discount.

#### Declaration

```
public decimal TypeValue { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

#### Remarks

The type value corresponds to the [Type](#) of the discount. Is the [Type](#) = [Discount](#) then a [TypeValue](#) of 10 has a meaning of 10 percent. The type value is always seen as a discount if sign of type value is positive. This means that a type value of 10 represents a discount of 10 percent (if type is percentage) and a type value of -10 represents an extra charge of 10 percent.

#### Methods

##### Revert()

Reverts the discount (turns all values negative)

#### Declaration

```
public void Revert()
```

##### ValidateElement()

Validates the element and returns a list of [DocumentValidationError](#) objects.

#### Declaration

```
protected override List<DocumentValidationError> ValidateElement()
```

#### Returns

| TYPE                                                                       | DESCRIPTION                                                |
|----------------------------------------------------------------------------|------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | A list of <a href="#">DocumentValidationError</a> objects. |

#### Overrides

[RetailForce.Common.Validation.ValidationBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateElement\(\)](#)

# Enum DiscountType

The type of the discount.

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum DiscountType
```

Remarks

The type of the discount can be a value or percentage.

Fields

| NAME      | DESCRIPTION                       |
|-----------|-----------------------------------|
| Allowance | Represents a value discount.      |
| Discount  | Represents a percentage discount. |

# Class Document

Represents a fiscal document.

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<DocumentValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<DocumentValidationError>

[DocumentValidationBase](#)

Document

## Inherited Members

[DocumentValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[DocumentValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate()

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateProperties(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>(System.Boolean)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class Document : DocumentValidationBase
```

## Constructors

### Document()

Constructor.

## Declaration

```
public Document()
```

### Document(FiscalResponse)

Constructor.

## Declaration

```
public Document(FiscalResponse response)
```

## Parameters

| TYPE                           | NAME     | DESCRIPTION                                                                                          |
|--------------------------------|----------|------------------------------------------------------------------------------------------------------|
| <a href="#">FiscalResponse</a> | response | A <a href="#">FiscalResponse</a> object representing the fiscal response for starting a transaction. |

## Exceptions

| TYPE                         | CONDITION                                                 |
|------------------------------|-----------------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>response</code> parameter is set to null. |

## Properties

### AllocationGroups

The allocation group for the document.

## Declaration

```
public List<string> AllocationGroups { get; set; }
```

## Property Value

| TYPE                                           | DESCRIPTION |
|------------------------------------------------|-------------|
| System.Collections.Generic.List<System.String> |             |

Remarks

Country specific implementation:

- 

### BookDate

The storage date of the document.

Declaration

```
[Required]
public DateTime BookDate { get; set; }
```

Property Value

| TYPE            | DESCRIPTION |
|-----------------|-------------|
| System.DateTime |             |

### CancellationDocument

True if this document cancels another document; otherwise false.

Declaration

```
public bool CancellationDocument { get; set; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

Remarks

If this property is set to true the document reference must be set (with [ReferenceType Cancellation](#)).

### CreateDate

The creation date of the document. Must be set when the document was initially created.

Declaration

```
[Required]
public DateTime CreateDate { get; set; }
```

Property Value

| TYPE            | DESCRIPTION |
|-----------------|-------------|
| System.DateTime |             |

### DocumentGuid

The identification of the document.

Declaration

```
public Guid DocumentGuid { get; set; }
```

Property Value

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Guid |             |

Remarks

Not required, if not set it will be automatically set by the fiscal system.

### DocumentId

The unique identification of the document.

Declaration

```
public string DocumentId { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

Remarks



Should be continuous and unique identification of all documents. required, max length = 40.

#### DocumentLevel

The validation level for this element.

Declaration

```
protected override DocumentLevel DocumentLevel { get; }
```

Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">DocumentLevel</a> |             |

Overrides

[DocumentValidationBase.DocumentLevel](#)

#### DocumentNumber

The number of the document (of the external system).

Declaration

```
public string DocumentNumber { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### DocumentReference

Reference to another document.

Declaration

```
public DocumentReference DocumentReference { get; set; }
```

Property Value

| TYPE                              | DESCRIPTION |
|-----------------------------------|-------------|
| <a href="#">DocumentReference</a> |             |

#### DocumentType

The type of the document.

Declaration

```
[Required]  
public DocumentType DocumentType { get; set; }
```

Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">DocumentType</a> |             |

#### DocumentTypeCaption

The name of the document type. Better description of the document type.

Declaration

```
public string DocumentTypeCaption { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

Remarks

For instance you can have to different types of document with the document type: [Receipt](#). With this property it is possible to store this information (text). This property can be also filled with language specific text (so "Beleg" for austria for example).

#### FiscalDocumentNumber

Declaration

```
public int FiscalDocumentNumber { get; set; }
```

Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

#### FiscalDocumentRevision

Declaration

```
public int FiscalDocumentRevision { get; set; }
```

Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

#### FiscalResponse

The fiscal response for this document when signed by fiscalisation unit.

Declaration

```
public FiscalResponse FiscalResponse { get; }
```

Property Value

| TYPE                           | DESCRIPTION |
|--------------------------------|-------------|
| <a href="#">FiscalResponse</a> |             |

#### IsTraining

True if this document is a training document; otherwise false.

Declaration

```
[Required]  
public bool IsTraining { get; set; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

#### Partner

The partner for the document. A partner can be for instance a customer, a supplier, etc.

Declaration

```
public Partner Partner { get; set; }
```

Property Value

| TYPE                    | DESCRIPTION |
|-------------------------|-------------|
| <a href="#">Partner</a> |             |

#### Payments

The payments for the document.

Declaration

```
public List<DocumentPayment> Payments { get; set; }
```

Property Value

| TYPE                                                               | DESCRIPTION |
|--------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">DocumentPayment</a> > |             |

Remarks

Depending on the document type it is necessary to have payments attached or not.

#### Positions

The positions for the document.

Declaration

```
[Required]
public List<DocumentPositionBase> Positions { get; set; }
```

#### Property Value

| TYPE                                                                    | DESCRIPTION |
|-------------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">DocumentPositionBase</a> > |             |

#### Remarks

Positions can be of type:

- [ItemPosition](#)
- [TextPosition](#)
- [SubItemPosition](#)

#### UniqueClientId

Represents the client for this document.

#### Declaration

```
[Required]
public Guid UniqueClientId { get; set; }
```

#### Property Value

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Guid |             |

#### Remarks

The client must be found in the current configuration and may not be [System.Guid.Empty](#).

#### User

The user for this transaction.

#### Declaration

```
public User User { get; set; }
```

#### Property Value

| TYPE                 | DESCRIPTION |
|----------------------|-------------|
| <a href="#">User</a> |             |

#### Methods

##### ValidateElement()

Validates the element and returns a list of [DocumentValidationError](#) objects.

#### Declaration

```
protected override List<DocumentValidationError> ValidateElement()
```

#### Returns

| TYPE                                                                       | DESCRIPTION                                                |
|----------------------------------------------------------------------------|------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | A list of <a href="#">DocumentValidationError</a> objects. |

#### Overrides

[RetailForce.Common.Validation.ValidationBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateElement\(\)](#)

#### Extension Methods

[DocumentExtension.GetItemPositions\(Document\)](#)

[DocumentExtension.GetTaxPositions\(Document\)](#)

# Class DocumentExtension

## Inheritance

System.Object

DocumentExtension

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public static class DocumentExtension
```

## Methods

### GetItemPositions(Document)

Returns all positions of type item [DocumentPositionType](#).

#### Declaration

```
public static List<DocumentPositionItem> GetItemPositions(this Document document)
```

#### Parameters

| TYPE                     | NAME     | DESCRIPTION |
|--------------------------|----------|-------------|
| <a href="#">Document</a> | document |             |

#### Returns

| TYPE                                                                    | DESCRIPTION |
|-------------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">DocumentPositionItem</a> > |             |

### GetTaxPositions(Document)

The summary of the tax positions for the document.

#### Declaration

```
public static List<DocumentTaxPosition> GetTaxPositions(this Document document)
```

#### Parameters

| TYPE                     | NAME     | DESCRIPTION |
|--------------------------|----------|-------------|
| <a href="#">Document</a> | document |             |

#### Returns

| TYPE                                                                   | DESCRIPTION |
|------------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">DocumentTaxPosition</a> > |             |

# Enum DocumentLevel

The level of the error in the document.

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum DocumentLevel
```

## Fields

| NAME     | DESCRIPTION                                               |
|----------|-----------------------------------------------------------|
| Header   | The validation error level is at document level header.   |
| Payment  | The validation error level is at document level payment.  |
| Position | The validation error level is at document level position. |

# Class DocumentPayment

Payment position of the document.

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<DocumentValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<DocumentValidationError>

DocumentValidationBase

DocumentPayment

## Inherited Members

DocumentValidationBase.VALIDATION\_ERROR\_SOURCE

DocumentValidationBase.AddPropertyError(ErrorLevel, String, String, String)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate()

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateProperties(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>(System.Boolean)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class DocumentPayment : DocumentValidationBase
```

## Properties

### Amount

The amount of the payment in the currency of the cash register (not a foreign amount).

## Declaration

```
[Required]  
public decimal Amount { get; set; }
```

## Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

### Caption

The caption of the payment.

## Declaration

```
public string Caption { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### CurrencyIsoCode

The iso code of the currency of the payment.

