



# Sage XRT Common Services

Version 5.1.100

## User Guide



# Contents

<b>Installation.....</b>	<b>7</b>
Presentation .....	7
Guidelines.....	8
Deployment.....	9
Configuration 1.....	9
Configuration 2.....	10
Configuration 3.....	11
Configuration with SXA and SXCS.....	11
Examples with Payment Management from SXA.....	12
Workflow and Processing.....	12
Sage XRT Advanced .....	12
Sage XRT Common Services .....	12
Sage XRT Communication & Signature.....	13
Use of JAVA Open Source .....	14
<b>Tenants Management Interface .....</b>	<b>17</b>
Tenants .....	17
Creation .....	17

Databases .....	23
Update .....	23
SQL Server and Non-SYSADMIN Profiles .....	24
Modifications .....	26
First Connection .....	28
Users .....	28
Addition to Tenant .....	29
Modification .....	31
<b>Sage XRT Administration Services .....</b>	<b>32</b>
Authentication Service .....	33
Configuration .....	33
Login Page .....	34
Administration Service .....	37
Configuration .....	37
Connection .....	37
Licenses .....	39
Creation .....	40
Modification .....	40
Deletion .....	40
Application .....	41
Access Rights .....	41
Authentication Setup .....	41
Password Policy .....	47
Data Activation and Four-Eye Rule .....	48
User Account .....	51
Profiles .....	54
Creation .....	55
Duplication .....	58
Modification .....	58
Deletion .....	59
Activation .....	59
Deactivation .....	59

Sites .....	60
Creation .....	60
Modification .....	61
Deletion .....	61
Activation.....	61
Deactivation .....	61
My Account .....	62
Audits and Logs .....	62
Setup.....	62
Audit .....	64
Log .....	65
Transcoding .....	66
Design .....	66
Correspondences.....	69
XDLO (deprecated) .....	70
Sage XRT Functional Service .....	71
Configuration.....	71
Connection .....	72
Format Library - Format API .....	74
Payments - Batch Transfers - Payments API.....	81
<b>Sage.FCS.Client Library .....</b>	<b>99</b>
Operation .....	99
Integrated Methods Description .....	101
Logging .....	101
Connection Page.....	104
Tenants .....	106
Licenses .....	106
Profiles -Sites -Users- Setup .....	109
Password .....	115
Format Library .....	118
Configuration File .....	125
<b>Sage.fcs.apifmt Application .....</b>	<b>127</b>

Installation.....	127
Configuration.....	127
Authentication Service .....	128
Data Transforming Service .....	128
Permissions.....	129
Operation .....	131
Basic Parameters .....	131
Examples.....	133
<b>Sage.fcs.pwdencode.exe Application .....</b>	<b>136</b>
Installation.....	136
Operation .....	136
Base64-encoding Only.....	137
Encryption and Base64-encoding.....	137
Description of Configuration File.....	137
Using Executable .....	139
<b>Appendix .....</b>	<b>140</b>

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# Installation

## Presentation

This version 5.0 of **Sage XRT Common Services** is the first to offer the most used functions on web interfaces.

The Management of Tenants (e.g.: **workgroups**) and the *DBInstaller* part are the only ones to keep a *Win32* interface.

**Sage XRT Common Services** provides the following functions:

- Data Activation and *Four-Eye* Rule
- SAML V2 Authentication
- Management of *Crystal Report* 13.0.23
- Rest API for Authentication Management
- Rest API for Data Conversion (Format Library)
- Rest API for Payment Management including interfacing with a Signature or Communication service
- **CloudID Authentication**
- Use of *Java Open Source*
- Improved *DB Installer*
- API Rest for Bank Statement Management (refer to the dedicated documentation)

Version 5.1.100 adds up the following:

- **SSO Windows** Authentication for **Sage XRT Communication & Signature** and **Sage XRT Treasury**
- Support of *Oracle 19c*

### Guidelines

Sage XRT Common Services	Guidelines
<b>Server</b>	<ul style="list-style-type: none"> <li>Database engine: SQL Server 2016, SQL Server 2017</li> <li>Microsoft Server: IIS 10 or later</li> <li>Version JRE 8 (64 bits) for the smooth operation of Sage XRT Bank Format Library</li> <li>Activation of PowerShell Execution: PS&gt; Set-ExecutionPolicy -ExecutionPolicy RemoteSigned</li> </ul>
<b>Client Station</b>	Same SQL Provider Version as the server one

#### Important!

Installing **Sage XRT Common Services** on each client station is no longer required when installing **Sage XRT Communication & Signature** and **Sage XRT Advanced**.

**Sage XRT Common Services** must only be installed on the server station.

For **Sage XRT Communication & Signature**, **Sage XRT Common Services** must be installed on the same station as the communication server.

For **Sage XRT Business Exchange**, until **sage.fcs.client** wrapper is integrated, **Sage XRT Common Services** must be installed on the same station as **Sage XRT Business Exchange**.

When a tenant is created before the installation of another product, **Sage XRT Common Services** must be updated.



# Deployment

## Configuration 1

If everything is on the same station, we recommend that you follow this installation order:

1. **Sage XRT Bank Format Library**
2. **Sage XRT Common Services**
3. **Sage XRT Treasury Communication**
4. **Sage XRT Treasury Signature**
5. **Sage XRT Advanced**

You must use:

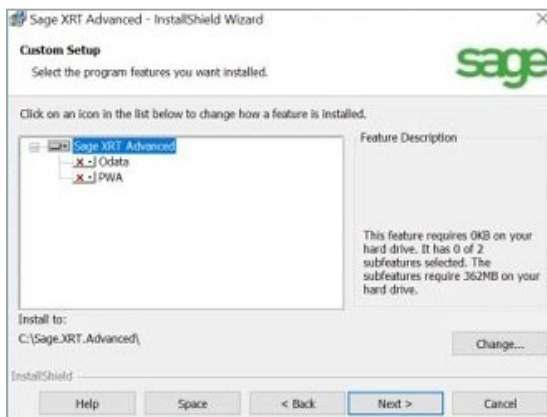
- The **Complete** installation process for **Sage XRT Common Services**
- The **Complete** installation process for **Sage XRT Communication**
- The **Complete** installation process for **Sage XRT Signature**

**Sage XRT Common Services** database must be updated with *DBInstaller*.

- The **Custom** or **Complete** installation process for **Sage XRT Advanced**

**Complete** is a standard installation where all **Sage XRT Advanced** programs are installed.

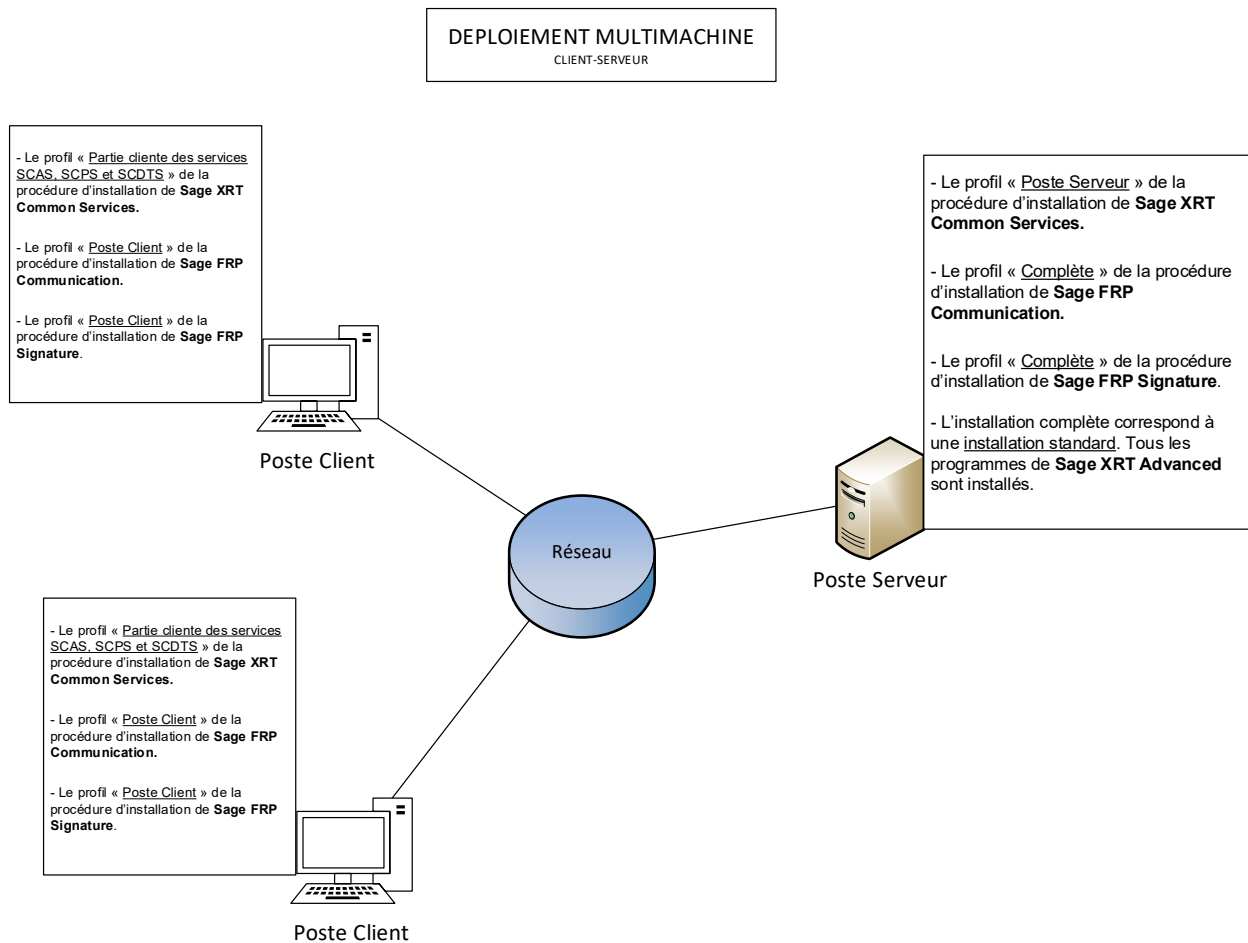
**Custom** triggers the following window.



## Installation

### Configuration 2

This configuration is the standard on-premise installation.



When 1 to  $n$  client station and 1 server station, then on the client station, you must use:

- The **SCAS, SCPS and SCDTS Client Part** installation process for **Sage XRT Common Services**
- The **Client Station** installation process for **Sage XRT Communication**
- The **Client Station** installation process for **Sage XRT Signature**

And on the server station:

- The **Client Station** installation process for **Sage XRT Common Services**
- The **Complete** installation process for **Sage XRT Treasury Communication**

## Installation

- The **Complete** installation process for **Sage XRT Treasury Signature**
- The **Complete** or **Custom** installation process for **Sage XRT Advanced** Complete is a standard installation. All **Sage XRT Advanced** programs are installed.

**Sage XRT Common Services** database must then be updated with *DBInstaller*.

And on the server station:

- The **Client Station** installation process for **Sage XRT Common Services**

## Configuration 3

For 1 to  $n$  client station and 1 server station for **Sage XRT Communication & Signature** and 1 server station for **Sage XRT Common Services**, then on the client station, you must use:

- The **SCAS, SCPS and SCDTS Client Part** installation process for **Sage XRT Common Services**
- The **Client Station** installation process for **Sage XRT Treasury Communication**
- The **Client Station** installation process for **Sage XRT Treasury Signature**

On **Sage XRT Communication & Signature** server station, you must use:

- The **Client Station** installation process for **Sage XRT Common Services**
- The **Complete** installation process for **Sage XRT Treasury Communication**
- The **Complete** installation process for **Sage XRT Treasury Signature**

On **Sage XRT Common Services** server station, you must use:

- The **Client Station** installation process for **Sage XRT Common Services**
- The **Database Scripts** installation process for **Sage XRT Common Services**
- The **Database Scripts** installation process for **Sage XRT Signature**

**Sage XRT Common Services** database must then be updated with *DBInstaller*.

## Configuration with SXA and SXCS

For an installation with **Sage XRT Advanced** and **Sage XRT Communication & Signature**, proceed as follows.

1. Activate powershell : *Set-ExecutionPolicy - ExecutionPolicy RemoteSigned -Scope LocalMachine*

## Installation

2. In *Sage.SCDTSServer.Service.exe.config*, set up **REST SXCS** URL for the status request and activate the process: action=**YES**.
3. Set up **REST SXCS** URL for the addition request.

For migration of **Sage XRT Common Services** 3.9 to 5.0, the *XRT standard* user preset in the services configuration files, does not yet exist. You need to either create it or modify the configuration files using an existing username.

## Examples with Payment Management from SXA

### Workflow and Processing

These paragraphs present the workflow for a payment and its processing in each product, as well as the required manual actions.

Product	Acronym
Sage XRT Advanced	SXA
Sage XRT Common Services	SCS
Sage XRT Communication & Signature	SXCS

### Sage XRT Advanced

The user initiates a payment from the **SXA**.

**SXA** generates a *JSON* request and sends it to **SCS** through **API Rest** protocol.

**SXA** monitors this request (still with **API Rest**) and keeps the user informed in real time of the payment status evolving through its life cycle.

### Sage XRT Common Services

**SCDTS** receives the payment request from **SXA** and provides it with a transaction ID for future status requests. Then, these steps follow on:

1. Conversion of the initial *JSON* flow into XML file for processing
2. Enrichment for the initial data transactions if selected.

This file is eventually posted in **Signature** module.

## Installation

**Important!** The manual initialization of payment flows by bank is a required step (session/connection). It consists in sending a payment to **SXA** for the first time. Then you need to modify the correspondence in EXITPOSTGEN transcoding table.

In *Sage.SCDTSServer.Service.exe.config*, you need to do the following:

1. Set up REST SXCS URL for the status request.
2. Activate the processing: action=YES.
3. Set up REST SXCS URL for the addition request.

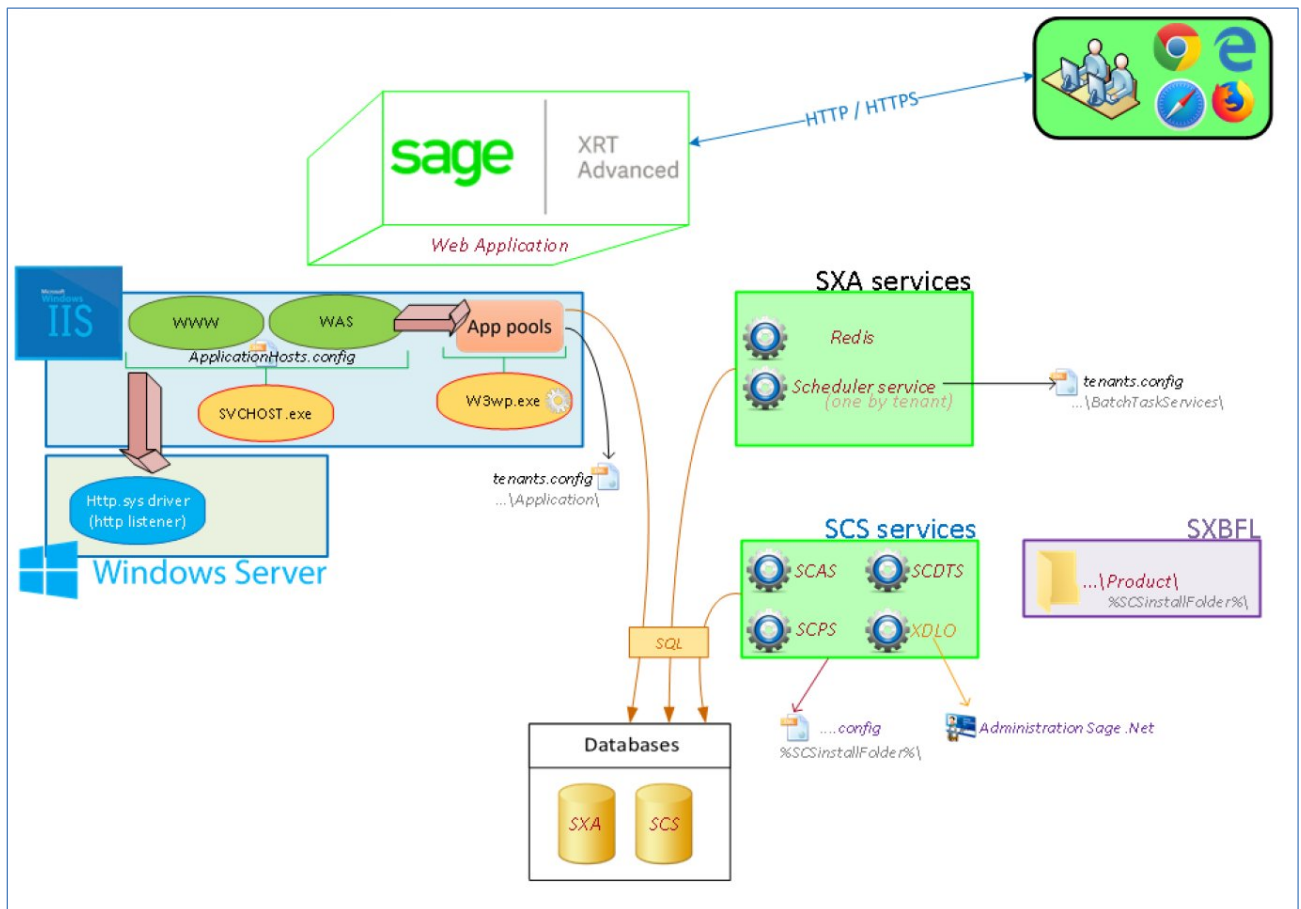
## Sage XRT Communication & Signature

**ComSignAPI** takes over the request from **SCDTS** and inserts it into the workflow of the selected contract.

**Important!** Remember that for multi-station configurations, you must set up LAD service address as well as **SCDTS**, **SCAS** and **SCPS** addresses in the file *<INSTALLPATH\_DE\_SCS\_CLIENT>\sage.fcs.client.dll.config*.

## Installation

### Diagram of flows exchange from **SXA Payments**



## Use of JAVA Open Source

1. Uninstall the existing JAVA program.
2. Through a command line, test the bank file generation from an intermediary file. The following error message should be triggered: **jvm.dll required for Sun JDK**
3. Download *Windows/x64* zip file of the most recent version available from <https://jdk.java.net>: *openjdk-13.0.2\_windows-x64\_bin.zip* (187 MB).

## Installation

**jdk.java.net**

GA Releases  
JDK 13  
JMC 7

Early-Access Releases  
JDK 15  
JDK 14  
Jpackage  
Loom  
OpenJFX  
Panama  
Valhalla

Reference Implementations  
Java SE 13  
Java SE 12  
Java SE 11  
Java SE 10  
Java SE 9  
Java SE 8  
Java SE 7

Feedback  
Report a bug

Archive

### JDK 13.0.2 General-Availability Release

#### Schedule, status, & features (OpenJDK)

#### Documentation

- Release notes
- API Javadoc

#### Build 8 (2019/12/11): General Availability

- Changes in this build
- Issues addressed in this build

These open-source builds are provided under the GNU General Public License, version 2, with the Classpath Exception.

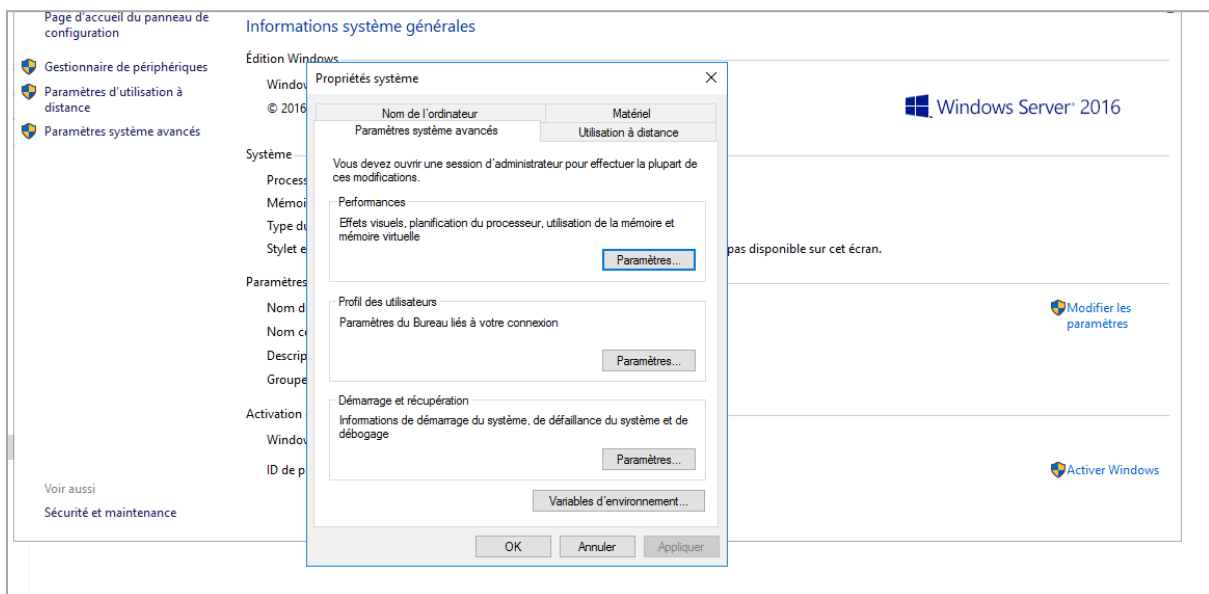
<b>Linux/x64</b>	tar.gz (sha256)	195812001 bytes
<b>macOS/x64</b>	tar.gz (sha256)	189969691
<b>Windows/x64</b>	zip (sha256)	195969512

Commercial builds of JDK 13.0.2 from Oracle under a non-open-source license, for a wider range of platforms, can be found at the [Oracle Technology Network](#).

4. Create the **JAVA** folder in **C:\Programs** and unzip the downloaded file in this new folder: a *jdk* file is generated.
5. You need to create the environment variables.

In *Windows* Explorer, with a right click on **This PC**, open the contextual menu and click **Properties** from it.

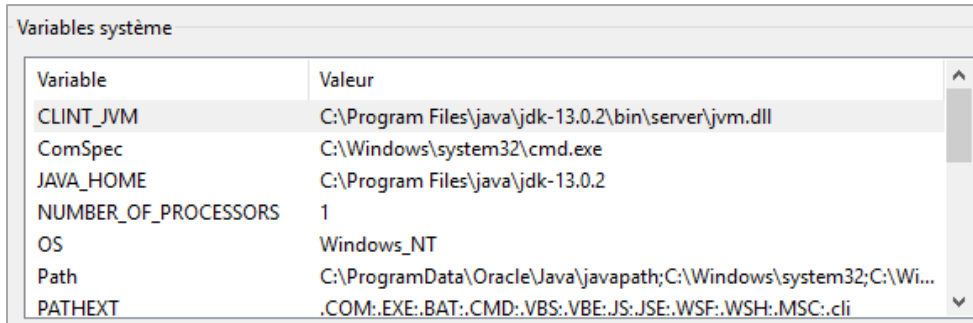
In the left pane, select **Advanced system settings**. Click the **Environment Variables...** button.



In **User Variables for Administrator**, double-click the **Path** variable, then select **New** and the variable **C:\Program Files\java\jdk-13.0.2\bin**

## Installation

In **System Variables**, click **New**.  
Create the **JAVA\_HOME** variable with the value: *C:\Program Files\java\jdk-13.0.2*.  
Create the **CLINT\_JVM** variable with the value: **C:\Program Files\java\jdk-13.0.2\bin\server\jvm.dll**



Variable	Valeur
CLINT_JVM	C:\Program Files\java\jdk-13.0.2\bin\server\jvm.dll
ComSpec	C:\Windows\system32\cmd.exe
JAVA_HOME	C:\Program Files\java\jdk-13.0.2
NUMBER_OF_PROCESSORS	1
OS	Windows_NT
Path	C:\ProgramData\Oracle\Java\javapath;C:\Windows\system32;C:\Wi...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC;.cli

6. Through another command line, test the bank file generation from an intermediary file: the message has disappeared.



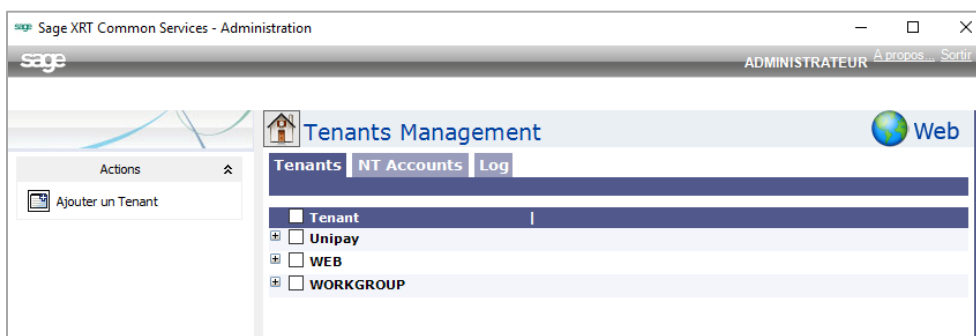
# Tenants Management Interface

## Tenants

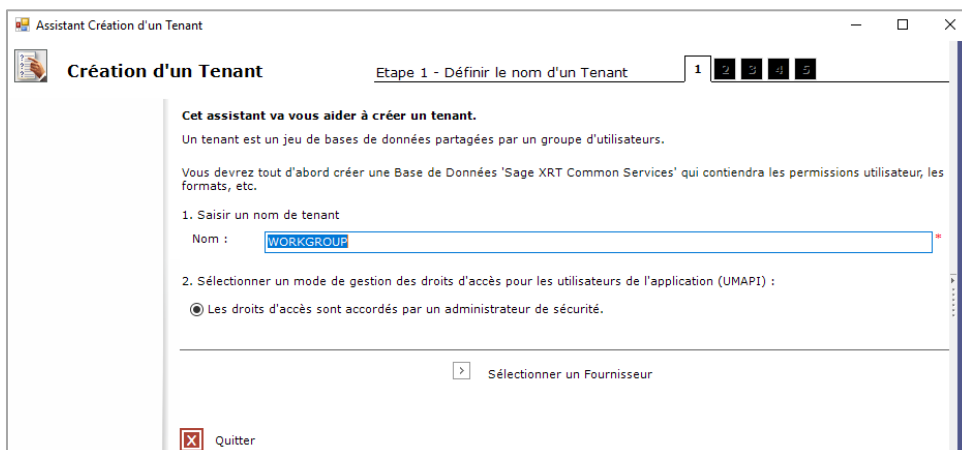
If **Sage XRT Common Services** is installed for the very first time, no tenant exists: the first step consists in creating one or more tenants according to the database type used (*SQL Server* or *Oracle*).

## Creation

In the **Start** menu, go to **Programs – Sage – Administration XRT .NET**. The **Tenants Management** interface is displayed.



Click the **Add a Tenant** link to launch the **Tenants Creation Wizard**.



**Note:** When no tenant has been specified, the **Tenants Creation Wizard** is displayed automatically.

## Tenants Management Interface

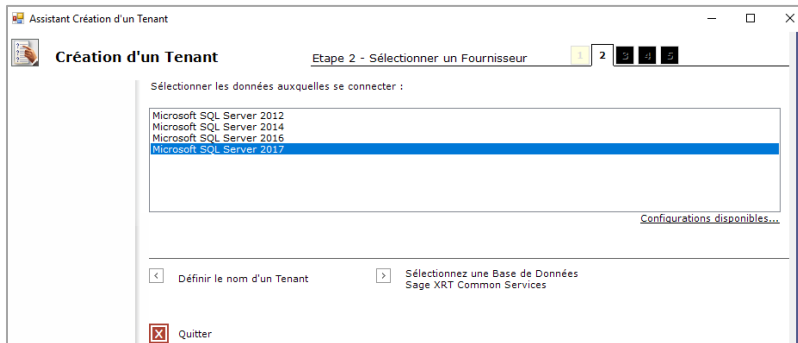
### Name

Enter a name in the **Name** field. The default name is **WORKGROUP**.

Define the access permissions management mode for **Sage XRT** application users.

**Note:** As of version 5.0, the validation by level-2 administrators has been replaced by the data activation. This activation function depends on the setting.

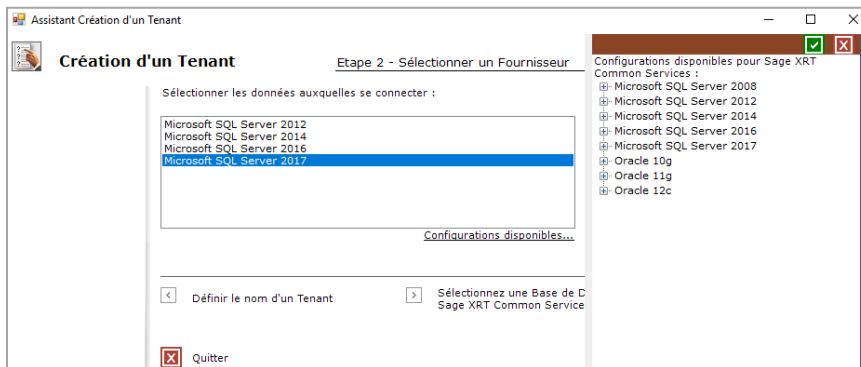
Click **Select a Provider**.



### Selecting Providers

Select from the list the database server or client.

Click **Available Configurations** to display the details of the database servers or clients which are installed on the computer, as well as the authorized operations (creation and update).



Click  to close the page and go back to the Database Access Provider selection page.

## Tenants Management Interface

Click **Select Sage XRT Common Services Database**.

Assistant Création d'un Tenant

Création d'un Tenant

Etape 3 - Sélectionnez une Base de Données Sage XRT Common Services

Sélectionner les informations nécessaires à la connexion aux données SQL Server :

1. Sélectionner ou saisir un nom de serveur :

WIN-18LGUGG6C31 \* Rafraichir

2. Saisir les crédeniels de l'administrateur du serveur :

☒ Utiliser la sécurité intégrée de Windows NT  
☐ Utiliser un nom d'utilisateur et un mot de passe spécifiques :

Nom Utilisateur :  
Mot de Passe :  ☐ Pas de Mot de Passe

3. Sélectionner ou créer une base de données sur le serveur :

☒ Sélectionner la base de données :  
☐ Créer la base de données :

Nom :  \* Version du modèle XRT : ?

DBO :  \* Mot de Passe :  \*

Utilisateur :  \* Mot de Passe :  \*

Collation string :

< Sélectionner un Fournisseur > Produits

Quitter

[Tester la connexion DBA](#)  
[Tester la connexion DBO](#)  
[Tester la connexion USERS](#)

### Selecting Databases

Enter the name of the server where you want to create the database. The available characters to name the server are:

- (local)
- (LOCAL)
- .
- *server name*

The **Refresh** button enables the display of the *Microsoft SQL Servers* list connected to the corporate network.

According to the authentication type used by the DBA (Database Administrator) to connect to the database server, select one of the following options:

- **Use Windows NT integrated security:** the DBA is authenticated by its NT account.
- **Use a specific username and password:** the DBA is authenticated by a username and a password.

**Note:** Click the **Test DBA connection** link at the bottom of the page to check the DBA's Identifiers.

## Tenants Management Interface

You have two options:

- **Select the database** if you want to work on an existing database.
  - Select the database from the dropdown list. The existing databases are refreshed upon the first display of the list.
  - Enter the password corresponding to the DBO name appearing in the **DBO** field. The wizard suggests the password **password#2005**. When you select a database from the list, the wizard automatically looks for its owner name using the DBA account.
  - Enter **XRTUSERS** account password. The default password is: **password#2005**.

**Note:** Click the **Test DBO connection** link at the bottom of the page to check the DBO's Identifiers.

- **Create the database** if you want a new database.
  - Enter a name for the database. The wizard checks whether this name is already used for another database, when the user clicks **Create/Modify models**

**Important!** The database name cannot contain spaces or special characters (\*, ?, \, /, etc.).

- Enter the database owner credentials. The wizard suggests the identifier **XRT** with the password **XRT**. It creates the account if necessary and gives it the **db\_owner** role on the database.
- Select the **Collation string** or keep the default **French\_CI\_AS** (no distinction between uppercase and lowercase).

Click **Products**.

### Configuring Logical Units

The wizard proposes a default scenario in which the filegroup tables **DATA** and the filegroup indexes **INDEX** of **XCS** model are created in the filegroup **PRIMARY** (default filegroup upon SQL Server database creation).

From this Properties panel you can:

- Modify the proposed scenario and install indexes in two distinct **Filegroups** (e.g.: **XCS\_DATA** and **XCS\_INDEX**).
- Modify the filegroup creation settings (storage directory, initial size, maximum size, file growth). The storage directory must already exist for the creation process to work properly.

**Important!** Sage XRT Common Services model scripts are based on the **DATA** logical filegroup for tables and the **INDEX** logical filegroup for indexes.

When executing the model creation process, the wizard replaces the logical names by the values entered in the **Properties** panel (**PRIMARY** for the default scenario).

If the target filegroups do not exist (e.g.: **XCS\_DATA** and **XCS\_INDEX**), they are automatically created by the wizard.

Click **Creating/Modifying Models**.

### Creating and Modifying Models

The **Scripts to be executed** list includes all the scripts to be executed in order to create **Sage XRT Common Services** model.

- **createlogicalunits.sql**: Creation script for logical units. A logical unit represents a filegroup for the creation of a *Microsoft SQL server* database.
- **xl\_configuration createxl\_configuration.sql**: Creation script for the table in which the model version is to be saved
- **registerlogicalunits.sql**: Registering script for logical units

The product scripts are processed later.

According to their types, the scripts are executed with the DBA or DBO account.

Select the **Select data to be imported** option and choose a language from the list. This import processes data (*XML* format) for APIFMT, TRANSCO and UMAPI.

Click **Validate all steps** and proceed with the execution of the actions set up in steps 1, 2, 3, and 4.

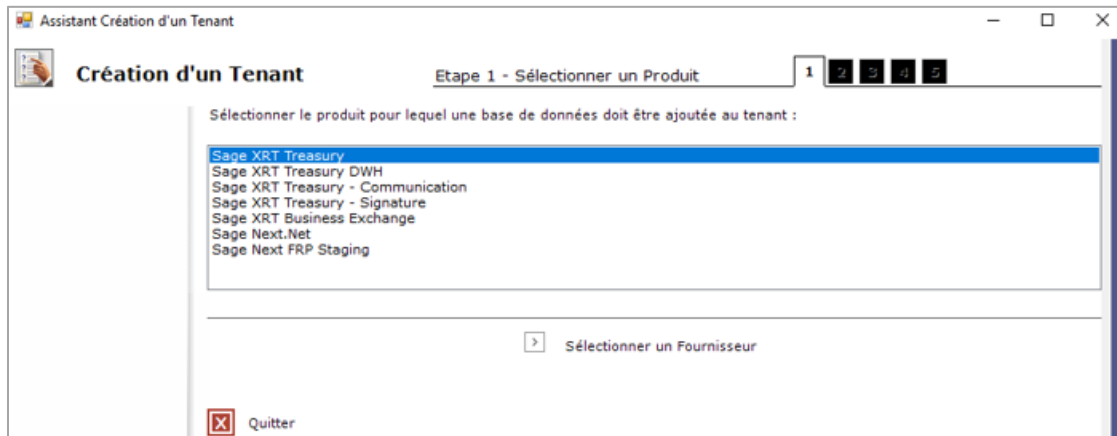
## Tenants Management Interface

### Execution of Actions

This may take several minutes. At this stage, **XCS** model is created.

You can **Quit** the **Tenant Creation** Wizard and open the **Administration** service or add another **Product** model.

Click **Add a Product Database** and the **Tenants Creation Wizard** is displayed.



### Selecting Products

Select a product from the list.

Click **Select a Provider**.

**Note:** For more information about the process of provider selection, refer to the **Selecting a Provider** section.

## Tenants Management Interface

### Databases

The Tenants Management interface gathers the tenants, users and databases.

**Important!** The database update may damage your data. The data must be saved previously.

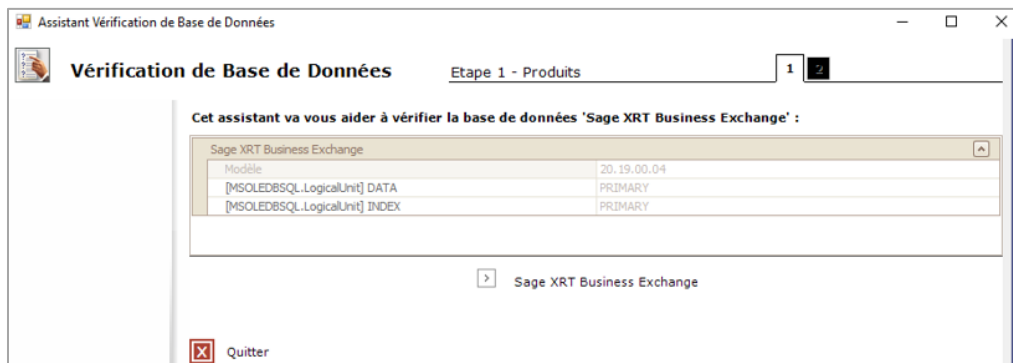
### Update

In the tree-view, expand the **Tenant** element, then the relevant tenant and eventually **Database**.

Right-click the line of the database to update and select **Check the database** from the contextual menu.



The **Database Check Wizard** is displayed.