## Declaration

```
public string CurrencyIsoCode { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### DocumentLevel

The validation level for this element.

#### Declaration

```
protected override DocumentLevel DocumentLevel { get; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">DocumentLevel</a> |             |

#### Overrides

[DocumentValidationBase.DocumentLevel](#)

#### ForeignAmount

The foreign amount of the payment.

#### Declaration

```
public decimal ForeignAmount { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

#### ForeignAmountExchangeRate

The exchange rate to the cash register currency.

#### Declaration

```
public decimal ForeignAmountExchangeRate { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

#### IsCash

True if the given payment is cash (no e-cash, creditcard, etc.).

#### Declaration

```
public bool IsCash { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

#### UniqueReadablePaymentIdentifier

An unique id for the payment (used for instance for accounting interfaces, etc.).

#### Declaration

```
public string UniqueReadablePaymentIdentifier { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Methods

##### Revert()

Reverts the payment (turns all values negative)

#### Declaration

```
public void Revert()
```

##### ValidateElement()

Validates the element and returns a list of [DocumentValidationError](#) objects.

#### Declaration



protected override List<DocumentValidationError> ValidateElement()

Returns

| TYPE                                                                       | DESCRIPTION                                                |
|----------------------------------------------------------------------------|------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | A list of <a href="#">DocumentValidationError</a> objects. |

Overrides

RetailForce.Common.Validation.ValidationBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateElement()

# Class DocumentPositionBase

Base class for all positions.

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<[DocumentValidationError](#)>

RetailForce.Common.Validation.ValidationPropertyBase<[DocumentValidationError](#)>

[DocumentValidationBase](#)

DocumentPositionBase

[DocumentPositionText](#)

[DocumentPositionTotal](#)

[DocumentPositionVatPosition](#)

## Inherited Members

[DocumentValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[DocumentValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate()

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateProperties(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>(System.Boolean)

RetailForce.Common.Validation.ValidationBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateElement()

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
[JsonConverter(typeof(DocumentJsonConverter))]  
[Serializable]  
public abstract class DocumentPositionBase : DocumentValidationBase
```

## Properties

### CancellationPosition

True if this position cancels a position of another document; otherwise false.

#### Declaration

```
public bool CancellationPosition { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

#### Remarks

Please ensure to set [PositionReference](#) with type [Cancellation](#) if setting this property to true.

### DocumentLevel

The validation level for this element.

#### Declaration

```
protected override DocumentLevel DocumentLevel { get; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">DocumentLevel</a> |             |

#### Overrides

[DocumentValidationBase.DocumentLevel](#)

### PositionNumber

The number of the position in the position sequence.

#### Declaration

```
public int PositionNumber { get; set; }
```

Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

### PositionReference

Referene to another document position.

Declaration

```
public DocumentPositionReference PositionReference { get; set; }
```

Property Value

| TYPE                                      | DESCRIPTION |
|-------------------------------------------|-------------|
| <a href="#">DocumentPositionReference</a> |             |

Remarks

Must be set if the NetValue/GrossValue of the position is negative value.

Type

The type of the position. For possible types see [DocumentPositionType](#).

Declaration

```
public abstract DocumentPositionType Type { get; }
```

Property Value

| TYPE                                 | DESCRIPTION |
|--------------------------------------|-------------|
| <a href="#">DocumentPositionType</a> |             |

### Methods

Revert()

Reverts the position (turns all values negative)

Declaration

```
public abstract void Revert()
```

ToString()

Returns the string representation for this [DocumentPositionBase](#).

Declaration

```
public override string ToString()
```

Returns

| TYPE          | DESCRIPTION                                                               |
|---------------|---------------------------------------------------------------------------|
| System.String | The string representation for this <a href="#">DocumentPositionBase</a> . |

Overrides

System.Object.ToString()

# Class DocumentPositionBooking

Represents a booking position. A booking position can be used for booking values (instead of items).

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<DocumentValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<DocumentValidationError>

DocumentValidationBase

DocumentPositionBase

DocumentPositionVatPosition

DocumentPositionBooking

## Implements

IBusinessTransactionTypePosition

IVatPosition

## Inherited Members

DocumentPositionVatPosition.VatIdentification

DocumentPositionVatPosition.VatPercent

DocumentPositionVatPosition.NetValue

DocumentPositionVatPosition.GrossValue

DocumentPositionVatPosition.TaxValue

DocumentPositionVatPosition.AccountingIdentifier

DocumentPositionVatPosition.Revert()

DocumentPositionBase.PositionNumber

DocumentPositionBase.PositionReference

DocumentPositionBase.CancellationPosition

DocumentPositionBase.DocumentLevel

DocumentPositionBase.ToString()

DocumentValidationBase.VALIDATION\_ERROR\_SOURCE

DocumentValidationBase.AddPropertyError(ErrorLevel, String, String, String)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate()

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateProperties(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>(System.Boolean)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class DocumentPositionBooking : DocumentPositionVatPosition, IBusinessTransactionTypePosition, IVatPosition
```

## Remarks

You can use a booking for instance for a payin, payout, vouchers...

## Properties

### BusinessTransactionType

The type of this booking.

## Declaration

```
[Required]  
public BusinessTransactionType BusinessTransactionType { get; set; }
```

## Property Value

| TYPE                                    | DESCRIPTION |
|-----------------------------------------|-------------|
| <a href="#">BusinessTransactionType</a> |             |

## Caption

The caption of the booking.

## Declaration

```
[Required]  
public string Caption { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Identifier

An additional identifier for the booking.

Declaration

```
public string Identifier { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Type

The type of the position. For possible types see [DocumentPositionType](#).

Declaration

```
public override DocumentPositionType Type { get; }
```

Property Value

| TYPE                                 | DESCRIPTION |
|--------------------------------------|-------------|
| <a href="#">DocumentPositionType</a> |             |

Overrides

[DocumentPositionBase.Type](#)

### Methods

#### ValidateElement()

Declaration

```
protected override List<DocumentValidationError> ValidateElement()
```

Returns

| TYPE                                                                       | DESCRIPTION |
|----------------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > |             |

Overrides

[RetailForce.Common.Validation.ValidationBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateElement\(\)](#)

### Implements

[IBusinessTransactionTypePosition](#)

[IVatPosition](#)

### Extension Methods

[DocumentModelExtensions.GetBaseNetValue\(IBusinessTransactionTypePosition\)](#)

[DocumentModelExtensions.GetBaseGrossValue\(IBusinessTransactionTypePosition\)](#)

[DocumentModelExtensions.GetBaseTaxValue\(IBusinessTransactionTypePosition\)](#)

[DocumentModelExtensions.GetCaption\(IBusinessTransactionTypePosition\)](#)

# Class DocumentPositionItem

One position of one document. Document positions can have multiple types.

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<DocumentValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<DocumentValidationError>

DocumentValidationBase

DocumentPositionBase

DocumentPositionVatPosition

DocumentPositionItemBase

DocumentPositionItem

## Implements

IBusinessTransactionTypePosition

IVatPosition

System.ICloneable

## Inherited Members

DocumentPositionItemBase.Quantity

DocumentPositionItemBase.QuantityUnit

DocumentPositionItemBase.ItemId

DocumentPositionItemBase.BaseNetValue

DocumentPositionItemBase.BaseGrossValue

DocumentPositionItemBase.BaseTaxValue

DocumentPositionItemBase.GTIN

DocumentPositionItemBase.BusinessTransactionType

DocumentPositionVatPosition.VatIdentification

DocumentPositionVatPosition.VatPercent

DocumentPositionVatPosition.NetValue

DocumentPositionVatPosition.GrossValue

DocumentPositionVatPosition.TaxValue

DocumentPositionVatPosition.AccountingIdentifier

DocumentPositionBase.PositionNumber

DocumentPositionBase.PositionReference

DocumentPositionBase.CancellationPosition

DocumentPositionBase.DocumentLevel

DocumentValidationBase.VALIDATION\_ERROR\_SOURCE

DocumentValidationBase.AddPropertyError(ErrorLevel, String, String, String)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate()

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateProperties(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>(System.Boolean)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
[Serializable]
public class DocumentPositionItem : DocumentPositionItemBase, IBusinessTransactionTypePosition, IVatPosition, ICloneable
```

## Properties

### Discounts

A list of all discounts for this position.

### Declaration

```
public List<Discount> Discounts { get; set; }
```

### Property Value

| TYPE                                      | DESCRIPTION |
|-------------------------------------------|-------------|
| System.Collections.Generic.List<Discount> |             |

## Remarks

At document validation this list will be sorted automatically by [DiscountOrder](#). The [DiscountOrder](#) must start with 0 value and must have continuous order.

### ItemCaption

Represents the caption of the item.

Declaration

```
public override string ItemCaption { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

Overrides

[DocumentPositionItemBase.ItemCaption](#)

### ItemShortCaption

Represents a short caption for the item (e.g. used for printing purposes on receipt print).