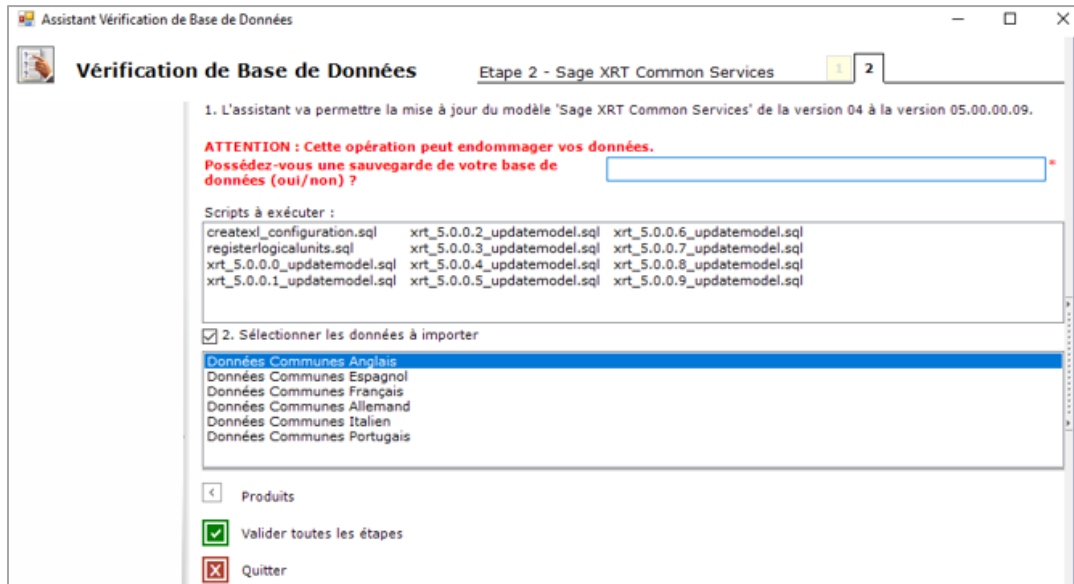
**Note:** if the *Windows* user is not registered as the *DBO* in this tenant, they are not allowed to update the database. The wizard does not suggest any database update and the **Product** is not displayed on screen.

## Tenants Management Interface

Click on the product.

If the wizard detects an inconsistency in versions, you are redirected to the database update process.

Otherwise, the **second step** appears onscreen.



Answer the question by yes or no: **Do you have a back up of your database?**

Select **Select the data to import** if the data in database are not up to date.

Click **Validate all steps**.

## SQL Server and Non-SYSADMIN Profiles

Follow this procedure.

1. First you need to create and update a database with a *dbcreator* profile.
2. For the database creation, enter the *dbcreator* username and password.



## Tenants Management Interface

Assistant Création de Base de Données

**Création de Base de Données** Etape 3 - Sélectionnez une Base de Données Sage XRT Business Exchange

Sélectionner les informations nécessaires à la connexion aux données SQL Server :

1. Sélectionner ou saisir un nom de serveur :

WIN-I8LGUGG6C31 Rafraichir

2. Saisir les crédeniels de l'administrateur du serveur :

☐ Utiliser la sécurité intégrée de Windows NT

☒ Utiliser un nom d'utilisateur et un mot de passe spécifiques :

Nom Utilisateur : Mot de Passe : ☐ Pas de Mot de Passe

3. Sélectionner ou créer une base de données sur le serveur :

☒ Sélectionner la base de données :

☐ Créer la base de données :

Nom : Version du modèle SMP : ?

DBO : Mot de Passe : Utilisateur : Mot de Passe : Collation string :

< Sélectionner un Fournisseur Produits

Tester la connexion DBA  
Tester la connexion DBO  
Tester la connexion USERS

Quitter

**Note:** During the DBA connection test, the message requiring a SYSADMIN connection has disappeared.

- Resume the usual process of database management: when scripts are processed, a message requires a SYSADMIN operator's intervention.

Tenant Creation

Please wait while the Wizard is being executed. This may take several minutes.

Status: Step 3 - Select a Sage XRT Common Services Database

The database is being created

Exécution du script SQL

Veuillez-vous connecter à la base de données TESTFC545 en tant que sysadmin et exécuter le script ci-dessous.

C:\Users\Marc\AppData\Local\Temp\XRT\manageusersmanually.sql

Ok Annuler

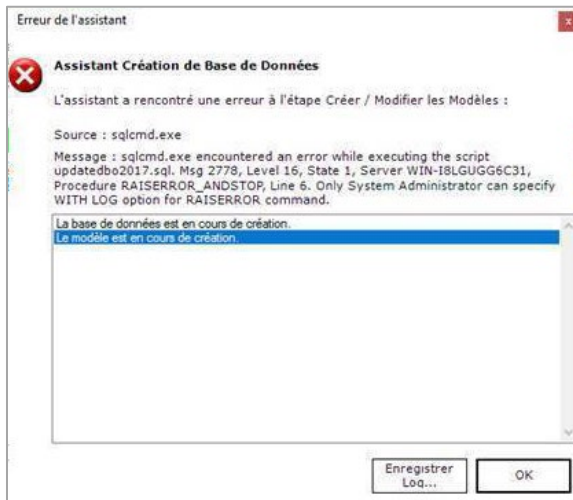
- Connect to **SQL Server** with a SYSADMIN profile and open the specified file.

## Tenants Management Interface

Run the script.

5. Go back to the **Database Creation** wizard and click **OK** to complete the process.

The display of the error shown on the screenshot below means you are using **Microsoft SQL Server 2017 (RTM-GDR) (KB4293803) - 14.0.2002.14 (X64) Jul 21 2018**.

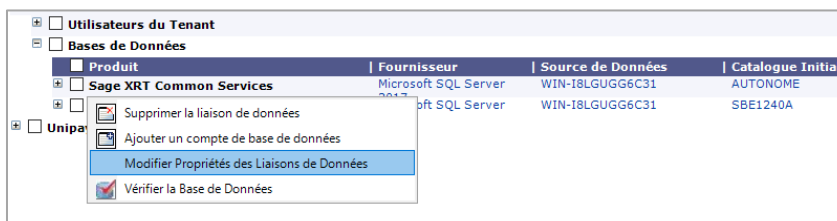


To solve this problem, you need to update **SQL Server** and use **Microsoft SQL Server 2017 (RTM-GDR) (KB4505224) – 14.0.2027.2 (X64) Jun 15 2019**.

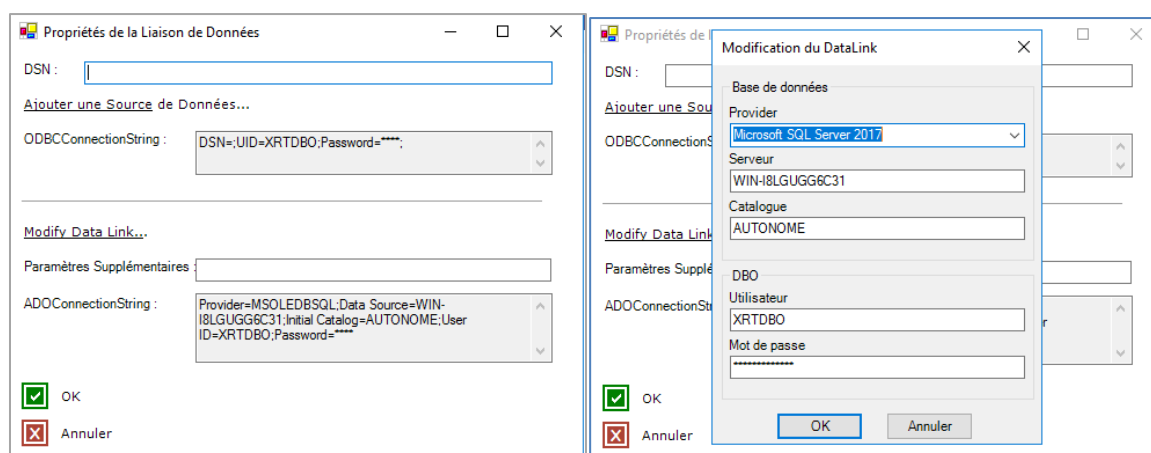
## Modifications

You may modify **Provider**, **Data Source** (server) and **Catalog** without using the DBInstaller (**Oracle** and **SQL Server**), for example if you want to get a (pre-)production database instead test database.

For **SQL Server** Databases, select the database, and after right-clicking to open the contextual menu, click **Modify Data Link Properties**.



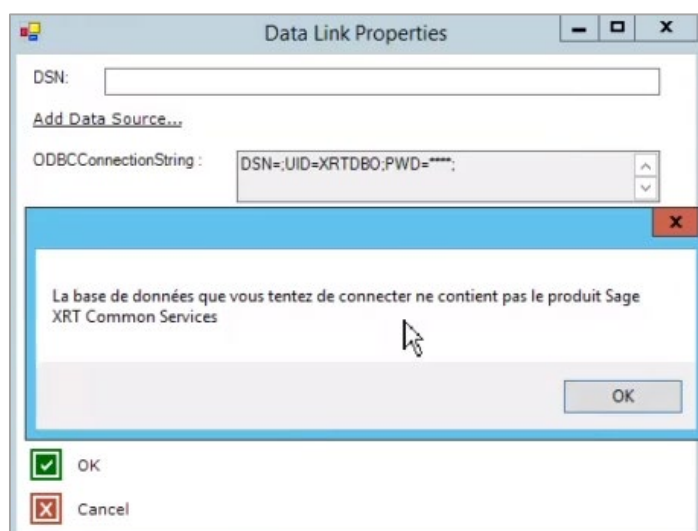
## Tenants Management Interface



Use the link named: **Modify Data Link**.

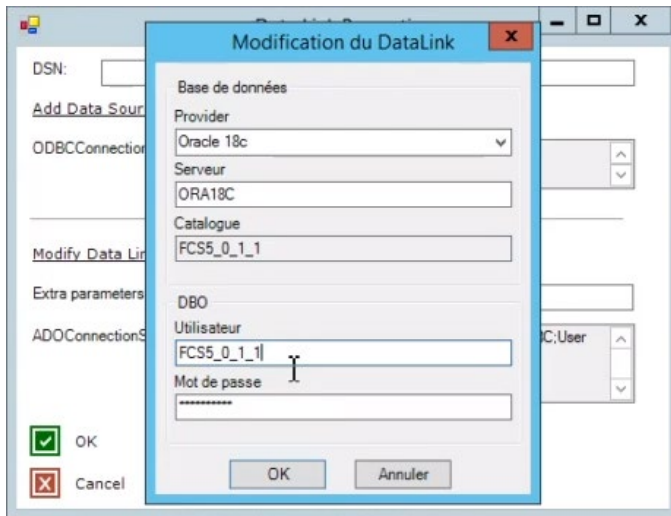
You can modify the **Provider** only in the same *family*: from **SQL Server 2017** to **SQL Server 2019**, from **Oracle 12** to **18**.

You can modify the **Catalog** only for database of the same type or containing the data from the modified database (modification of **FCS** database by another **FCS** database or database **FCS+SXBE**), otherwise a blocking error message is displayed.



## Tenants Management Interface

For **Oracle** Databases, the catalog cannot be modified as it uses.



## First Connection

After the database creation, upon first connection, you can:

- either the NT account used to set up the product
- the login **XRT** and password **S3cret#2018**

**Important!** The credentials **XRT** and **S3cret#2018** are only for one day!

## Users

During the workgroup creation, **Windows NT Administrators** and **XRTDBAdministrators** local groups are automatically declared as administrators of this group.

**Sage XRT Common Services** proposes a wizard for the management of users within their workgroups.

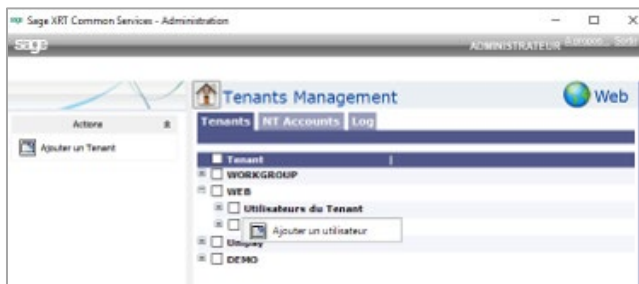
## Tenants Management Interface

The wizard allows the following actions:

- **Add a network user:** To add a user, enter the NT account of a user or click **Search...** to access *Microsoft Windows NT* user search tool.
- **Add a network group:** This option enables the association of a *Windows NT* user group with a workgroup. For this, click **Search...** to access *Microsoft* tool to find a *Windows NT* user.
- **Add a local system account to:** This type of account is used by a system service executed for the local system and must access a new database.

## Addition to Tenant

1. To assign users to the tenant, expand the **Tenants** element in the tree-view.
2. Select a tenant from the list and right-click on the **Users** level.



3. Select **Add User** to open the **User Creation Wizard**.



4. Click the link **Sage XRT Common Services** to go to the second step.

## Tenants Management Interface

Assistant Création d'un Utilisateur

Création d'un Utilisateur

Etape 2 - Sage XRT Common Services

Crédentiels à utiliser pour connecter le compte NT SAGEFR\BROB à la base de données 'Sage XRT Common Services' :

1. Sélectionner ou saisir un nom pour identifier l'accès à la base de données :

dbo

2. Définir les propriétés d'authentification :

☐ Authentification Windows

☒ Authentification SGBD

Utilisateur : FCS64

Mot de Passe : \*\*\*\*\* ☐ Pas de mot de passe

< Affecter un Utilisateur > Sage XRT Business Exchange

Quitter

5. Select the type of data access from the dropdown list or specify a new one. The wizard proposes two default types of predefined access:

- **DBO**: This access type should be reserved to the database owner.
- **Users**: This access type must be used by profiles with no authorization.

6. Select the user authentication mode on the database server:

- **Windows Authentication**: by the NT account.
- **DBMS Authentication**: by the account assigned by the database administrator (DBA).

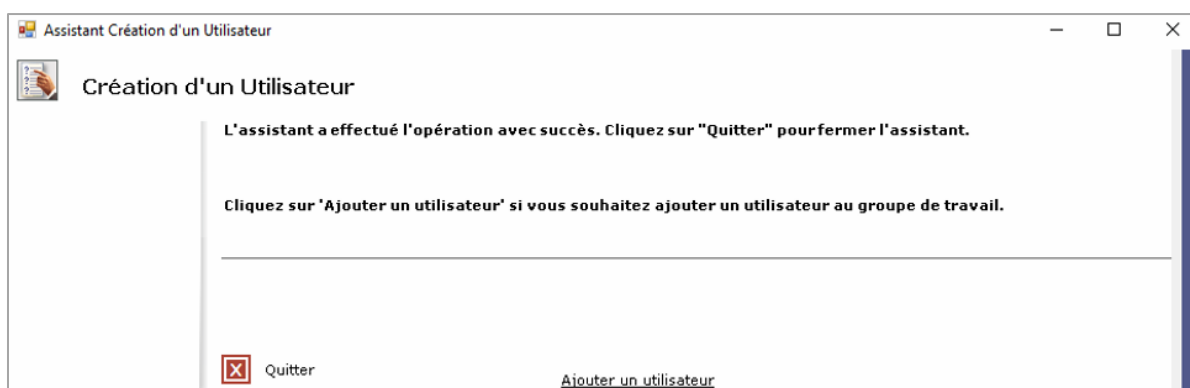
**Important!** It is recommended to define the access using an *SQL Server* account, as using *NT* authentication does not allow connection pooling.

You can create another access name for a given workgroup. This is a **User** access type.

E.g.: definition of the *TREASURER* access for **Sage XRT Treasury** database with a specific *SQL Server* account name *TRESO*.

7. Click **Validate all steps**.

## Tenants Management Interface

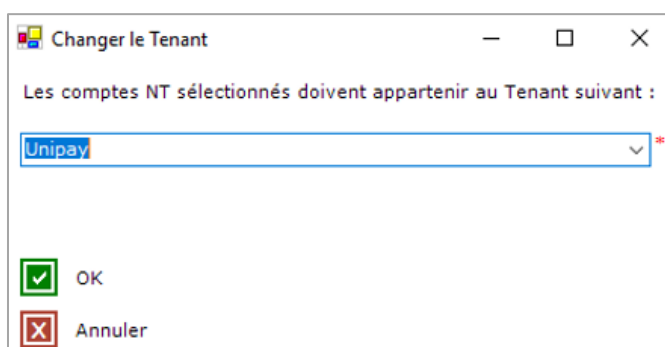


**Note:** You may also manage **Sage XRT Treasury** users by repeating the process of access to **Sage XRT Common Services** database.

## Modification


You can modify the assignment of users to a tenant.

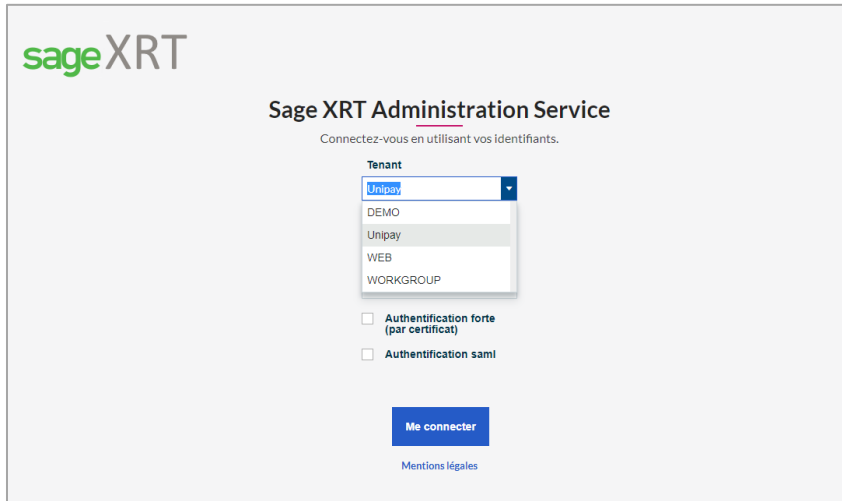
1. After a right-click on the user to be modified, select **Change Tenant**.



2. Select another tenant and click **OK**.

## Sage XRT Administration Services

The icon  on the top right of **Tenants Management** interface gives direct access to **Sage XRT Administration Service**, to manage users, profiles, rights, etc.

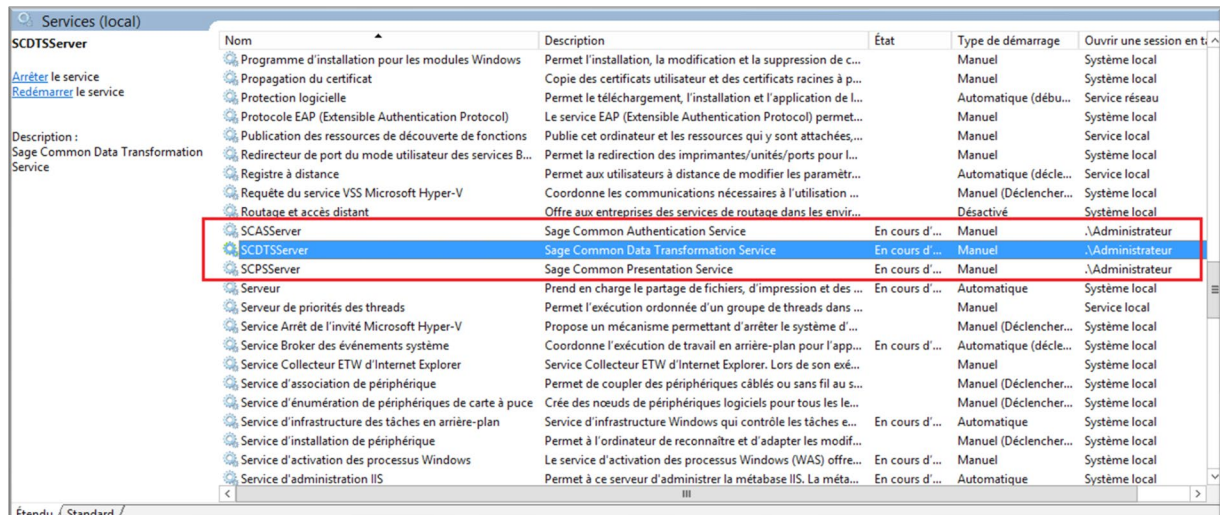


**Sage XRT Common Services 5.0** consists of three services:

- The Authentication Service (SCAS) which validates user identification.
- The Administration service (SCPS) which manages the sections: Rights (Users, Profiles, Sites, etc.), Audits (Audits, Logs) and Transcoding (Design and Correspondences).
- The Functions Service (SCDTS) which covers the following areas:
  - Format Management
  - Third-Party Security Management (not yet available in 5.0)
  - Payment Management (batch transfers available in 5.0)
  - Bank Statement Management (not yet available in 5.0)



## Sage XRT Administration Services



Documentation for these APIs is generated by *Swagger*. **Swagger.json** file corresponds to the documentation JSON export.