Declaration

```
public string ItemShortCaption { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### SubItems

includes the sub items of an position if UseSubItemVatCalculation is true vat values have to be set otherwise the vat values from the position will be used and sub item vat values will be ignored

Declaration

```
public List<DocumentPositionSubItem> SubItems { get; set; }
```

Property Value

| TYPE                                                                       | DESCRIPTION |
|----------------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">DocumentPositionSubItem</a> > |             |

### Type

The type of the position. For possible types see [DocumentPositionType](#).

Declaration

```
public override DocumentPositionType Type { get; }
```

Property Value

| TYPE                                 | DESCRIPTION |
|--------------------------------------|-------------|
| <a href="#">DocumentPositionType</a> |             |

Overrides

[DocumentPositionBase.Type](#)

### UseSubItemVatCalculation

True if the vat calculation of the sub items is taken and the vat of the parent item position is ignored; otherwise false.

Declaration

```
public bool UseSubItemVatCalculation { get; set; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

### Methods

#### Clone()

Clones the position to a new object.

Declaration

```
public object Clone()
```

Returns

| TYPE          | DESCRIPTION                                                                                 |
|---------------|---------------------------------------------------------------------------------------------|
| System.Object | A <a href="#">DocumentPositionItem</a> object representing the copy of the actual position. |

**Revert()**

Reverts the position (turns all values negative)

Declaration

```
public override void Revert()
```

Overrides

[DocumentPositionItemBase.Revert\(\)](#)

**ToString()**

Returns the string representation for this [DocumentPositionItem](#).

Declaration

```
public override string ToString()
```

Returns

| TYPE          | DESCRIPTION                                                               |
|---------------|---------------------------------------------------------------------------|
| System.String | The string representation for this <a href="#">DocumentPositionItem</a> . |

Overrides

[DocumentPositionBase.ToString\(\)](#)

**ValidateElement()**

Validates the element and returns a list of [DocumentValidationError](#) objects.

Declaration

```
protected override List<DocumentValidationError> ValidateElement()
```

Returns

| TYPE                                                                       | DESCRIPTION                                                |
|----------------------------------------------------------------------------|------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | A list of <a href="#">DocumentValidationError</a> objects. |

Overrides

[RetailForce.Common.Validation.ValidationBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateElement\(\)](#)

Exceptions

| TYPE                  | CONDITION                                                          |
|-----------------------|--------------------------------------------------------------------|
| System.NotImplemented | Thrown if a certain <a href="#">DiscountType</a> is not supported. |

**Implements**

[IBusinessTransactionTypePosition](#)

[IVatPosition](#)

System.ICloneable

**Extension Methods**

[DocumentModelExtensions.GetBaseNetValue\(IBusinessTransactionTypePosition\)](#)

[DocumentModelExtensions.GetBaseGrossValue\(IBusinessTransactionTypePosition\)](#)

[DocumentModelExtensions.GetBaseTaxValue\(IBusinessTransactionTypePosition\)](#)

[DocumentModelExtensions.GetCaption\(IBusinessTransactionTypePosition\)](#)



# Class DocumentPositionItemBase

Base class for item and subitem.

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<[DocumentValidationError](#)>

RetailForce.Common.Validation.ValidationPropertyBase<[DocumentValidationError](#)>

[DocumentValidationBase](#)

[DocumentPositionBase](#)

[DocumentPositionVatPosition](#)

DocumentPositionItemBase

[DocumentPositionItem](#)

[DocumentPositionSubItem](#)

## Implements

[IBusinessTransactionTypePosition](#)

[IVatPosition](#)

## Inherited Members

[DocumentPositionVatPosition.VatIdentification](#)

[DocumentPositionVatPosition.VatPercent](#)

[DocumentPositionVatPosition.NetValue](#)

[DocumentPositionVatPosition.GrossValue](#)

[DocumentPositionVatPosition.TaxValue](#)

[DocumentPositionVatPosition.AccountingIdentifier](#)

[DocumentPositionBase.PositionNumber](#)

[DocumentPositionBase.PositionReference](#)

[DocumentPositionBase.CancellationPosition](#)

[DocumentPositionBase.Type](#)

[DocumentPositionBase.DocumentLevel](#)

[DocumentPositionBase.ToString\(\)](#)

[DocumentValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[DocumentValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateProperties\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateElement\(\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
[Serializable]
public abstract class DocumentPositionItemBase : DocumentPositionVatPosition, IBusinessTransactionTypePosition, IVatPosition
```

## Properties

### BaseGrossValue

The gross value (including tax) before discounts were calculated (without discounts and extra charges).

#### Declaration

```
public decimal BaseGrossValue { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

### BaseNetValue

The net value (excluding tax) before discounts were calculated (without discounts and extra charges).

#### Declaration

```
public decimal BaseNetValue { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

### BaseTaxValue

The tax value of the position before discounts were calculated (without discounts and extra charges).

Declaration

```
public decimal BaseTaxValue { get; set; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

### BusinessTransactionType

The type for this position. Default value is set to [Revenue](#).

Declaration

```
[Required]
public BusinessTransactionType BusinessTransactionType { get; set; }
```

Property Value

| TYPE                                    | DESCRIPTION |
|-----------------------------------------|-------------|
| <a href="#">BusinessTransactionType</a> |             |

### GTIN

The global trade identification number for the item.

Declaration

```
public string GTIN { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### ItemCaption

Represents the caption of the item.

Declaration

```
public virtual string ItemCaption { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### ItemId

The id of the item.

Declaration

```
[Required]
public string ItemId { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Quantity

The quantity of the position.

Declaration

```
[Required]
public decimal Quantity { get; set; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

### QuantityUnit

The quantity unit of the position.

Declaration

```
public QuantityUnit QuantityUnit { get; set; }
```

Property Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">QuantityUnit</a> |             |

### Methods

#### Revert()

Reverts the position (turns all values negative)

Declaration

```
public override void Revert()
```

Overrides

[DocumentPositionVatPosition.Revert\(\)](#)

#### Implements

[IBusinessTransactionTypePosition](#)

[IVatPosition](#)

#### Extension Methods

[DocumentModelExtensions.GetBaseNetValue\(](#)[IBusinessTransactionTypePosition](#)[\)](#)

[DocumentModelExtensions.GetBaseGrossValue\(](#)[IBusinessTransactionTypePosition](#)[\)](#)

[DocumentModelExtensions.GetBaseTaxValue\(](#)[IBusinessTransactionTypePosition](#)[\)](#)

[DocumentModelExtensions.GetCaption\(](#)[IBusinessTransactionTypePosition](#)[\)](#)

# Class DocumentPositionReference

A document position reference.

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<[DocumentValidationError](#)>

RetailForce.Common.Validation.ValidationPropertyBase<[DocumentValidationError](#)>

[DocumentValidationBase](#)

[DocumentReference](#)

DocumentPositionReference

## Inherited Members

[DocumentReference.ReferenceType](#)

[DocumentReference.StoreNumber](#)

[DocumentReference.TerminalNumber](#)

[DocumentReference.DocumentType](#)

[DocumentReference.DocumentNumber](#)

[DocumentReference.FiscalDocumentNumber](#)

[DocumentReference.DocumentGuid](#)

[DocumentReference.DocumentId](#)

[DocumentReference.DocumentBookDate](#)

[DocumentValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[DocumentValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateProperties\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>\(System.Boolean\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

[System.Object.ToString\(\)](#)

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
[Serializable]
public class DocumentPositionReference : DocumentReference
```

## Remarks

To use document position references it is not necessary to set document reference. When setting also document reference the document key must be equal to the document position reference.

## Properties

### DocumentLevel

#### Declaration

```
protected override DocumentLevel DocumentLevel { get; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">DocumentLevel</a> |             |

## Overrides

[DocumentReference.DocumentLevel](#)

### PositionNumber

The position number of the referenced document position.

#### Declaration

```
public int PositionNumber { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

## Methods

### ValidateElement()

#### Declaration

```
protected override List<DocumentValidationError> ValidateElement()
```

#### Returns

| TYPE                                                                       | DESCRIPTION |
|----------------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > |             |

#### Overrides

[DocumentReference.ValidateElement\(\)](#)

# Class DocumentPositionSubItem

Represents a sub item (like a set)

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<DocumentValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<DocumentValidationError>

[DocumentValidationBase](#)

[DocumentPositionBase](#)

[DocumentPositionVatPosition](#)

[DocumentPositionItemBase](#)

DocumentPositionSubItem

## Implements

[IBusinessTransactionTypePosition](#)

[IVatPosition](#)

## Inherited Members

[DocumentPositionItemBase.Quantity](#)

[DocumentPositionItemBase.QuantityUnit](#)

[DocumentPositionItemBase.ItemId](#)

[DocumentPositionItemBase.ItemCaption](#)

[DocumentPositionItemBase.BaseNetValue](#)

[DocumentPositionItemBase.BaseGrossValue](#)

[DocumentPositionItemBase.BaseTaxValue](#)

[DocumentPositionItemBase.GTIN](#)

[DocumentPositionItemBase.BusinessTransactionType](#)

[DocumentPositionItemBase.Revert\(\)](#)

[DocumentPositionVatPosition.VatIdentification](#)

[DocumentPositionVatPosition.VatPercent](#)

[DocumentPositionVatPosition.NetValue](#)

[DocumentPositionVatPosition.GrossValue](#)

[DocumentPositionVatPosition.TaxValue](#)

[DocumentPositionVatPosition.AccountingIdentifier](#)

[DocumentPositionBase.PositionNumber](#)

[DocumentPositionBase.PositionReference](#)

[DocumentPositionBase.CancellationPosition](#)

[DocumentPositionBase.DocumentLevel](#)

[DocumentPositionBase.ToString\(\)](#)

[DocumentValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[DocumentValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateProperties\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>\(System.Boolean\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class DocumentPositionSubItem : DocumentPositionItemBase, IBusinessTransactionTypePosition, IVatPosition
```

## Properties

### Type

The type of the position. For possible types see [DocumentPositionType](#).

## Declaration

```
public override DocumentPositionType Type { get; }
```

## Property Value

| TYPE                                 | DESCRIPTION |
|--------------------------------------|-------------|
| <a href="#">DocumentPositionType</a> |             |

## Overrides

## DocumentPositionBase.Type

### Methods

#### ValidateElement()

Validates the element and returns a list of [DocumentValidationError](#) objects.

#### Declaration

```
protected override List<DocumentValidationError> ValidateElement()
```

#### Returns

| TYPE                                                                       | DESCRIPTION                                                |
|----------------------------------------------------------------------------|------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | A list of <a href="#">DocumentValidationError</a> objects. |

#### Overrides

[RetailForce.Common.Validation.ValidationBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateElement\(\)](#)

#### Exceptions

| TYPE                  | CONDITION                                                          |
|-----------------------|--------------------------------------------------------------------|
| System.NotImplemented | Thrown if a certain <a href="#">DiscountType</a> is not supported. |

### Implements

[IBusinessTransactionTypePosition](#)

[IVatPosition](#)

### Extension Methods

[DocumentModelExtensions.GetBaseNetValue\(IBusinessTransactionTypePosition\)](#)

[DocumentModelExtensions.GetBaseGrossValue\(IBusinessTransactionTypePosition\)](#)

[DocumentModelExtensions.GetBaseTaxValue\(IBusinessTransactionTypePosition\)](#)

[DocumentModelExtensions.GetCaption\(IBusinessTransactionTypePosition\)](#)

# Class DocumentPositionText

Represents a text position.

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<[DocumentValidationError](#)>

RetailForce.Common.Validation.ValidationPropertyBase<[DocumentValidationError](#)>

[DocumentValidationBase](#)

[DocumentPositionBase](#)

DocumentPositionText

## Inherited Members

[DocumentPositionBase.PositionNumber](#)

[DocumentPositionBase.PositionReference](#)

[DocumentPositionBase.CancellationPosition](#)

[DocumentPositionBase.DocumentLevel](#)

[DocumentValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[DocumentValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate()

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateProperties(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>(System.Boolean)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class DocumentPositionText : DocumentPositionBase
```

## Properties

### Text

The text of the position.

### Declaration

```
public string Text { get; set; }
```

### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Type

The type of the position. For possible types see [DocumentPositionType](#).

### Declaration

```
public override DocumentPositionType Type { get; }
```

### Property Value

| TYPE                                 | DESCRIPTION |
|--------------------------------------|-------------|
| <a href="#">DocumentPositionType</a> |             |

## Overrides

[DocumentPositionBase.Type](#)

## Methods

### Revert()

Reverts the position (turns all values negative)

### Declaration

```
public override void Revert()
```

## Overrides



[DocumentPositionBase.Revert\(\)](#)

### ToString()

Returns the string representation for this [DocumentPositionText](#).

Declaration

```
public override string ToString()
```

Returns

| TYPE          | DESCRIPTION                                                               |
|---------------|---------------------------------------------------------------------------|
| System.String | The string representation for this <a href="#">DocumentPositionText</a> . |

Overrides

[DocumentPositionBase.ToString\(\)](#)

### ValidateElement()

Validates the element and returns a list of [DocumentValidationError](#) objects.

Declaration

```
protected override List<DocumentValidationError> ValidateElement()
```

Returns

| TYPE                                                                       | DESCRIPTION                                                |
|----------------------------------------------------------------------------|------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | A list of <a href="#">DocumentValidationError</a> objects. |

Overrides

[RetailForce.Common.Validation.ValidationBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateElement\(\)](#)

# Class DocumentPositionTotal

Total position. Must be the last position.

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<[DocumentValidationError](#)>

RetailForce.Common.Validation.ValidationPropertyBase<[DocumentValidationError](#)>

[DocumentValidationBase](#)

[DocumentPositionBase](#)

DocumentPositionTotal

## Inherited Members

[DocumentPositionBase.PositionNumber](#)

[DocumentPositionBase.PositionReference](#)

[DocumentPositionBase.CancellationPosition](#)

[DocumentPositionBase.ToString\(\)](#)

[DocumentValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[DocumentValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate()

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateProperties(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>(System.Boolean)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class DocumentPositionTotal : DocumentPositionBase
```

## Properties

### BaseValue

The value of the position without discounts.

#### Declaration

```
public decimal BaseValue { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

### Discounts

A list of all discounts for this position.

#### Declaration

```
public List<Discount> Discounts { get; set; }
```

#### Property Value

| TYPE                                                        | DESCRIPTION |
|-------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">Discount</a> > |             |

## Remarks

At document validation this list will be sorted automatically by [DiscountOrder](#). The [DiscountOrder](#) must start with 0 value and must have continuous order.

### DocumentLevel

The validation level for this element.

#### Declaration

```
protected override DocumentLevel DocumentLevel { get; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">DocumentLevel</a> |             |

Overrides

[DocumentPositionBase.DocumentLevel](#)

### Type

The type of the position. For possible types see [DocumentPositionType](#).

Declaration

```
public override DocumentPositionType Type { get; }
```

Property Value

| TYPE                                 | DESCRIPTION |
|--------------------------------------|-------------|
| <a href="#">DocumentPositionType</a> |             |

Overrides

[DocumentPositionBase.Type](#)

### Value

The value of the position including discounts.

Declaration

```
public decimal Value { get; set; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

### Methods

#### Revert()

Reverts the position (turns all values negative)

Declaration

```
public override void Revert()
```

Overrides

[DocumentPositionBase.Revert\(\)](#)

#### ValidateElement()

Declaration

```
protected override List<DocumentValidationError> ValidateElement()
```

Returns

| TYPE                                                                       | DESCRIPTION |
|----------------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > |             |

Overrides

[RetailForce.Common.Validation.ValidationBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateElement\(\)](#)

# Enum DocumentPositionType

Represents the possible types of a document position.

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: [RetailForce.Fiscalisation.dll](#)

Syntax

```
public enum DocumentPositionType
```

Remarks

ATTENTION: Add new type also to [ReadJson\(JsonReader, Type, Object, JsonSerializer\)](#) and also add a test at test unit [BasicDocumentValidation.ValidateDocumentSerializeDeSerializeTest!](#)

Fields

| NAME    | DESCRIPTION                                                                                                                 |
|---------|-----------------------------------------------------------------------------------------------------------------------------|
| Booking | Represents a booking position. A booking position can be used for booking values (instead of items).                        |
| Item    | Represents an item position.                                                                                                |
| SubItem |                                                                                                                             |
| Text    | Represents a text position.                                                                                                 |
| Total   | Represents a total position. A total position can be used for sending the total amount and discounts on the total document. |

# Class DocumentPositionVatPosition

Base class for all positions having vat.

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<DocumentValidationError>

RetailForce.Common.Validation.ValidationPropertyBase<DocumentValidationError>

[DocumentValidationBase](#)

[DocumentPositionBase](#)

DocumentPositionVatPosition

[DocumentPositionBooking](#)

[DocumentPositionItemBase](#)

## Implements

[IVatPosition](#)

## Inherited Members

[DocumentPositionBase.PositionNumber](#)

[DocumentPositionBase.PositionReference](#)

[DocumentPositionBase.CancellationPosition](#)

[DocumentPositionBase.Type](#)

[DocumentPositionBase.DocumentLevel](#)

[DocumentPositionBase.ToString\(\)](#)

[DocumentValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[DocumentValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate\(\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateProperties\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>\(System.Boolean\)](#)

[RetailForce.Common.Validation.ValidationBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateElement\(\)](#)

[System.Object.Equals\(System.Object\)](#)

[System.Object.Equals\(System.Object, System.Object\)](#)

[System.Object.GetHashCode\(\)](#)

[System.Object.GetType\(\)](#)

[System.Object.MemberwiseClone\(\)](#)

[System.Object.ReferenceEquals\(System.Object, System.Object\)](#)

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
[Serializable]
public abstract class DocumentPositionVatPosition : DocumentPositionBase, IVatPosition
```

## Properties

### AccountingIdentifier

An additional identifier for accounting purposes (accounting interface).

#### Declaration

```
public virtual string AccountingIdentifier { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### GrossValue

The gross value of the booking.

#### Declaration

```
[Required]
public virtual decimal GrossValue { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

### NetValue

The net value of the booking. If there is no Vat, or vat with 0 percent must be equal [GrossValue](#);

#### Declaration

```
[Required]  
public virtual decimal NetValue { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

#### TaxValue

The vat value of the booking.

#### Declaration

```
public virtual decimal TaxValue { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

#### VatIdentification

The value added tax for this position.