**Note:** You can access the documentation and the JSON file (the link appears in the *\*.config* file for each service) in **C:\Program Files\Common Files\xrt**.

Each service contains its configuration file.

## Authentication Service

### Configuration

*Sage.SCASServer.Service.exe.config* (configuration file) is located in: **C:\Program Files\Common Files\xrt**

### Activating Logs

See <system.diagnostics> and <diagnostics> nodes

### Defining location for website, listening ports and service hosts

See <ApplicationSettings> node

```
<add key="websitehost" value="*" />
<add key="websitehostdefault" value="http://localhost" />
<add key="httpservicehost" value="http://*:80/Auth" />
<add key="httpsservicehost" value="https://*:443/Auth" />
```

## Sage XRT Administration Services

### Defining Security Features

See <ApplicationSettings> node

```
<add key="showfriendlymessage" value="NO"/>
```

(**Access Denied** generic error messages)

```
<add key="redirectwhitelisthost" value="*"/>
```

(White list of redirection URLs after authentication, \* means the redirection is on the same requesting domain, you can add other domain names)

(e.g.: \*, localhost, *yourdomainname*)

### SWAGGER Documentation

Documentation URL and export URL

## Login Page

### Initializing Login Process

To start the login process, the form below must be used with the POST method in **Sage XRT Common Services** Authentication Service:

**http://computername:80/Auth/loginpage** or

<https://nomdemachine:443/Auth/loginpage>

```
<form name="loginpage" method="post"
action="http://nomdemachine:80/Auth/loginpage">

    <input type="hidden" name="workgroup" value="">

    <input type="hidden" name="strongauth" value="YES">

    <input type="hidden" name="samlv2" value="YES">

    <input type="hidden" name="product" value="SXSC">

    <input type="hidden" name="url"
value="http://nomdemachine:80/home/homepage">

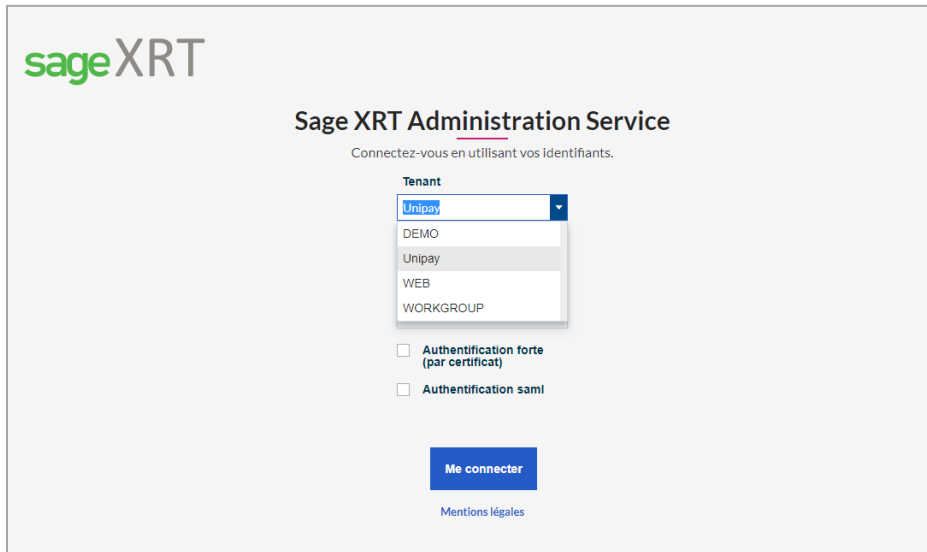
    <input type="hidden" name="xrtloginweborigin" value="">

    &lt;input type="hidden" name="goto" value=""&gt;

</form>
```

## Sage XRT Administration Services

The connection page is displayed.



The screenshot shows the Sage XRT Administration Service login interface. At the top left is the 'sageXRT' logo. The title 'Sage XRT Administration Service' is centered, with the instruction 'Connectez-vous en utilisant vos identifiants.' below it. A 'Tenant' dropdown menu is open, showing options: 'Unipay' (selected), 'DEMO', 'Unipay', 'WEB', and 'WORKGROUP'. Below the dropdown are two unchecked checkboxes: 'Authentification forte (par certificat)' and 'Authentification saml'. A blue 'Me connecter' button is at the bottom, with a 'Mentions légales' link underneath.

### Workgroup Form Variable

This variable enables the tenant presetting. Its value determines the presence of the dropdown list to select the tenant.

If the variable is a workgroup name, the list is not displayed and the Username/Password is to be checked for this tenant.

### Strongauth Variable

This variable enables the strong authentication option.

If the variable is **YES**, the strong authentication checkbox is displayed.

If the variable is empty, the checkbox is not displayed.

### Samlv2 Variable

This variable enables the SAML authentication option.

If the variable is **YES**, the SAML authentication checkbox is displayed.

If the variable is empty, the checkbox is not displayed.

## Sage XRT Administration Services

### Product Form Variable

This variable displays the product name on the connection page. It may be a predefined code or a free text. Below are the predefined codes:

- product= SXSC for **Sage XRT Administration Service**
- product= SCSDTS for **Sage XRT Functional Service**
- product= SXBEONLINEBANKING for **Connection to OnlineBanking**
- product= SXBEADMINISTRATION for **Connection to Business Exchange Administration**
- product= VIEWANDSIGN for **Sage View & Sign**

When these codes are used, **XRTLoginWeb** connection process for **Sage XRT Common Services** manages the localization into French, Spanish and English.

The variable's value can be a free text.

### Url Variable

This variable defines the callback URL when the authentication is successful (see the URL white list).

### Xrtloginweborigin Variable

This variable defines the website URL for the authentication process when it is not hosted on the same station as the page which launches **XRTLoginWeb** initialization. This variable can be avoided, when the setting up is performed in the configuration file for the authentication service (SCAS).

**XRTLoginWeb** also defines whether passwords are encrypted and then base64 encoded or only base64 encoded. For this, a certificate must be specified in the configuration file of SCAS.

For the certificate which encrypts the user name:

```
<add key="serialnumberforpwdcrypt" value="" /> tag
```

### goto Form Variable

Two values are possible for this variable: **SAML** or **SAGEID**.

To be taken into account, the **WORKGROUP** variable must be specified.

When these values are entered, users are directly led to **SAML** or **SAGEID** authentication page.

## Administration Service

### Configuration

*Sage.SCPServer.Service.exe.config* (configuration file) is located in: **C:\Program Files\Common Files\xrt.**

### Activating Logs

See <system.diagnostics> and <diagnostics> nodes

### Defining location for website, listening ports and service hosts

See <ApplicationSettings> node

```
<add key="websitehost" value="*" />
<add key="websitehostdefault" value="http://localhost" />
<add key="httpservicehost" value="http://*:80"/>
<add key="httpsservicehost" value="https://*:443"/>
```

### Defining Account and Sync Frequency in seconds for NT/LDAP Groups

See <ApplicationSettings> node

```
<add key="syncprofilesitesuser" value="XRT"/>
<add key="syncprofilesitesfrequency" value="3600"/>
```

### Defining Security Features

See <ApplicationSettings> node

```
<add key="showfriendlymessage" value="NO"/>
```

(version number not displayed and generic error messages)

### SWAGGER Documentation

Documentation URL and export URL


### Connection

The following URL enables the use of the Administration Service interface:

<http://localhost/SCPS/index.html>

It requires the reboot of the Authentication and Administration Services.

## Sage XRT Administration Services



### Sage XRT Administration Service

Connectez-vous en utilisant vos identifiants.

**Tenant**  

Unipay

**Utilisateur**  

Indiquez le nom d'utilisateur

**Mot de passe**  


Indiquez le mot de passe

☐ **Authentification forte (par certificat)**

☐ **Authentification saml**

**Me connecter**

[Mentions légales](#)




Unipay - PPCHON

Environnement

Transcodages

Droits

Audits



Cette interface vous permet d'administrer la configuration des produits Sage XRT Common Services et Sage XRT Bank Format Library.

La fonction Transcodages vous permet de :

- Configurer vos tables de transcodages : les créer, les modifier ou les supprimer,
- Ajouter, modifier, supprimer des correspondances,
- Chercher des correspondances dans les tables.


La fonction Droits vous permet d'administrer tous les aspects concernant les droits sur les applications qui utilisent Sage XRT Common Services :

- Visualiser les caractéristiques de l'utilisateur connecté (Mon compte),
- Gérer les utilisateurs, profils ou sites de la plateforme,
- Configurer le paramétrage des différents services d'authentification,
- Paramétrer le niveau de sécurité désiré.

La fonction Audits vous permet de :

- Consulter les différents événements audités au sein de la plateforme,
- Consulter différentes logs,
- Chercher un élément en particulier.

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## Sage XRT Administration Services

### Refresh Token

Windows services use the **Refresh token** and consume the Rest APIs of **Sage XRT Common Services**. Its implementation requires a certificate installation on the client and server stations.



### Licenses

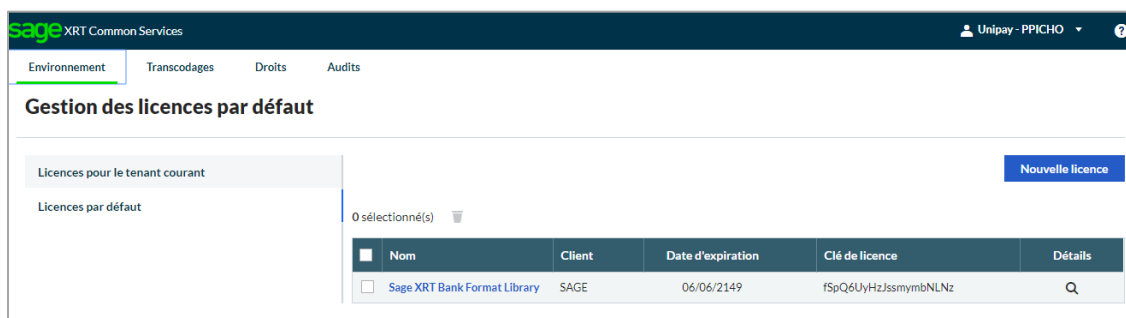
Default licenses are applied to all the tenants for which no license has been specified.

The **Default Licenses** function now replaces the function called **Licenses**. This license remains stored in the registry.

Interfaces are the same for both licenses types.

The licenses for the current tenant are listed when the **Licenses for current tenant** function is called.

The default licenses are listed when the **Default Licenses** function is called.



Click the *magnifier* button to view the license key details.

Example for **Sage XRT Bank Format Library**:

## Sage XRT Administration Services

Détails de la licence Sage XRT Bank Format Library	
Fonction	
Convertisseurs	ok
IN - Accusés de Réception : EDIFACT - ACA 560	ok
IN - Reporting : Espagne - AEB 57	ok
IN - Reporting : SWIFT - MT199-MT299	ok
IN - Account Statements : ISO 20022 - XML CAMT052	ok
IN - Accusés de Réception : EDIFACT - BANSTA	ok
IN - Accusés de Réception : EDIFACT - CONTROL	ok
IN - Accusés de Réception : France - AOI160	ok
IN - Accusés de Réception : France - CVE120	ok
IN - Accusés de Réception : France - E OIR240	ok

## Creation

In the **Environment** menu, the **New License** button enables you to access the creation wizard.

The fields marked with asterisk (\*) are required.

Click **Save** to complete the creation. A message confirms the license creation.

Création d'une licence	
Nom*	<input type="text"/>
Client*	<input type="text"/>
Clé de licence*	<input type="text"/>
<input type="button" value="Enregistrer"/> <input type="button" value="Annuler"/>	

## Modification

Click the link available on the **Name** of the license to modify. The **Client** and **License Key** are the only elements that can be modified.

Click the **Save** button to save your modification. A message confirms the action.

## Deletion

From the license list, select the one to delete.



Click the *bin* button to complete the deletion. A message confirms the action.

### Application

When a license for a tenant is specified, the default license does not apply.

## Access Rights

This chapter describes the different user authentication methods offered by **Sage XRT Common Services** and the actions to perform for user and access permission management.

### Authentication Setup

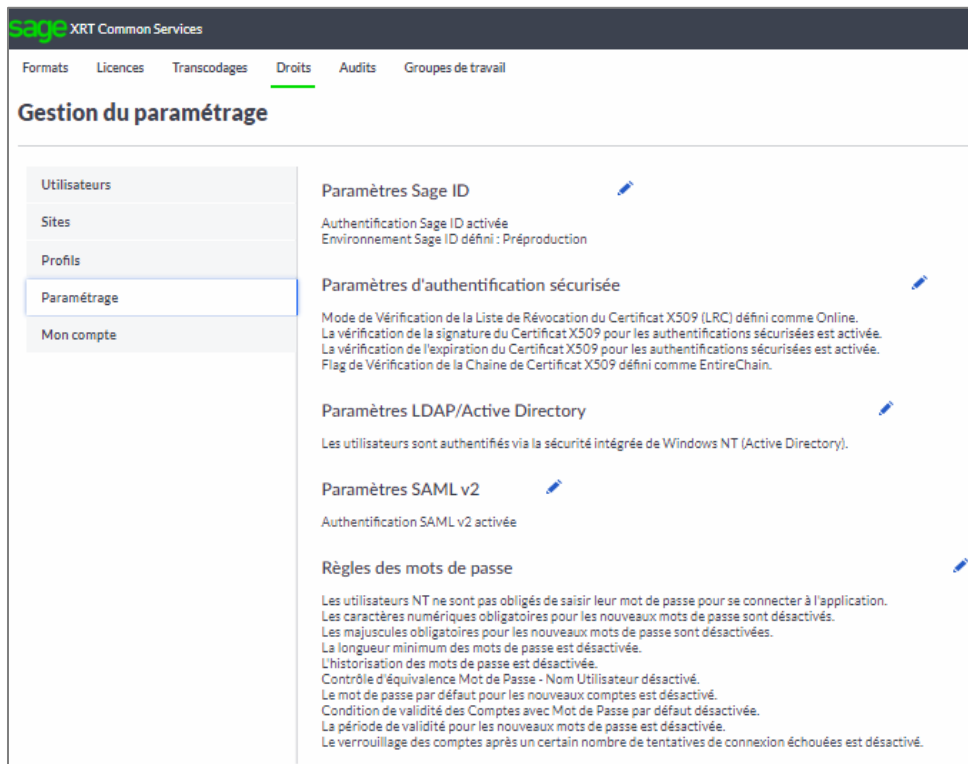
UMAPI login model supports three authentication modes:

- **Windows** Authentication
- **UMAPI** Authentication
- **LDAP** Authentication
- **SAML** Authentication
- **CloudID Authentication Sage ID V2**

These authentication methods must be activated before being linked to a user.

## Sage XRT Administration Services

Click the **Setup** tab from the **Rights** menu.



Click the *pencil* button to modify the settings of each authentication method.

### Windows NT Authentication

*Windows NT* authentication benefits from *NT Windows* security and its user account management. This security mode enables *Sage XRT* applications to use *Windows NT* users credentials.

*Sage XRT* applications offer two operating modes with this type of authentication:

- The trusted connection mode is no longer available as of version 5.0 since **Sage XRT Common Services** is now a web application.
- Standard Mode: the user needs to enter their password as it is checked by the system via *Windows APIs*.

Advantages of *Windows NT* authentication mode:

- No additional credentials to remember
- No consequences on *UMAPI* when password is changed
- Management of passwords complying with Sarbanes-Oxley Act

## Sage XRT Administration Services

- Access to other system functions such as periodic password modification and access logs

**Note:** Setting up *Windows NT* authentication requires a close collaboration with the *Windows* administrator for creation of users and workgroups. The implementation of *Windows* authentication in *UMAPI* is based on the base class library of the *System.DirectoryServices* namespace for *.NET* framework.

### UMAPI Authentication

When using *UMAPI* authentication, the user who wants to connect to a *Sage XRT* application needs to enter a username and a password which are controlled on the basis of information contained in the database.

Advantages of *UMAPI* authentication mode:

- Management of passwords complying with Sarbanes-Oxley Act
- Storage of the last four passwords which cannot be used again when the system requires a password change (editable function)
- User account locked after three consecutive authentication failures (editable function)
- Locked account, unlocked after a given period of time
- No password stored in the database, only the SHA1 hash codes are
- Passwords with at least six characters containing one upper case letter and one figure at least (editable function)
- Password to change periodically (editable function)
- Possibility for the administrator to lock a user account for a determined or permanent period of time

### LDAP Authentication

When using *LDAP* authentication, the user who wants to connect to a *Sage XRT* application needs to enter a username and a password which are controlled based on the information contained in LDAP directory.

## Sage XRT Administration Services

Advantages of *LDAP* authentication mode:

- This is an interesting alternative when a company does not want to use *Windows NT* authentication method exclusively.
- Applicative authentication with *Sage XRT* products

Access to directory can be set up from the setup window for user management. The administrator must enter the following settings:

- The IP address of the station that hosts *LDAP* server
- The number of the port on which *LDAP* server must be called
- The **DN base** parameter of the directory
- The **User ID attribute name** on which is based the user authentication
- The **User** class name to use when searching the directory for a person
- The **Group** class name to use when searching the directory for a group of persons
- The credentials to search the directory (the **Test Connection** button enables you to check these credentials).

Paramètres LDAP/Active Directory

☐ Utiliser Windows Active Directory uniquement

☒ Utiliser aussi le serveur LDAP personnalisé

☐ Utiliser un serveur LDAP secondaire

Hôte\* Port ☐ SSL

Références de connexion

Bind DN Mot de passe

ex: cn=manager,dc=domain,dc=com

Tester la connexion

DN Base\*

Attribut ID utilisateur\* objectClass utilisateur

NN ex: person

objectClass groupe Attribut membres du groupe

ex: groupOfUniqueNames ex: uniqueMember

Tester les paramètres

Enregistrer Annuler

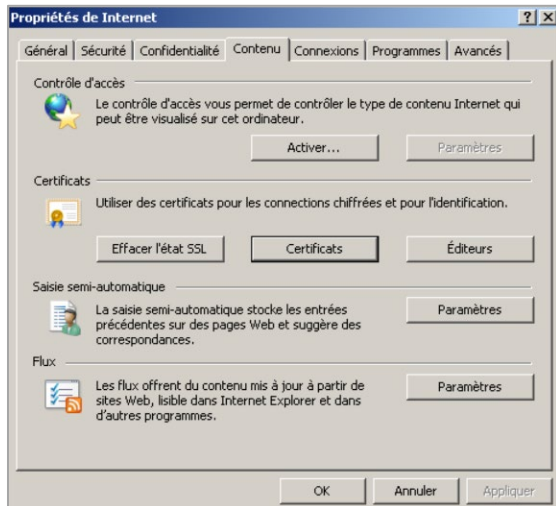
**Note:** The implementation of *LDAP* authentication in *UMAPI* is based on the base class library of the *System.DirectoryServices* namespace for *.NET* framework.