#### Declaration

```
public virtual int VatIdentification { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

#### VatPercent

The percentage of the vat

#### Declaration

```
public virtual decimal VatPercent { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

#### Methods

##### Revert()

Reverts the position (turns all values negative)

#### Declaration

```
public override void Revert()
```

#### Overrides

[DocumentPositionBase.Revert\(\)](#)

#### Implements

[IVatPosition](#)

# Class DocumentReference

A document reference used for referencing other documents (when canceling, linking, etc.).

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationBase<[DocumentValidationError](#)>

RetailForce.Common.Validation.ValidationPropertyBase<[DocumentValidationError](#)>

[DocumentValidationBase](#)

DocumentReference

[DocumentPositionReference](#)

## Inherited Members

[DocumentValidationBase.VALIDATION\\_ERROR\\_SOURCE](#)

[DocumentValidationBase.AddPropertyError\(ErrorLevel, String, String, String\)](#)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate()

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.Validate(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateProperties(System.Boolean)

RetailForce.Common.Validation.ValidationPropertyBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidatePropertiesAbstract<RequiredAttributeType>(System.Boolean)

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
[Serializable]
public class DocumentReference : DocumentValidationBase
```

## Properties

### DocumentBookDate

The storage date of the referenced document.

#### Declaration

```
public DateTime DocumentBookDate { get; set; }
```

#### Property Value

| TYPE            | DESCRIPTION |
|-----------------|-------------|
| System.DateTime |             |

### DocumentGuid

The document guid of the referenced document.

#### Declaration

```
public Guid DocumentGuid { get; set; }
```

#### Property Value

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Guid |             |

## Remarks

Either the [DocumentGuid](#) or the complete document key ([StoreNumber](#), [TerminalNumber](#), [DocumentType](#) and [DocumentNumber/FiscalDocumentNumber](#)) must be set.

### DocumentId

The unique identification of the document.

#### Declaration

```
public string DocumentId { get; set; }
```

#### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### Remarks

Should be continuous and unique identification of all documents. required, max length = 40.

#### DocumentLevel

##### Declaration

```
protected override DocumentLevel DocumentLevel { get; }
```

##### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">DocumentLevel</a> |             |

##### Overrides

[DocumentValidationBase.DocumentLevel](#)

#### DocumentNumber

The document number of the referenced document.

##### Declaration

```
public string DocumentNumber { get; set; }
```

##### Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

#### DocumentType

The type of the referenced document.

##### Declaration

```
public DocumentType? DocumentType { get; set; }
```

##### Property Value

| TYPE                                            | DESCRIPTION |
|-------------------------------------------------|-------------|
| System.Nullable< <a href="#">DocumentType</a> > |             |

#### FiscalDocumentNumber

The fiscal document number of the referenced document.

##### Declaration

```
public int FiscalDocumentNumber { get; set; }
```

##### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

#### Remarks

Either the [DocumentNumber](#) or the [FiscalDocumentNumber](#) must be set (when not using [DocumentGuid](#)).

#### ReferenceType

The type of the reference.

##### Declaration

```
public ReferenceType ReferenceType { get; set; }
```

##### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">ReferenceType</a> |             |

#### StoreNumber

The store number of the referenced document.

##### Declaration

```
public string StoreNumber { get; set; }
```



Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### TerminalNumber

The terminal number of the referenced document.

Declaration

```
public string TerminalNumber { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Methods

#### ValidateElement()

Declaration

```
protected override List<DocumentValidationError> ValidateElement()
```

Returns

| TYPE                                                                       | DESCRIPTION |
|----------------------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > |             |

Overrides

RetailForce.Common.Validation.ValidationBase<RetailForce.Fiscalisation.Model.Document.DocumentValidationError>.ValidateElement()

# Class DocumentTaxPosition

Represents a tax position (summary for all tax items on a document).

## Inheritance

System.Object

DocumentTaxPosition

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class DocumentTaxPosition
```

## Properties

### GrossAmount

The gross amount (including vat) for this vat position.

#### Declaration

```
public decimal GrossAmount { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

### NetAmount

The net amount (without vat) for this vat position.

#### Declaration

```
public decimal NetAmount { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

### VatAmount

The amount of the vat for this vat position.

#### Declaration

```
public decimal VatAmount { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

#### VatIdentification

The identification for this vat position.

#### Declaration

```
public int VatIdentification { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

#### VatPercent1

The percentage for this vat position.

#### Declaration

```
public decimal VatPercent1 { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

# Enum DocumentType

The type of the document.

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: [RetailForce.Fiscalisation.dll](#)

Syntax

```
public enum DocumentType
```

Remarks

Not every document type is used for every storage provider and fiscal interface.

You can find supported document types at

Fields

| NAME         | DESCRIPTION                           |
|--------------|---------------------------------------|
| DeliveryNote | Delivery note to a customer.          |
| EndOfDay     | End Of Day Receipt                    |
| Invoice      | Invoice to a customer.                |
| NullReceipt  | Null receipt to start fiscalisation.  |
| PayIn        | Pay in to the cash register system.   |
| PayOut       | Pay out for the cash register system. |
| Receipt      | Receipt of a cash register system.    |
| TableOrder   | Table order (Gastronomy).             |

Extension Methods

[DocumentTypeExtensions.In\(DocumentType\[\]\)](#)

# Class DocumentTypeExtensions

## Inheritance

System.Object

DocumentTypeExtensions

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public static class DocumentTypeExtensions
```

## Methods

In(DocumentType, DocumentType[])

### Declaration

```
public static bool In(this DocumentType documentType, params DocumentType[] parameters)
```

### Parameters

| TYPE                           | NAME         | DESCRIPTION |
|--------------------------------|--------------|-------------|
| <a href="#">DocumentType</a>   | documentType |             |
| <a href="#">DocumentType[]</a> | parameters   |             |

### Returns

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Boolean |             |

# Class DocumentValidationError

Represents a document validation error.

## Inheritance

System.Object

RetailForce.Common.Validation.ValidationError

DocumentValidationError

## Inherited Members

RetailForce.Common.Validation.ValidationError.ErrorLevel

RetailForce.Common.Validation.ValidationError.ErrorText

RetailForce.Common.Validation.ValidationError.ErrorSource

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class DocumentValidationError : ValidationError
```

## Constructors

DocumentValidationError(ErrorLevel, DocumentLevel, String, String)

Constructor.

## Declaration

```
public DocumentValidationError(ErrorLevel errorLevel, DocumentLevel level, string errorText, string errorSource = "")
```

## Parameters

| TYPE                                     | NAME        | DESCRIPTION                                                                                                                                                |
|------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RetailForce.Common.Validation.ErrorLevel | errorLevel  | The level of the error (errortype). Possible values are error, warning and information. See RetailForce.Common.Validation.ErrorLevel for more information. |
| <a href="#">DocumentLevel</a>            | level       | The level of the error in the document. Possible values are header, position, payment. See <a href="#">level</a> for more information.                     |
| System.String                            | errorText   | The description of the error.                                                                                                                              |
| System.String                            | errorSource | The source module of the error. If omitted "Document" is assumed.                                                                                          |

## Exceptions

| TYPE                         | CONDITION                                                        |
|------------------------------|------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if <code>errorText</code> is set to null or empty string. |

## Properties

### Level

The level of the error in the document. Possible values are header, position, payment.

#### Declaration

```
public DocumentLevel Level { get; }
```

#### Property Value

| TYPE                          | DESCRIPTION |
|-------------------------------|-------------|
| <a href="#">DocumentLevel</a> |             |

## Methods

### ToString()

Returns the string representation for this [DocumentValidationError](#).

#### Declaration

```
public override string ToString()
```

#### Returns

| TYPE          | DESCRIPTION                                                                  |
|---------------|------------------------------------------------------------------------------|
| System.String | The string representation for this <a href="#">DocumentValidationError</a> . |

#### Overrides

[RetailForce.Common.Validation.ValidationError.ToString\(\)](#)

# Interface IBusinessTransactionTypePosition

Interface for all positions containing a business transaction type.

Inherited Members

[IVatPosition.VatIdentification](#)

[IVatPosition.VatPercent](#)

[IVatPosition.NetValue](#)

[IVatPosition.GrossValue](#)

[IVatPosition.TaxValue](#)

[IVatPosition.AccountingIdentifier](#)

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: [RetailForce.Fiscalisation.dll](#)

Syntax

```
public interface IBusinessTransactionTypePosition : IVatPosition
```

## Properties

### BusinessTransactionType

The business transaction type for this position.

Declaration

```
BusinessTransactionType BusinessTransactionType { get; set; }
```

Property Value

| TYPE                                    | DESCRIPTION |
|-----------------------------------------|-------------|
| <a href="#">BusinessTransactionType</a> |             |

## Extension Methods

[DocumentModelExtensions.GetBaseNetValue\(IBusinessTransactionTypePosition\)](#)

[DocumentModelExtensions.GetBaseGrossValue\(IBusinessTransactionTypePosition\)](#)

[DocumentModelExtensions.GetBaseTaxValue\(IBusinessTransactionTypePosition\)](#)

[DocumentModelExtensions.GetCaption\(IBusinessTransactionTypePosition\)](#)



# Interface IVatPosition

Interface for all positions having vat.

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public interface IVatPosition
```

## Properties

### AccountingIdentifier

An additional identifier for accounting purposes (accounting interface).

Declaration

```
string AccountingIdentifier { get; set; }
```

Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### GrossValue

The gross value of the booking.

Declaration

```
decimal GrossValue { get; set; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

### NetValue

The net value of the booking. If there is no Vat, or vat with 0 percent must be equal [GrossValue](#);

Declaration

```
decimal NetValue { get; set; }
```

Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

### TaxValue

The vat value of the booking.

Declaration

```
decimal TaxValue { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

#### VatIdentification

The value added tax for this position.

#### Declaration

```
int VatIdentification { get; set; }
```

#### Property Value

| TYPE         | DESCRIPTION |
|--------------|-------------|
| System.Int32 |             |

#### VatPercent

The percentage of the vat

#### Declaration

```
decimal VatPercent { get; set; }
```

#### Property Value

| TYPE           | DESCRIPTION |
|----------------|-------------|
| System.Decimal |             |

# Class QuantityUnit

Represents a quantity unit of a position.

## Inheritance

System.Object

QuantityUnit

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
[Serializable]  
public class QuantityUnit
```

## Properties

### Id

The id of the quantity unit.

## Declaration

```
public string Id { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

# Enum ReferenceType

The reference type of the document (position) reference.

Namespace: [RetailForce.Fiscalisation.Model.Document](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public enum ReferenceType
```

## Fields

| NAME         | DESCRIPTION                                                 |
|--------------|-------------------------------------------------------------|
| Cancellation | Represents a type to a voided document / document position. |

# Namespace RetailForce.Fiscalisation.Provider

## Classes

### [CloudStorageProvider](#)

Represents a storage provider to the retail experts cloud system.

### [FileAlreadyExistsException](#)

Represents an exception if a file already exists on the given path.

### [FileStorageProvider](#)

Represents storage of documents to files in given directory.

### [PaymentStockInfo](#)

Content of the client cash stock file.

### [PaymentStockProvider](#)

Provider to store stock information for payments.

## Interfaces

### [IStorageProvider](#)

Represents a storage provider for digital documents.

# Class CloudStorageProvider

Represents a storage provider to the retail experts cloud system.

## Inheritance

System.Object

CloudStorageProvider

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Provider](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class CloudStorageProvider
```

# Class FileAlreadyExistsException

Represents an exception if a file already exists on the given path.

## Inheritance

System.Object  
System.Exception  
FileAlreadyExistsException

## Implements

System.Runtime.Serialization.ISerializable

## Inherited Members

System.Exception.GetBaseException()  
System.Exception.GetObjectData(System.Runtime.Serialization.SerializationInfo, System.Runtime.Serialization.StreamingContext)  
System.Exception.GetType()  
System.Exception.ToString()  
System.Exception.Data  
System.Exception.HelpLink  
System.Exception.HResult  
System.Exception.InnerException  
System.Exception.Source  
System.Exception.StackTrace  
System.Exception.TargetSite  
System.Exception.SerializeObjectState  
System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [RetailForce.Fiscalisation.Provider](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class FileAlreadyExistsException : Exception, ISerializable
```

## Constructors

### FileAlreadyExistsException(String)

Constructor.

## Declaration

```
public FileAlreadyExistsException(string filename)
```

## Parameters

| TYPE          | NAME     | DESCRIPTION                                            |
|---------------|----------|--------------------------------------------------------|
| System.String | filename | The filename of the file which already exists on disk. |

### FileAlreadyExistsException(String, String)

Constructor.

## Declaration

```
public FileAlreadyExistsException(string filename, string message)
```

## Parameters

| TYPE          | NAME     | DESCRIPTION                                            |
|---------------|----------|--------------------------------------------------------|
| System.String | filename | The filename of the file which already exists on disk. |
| System.String | message  | The message for this exception.                        |

## Properties

### Filename

The filename of the file which already exists on disk.

## Declaration

```
public string Filename { get; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### Message

The message for this exception.

## Declaration

```
public string Message { get; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Implements

System.Runtime.Serialization.ISerializable



# Class FileStorageProvider

Represents storage of documents to files in given directory.

## Inheritance

System.Object

RetailForce.Common.Logging.LoggingBase

FileStorageProvider

## Implements

[IStorageProvider](#)

[IDocumentInterface](#)

## Inherited Members

RetailForce.Common.Logging.LoggingBase.\_logger

RetailForce.Common.Logging.LoggingBase.\_logSource

RetailForce.Common.Logging.LoggingBase.LogCritical(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogCritical(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogError(System.Exception, System.String, System.Object[])

RetailForce.Common.Logging.LoggingBase.LogWarning(System.String, System.Object[])

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Provider](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class FileStorageProvider : LoggingBase, IStorageProvider, IDocumentInterface
```

## Constructors

FileStorageProvider(ILogger, String)

Constructor.

## Declaration

```
public FileStorageProvider(ILogger logger, string basePath)
```

## Parameters

| TYPE                                 | NAME     | DESCRIPTION                                                           |
|--------------------------------------|----------|-----------------------------------------------------------------------|
| Microsoft.Extensions.Logging.ILogger | logger   | The logger for this class.                                            |
| System.String                        | basePath | The path where the files should be stored. Must not be null or empty. |

## Exceptions

| TYPE                                 | CONDITION                                                                   |
|--------------------------------------|-----------------------------------------------------------------------------|
| System.ArgumentNullException         | Thrown if <code>basePath</code> was set to null or empty string.            |
| System.IO.DirectoryNotFoundException | Thrown if directory <code>basePath</code> is not found or not a valid path. |

## Properties

### ProcessingDocumentTypes

Returns all process document types by this provider.

#### Declaration

```
public IReadOnlyList<DocumentType> ProcessingDocumentTypes { get; }
```

#### Property Value

| TYPE                                                                     | DESCRIPTION |
|--------------------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">DocumentType</a> > |             |

### SupportedDocumentTypes

Returns all supported document types by this provider.

#### Declaration

```
public IReadOnlyList<DocumentType> SupportedDocumentTypes { get; }
```

#### Property Value

| TYPE                                                                     | DESCRIPTION |
|--------------------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">DocumentType</a> > |             |

## Methods

### BeginTransaction(Nullable<Guid>)

Starts a new transaction on this interface.

#### Declaration

```
public void BeginTransaction(Guid? transactionId)
```

#### Parameters

| TYPE                         | NAME          | DESCRIPTION                                                                                             |
|------------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| System.Nullable<System.Guid> | transactionId | The id for the new transaction. The transactionId is the DocumentGuid of the <a href="#">Document</a> . |

## Exceptions

| TYPE                             | CONDITION                                                                     |
|----------------------------------|-------------------------------------------------------------------------------|
| System.ArgumentNullException     | Thrown if <code>transactionId</code> is set to null or System.Guid.Empty.     |
| System.InvalidOperationException | Thrown if a transaction is already running and this function is called again. |

### CommitTransaction(Nullable<Guid>)

Commits the transaction on this interface.

Declaration

```
public void CommitTransaction(Guid? transactionId)
```

Parameters

| TYPE                         | NAME          | DESCRIPTION                                                                                                 |
|------------------------------|---------------|-------------------------------------------------------------------------------------------------------------|
| System.Nullable<System.Guid> | transactionId | The id for the current transaction. The transactionId is the DocumentGuid of the <a href="#">Document</a> . |

Exceptions

| TYPE                             | CONDITION                                                                       |
|----------------------------------|---------------------------------------------------------------------------------|
| System.ArgumentNullException     | Thrown if <code>transactionId</code> is set to null or System.Guid.Empty.       |
| System.InvalidOperationException | Thrown if this function is called and no transaction was started before.        |
| System.ArgumentException         | Thrown if the <code>transactionId</code> is not the actual running transaction. |

### RollbackTransaction(Nullable<Guid>)

Roll the transaction on this interface back.

Declaration

```
public void RollbackTransaction(Guid? transactionId)
```

Parameters

| TYPE                         | NAME          | DESCRIPTION                                                                                                 |
|------------------------------|---------------|-------------------------------------------------------------------------------------------------------------|
| System.Nullable<System.Guid> | transactionId | The id for the current transaction. The transactionId is the DocumentGuid of the <a href="#">Document</a> . |

Exceptions

| TYPE                             | CONDITION                                                                       |
|----------------------------------|---------------------------------------------------------------------------------|
| System.ArgumentNullException     | Thrown if <code>transactionId</code> is set to null or System.Guid.Empty.       |
| System.InvalidOperationException | Thrown if this function is called and no transaction was started before.        |
| System.ArgumentException         | Thrown if the <code>transactionId</code> is not the actual running transaction. |

### StoreDocument(Nullable<Guid>, Document)

Stores a document with this provider.

Declaration