*LDAP* exchanges between client and server are usually made by standard *TCP/IP* port (port 389) with encryption, or via the *SSL* tunnel (port 636). *SSL* technology is enabled by installing

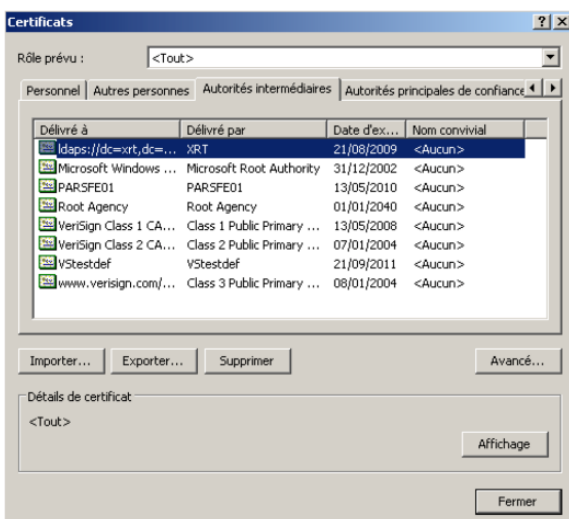
## Sage XRT Administration Services

a certificate published by a certification authority approved by the domain controller and the LDAP clients. The approval is obtained by setting up clients and server in order to approve the root certification authority to which the issuing certification authority is bound.

The installed certificate is usually located in the personal certificate store of the local computer in **Internet Properties - Content - Certificates - Intermediate Certification Authorities**.



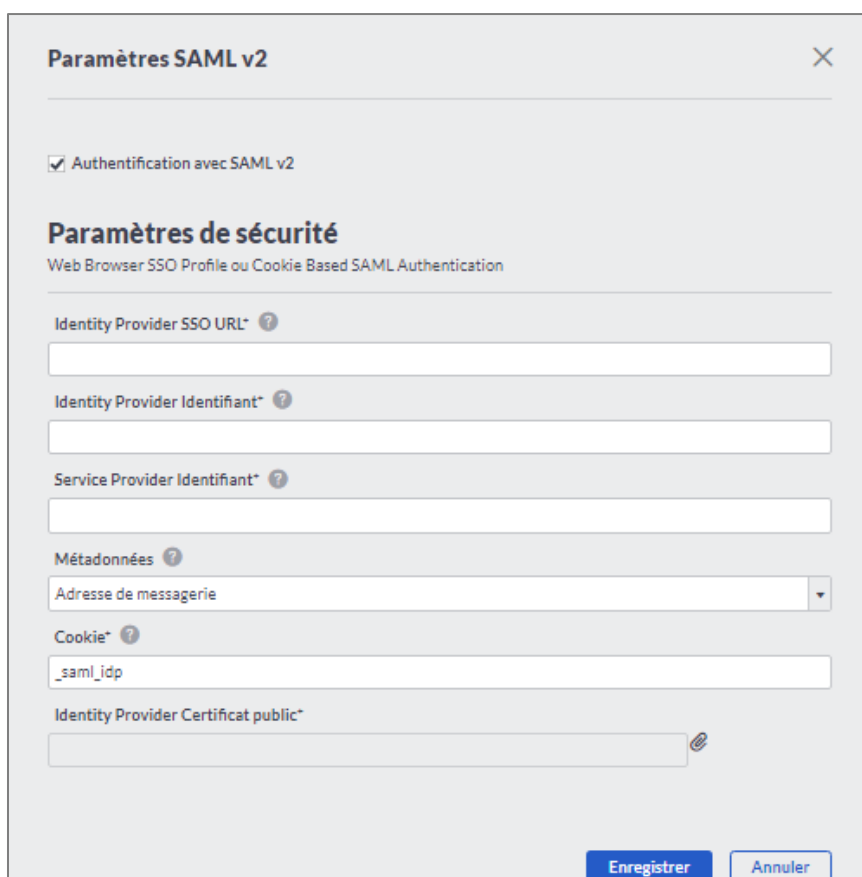
Click **Certificats**. The following dialog box is displayed.



## SAML Authentication

Security Assertion Markup Language (SAML) is an open standard defining a protocol to exchange security data and based on XML language.

SAML offers the *single sign-on* or SSO for the web. This way, you may browse various sites with a single authentication.



SAML authentication uses:

- Identity provider: **Identity Provider SSO URL** and **Identity Provider ID** fields
- Services providers (the services which require authentication): **Service Provider ID** field. More than one *Services provider* can be specified (they are all part of the same circle of trust linked to an *IdP*).
- User identified through an element declared in the metadata (e.g.: ID or Email).

### Double Authentication

The protocol *TOTP* (RFC 6238) has been chosen.

Its technology associates a secret key with timestamping, using a cryptographic hash function to generate a one-time password. As network latency and unsynchronized clocks may block authentication attempts, timestamp increases every 30-second interval which reduces the potential search range.

Using this protocol enables the use of other applications already available such as *FreeOTP*, *Microsoft Authenticator* or *Google Authenticator*.

**Note:** See *SCS.4.3.DoubleAuthentication.UserGuide\_EN*.

### Password Policy

These rules are defined from the **Rights** menu. Click **Setup**.

The screenshot displays the 'Gestion du paramétrage' (Parameter Management) page in the Sage XRT Common Services application. The left sidebar contains a menu with options: Utilisateurs, Sites, Profils, Paramétrage (selected), and Mon compte. The main content area is titled 'Droits' and lists several configuration sections, each with a blue edit icon:

- Paramètres Sage ID**: Authentication Sage ID activée, Environnement Sage ID défini : Préproduction.
- Paramètres d'authentification sécurisée**: Mode de Vérification de la Liste de Révocation du Certificat X509 (LRC) défini comme Online. La vérification de la signature du Certificat X509 pour les authentifications sécurisées est activée. La vérification de l'expiration du Certificat X509 pour les authentifications sécurisées est activée. Flag de Vérification de la Chaîne de Certificat X509 défini comme EntireChain.
- Paramètres LDAP/Active Directory**: Les utilisateurs sont authentifiés via la sécurité intégrée de Windows NT (Active Directory).
- Paramètres SAML v2**: Authentification SAML v2 activée.
- Règles des mots de passe**: Les utilisateurs NT ne sont pas obligés de saisir leur mot de passe pour se connecter à l'application. Les caractères numériques obligatoires pour les nouveaux mots de passe sont désactivés. Les majuscules obligatoires pour les nouveaux mots de passe sont désactivées. La longueur minimum des mots de passe est désactivée. L'historisation des mots de passe est désactivée. Contrôle d'équivalence Mot de Passe - Nom Utilisateur désactivé. Le mot de passe par défaut pour les nouveaux comptes est désactivé. Condition de validité des Comptes avec Mot de Passe par défaut désactivée. La période de validité pour les nouveaux mots de passe est désactivée. Le verrouillage des comptes après un certain nombre de tentatives de connexion échouées est désactivé.

## Sage XRT Administration Services

Click the *pencil* button to modify password rules.

**Règles des mots de passe** [X]

- ☐ Saisie obligatoire du mot de passe pour les utilisateurs NT pour se connecter à l'application
- ☐ Nombre obligatoire de caractères numériques dans les nouveaux mots de passe [input type="text"]
- ☐ Nombre obligatoire de majuscules dans les nouveaux mots de passe [input type="text"]
- ☐ Longueur minimum du mot de passe [input type="text"]
- ☐ Différence entre ancien et nouveau mot de passe [input type="text"]
- ☐ Différence entre le nouveau mot de passe et le nom d'utilisateur
- ☐ Mot de passe par défaut pour les nouveaux comptes [input type="text"]
- Confirmez le mot de passe par défaut pour les nouveaux comptes [input type="text"]
- ☐ Verrouiller le compte si le mot de passe n'a pas été modifié après [input type="text"] [input type="text"]
- ☐ Période de validité des nouveaux mots de passe [input type="text"] [input type="text"]
- ☐ Nombre de tentatives de connexion avant verrouillage de compte [input type="text"]
- Verrouiller le compte pour une période de [input type="text"] [input type="text"]

[Enregistrer] [Annuler]

## Data Activation and Four-Eye Rule

Data Activation and *Four-Eye* Rule must explicitly requested. By default, data are not activated and the *Four-Eye* Rule not applied.

**Important!** Reminder: Deactivated data cannot be used (**deactivated** status). They have to be activated to be usable (**activated** status).

Reminder: A single user can intervene only twice on a same element: creation+modification, creation+deletion, creation+activation, etc.



## Sage XRT Administration Services

Click **Setup**.

**Sage XRT Common Services**

Transcodages Droits Audits

### Gestion du paramétrage

Utilisateurs	Paramètres Sage ID
Sites	Authentification Sage ID activée Environnement Sage ID défini : Préproduction
Profil	
Paramétrage	Paramètres d'authentification sécurisée Mode de Vérification de la Liste de Révocation du Certificat X509 (LRC) défini comme Online. La vérification de la signature du Certificat X509 pour les authentifications sécurisées est activée. La vérification de l'expiration du Certificat X509 pour les authentifications sécurisées est activée. Flag de Vérification de la Chaîne de Certificat X509 défini comme EntireChain.
Mon compte	Paramètres LDAP/Active Directory Les utilisateurs sont authentifiés via la sécurité intégrée de Windows NT (Active Directory). Paramètres SAML v2 Authentification SAML v2 activée Règles des mots de passe Les utilisateurs NT ne sont pas obligés de saisir leur mot de passe pour se connecter à l'application. Les caractères numériques obligatoires pour les nouveaux mots de passe sont désactivés. Les majuscules obligatoires pour les nouveaux mots de passe sont désactivées. La longueur minimum des mots de passe est désactivée. L'histoirisation des mots de passe est désactivée. Contrôle d'équivalence Mot de Passe - Nom Utilisateur désactivé. Le mot de passe par défaut pour les nouveaux comptes est désactivé. Condition de validité des Comptes avec Mot de Passe par défaut désactivée. La période de validité pour les nouveaux mots de passe est désactivée. Le verrouillage des comptes après un certain nombre de tentatives de connexion échouées est désactivé. Activation des données et règle des 4 yeux L'activation des utilisateurs est désactivée L'activation des sites est désactivée L'activation des profils est désactivée La règle des 4 yeux ne s'applique pas sur la gestion des utilisateurs La règle des 4 yeux ne s'applique pas sur la gestion des sites La règle des 4 yeux ne s'applique pas sur la gestion des profils La règle des 4 yeux ne s'applique pas sur la gestion des paramètres d'authentification La règle des 4 yeux ne s'applique pas sur la gestion des tables de transcodage La règle des 4 yeux ne s'applique pas sur la gestion des correspondances des tables de transcodage

Click the *pencil* button to modify Data Activation and *Four-Eye* rules.

### Activation des données et règle des 4 yeux

#### Activation des données

- ☐ Activation requise des utilisateurs
- ☐ Activation requise des sites
- ☐ Activation requise des profils

#### Règle des 4 yeux

- ☐ Application sur la gestion des utilisateurs
- ☐ Application sur la gestion des sites
- ☐ Application sur la gestion des profils
- ☐ Application sur la gestion des paramètres d'authentification
- ☐ Application sur la gestion des tables de transcodage
- ☐ Application sur la gestion des correspondances des tables de transcodage

**Enregistrer** **Annuler**

## Sage XRT Administration Services

The activation of an element can only be requested if there is no **deactivated** element.

Activation can be performed for:

- Users
- Profiles
- Sites

### Profiles

If profile activation has been requested:

- NT/LDAP profiles are always created as **activated** and cannot be deactivated. Other profiles are always created as **deactivated**.
- If a user is linked to a deactivated profile, they cannot use the rights corresponding to the profile.
- All users linked to NT/LDAP profiles are created as **activated** and can be deactivated.

If profile activation has not been requested: all profiles are created as **activated**.

### Sites

If site activation has been requested:

- NT/LDAP sites are always created as **activated** and cannot be deactivated. Other sites are always created as **deactivated**.
- All users linked to NT/LDAP sites are created as **activated** and can be deactivated.

If site activation has not been requested: all sites are created as **activated**.

### Users

If user activation has been requested:

- All users linked to NT/LDAP profiles are created as **activated** and can be deactivated.
- All users linked to NT/LDAP sites are created as **activated** and can be deactivated.
- A standard user is created as **deactivated**.
- Users cannot activate themselves.
- Deactivated users cannot log in.

If user activation has not been requested: all users are created as **activated**.

*Four-Eye* Rule application may be requested for:

- Users
- Profiles
- Sites
- Authentication Parameters Management
- Transcoding Tables
- Transcoding Tables Correspondences

The *Four-Eye* Rule is always applied on the setting up of **Data Activation** and **Four-Eye Rule**.

### User Account

A user account enables a user to be authenticated by *Sage XRT* applications. It also enables the management of their access authorizations for the application functions.

A user account includes the following elements:

- User language (French, English, Spanish, Portuguese, Italian, German)
- User Email for notifications
- Description
- User type (administrator or standard user)

## Sage XRT Administration Services

### Adding Users

Click the **Users** tab from the **Rights** menu.

The screenshot shows the 'Gestion des utilisateurs' (User Management) page in the Sage XRT Common Services application. The page has a dark header with the Sage logo and 'XRT Common Services'. Below the header is a navigation bar with tabs: 'Formats', 'Licences', 'Transcodages', 'Droits' (highlighted), 'Audits', and 'Groupes de travail'. The main content area is titled 'Gestion des utilisateurs'. On the left is a sidebar with a tree view containing 'Utilisateurs' (selected), 'Sites', 'Profils', 'Paramétrage', and 'Mon compte'. The main area contains a search bar with filters for 'Filtrer par profil' and 'Filtrer par site', and a search input 'Rechercher le nom contenant...'. Below this is a table of users. The table has columns: 'Nom', 'Description', 'Type', 'Profil(s)', 'Site(s)', and 'Statut'. The 'Statut' column has buttons for 'actif' (blue) and 'inactif' (red). The table lists several users, including 'ABRILHA', 'ADMINISTRATEUR', 'AWAGUE', 'BOELPRA', 'BSARTEL', 'DA', and 'DF'. A 'Nouvel utilisateur' button is located in the top right corner.

Nom	Description	Type	Profil(s)	Site(s)	Statut
<input type="checkbox"/> ABRILHA		Standard	SIGNATAIRE INTERNE		<input type="button" value="inactif"/>
<input type="checkbox"/> ADMINISTRATEUR		Niveau 1	<Multiples>		<input type="button" value="actif"/>
<input type="checkbox"/> AWAGUE		Standard	<Multiples>		<input type="button" value="actif"/>
<input type="checkbox"/> BOELPRA		Standard	SIGNATAIRE BANCAIRE		<input type="button" value="actif"/>
<input type="checkbox"/> BSARTEL		Standard	SIGNATAIRE BANCAIRE		<input type="button" value="actif"/>
<input type="checkbox"/> DA		Niveau 1	ADMINISTRATEURS		<input type="button" value="actif"/>
<input type="checkbox"/> DF		Standard	ADMINISTRATEURS		<input type="button" value="actif"/>

In the **User Management** tab, the **New User** button enables you to access the creation wizard.

The screenshot shows the 'Création d'un utilisateur' (Create User) wizard. The window has a title bar with a close button. The main area contains several input fields and checkboxes. The 'Authentification\*' field is a dropdown menu. The 'Nom\*' field is a text input. The 'Niveau de sécurité\*' field is a dropdown menu. The 'Langue\*' field is a dropdown menu. The 'Adresse mail' field is a text input. The 'Description' field is a text input. Below these fields are two checkboxes: 'Activer la période de validité' and 'Double authentification'. There is also a checkbox for 'Réinitialiser la double authentification'. At the bottom, there is a list of profiles with checkboxes: 'UTILISATEURS', 'PAIE', 'DRH', 'SIGNATAIRE BANCAIRE', 'INFORMATIQUE', 'SIGNATAIRE INTERNE', 'STAGIAIRE', 'TRESORERIE', 'ADMINISTRATEURS', and 'TESTEUR'. At the bottom right, there are two buttons: 'Enregistrer' (blue) and 'Annuler' (light blue).

## Sage XRT Administration Services

Select the authentication mode and enter the username.

**Windows authentication** offers two adding modes for NT users:

- Either adding by selecting the user from the list displayed in the dialog box. The access to the database needs to be defined previously for each user.
- Or adding by searching the company directory for the user. The user gains the *XRTUsers* database access type.

**LDAP Authentication:** research and selection of the users belonging to the directory set up in the LDAP authentication configuration, provided by the **Search** button.

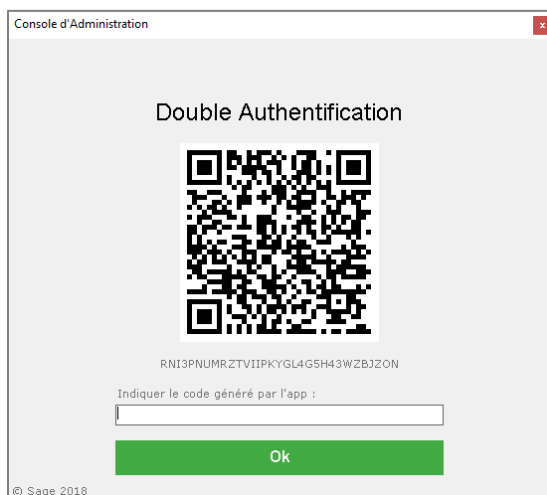
**Standard authentication:** enter a unique identifier for the user.

**Important!** Setting up access management based on *NT* accounts is highly recommended.

**SAML Authentication:** Mandatory input of the SSO ID provided by the Identity Provider.

### Sage ID Authentication

**Double Authentication** option: This option may be selected or not at user creation or later, whatever the authentication type (**Standard**, **Windows**, **SageID**, etc.). When the option is selected and upon first connection, the user must start the authentication by capturing the QR Code (or equivalent) through an app compatible with protocol *TOTP* 6 digits (*FreeOTP* for example). This option appears in orange until the initialization. After the initialization, it turns green.



In case the user loses or replaces their smartphone or uninstalls the authenticating app, the status must be reinitialized to regenerate the link.

For this purpose the option **Reset double authentication** is available in the users list.

## Sage XRT Administration Services

Choose the user type to be created:

- **Level 1 security administrator:** they administrate access permissions of the workgroup's users.
- **Standard User:** they have no write nor modification access granted.

Complete the following fields.

- **Language:** Select the language of the user from the dropdown list.
- **Description:** Enter a description for the user.
- **Email:** Enter the user email address.
- **Validity Period:** Check the box to enable the three fields allowing to define the user validity period.

You may link the user to a profile and a site.

Click **Save** or **Cancel** to quit the dialog box and go back to the user list.

### User Account Activation

Users cannot activate themselves.

### Expired User

Users get this status when their validity period has expired.

### Blocked User

Users get this status when they cannot log in after password policy application.