```
public void StoreDocument(Guid? transactionId, Document document)
```

Parameters

| TYPE                         | NAME          | DESCRIPTION                                                                                                 |
|------------------------------|---------------|-------------------------------------------------------------------------------------------------------------|
| System.Nullable<System.Guid> | transactionId | The id for the current transaction. The transactionId is the DocumentGuid of the <a href="#">Document</a> . |
| <a href="#">Document</a>     | document      | The document to store.                                                                                      |

Exceptions

| TYPE                                       | CONDITION                                                                                     |
|--------------------------------------------|-----------------------------------------------------------------------------------------------|
| System.ArgumentNullException               | Thrown if <code>document</code> or <code>transactionId</code> is set to null (or Guid.Empty). |
| System.IO.InvalidDataException             | Thrown if the serialized string is null or empty.                                             |
| System.InvalidOperationException           | Thrown if the function was called and no transaction was started in front.                    |
| <a href="#">FileAlreadyExistsException</a> | Thrown if the work file for this document already exists.                                     |
| System.ArgumentException                   | Thrown if the <code>transactionId</code> is not the actual running transaction.               |

### ValidateDocument(Document)

Validates a document and returns (if appropriate) a list of document validation errors.

Declaration

```
public List<DocumentValidationError> ValidateDocument(Document document)
```

#### Parameters

| TYPE                     | NAME     | DESCRIPTION               |
|--------------------------|----------|---------------------------|
| <a href="#">Document</a> | document | The document to validate. |

#### Returns

| TYPE                                                                       | DESCRIPTION                             |
|----------------------------------------------------------------------------|-----------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | The list of document validation errors. |

#### Remarks

This function will always return an empty list because the [FileStorageProvider](#) will always store anything of the model.

#### Implements

[IStorageProvider](#)

[IDocumentInterface](#)

# Interface IStorageProvider

Represents a storage provider for digital documents.

Inherited Members

[IDocumentInterface.SupportedDocumentTypes](#)

[IDocumentInterface.ProcessingDocumentTypes](#)

[IDocumentInterface.ValidateDocument\(Document\)](#)

Namespace: [RetailForce.Fiscalisation.Provider](#)

Assembly: RetailForce.Fiscalisation.dll

Syntax

```
public interface IStorageProvider : IDocumentInterface
```

## Methods

### BeginTransaction(Nullable<Guid>)

Starts a new transaction on this interface.

Declaration

```
void BeginTransaction(Guid? transactionId)
```

Parameters

| TYPE                         | NAME          | DESCRIPTION                                                                                             |
|------------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| System.Nullable<System.Guid> | transactionId | The id for the new transaction. The transactionId is the DocumentGuid of the <a href="#">Document</a> . |

### CommitTransaction(Nullable<Guid>)

Commits the transaction on this interface.

Declaration

```
void CommitTransaction(Guid? transactionId)
```

Parameters

| TYPE                         | NAME          | DESCRIPTION                                                                                             |
|------------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| System.Nullable<System.Guid> | transactionId | The id for the new transaction. The transactionId is the DocumentGuid of the <a href="#">Document</a> . |

### RollbackTransaction(Nullable<Guid>)

Roll the transaction on this interface back.

Declaration

```
void RollbackTransaction(Guid? transactionId)
```

Parameters

| TYPE                         | NAME          | DESCRIPTION                                                                                             |
|------------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| System.Nullable<System.Guid> | transactionId | The id for the new transaction. The transactionId is the DocumentGuid of the <a href="#">Document</a> . |

### StoreDocument(Nullable<Guid>, Document)

Stores a document with this provider.

Declaration

```
void StoreDocument(Guid? transactionId, Document document)
```

Parameters

| TYPE                         | NAME          | DESCRIPTION                                                                                             |
|------------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| System.Nullable<System.Guid> | transactionId | The id for the new transaction. The transactionId is the DocumentGuid of the <a href="#">Document</a> . |
| <a href="#">Document</a>     | document      | The document to store.                                                                                  |

# Class PaymentStockInfo

Content of the client cash stock file.

## Inheritance

System.Object

PaymentStockInfo

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Provider](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public sealed class PaymentStockInfo
```

## Properties

### EditInfo

Edit information for the file.

## Declaration

```
[JsonRequired]  
public string EditInfo { get; set; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Hash

The hash of the payment collection ([Payments](#)) and the [EditInfo](#) for security reasons.

## Declaration

```
[JsonProperty("Hash")]  
[JsonRequired]  
public string Hash { get; }
```

## Property Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

## Payments

List of payment records containing the stock of each payment.



## Declaration

```
[JsonRequired]  
public List<Payment> Payments { get; set; }
```

## Property Value

| TYPE                                     | DESCRIPTION |
|------------------------------------------|-------------|
| System.Collections.Generic.List<Payment> |             |

## UniqueClientIdentifier

The unique client id of the corresponding [FiscalClient](#)

## Declaration

```
[JsonRequired]  
public Guid UniqueClientIdentifier { get; set; }
```

## Property Value

| TYPE        | DESCRIPTION |
|-------------|-------------|
| System.Guid |             |

## Methods

### CheckHashCode()

Check whether the stored hashcode ([Hash](#)) is correct with the given values.

## Declaration

```
public bool CheckHashCode()
```

## Returns

| TYPE           | DESCRIPTION                                   |
|----------------|-----------------------------------------------|
| System.Boolean | True if the hash is correct; otherwise false. |

# Class PaymentStockProvider

Provider to store stock information for payments.

## Inheritance

System.Object

PaymentStockProvider

## Implements

[IStorageProvider](#)

[IDocumentInterface](#)

System.IDisposable

## Inherited Members

System.Object.Equals(System.Object)

System.Object.Equals(System.Object, System.Object)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Provider](#)

Assembly: RetailForce.Fiscalisation.dll

## Syntax

```
public class PaymentStockProvider : IStorageProvider, IDocumentInterface, IDisposable
```

## Remarks

This provider is used to use simple closing methods.

## Constructors

PaymentStockProvider(FiscalClient, String)

Constructor.

## Declaration

```
public PaymentStockProvider(FiscalClient fiscalClient, string storageRootPath = "")
```

## Parameters

| TYPE                         | NAME            | DESCRIPTION                                                                                                                      |
|------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">FiscalClient</a> | fiscalClient    | The fiscal client for this payment stock provider.                                                                               |
| System.String                | storageRootPath | The root path for the payment stock provider files. If empty <a href="#">GetStaticStandardLocalClientDataPath(Guid)</a> is used. |

## Exceptions

| TYPE | CONDITION |
|------|-----------|
|------|-----------|

| TYPE                         | CONDITION                                                     |
|------------------------------|---------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>fiscalClient</code> is set to null. |

## Fields

### `_fiscalClient`

Declaration

```
protected FiscalClient _fiscalClient
```

Field Value

| TYPE                         | DESCRIPTION |
|------------------------------|-------------|
| <a href="#">FiscalClient</a> |             |

### `_openTransactions`

Declaration

```
protected List<Guid> _openTransactions
```

Field Value

| TYPE                                         | DESCRIPTION |
|----------------------------------------------|-------------|
| System.Collections.Generic.List<System.Guid> |             |

### `_storageRootPath`

Declaration

```
protected string _storageRootPath
```

Field Value

| TYPE          | DESCRIPTION |
|---------------|-------------|
| System.String |             |

### `_supportedDocumentTypes`

Declaration

```
protected List<DocumentType> _supportedDocumentTypes
```

Field Value

| TYPE                                                            | DESCRIPTION |
|-----------------------------------------------------------------|-------------|
| System.Collections.Generic.List< <a href="#">DocumentType</a> > |             |

## Properties

### `ProcessingDocumentTypes`

Returns all document types which are processed by this interface.

## Declaration

```
public IReadOnlyList<DocumentType> ProcessingDocumentTypes { get; }
```

## Property Value

| TYPE                                                                     | DESCRIPTION |
|--------------------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">DocumentType</a> > |             |

## SupportedDocumentTypes

Returns all supported document types by this fiscal module.

## Declaration

```
public IReadOnlyList<DocumentType> SupportedDocumentTypes { get; }
```

## Property Value

| TYPE                                                                     | DESCRIPTION |
|--------------------------------------------------------------------------|-------------|
| System.Collections.Generic.IReadOnlyList< <a href="#">DocumentType</a> > |             |

## Methods

### BeginTransaction(Nullable<Guid>)

Starts a new transaction on this interface.

## Declaration

```
public void BeginTransaction(Guid? transactionId)
```

## Parameters

| TYPE                         | NAME          | DESCRIPTION                                                                                             |
|------------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| System.Nullable<System.Guid> | transactionId | The id for the new transaction. The transactionId is the DocumentGuid of the <a href="#">Document</a> . |

## Exceptions

| TYPE                                     | CONDITION                                                                           |
|------------------------------------------|-------------------------------------------------------------------------------------|
| System.Transactions.TransactionException | Thrown if a new new transaction is started and an old one is not finished.          |
| System.ArgumentNullException             | Thrown if parameter <code>transactionId</code> is set to null or System.Guid.Empty. |

### CommitTransaction(Nullable<Guid>)

Commits the transaction on this interface.

## Declaration

```
public void CommitTransaction(Guid? transactionId)
```

#### Parameters

| TYPE                         | NAME          | DESCRIPTION                                                                                             |
|------------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| System.Nullable<System.Guid> | transactionId | The id for the new transaction. The transactionId is the DocumentGuid of the <a href="#">Document</a> . |

#### Exceptions

| TYPE                                            | CONDITION                                                                           |
|-------------------------------------------------|-------------------------------------------------------------------------------------|
| System.Transactions.TransactionInDoubtException | Thrown if no transaction file exists (transaction was not started).                 |
| System.ArgumentNullException                    | Thrown if parameter <code>transactionId</code> is set to null or System.Guid.Empty. |

### Dispose()

#### Declaration