## Profiles

The **Administration Console** is now running. You can create one or several profiles for users.

By default, a user cannot access any function of the product. The administrator must define the access rights of users.

A profile consists of users sharing the same rights. Rights define users' access to product functions.

**Important!** A user can belong to several profiles.

A user is authorized to access a product function if the corresponding permission is opened in at least one of the profiles to which he/she belongs.

*UMAPI* executes an operation of type *OR* on the permissions. This operating mode enables the association of a profile with a group of persons with the same activities.

The *standard* profile is defined by the following characteristics:

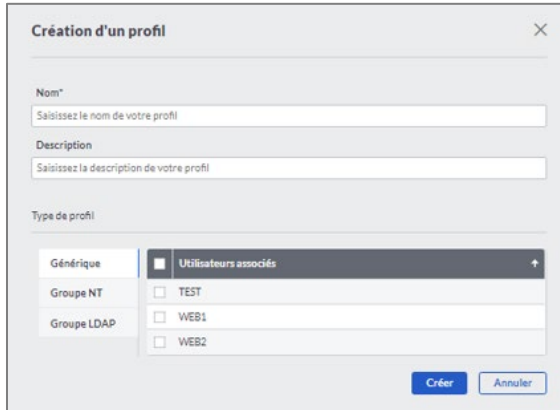
- A **Code** that identifies the profile (no space)
- A **Description**

## Creation

Click the **Profiles** tab from the **Rights** menu.

Nom	Description	Type de profil	Statut
ADMINISTRATEURS		Générique	actif
DRH		Générique	actif
INFORMATIQUE		Générique	actif
PAIE	GROUPE PAIE RH	Générique	actif
SIGNATAIRE BANCAIRE	SIGNATAIRE BANCAIRE	Générique	actif
SIGNATAIRE INTERNE	SIGNATAIRE INTERNE	Générique	actif
STAGIAIRE	STAGIAIRES	Générique	actif
TEST DROITS	TEST DROITS	Générique	Inactif
TESTEUR	TESTEUR	Générique	actif
TRESORERIE		Générique	actif

In the **Profile** tab, the **New Profile** button enables you to access the creation wizard.



Enter the following information:

- **Name:** Enter a name for the profile. This field is mandatory.
- **Description:** Enter a description for the profile.

Select the profile type:

- **Generic:** Select the users to associate with the profile.
- **NT Group:** Every member of this group is automatically saved in the database as a *Sage XRT User*. *AD Group* profiles are based on *Windows NT* user account data. Select the default language and security level.
- **LDAP Group:** *LDAP Group* profiles are based on a company directory data. The creation of an *LDAP* group is effective only if the access to the company directory was set up. Select the default language and security level.

When creating an *NT* or *LDAP* profile, all the users belonging to the group are automatically registered in the database as *Sage XRT* application users.

Click **Create** to save your new profile.



## Sage XRT Administration Services

### Access Rights

From the profiles list, select a profile and click **Profile rights management**.

The screenshot shows the 'Gestion des profils' page in the Sage XRT Common Services interface. The page has a sidebar with navigation links: Utilisateurs, Sites, Profils, Paramétrage, and Mon compte. The main area displays a table of profiles. The 'ADMINISTRATEURS' profile is selected, and a dropdown menu is open over the 'Actions' column, showing options like 'Gestion des droits d'accès aux fonctions du profil' and 'Copier les droits d'accès aux fonctions du profil'. The table lists various profiles such as DRH, INFORMATIQUE, PAIE, PROFIL API, PROFIL DONNEES, SIGNATAIRE BANCAIRE, SIGNATAIRE INTERNE, STAGIAIRE, and TEST DROITS. The status of each profile is indicated by a button (actif or inactif).

Nom	Description	Type de profil	Statut
ADMINISTRATEURS		Générique	actif
DRH		Générique	actif
INFORMATIQUE		Générique	actif
PAIE	GROUPE PAIE RH	Générique	actif
PROFIL API	DESCRIPTION PROFIL API	Générique	inactif
PROFIL DONNEES	PROFIL DONNEES	Générique	inactif
SIGNATAIRE BANCAIRE	SIGNATAIRE BANCAIRE	Générique	actif
SIGNATAIRE INTERNE	SIGNATAIRE INTERNE	Générique	actif
STAGIAIRE	STAGIAIRES	Générique	actif
TEST DROITS	TEST DROITS	Générique	actif

The **Grant Rights** page enables the user to manage access rights to functions of a profile for the different *Sage XRT* products.

Click the **Sage XRT Administration Service** tab,

The screenshot shows the 'Modification des droits d'accès aux fonctions du profil' dialog box for the 'ADMINISTRATEURS' profile. The dialog has a sidebar with navigation links: Sage XRT Business Exchange, Sage XRT Administration Service, Sage FRP Treasury, Sage XRT Functional Service, and Audits. The 'Sage XRT Administration Service' is selected, and its functions are listed with checkboxes for granting access. The functions include Licences, Transcodage, Droits, Utilisateurs, Sites, Profils, Paramétrage, Mon compte, Refresh token, and Audits. The 'Enregistrer' button is highlighted.

Service	Fonction	Statut
Sage XRT Business Exchange	Licences	<input checked="" type="checkbox"/>
	Licences par défaut	<input checked="" type="checkbox"/>
	Licences du tenant courant	<input checked="" type="checkbox"/>
Sage XRT Administration Service	Transcodage	<input checked="" type="checkbox"/>
	Conception	<input checked="" type="checkbox"/>
	Correspondances	<input checked="" type="checkbox"/>
Sage FRP Treasury	Droits	<input checked="" type="checkbox"/>
	Utilisateurs	<input checked="" type="checkbox"/>
	Visualiser le détail d'un utilisateur	<input checked="" type="checkbox"/>
Sage XRT Functional Service	Accès à la liste des utilisateurs	<input checked="" type="checkbox"/>
	Créer un nouvel utilisateur	<input checked="" type="checkbox"/>
	Modifier un utilisateur	<input checked="" type="checkbox"/>
Audits	Supprimer un utilisateur	<input checked="" type="checkbox"/>
	Activer un utilisateur	<input checked="" type="checkbox"/>
	Désactiver un utilisateur	<input checked="" type="checkbox"/>

Grant the access rights.

Repeat the same process for **Sage XRT Treasury**, **Sage XRT Business Exchange** and **Sage XRT Functional Service (Sage XRT Common Services)** if needed.

## Sage XRT Administration Services

Click **Save** to keep the modifications or **Cancel** to cancel them.

### Manage Profile's Function Access Rights

**Sage XRT Functional Service** uses the functions that follow in full autonomy, i.e. with no link to **Sage XRT Business Exchange**, nor **Sage XRT Advanced**.

From the profile list, select a profile and click **Manage profile's function access rights**.

Select by data type (**Origin**, **Entity**, **Bank**, **Account**, **Currency** tabs), the elements unauthorized to the profile users. By default, all elements can be accessed.

Then click the **Save** button to save your setup.

The option **Show inaccessible data only** is not selected by default.

Modification des droits d'accès aux données du profil "ADMINISTRATEURS"

Origine

Entité

Banque

Compte

Devise

☐ Afficher uniquement les données inaccessible

0 sélectionné(s)

Banque inaccessible

☐ BBVAESMM

☐ BNPPFRPP

☐ SOGEFRPP

Afficher 10 enregistrement(s) Page 1 sur 1 3 enregistrement(s)

Enregistrer

### Duplication

From the profile list, select a profile then click **Copy profile's function access rights**. The creation wizard for profiles appears.

Enter the profile information and click **Create**. This new profile automatically owns the access rights of the copied profile.

### Modification

Click the **Profiles** tab from the **Rights** menu. The list of the existing profiles is displayed.

For modification, use the corresponding link available from the profile name.

Proceed with your modifications and click **Save**.

### Deletion

Click the **Profiles** tab from the **Rights** menu. The list of the existing profiles is displayed.

To delete one profile, select the corresponding box and click the *bin* button.

### Activation

When a profile is created, it gets the **Inactive** status until an Administrator enables it.

From the **Profiles** list, select the one to activate.

Click on the **Inactive** status once and confirm the profile activation.

A message confirms the action.

### Deactivation

From the **Profiles** list, select the one to deactivate.

Click on the **Active** status once and confirm the profile deactivation.

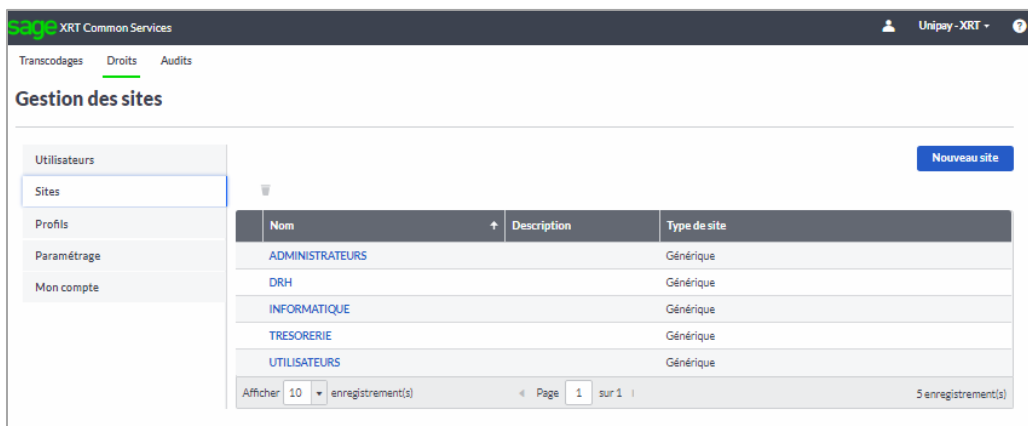
A message confirms the action.

# Sites

## Creation

Creating Sites is the same process as for profiles.

Click the **Site** tab from the **Rights** menu.



The **New Profile** button enables you to access the creation wizard.

The screenshot shows the 'Création d'un site' (Create a site) wizard. It has a title bar with a close button. The form contains three main sections: 'Nom\*' (Name), 'Description', and 'Type de site'. The 'Nom\*' section has a text input field with the placeholder 'Saisissez le nom de votre site'. The 'Description' section has a text input field with the placeholder 'Saisissez la description de votre site'. The 'Type de site' section has a list of options: 'Générique' (selected), 'Groupe NT', and 'Groupe LDAP'. To the right of these options is a section titled 'Utilisateurs associés' (Associated users) with a plus icon. This section contains three checkboxes: 'TEST', 'WEB1', and 'WEB2'. At the bottom right, there are two buttons: 'Créer' (Create) and 'Annuler' (Cancel).

## Sage XRT Administration Services

Enter the following information:

- **Name:** Enter a name for the site. This field is mandatory.
- **Description:** Enter a description for the site.

Select the site type:

- **Generic:** Select the existing users to associate with the site.
- **AD Group:** Every member of this group is automatically saved in the database as a *Sage XRT User*. **AD Group** sites are based on *Windows NT* user account data.
- **LDAP Group:** **LDAP Group** Sites are based on a company directory data. The creation of an LDAP group is effective only if the access to the company directory has been set up.

Click **Create** to save your new site.

### Modification

Click the **Site** tab from the **Rights** menu. The list of the existing sites is displayed.

For modification, use the corresponding link available from the site name.

Proceed with your modifications and click **Save**.

### Deletion

Click the **Site** tab from the **Rights** menu. The list of the existing sites is displayed.

To delete sites, select the sites and click the *bin* button.

### Activation

When a site is created, it gets the **Disabled** status until an Administrator enables it.

From the site list, select the site to activate.

Click on the **Inactive** status once and confirm the site activation. A message confirms the action.

### Deactivation

From the site list, select the site to deactivate.

Click on the **Active** status once and confirm your action. A message confirms the action.

### My Account

This tab is available to **Standard** Users. It enables the modification of the connected user's password.

Click the **My Account** tab from the **Rights** menu.

sage XRT Common Services

Environnement Transcodages **Droits** Audits

**Gestion de mon compte**

Utilisateurs	Nom PPICHON	Modification du Mot de Passe
Sites	Niveau de sécurité Administrateur de sécurité de niveau 1	
Profil	Langue Français	
Paramétrage	Description	
Mon compte	Adresse mail herve.pires@sage.com	

The user details are recapped: **Name, Security Level, Language, Description, Email.**

The password is the only element that can be modified using the *pencil* button.

### Audits and Logs

#### Setup

You need to define the audit type and the log activation before viewing any data.

Click the **Setup** tab from the **Audits** menu.

Formats Licences Transcodages Droits **Audits** Groupes de travail

**Paramétrage**

Audits	Audits
Logs	Type d'audit par défaut : Système
Paramétrage	Logs

Type de log par défaut : Gestion des formats

La log de gestion des utilisateurs est 'activée'.  
La log de gestion des formats est 'activée'.  
La log du client XDLO est 'activée'.  
La log de XDLO est 'activée'.  
La log de XRTLib est 'désactivée'.  
La log de XRTProt est 'désactivée'.

The setup is recapped. It can be modified using the *pencil* button.

## Sage XRT Administration Services

Select the default audit type to be displayed:

- System
- Database
- Users

Select the default log type to be displayed:

- Format Management
- User Management
- Database Management
- Console Management
- XDLO Client
- XDLO
- XDLO Service
- XRTProt
- XRTLogin
- XRTRLib

Select the logs to be activated.

Click the **Save** button to complete your setup.

**Paramètres audits et logs**

**Audits**

Type d'audit sélectionné par défaut: Système

**Logs**

Type de log sélectionné par défaut: Gestion des formats

☒ Activer la log sur la gestion des utilisateurs    ☒ Activer la log XDLO

☒ Activer la log sur la gestion des formats    ☐ Activer la log XRTRLib

☒ Activer la log client XDLO    ☐ Activer la log XRTProt

**Enregistrer** **Annuler**

### Audit

Click the **Audit** tab from the **Audits** menu. The default audit type is displayed.

EnvironnementTranscodagesDroitsAudits

Gestion des audits

Audits

Logs

Paramétrage

Type d'audit

Système

Période

Aucune

Rechercher

Purger

Date/Heure	Statut	Utilisateur	Compte utilisateur	Machine	Description
18/10/2019 16:42:24	Succès	PPICHON	ADMINISTRATEUR	WIN-I8LGUGG6C31	Activation du profil 'PROFIL API'
17/10/2019 14:57:21	Succès	PPICHON	ADMINISTRATEUR	WIN-I8LGUGG6C31	Modification de l'utilisateur 'ADMINISTRATEUR' (Administrateur de sécurité de niveau 1)
17/10/2019 10:13:49	Succès	PPICHON	ADMINISTRATEUR	WIN-I8LGUGG6C31	Modifier les règles de double authentification (Le nombre de saisies OTP incorrectes avant verrouillage est de 34)
17/10/2019 10:13:33	Succès	PPICHON	ADMINISTRATEUR	WIN-I8LGUGG6C31	Modifier les règles de double authentification (La période de verrouillage des comptes après saisies OTP incorrectes est : définitivement)
17/10/2019 10:13:33	Succès	PPICHON	ADMINISTRATEUR	WIN-I8LGUGG6C31	Modifier les règles de double authentification (Le nombre de saisies OTP incorrectes avant verrouillage est de 3)
07/10/2019 16:27:51	Succès	PPICHON	ADMINISTRATEUR	WIN-I8LGUGG6C31	Modification des droits du profil 'ADMINISTRATEURS'
07/10/2019 16:26:26	Succès	PPICHON	ADMINISTRATEUR	WIN-I8LGUGG6C31	Modification des droits du profil 'ADMINISTRATEURS'
07/10/2019 16:25:24	Succès	PPICHON	ADMINISTRATEUR	WIN-I8LGUGG6C31	Modification des droits du profil 'ADMINISTRATEURS'
04/10/2019 16:33:08	Succès	PPICHON	ADMINISTRATEUR	WIN-I8LGUGG6C31	Modification des droits du profil 'ADMINISTRATEURS'
30/08/2019 10:11:22	Succès	PPICHON	ADMINISTRATEUR	WIN-I8LGUGG6C31	Modification des droits du profil 'ADMINISTRATEURS'

Afficher 10 enregistrement(s)Page 1 sur 11105 enregistrement(s)

To modify it, select another one from the **Audit Type** dropdown list.

To filter the table data, select a **Period** from the dropdown list:

- Today
- Last 7 days
- Last 30 days
- Last 12 months
- This week
- This month
- This year

The **Search** button gives you access to more selection criteria. The applied filtering criteria are recapped at the top of the list.

Click **Purge** to delete or export events from the list.



## Sage XRT Administration Services

### Suppression d'évènements de l'audit 'Utilisateurs'

Evènements antérieurs au :

Nombre d'évènements à supprimer :

Exporter Supprimer Annuler

## Log

Click the **Log** tab from the **Audits** menu. The default log type is displayed.

sage XRT Common Services

Unipay - XRT

Transcodages

Droits

Audits

### Gestion des logs

Audits

Logs

Paramétrage

Type de log

Gestion des formats

Période

Aujourd'hui

Rechercher

Critères de recherche appliqués

Date du 16/10/2018 au 16/10/2018 inclus

Effacer la recherche

Date/Heure	Niveau	Message
16/10/2018 08:51:00	DEBUG	CCFFmtRun:FMTDisconnect
16/10/2018 08:51:00	DEBUG	return_S_OK

Afficher 10 enregistrement(s)

Page 1 sur 1

2 enregistrement(s)

To change it, Select a **Log type** from the dropdown list.

To filter the table data, select another **Period** from the dropdown list:

- Today
- Last 7 days
- Last 30 days
- Last 12 months
- This week
- This month
- This year

The **Search** button gives you access to more selection criteria. The applied filtering criteria are recapped at the top of the list.

## Transcoding

### Design

#### Creation

Click the **Design** tab from the **Transcoding** menu.

The list displays the default tables required for *Sage XRT* products operation.

Transcodages Droits Audits

Conception des tables de transcodage

Conception

Correspondances

<Filtrer par nom>

<Filtrer par description>

Rechercher le nom contenant...

0 sélectionné(s) Actions

	Nom	Description	Nombre de colonnes en entrée	Nombre de colonnes en sortie
<input type="checkbox"/>	acsaebdv.dat	Correspondance Code Devise AEB <-> Code ISO	1	1
<input type="checkbox"/>	ACSAFBDV.DAT	Correspondance Code Devise AFB <-> Code ISO	2	1
<input type="checkbox"/>	ACSAFBPA.DAT	Table des partenaires	1	1
<input type="checkbox"/>	ACSAFBVE.DAT	Taux de change de l Euro par devise	1	1
<input type="checkbox"/>	ACSAFB_TO_MT		1	1
<input type="checkbox"/>	acsfinstapa.dat	Parametres d'intégration FINSTA	2	1
<input type="checkbox"/>	ACSMT_OP.DAT	Traduction des codes opération SWIFT	1	1
<input type="checkbox"/>	ACSMT_OP_DIR		2	1
<input type="checkbox"/>	AEB43_PARAM		1	1
<input type="checkbox"/>	AFB120RT_PARAM	Parametrage de l'AFB 120	1	1

Afficher 10 enregistrement(s) Page 1 sur 6 56 enregistrement(s)

## Sage XRT Administration Services

The **New Table** button enables you to access the creation wizard.