```
public void Dispose()
```

### GetActualStock(Guid)

Returns the actual stock for the requested client.

#### Declaration

```
public List<Payment> GetActualStock(Guid uniqueClientId)
```

#### Parameters

| TYPE        | NAME           | DESCRIPTION                                                                                                 |
|-------------|----------------|-------------------------------------------------------------------------------------------------------------|
| System.Guid | uniqueClientId | The unique client id ( <a href="#">UniqueClientId</a> ) of the client where the payment stock is requested. |

#### Returns

| TYPE                                                       | DESCRIPTION                                                                      |
|------------------------------------------------------------|----------------------------------------------------------------------------------|
| System.Collections.Generic.List< <a href="#">Payment</a> > | The actual stock for the requested client; Null if no stock is stored until now. |

#### Exceptions

| TYPE                         | CONDITION                                                       |
|------------------------------|-----------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>uniqueClientId</code> is set to null. |

### ReadClientStockfile(Guid, Boolean)

Reads the stock file of the given client and returns the payment stock info.

#### Declaration

```
protected PaymentStockInfo ReadClientStockfile(Guid uniqueClientId, bool isTransaction)
```

#### Parameters

| TYPE           | NAME           | DESCRIPTION                                                           |
|----------------|----------------|-----------------------------------------------------------------------|
| System.Guid    | uniqueClientId | The client id for the file where the payment stock info is requested. |
| System.Boolean | isTransaction  | True if the transaction file has to be read; otherwise false.         |

#### Returns

| TYPE                             | DESCRIPTION                         |
|----------------------------------|-------------------------------------|
| <a href="#">PaymentStockInfo</a> | The payment stock info of the file. |

#### Remarks

[PaymentStockInfo](#) is secured through sha256 hash. When reading file this hash is checked and if failed a `System.FormatException` is raised.

#### Exceptions

| TYPE                   | CONDITION                                             |
|------------------------|-------------------------------------------------------|
| System.FormatException | Thrown if the hash check when reading the file fails. |

### ReadStockfile(Boolean)

Reads the stock file and returns the payment stock info.

#### Declaration

```
protected PaymentStockInfo ReadStockfile(bool isTransaction)
```

#### Parameters

| TYPE           | NAME          | DESCRIPTION                                                   |
|----------------|---------------|---------------------------------------------------------------|
| System.Boolean | isTransaction | True if the transaction file has to be read; otherwise false. |

#### Returns

| TYPE                             | DESCRIPTION                         |
|----------------------------------|-------------------------------------|
| <a href="#">PaymentStockInfo</a> | The payment stock info of the file. |

#### Remarks

[PaymentStockInfo](#) is secured through sha256 hash. When reading file this hash is checked and if failed a `System.FormatException` is raised.

## Exceptions

| TYPE                   | CONDITION                                             |
|------------------------|-------------------------------------------------------|
| System.FormatException | Thrown if the hash check when reading the file fails. |

## RollbackTransaction(Nullable<Guid>)

Roll the transaction on this interface back.

### Declaration

```
public void RollbackTransaction(Guid? transactionId)
```

### Parameters

| TYPE                         | NAME          | DESCRIPTION                                                                                             |
|------------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| System.Nullable<System.Guid> | transactionId | The id for the new transaction. The transactionId is the DocumentGuid of the <a href="#">Document</a> . |

## Exceptions

| TYPE                         | CONDITION                                                                           |
|------------------------------|-------------------------------------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>transactionId</code> is set to null or System.Guid.Empty. |

## StoreDocument(Nullable<Guid>, Document)

Stores a document with this provider.

### Declaration

```
public void StoreDocument(Guid? transactionId, Document document)
```

### Parameters

| TYPE                         | NAME          | DESCRIPTION                                                                                             |
|------------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| System.Nullable<System.Guid> | transactionId | The id for the new transaction. The transactionId is the DocumentGuid of the <a href="#">Document</a> . |
| <a href="#">Document</a>     | document      | The document to store.                                                                                  |

## Exceptions

| TYPE                            | CONDITION                                                                                          |
|---------------------------------|----------------------------------------------------------------------------------------------------|
| System.Data.ConstraintException | Thrown if the currency code of an existing payment differs from an existing payment in stock file. |

| TYPE                           | CONDITION                                                                                                                                |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| System.IO.InvalidDataException | Thrown if the loaded data of the stock file contains another client id.                                                                  |
| System.ArgumentNullException   | Thrown if parameter <code>transactionId</code> is set to null or System.Guid.Empty or if parameter <code>document</code> is set to null. |

### ValidateDocument(Document)

Validates a document and returns (if appropriate) a list of document validation errors.

Declaration

```
public List<DocumentValidationError> ValidateDocument(Document document)
```

Parameters

| TYPE                     | NAME     | DESCRIPTION               |
|--------------------------|----------|---------------------------|
| <a href="#">Document</a> | document | The document to validate. |

Returns

| TYPE                                                                       | DESCRIPTION                             |
|----------------------------------------------------------------------------|-----------------------------------------|
| System.Collections.Generic.List< <a href="#">DocumentValidationError</a> > | The list of document validation errors. |

Exceptions

| TYPE                         | CONDITION                                                 |
|------------------------------|-----------------------------------------------------------|
| System.ArgumentNullException | Thrown if parameter <code>document</code> is set to null. |

### WriteStockfile(PaymentStockInfo, Boolean)

Write the given payment stock info to the stock file.

Declaration

```
protected void WriteStockfile(PaymentStockInfo paymentStockInfo, bool isTransaction)
```

Parameters

| TYPE                             | NAME             | DESCRIPTION                                                      |
|----------------------------------|------------------|------------------------------------------------------------------|
| <a href="#">PaymentStockInfo</a> | paymentStockInfo | The <a href="#">PaymentStockInfo</a> to write to the file.       |
| System.Boolean                   | isTransaction    | True if the transaction file should be written; otherwise false. |

Implements



IStorageProvider

IDocumentInterface

System.IDisposable

# Namespace RetailForce.Fiscalisation.Swagger

Classes

[SwaggerExcludeAttribute](#)

# Class SwaggerExcludeAttribute

## Inheritance

System.Object

System.Attribute

SwaggerExcludeAttribute

## Inherited Members

System.Attribute.Equals(System.Object)

System.Attribute.GetCustomAttribute(System.Reflection.Assembly, System.Type)

System.Attribute.GetCustomAttribute(System.Reflection.Assembly, System.Type, System.Boolean)

System.Attribute.GetCustomAttribute(System.Reflection.MemberInfo, System.Type)

System.Attribute.GetCustomAttribute(System.Reflection.MemberInfo, System.Type, System.Boolean)

System.Attribute.GetCustomAttribute(System.Reflection.Module, System.Type)

System.Attribute.GetCustomAttribute(System.Reflection.Module, System.Type, System.Boolean)

System.Attribute.GetCustomAttribute(System.Reflection.ParameterInfo, System.Type)

System.Attribute.GetCustomAttribute(System.Reflection.ParameterInfo, System.Type, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.Assembly)

System.Attribute.GetCustomAttributes(System.Reflection.Assembly, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.Assembly, System.Type)

System.Attribute.GetCustomAttributes(System.Reflection.Assembly, System.Type, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.MemberInfo)

System.Attribute.GetCustomAttributes(System.Reflection.MemberInfo, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.MemberInfo, System.Type)

System.Attribute.GetCustomAttributes(System.Reflection.MemberInfo, System.Type, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.Module)

System.Attribute.GetCustomAttributes(System.Reflection.Module, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.Module, System.Type)

System.Attribute.GetCustomAttributes(System.Reflection.Module, System.Type, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.ParameterInfo)

System.Attribute.GetCustomAttributes(System.Reflection.ParameterInfo, System.Boolean)

System.Attribute.GetCustomAttributes(System.Reflection.ParameterInfo, System.Type)

System.Attribute.GetCustomAttributes(System.Reflection.ParameterInfo, System.Type, System.Boolean)

System.Attribute.GetHashCode()

System.Attribute.IsDefaultAttribute()

System.Attribute.IsDefined(System.Reflection.Assembly, System.Type)

System.Attribute.IsDefined(System.Reflection.Assembly, System.Type, System.Boolean)

System.Attribute.IsDefined(System.Reflection.MemberInfo, System.Type)

System.Attribute.IsDefined(System.Reflection.MemberInfo, System.Type, System.Boolean)

System.Attribute.IsDefined(System.Reflection.Module, System.Type)

System.Attribute.IsDefined(System.Reflection.Module, System.Type, System.Boolean)

System.Attribute.IsDefined(System.Reflection.ParameterInfo, System.Type)

System.Attribute.IsDefined(System.Reflection.ParameterInfo, System.Type, System.Boolean)

System.Attribute.Match(System.Object)

System.Attribute.TypeId

System.Object.Equals(System.Object, System.Object)

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [RetailForce.Fiscalisation.Swagger](#)

Assembly: [RetailForce.Fiscalisation.dll](#)

## Syntax

```
[AttributeUsage(AttributeTargets.Property)]  
public class SwaggerExcludeAttribute : Attribute
```