**Création d'une table**

Nom\*  
DOC

Description

0 sélectionné(s) Nouvelle colonne

	Nom	Type de colonne
<input type="checkbox"/>	ENTREE 1	Entrée
<input type="checkbox"/>	ENTREE 2	Entrée
<input type="checkbox"/>	SORTIE	Sortie

Enregistrer Annuler

You must enter a **Name** for the table, the **Description** is optional.

The **New Column** button enables you to access the creation wizard for input and output columns.

**Création d'une nouvelle colonne**

Type de colonne\*

Nom\*

Valider Annuler

For each column, enter a name and select the column type (input/output).

Click the **Validate** button to save your creation.

## Sage XRT Administration Services

The new column appears in the column list of the table. Columns can be modified using the corresponding link available from their name and they can be deleted by selecting them and clicking the *bin* button.

Création d'une table

Nom\*  
DOC

Description

0 sélectionné(s)

Nouvelle colonne

Nom	Type de colonne
<input type="checkbox"/> ENTREE 1	Entrée
<input type="checkbox"/> ENTREE 2	Entrée
<input type="checkbox"/> SORTIE	Sortie

Enregistrer Annuler

Then click the **Save** button to save your creation. The new table appears in the list.

### Modification

Click the **Design** tab from the **Transcoding** menu. The list of the existing tables is displayed.

For modification, use the corresponding link available from the table name.

Proceed with your modifications and click **Save**.

### Deletion

Click the **Design** tab from the **Transcoding** menu. The list of the existing tables is displayed.

To delete tables, select them and click the *bin* button.

### Import

Click the **Design** tab from the **Transcoding** menu. The list of the existing tables is displayed.

To import transcoding tables, click **Import**. A dialog box enables you to select the file to import.

Select it and click **Open**.

### Export

Click the **Design** tab from the **Transcoding** menu. The list of the existing tables is displayed.

## Sage XRT Administration Services

To export tables, select them and click the **Export** option from the **Actions** dropdown menu.

## Correspondences

After the creation, correspondences to be applied must be specified.

### Creation

Click the **Correspondences** tab from the **Transcoding** menu.

The **RIBS-IBAN** Table is selected by default in the **Table** dropdown menu for correspondences display.

Select the table for which correspondences must be created. The table structure is displayed.

The screenshot shows the 'Correspondances dans les tables de transcodage' page. At the top, there is a navigation bar with tabs: 'Formats', 'Licences', 'Transcodages' (highlighted), 'Droits', 'Audits', and 'Groupes de travail'. Below the navigation bar, the page title is 'Correspondances dans les tables de transcodage'. On the left, there is a sidebar with two tabs: 'Conception' and 'Correspondances'. The main area contains a 'Table' dropdown menu with 'DOC' selected. To the right of the dropdown is a 'Nouvelle correspondance' button. Below the dropdown, it says '0 sélectionné(s)' with a trash icon. A table structure is displayed with three columns: 'ENTREE 1 (E)', 'ENTREE 2 (E)', and 'SORTIE (S)'. Below the table, there is a pagination bar showing 'Afficher 10 enregistrement(s)' and 'Page 1 sur 1'. At the bottom right, it says '0 enregistrement(s)'.

The **New correspondence** button enables you to access the creation wizard.

The screenshot shows the 'Création d'une correspondance' wizard. It has a title bar with a close button. The main area contains three input fields: 'ENTREE 1 (E)\*', 'ENTREE 2 (E)\*', and 'SORTIE (S)'. At the bottom, there are two buttons: 'Enregistrer' and 'Annuler'.

Enter input and output values for every correspondence.

Click **Save** to keep the new correspondence.

The new table has a **Disabled** status.

**Correspondances dans les tables de transcodage**

Table: ACSAFB\_TO\_MT

Nouvelle correspondance

0 sélectionné(s)

	Code_AFB (E)	Code_Swift (S)
<input type="checkbox"/>	01	NCHK
<input type="checkbox"/>	02	NCLR
<input type="checkbox"/>	03	NRTI
<input type="checkbox"/>	04	NMSC
<input type="checkbox"/>	05	NTRF
<input type="checkbox"/>	06	NTRF
<input type="checkbox"/>	07	NBOE
<input type="checkbox"/>	08	NDDT
<input type="checkbox"/>	09	NDDT
<input type="checkbox"/>	10	NRTI

Afficher 10 enregistrement(s) Page 1 sur 11 103 enregistrement(s)

### Modification

From the **Transcoding** menu, click **Correspondences**.

Select the working table. The list of the existing correspondences is displayed.

For modification, use the dedicated link available from the first column.

Proceed with your modifications and click **Save**.

### Deletion

Click the **Design** tab from the **Transcoding** menu.

Select the working table. The list of the existing correspondences is displayed.

To delete one correspondence, select the corresponding box and click the *bin* button.

### XDLO (deprecated)

The XDLO service does not exist anymore.

## Sage XRT Functional Service

### Configuration

*SSage.SCDTSServer.Service.exe.config* (configuration file for function service) is in: **C:\Program Files\Common Files\xrt**.

### Activating Logs

See <system.diagnostics> and <diagnostics> nodes

### Defining location for website, listening ports and service hosts

See <ApplicationSettings> node

```
<add key="websitehost" value="*" />
<add key="websitehostdefault" value="http://localhost" />
<add key="httpservicehost" value="http://*:80"/>
<add key="httpsservicehost" value="https://*:443"/>
```

### Defining counter and frequency in second for APIFMT jobs popping-off

See <ApplicationSettings> node

```
<add key="apifmtasyncuser" value="XRT" />
<add key="apifmtasyncfrequency" value="20" />
```

### Defining account and frequency in seconds for the payment creation jobs

See <ApplicationSettings> node

```
<add key="payasyncuser" value="XRT" />
<add key="payasyncfrequency" value="30" />
```

### Defining number of actions threads on payments JSON flows

See <ApplicationSettings> node

```
<add key="payasyncthreadtaskI" value="10" />
<add key="payasyncthreadtaskII" value="10" />
```

Notes:

**taskI** => Dematerialisation to Database

**taskII** => Creation from Database

### Defining tenants to exclude for jobs popping-off (APIFMT, PAIEMENTS)

See <ApplicationSettings> node

```
<add key="apifmtasyncexception"
value="[YOUR_WORKGROUP_EXCEPT1],[YOUR_WORKGROUP_EXCEPT2]" />
```

```
<add key="payasyncexception"
value="[YOUR_WORKGROUP_EXCEPT1],[YOUR_WORKGROUP_EXCEPT2]" />
```

### Defining Security Features

See <ApplicationSettings> node

```
<add key="showfriendlymessage" value="NO"/> (messages d'erreur
générique)
```

### Setting up the link to another product (RAPI, posting and status retrieval)

See <ApplicationSettings> node

```
<add key="paysendfilepostgen" value=" " />
```

```
<add key="payfollowfilepostgen" value=" " />
```

### SWAGGER Documentation

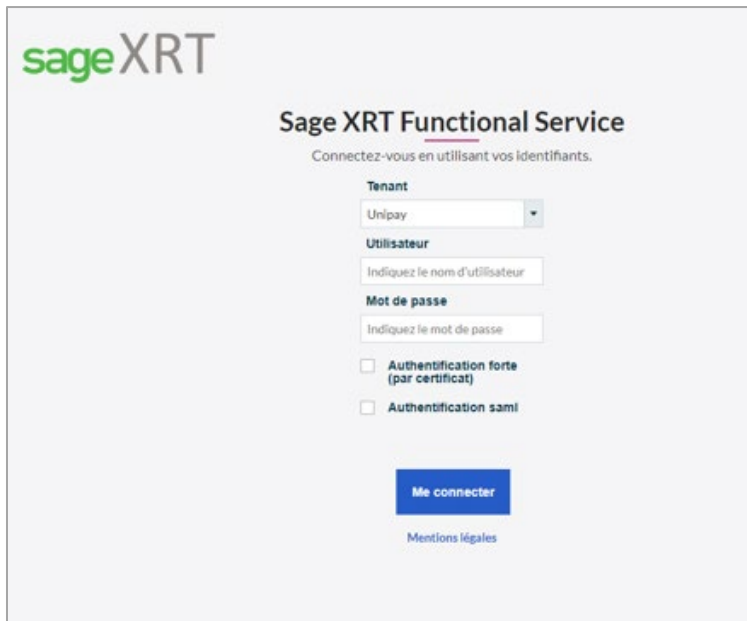
Documentation URL and export URL

### Connection

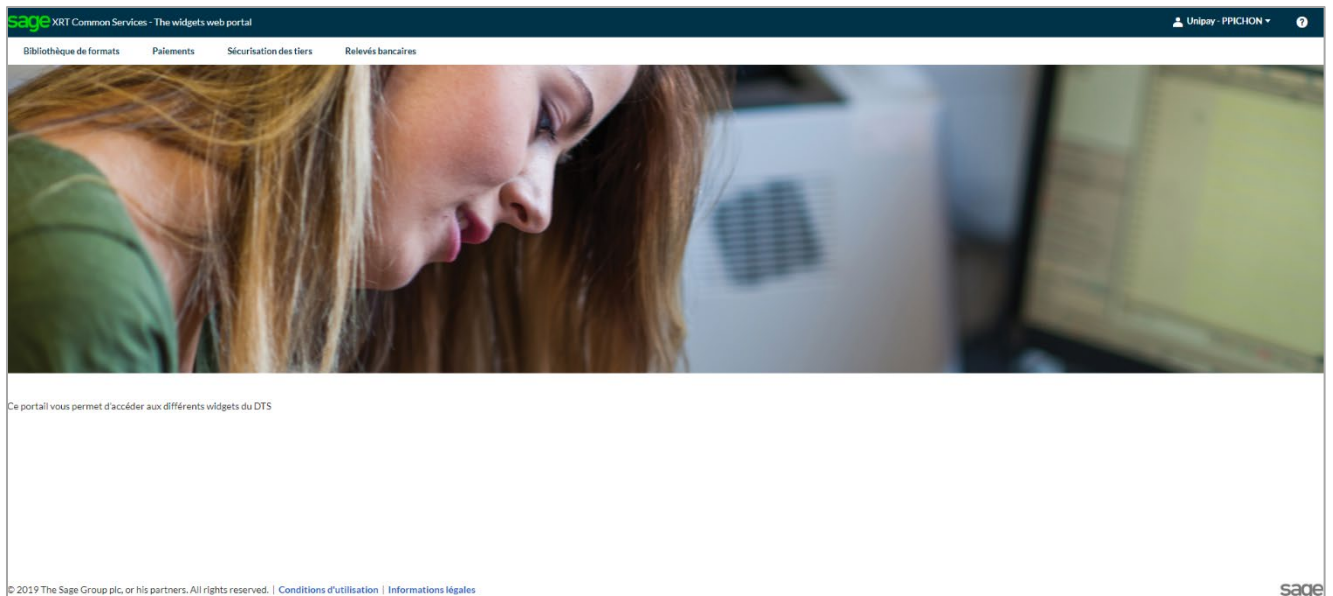
Access **Sage XRT Functional Service** interface through the URL **<http://localhost/SCDTS/index.html>**. Authentication and functional services must be restarted.



## Sage XRT Administration Services



The screenshot shows the login interface for Sage XRT Functional Service. At the top left is the 'sageXRT' logo. The title 'Sage XRT Functional Service' is centered, followed by the instruction 'Connectez-vous en utilisant vos identifiants.' Below this are three input fields: 'Tenant' with a dropdown menu showing 'Unipay', 'Utilisateur' with a text box containing 'Indiquez le nom d'utilisateur', and 'Mot de passe' with a text box containing 'Indiquez le mot de passe'. There are two checkboxes for authentication: 'Authentification forte (par certificat)' and 'Authentification saml', both of which are unchecked. A blue 'Me connecter' button is positioned below the password field. At the bottom, there is a link for 'Mentions légales'.



This service offers the following possibilities:

- Format Library
- Payment Management
- Third-Party Security (not available in 5.0)
- Bank Statements (not available in 5.0)

## Sage XRT Administration Services

**Sage XRT Functional Service** uses the functions that follow in full autonomy, i.e. with no link to **Sage XRT Business Exchange**, nor **Sage XRT Advanced**.

### Format Library - Format API

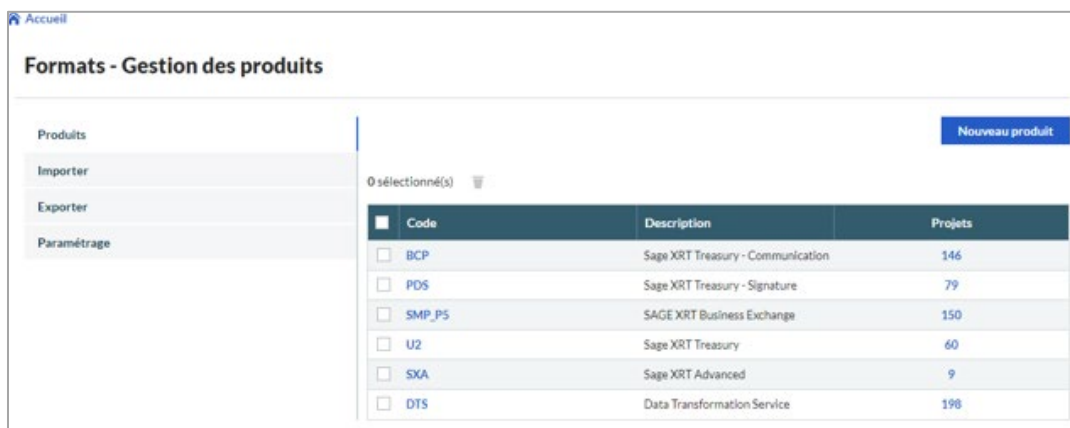
To access the format library, use the **Formats List** widget.



### Creating Products

The elements linked to the format management (projects, processing) can be accessed by **Product**.

By default, the usable products are available along with all their standard projects and processes.

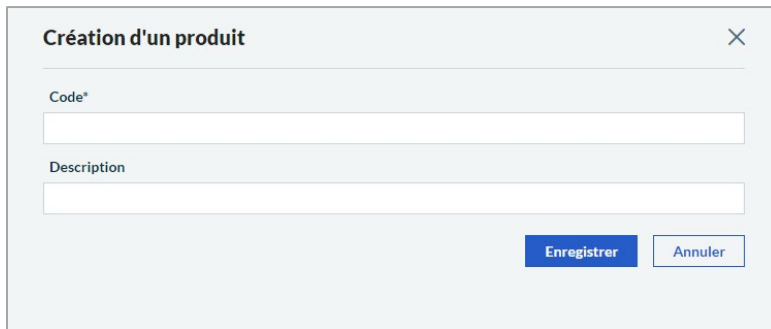


In the **Product** tab, the **New product** button enables you to access the creation wizard.

The **Code** is mandatory and the **Description** optional.

Click **Save** to validate the product creation or **Cancel** to go back to the products. A message confirms the license creation.

## Sage XRT Administration Services



A dialog box titled "Création d'un produit" with a close button (X) in the top right corner. It contains two input fields: "Code\*" and "Description". At the bottom right, there are two buttons: "Enregistrer" (blue) and "Annuler" (white with blue border).

### Modifying Products

In the product list, use the link on the product code. The modification wizard is displayed.

You can only modify the **Description**.

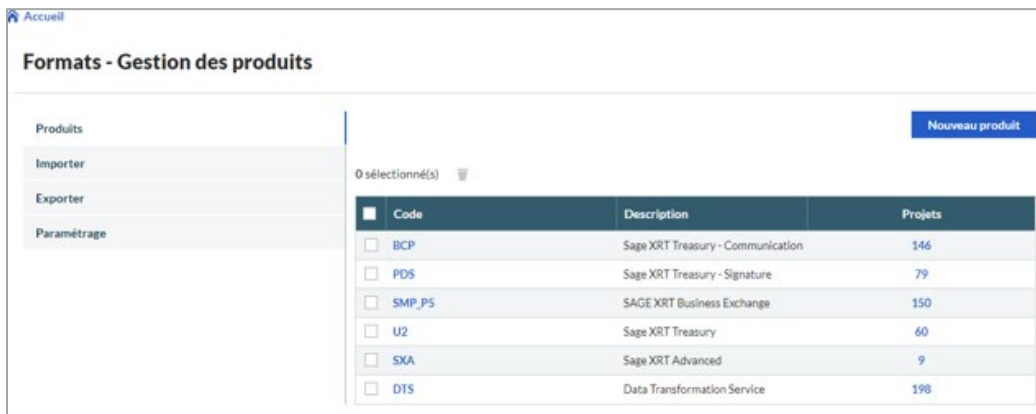
Click **Save** to validate the product modification or **Cancel** to go back to the products. A message confirms the action.

### Deleting Products

To delete a product, select it from the product list and click the *bin* button. A message confirms the action.

### Creating Projects

To access the list of the standard projects associated with the products, click the number displayed in the **Projects** column.



The screenshot shows the "Formats - Gestion des produits" interface. On the left is a sidebar with "Produits" selected. On the right, there is a table of products and a "Nouveau produit" button. The table has columns for selection, Code, Description, and Projects.

	Code	Description	Projets
<input type="checkbox"/>	BCP	Sage XRT Treasury - Communication	146
<input type="checkbox"/>	PDS	Sage XRT Treasury - Signature	79
<input type="checkbox"/>	SMP_P5	SAGE XRT Business Exchange	150
<input type="checkbox"/>	U2	Sage XRT Treasury	60
<input type="checkbox"/>	SXA	Sage XRT Advanced	9
<input type="checkbox"/>	DTS	Data Transformation Service	198

The project list is displayed.

## Sage XRT Administration Services

Accueil

< Retour Gestion des projets du produit PDS

Produits

Importer

Exporter

Paramétrage

<Filtrer par famille>

<Filtrer par format>

Rechercher le code contenant...

Nouveau projet

0 sélectionné(s)

	Code	Description	Famille	Format	Licence	Type	Traitements
<input type="checkbox"/>	AEB100	Format AEB 100 - Cheques	Chèques	AEB_100	✓	Chèque	5
<input type="checkbox"/>	AEB19	Format AEB 19 - Reçu	Prélèvements	AEB_19	✓	Prélèvement domestique	8
<input type="checkbox"/>	AEB32	Format AEB 32 - Effet	Effet de commerce	AEB_32	✓	Effet	4
<input type="checkbox"/>	AEB34	Format AEB 34	Virements Domestique	AEB_34	✓	Virement domestique	6
<input type="checkbox"/>	AEB34_1	Format AEB 34.1 (domestique et International)	Virements Internationaux	AEB_34_1	✓	Virement domestique	6
<input type="checkbox"/>	AEB34_12	Format AEB 34.1 (domestique et International)	Virements Internationaux	AEB_34	✓	Virement domestique	4
<input type="checkbox"/>	AEB58	Format AEB 58 - Anticipé de credits	Anticipés de crédit	AEB_58	✓	Anticipé de crédit	4
<input type="checkbox"/>	AEB67	Format AEB N67 (Cheques et Billets a ordres)	Virements Domestique	AEB_67	✓	Virement domestique	5
<input type="checkbox"/>	AEB68	Format AEB 68 (Palements domiciliés)	Virements Domestique	AEB_68	✓	Virement domestique	5
<input type="checkbox"/>	ALPHA	ALPHA	Chèques	ALPHA	✓	Chèque	5

Afficher 10 enregistrement(s)

Page 1 sur 8

79 enregistrement(s)

This list can be filtered by format and by family: International Transfers, Account Statements, etc.

You can also search directly for the project by entering part or all of a project code.

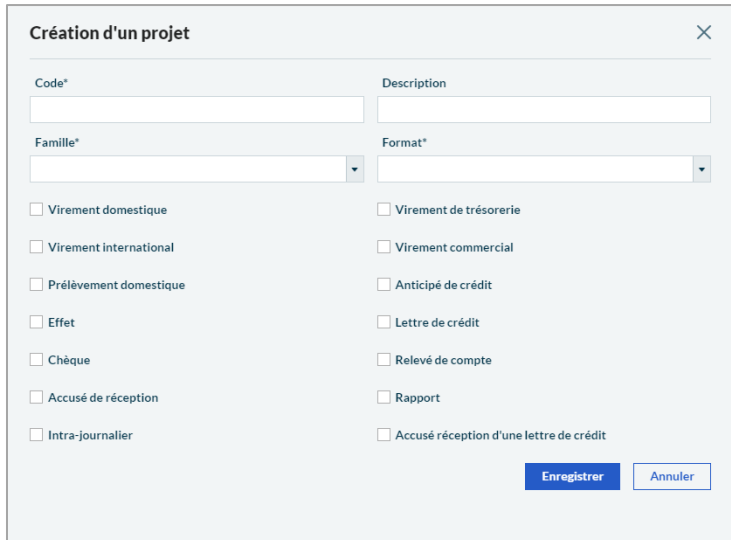
For each project identified by code, the list displays:

- Description
- Family
- Attached Format
- Access Right to the format according to the license key
- Access to the processes associated with the project

In the **Product** tab, the **New project** button enables you to access the creation wizard.

The **Code**, **Family** and **Format** fields are mandatory.

Click **Save** to validate the project creation.



Création d'un projet

Code\* Description

Famille\* Format\*

☐ Virement domestique ☐ Virement de trésorerie

☐ Virement international ☐ Virement commercial

☐ Prélèvement domestique ☐ Anticipé de crédit

☐ Effet ☐ Lettre de crédit

☐ Chèque ☐ Relevé de compte

☐ Accusé de réception ☐ Rapport

☐ Intra-journalier ☐ Accusé réception d'une lettre de crédit

Enregistrer Annuler

A message confirms the action.

### Modifying Projects

In the project list, use the link on the product code. The modification wizard is displayed.

The **Code** cannot be changed.

Click **Save** to validate the project modification or **Cancel** to go back to the projects.

A message confirms the action.

### Deleting Projects

From the project list, select the project to delete and click the *bin* button.

A message confirms the action.

### Creating Processing

To access the list of the standard processes associated with the project, click the number displayed in the **Processes** column.

< Retour Gestion des traitements du projet AEB34 du produit PDS

Produits

Importer

Exporter

Paramétrage

Nouveau traitement

0 sélectionné(s) Actions

	Code	Description	Type	Tâches
<input type="checkbox"/>	AEB34_PAY	Edition de Virement AEB 34 (Paysage)	Exécution asynchrone du traitement ?	1
<input type="checkbox"/>	AEB34_POR	Edition de Virement AEB 34 (Portrait)	Exécution asynchrone du traitement ?	1
<input type="checkbox"/>	AEB34_TOT	Edition des AEB 34 - Totaux	Exécution asynchrone du traitement ?	1
<input type="checkbox"/>	DelRejet		Redirection de la sortie de l'exécutable ?	1
<input type="checkbox"/>	DelSigne		Redirection de la sortie de l'exécutable ?	1
<input type="checkbox"/>	Prepa		Redirection de la sortie de l'exécutable ?	1

For each process identified by code, the list displays:

- Description
- Process Type
- Number of Tasks

In the **Products** tab, the **New Process** button enables you to access the creation wizard.

You must specify the **Code**.

For the task management, click the **+** button to add tasks, and the *bin* button to delete tasks.

Click **Save** to validate the process creation. A message confirms the action.

Création d'un traitement

Code\*

Description

Type

☐ Exécution asynchrone du traitement

☒ Redirection de la sortie de l'exécutable

☒ Exécution asynchrone des tâches du traitement

☐ Paramètres identiques à toutes les tâches

☐ Traitement permettant de visualiser un fichier

☐ Vue permettant la gestion des pouvoirs bancaires

☐ Conversion vers un autre format

Tâches

0 sélectionné(s) +

Paramètres

Enregistrer Annuler

## Sage XRT Administration Services

### Modifying Processing

In the process list, use the link on the process code.

The modification wizard is displayed.

The **Code** cannot be changed.

Click **Save** to validate the process modification. A message confirms the action.

### Deleting Processing

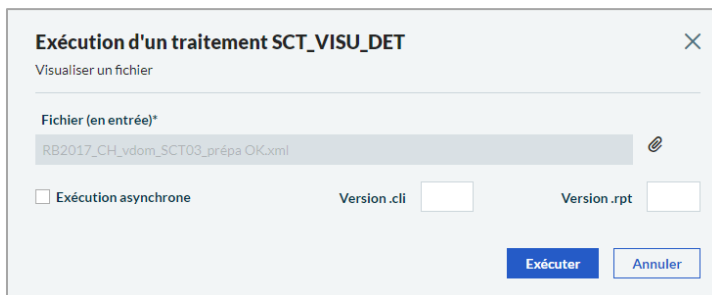
From the process list, select the process to delete then click the *bin* button. A message confirms the action.

### Executing Processing

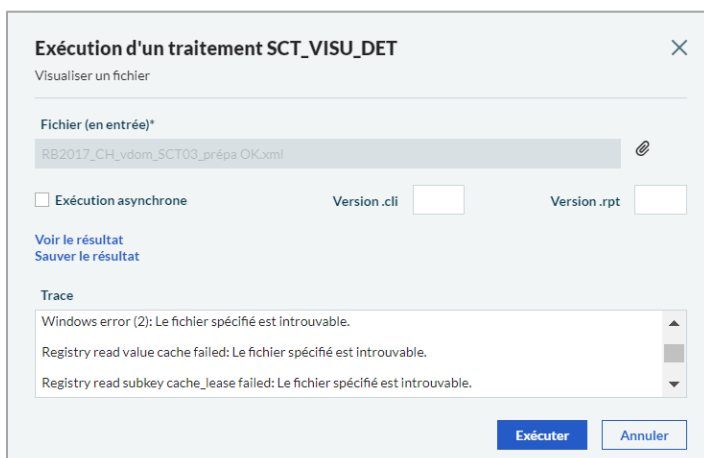
From the process list, select the process to execute.

Click **Actions** and select the one to execute.

The execution window is displayed. Select the file corresponding to the process.



Click **Execute** to launch the process.



## Sage XRT Administration Services

After the process completion, click **View Results** to access the process results (e.g.: file *PDF*) or **Save Results** to keep them without viewing them straight away.

### Import

You can import a modified *apifmt.xml* file via the **Import** function.

For this, click in the frame to open up the file browser and select the file to import.

Click **Import**.

The screenshot shows a web interface titled "Formats - Accès à l'importation". On the left, there is a sidebar with four menu items: "Produits", "Importer", "Exporter", and "Paramétrage". The "Importer" item is highlighted. The main area on the right contains a dashed blue rectangular box with the text "Essayez de déposer le fichier ici ou cliquez pour sélectionner le fichier à télécharger." Below this box is a blue button labeled "Importer".

### Export

You can export elements used in a file via the **Export** function.

When you call the function, the export process is automatically launched. Once it is completed, you may modify the *apifmt.xml* default file name.

Click **Save** to keep the file.

The screenshot shows a web interface titled "Formats - Accès à l'exportation". On the left, there is a sidebar with four menu items: "Produits", "Importer", "Exporter", and "Paramétrage". The "Exporter" item is highlighted. The main area on the right contains a blue information box with an 'i' icon and the text "Ci-dessous vous trouverez les informations à sauvegarder sur votre disque dur." Below this, there is a section "Nom du fichier" with a text input field containing "apifmt.xml". Underneath is a section "Contenu du fichier" with a text area containing XML code. At the bottom right of the text area is a blue button labeled "Sauvegarder".



## Sage XRT Administration Services

### Setup

You can manage the settings linked to the *Clint* engine and to the format management using the **Setup** function.

**Formats - Gestion du paramétrage**

**Produits**

Importer

Exporter

**Paramétrage**

**Clint**

SCRIPT\_PRODUCT : C:\Program Files\Common Files\xrt\Product\  
SCRIPT\_PATH : C:\Program Files\Common Files\xrt\Product\  
C:\Program Files\Common Files\xrt\Product\Common  
C:\Program Files\Common Files\xrt\Product\Payment

**Formats**

Les extensions suivantes sont désactivées : bat,cmd,sys,ini,inf,vbs,js  
La trace de l'API des formats est activée  
La trace de Clint est désactivée  
Le séparateur ODBC est Delimited(;)

These default settings can be modified via the *pencil* button.

**Paramétrage**

**Clint**

SCRIPT\_PRODUCT  
C:\Program Files\Common Files\xrt\Product\  
SCRIPT\_PATH  
C:\Program Files\Common Files\xrt\Product\C:\Program Files\Common  
Files\xrt\Product\Common;C:\Program Files\Common Files\xrt\Product\Payment;

**Formats**

Extensions désactivées  
bat,cmd,sys,ini,inf,vbs,js

☒ Activer la trace de l'API des formats ☐ Activer la trace de Clint

Séparateur ODBC  
Delimited(;)

Enregistrer Annuler

Click **Save** to keep the modifications or **Cancel** to ignore them.

### Payments - Batch Transfers - Payments API

This function enables you to manage transfer transactions (treasury or providers) from a single *JSON* flow including all the transactions to process.

### JSON Flow of Transactions to Process

Mandatory data appear in yellow.

Flux JSON UTF-8 BOM

```
{  
  "Transaction": [  
    {  
      "TransactionType":  
      "IssuingAgentBIC" :  
      "IssuingAgentNationalId" :  
      "IssuingAgentContact" :  
      "IssuingAgentPhone" :  
      "IssuingAgentFax" :  
      "IssuingAgentName" :  
      "IssuingAgentTown" :  
      "IssuingAgentState" :  
      "IssuingAgentCountry" :  
      "IssuingAgentCurrency" :  
      "IssuingAgentInCurrencyIndicator" :  
      "DebtorAgentName":  
      "DebtorAgentBIC":  
      "DebtorAgentNationalId":  
      "DebtorAgentAddressLine1":  
      "DebtorAgentAddressLine2":  
      "DebtorAgentTown":  
      "DebtorAgentState":  
      "DebtorAgentCountryCode":  
      "DebtorAgentCountryLabel":  
      "DebtorAgentBankId":  
      "DebtorAgentBranchId":  
      "DebtorAgentContact":
```

"DebtorAgentPhone":  
"DebtorAgentFax":  
"DebtorAgentIdType":  
"DebtorAgentId":  
"DebtorAgentDomiciliation":  
"InitiatingPartyName":  
"InitiatingPartyNationalId":  
"InitiatingPartyIdType":  
"InitiatingPartyId":  
"InitiatingPartyAdressLine1":  
"InitiatingPartyAdressLine2":  
"InitiatingPartyTown":  
"InitiatingPartyState":  
"InitiatingPartyProvince":  
"InitiatingPartyCountryCode":  
"InitiatingPartyContact":  
"InitiatingPartyService":  
"InitiatingPartyPhone":  
"InitiatingPartyFax":  
"InitiatingPartyEmail":  
"InitiatingPartySenderId":  
"InitiatingPartyContratNb":  
"InitiatingPartyIssuerIndicator":  
"DebtorName1":  
"DebtorName2":  
"DebtorAdressLine1":  
"DebtorAdressLine2":  
"DebtorTown":  
"DebtorState":  
"DebtorProvince":  
"DebtorCountryCode":

"DebtorCountryLabel":  
"DebtorNationalId":  
"DebtorIdType":  
"DebtorId":  
"DebtorContact":  
"DebtorService":  
"DebtorPhone":  
"DebtorFax":  
"DebtorEmail":  
"DebtorNonResidentIndicator":  
"DebtorSenderId":  
"DebtorContratNb":  
"DebtorAcctCountryCode":  
"DebtorAcctId":  
"DebtorAcctLocalKey":  
"DebtorAcctCurrency":  
"DebtorAcctIssuerId":  
"DebtorAcctType":  
"DebtorAcctReferenceNumber":  
"DebtorAcctIdCustomer":  
"ChargesAcctCountryCode":  
"ChargesAcctId":  
"ChargesAcctLocalKey":  
"ChargesAcctCurrency":  
"ChargesAcctType":  
"ChargesAcctBranchIdType":  
"ChargesAcctBranchId":  
"BeneficiaryName":

"BeneficiaryAdressLine1":  
"BeneficiaryAdress Line2":  
"BeneficiaryTown":  
  
"BeneficiaryProvince":  
  
"BeneficiaryCountryCode":  
"BeneficiaryContact":  
  
"BeneficiaryService":  
  
"BeneficiaryPhone":  
  
"BeneficiaryNationalId":  
"BeneficiaryTypeId":  
  
"BeneficiaryId":  
  
"BeneficiaryAutorisationNb":  
"BeneficiaryFax":  
  
"BeneficiaryEmail":  
  
"CreditorName":  
  
"CreditorAdressLine1":  
  
"CreditorAdressLine2":  
  
"CreditorTown":  
  
"CreditorProvince":  
  
"CreditorState":  
  
"CreditorCountryCode":  
  
"CreditorCountryLabel":  
  
"CreditorContact":  
  
"CreditorService":  
  
"CreditorPhone":  
  
"CreditorNationalId":  
  
"CreditorIdType":  
  
"CreditorId":

"CreditorNonResidentIndicator":  
"CreditorAutorisationNb":  
"CreditorFax":  
  
"CreditorEmail":  
  
"CreditorAgtName":  
  
"CreditorAgtBIC":  
  
"CreditorAgtAdressLine1":  
"CreditorAgtAdressLine2":  
"CreditorAgtTown":  
  
"CreditorAgtState":  
  
"CreditorAgtCountryCode":  
"CreditorAcctId":  
  
"CreditorAcctCurrency":  
  
"CreditorAcctDomiciliation":  
"CreditorAcctIdType":  
  
"CreditorAcctId":  
  
"CreditorAcctBankId":  
  
"CreditorAcctBIC1":  
  
"CreditorAcctType":  
  
"IntermediaryAgtBIC":  
  
"IntermediaryAgtOccasionnalIndicator":  
"IntermediaryAgtIdType":  
"IntermediaryAgtId":  
  
"IntermediaryAgtName":  
  
"IntermediaryAgtAdressLine1":  
"IntermediaryAgtAdressLine2":  
"IntermediaryAgtAdressLine3":  
"IntermediaryAgtCountryCode":  
"TransactionAmount":  
  
"TransactionAmountDecimalNb":  
"TransactionTransfertCurrency":  
"TransactionReference":

```
"TransactionExecutionDate":  
"TransactionFeesImputation":  
"TransactionPaymentMode":  
"TransactionTransactionCode":  
"TransactionInternalNumber":  
"TransactionStatus":  
  
"TransactionValueDate":  
  
"TransactionReason":  
  
"TransactionCurrencyPurchaseIndicator":  
"TransactionCurrencyPurchaseContractReference":  
"TransactionCurrencyPurchaseDate":  
"TransactionCurrencyPurchaseRate":  
"TransactionBeneficiaryAlertIndicator":  
"TransactionBeneficiaryAlertMode":  
"TransactionBeneficiaryAlertNb":  
"TransactionBankBeneficiaryAlertIndicator":  
"TransactionBankBeneficiaryAlertMode":  
"TransactionBankBeneficiaryAlertNb":  
"TransactionContratSettlement":  
"TransactionIntraCompanyIndicator":  
"TransactionNettingIndicator":  
"TransactionUrgentIndicator":  
"TransactionRTGSIndicator":  
"TransactionBilateralInstruction":  
"TransactionBeneficiaryIdentificationIndicator":  
"TransactionExclusivePaymentIndicator":  
"TransactionFreeText":  
  
"TransactionEconomicReason":  
"TransactionEconomicCountry":  
"TransactionBranchId":  
  
"TransactionInvoiceReference":  
"TransactionInvoiceDate":  
"TransactionInvoicePaidAmount":  
"TransactionInvoiceOriginalAmount":  
"TransactionDiscountAmount":  
"TransactionDeclaration": [  
    {  
        "DeclarationAmount" :  
        "DeclarationDate":  
        "DeclarationEcoReason":
```

"TransactionDeclarationdLZB":  
"TransactionDeclarationBranchIdLZB":  
"TransactionDeclarationPayorIdLZB":  
"TransactionDeclarationBuyText":  
"TransactionDeclarationBuyCode":  
"TransactionDeclarationCountryCode":  
"TransactionDeclarationBuyAmount":  
"TransactionDeclarationSellText":  
"TransactionDeclarationSellCode":  
"TransactionDeclarationSellCountryCode":  
"TransactionDeclarationSellAmount":  
"TransactionDeclarationStockingPlace":  
"TransactionDeclarationSellPlace":  
"TransactionDeclarationExpirationDateUnsoldGoods":  
"TransactionDeclarationActionType":  
"TransactionDeclarationActionCode":  
"TransactionDeclarationCapitalOriginCountry":  
"TransactionDeclarationCapitalDestinationCountry":  
"TransactionDeclarationProductCode":  
"TransactionDeclarationDNBTradingTransitCode":  
"TransactionDeclarationDNBRecordNumberCode":  
"TransactionDeclarationDNBGoodsTransitCode":  
"TransactionDecDirectIndicator":  
"TransactionSource":  
  
"TransactionPrivatePaymentIndicator":  
"TransactionFinality":  
  
"TransactionAmountExpression":  
"TransactionBeneficiaryReference":  
"TransactionGoodsPurchaseIndicator":  
"TransactionNIFIssuer":  
  
"TransactionNOF":  
  
"TransactionISINCode":  
  
"TransactionSuffix":  
  
"TransactionInvoiceDetail":  
"TransactionAdviceReference":  
"TransactionAdviceMode":  
"TransactionAdviceNumber":  
"TransactionAdviceName":  
"TransactionAdviceAddress":  
"TransactionAdviceCountry":  
"TransactionDirectPaymentOrderbyCCCindicator":  
"TransactionDocReference":  
"TransactionBonificationCurrency":



```
"TransactionPostalAcctBankPayee":
"TransactionPaymentNumber":
"TransactionSubmissionCode":
"TransactionCommercialFunction":
"TransactionLetter":

"TransactionMobilisation":
"TransactionRate":

"TransactionMargin":

"TransactionInvoices: [
    {
        "InvoiceEdifactType":
        "InvoiceLabel":
        "InvoiceInternalReference":
        "InvoiceIssuingDate":
        "InvoicePaidAmount":
        "InvoiceBeneficiaryReference":
        "InvoiceSign":
        "InvoiceXMLType":
        "InvoicePayeeType":
        "InvoiceAdditionnalInformation":
        "InvoiceDueAmount":
        "InvoiceGapReason":
        "InvoiceDecision":
        "InvoiceCommunication":
        "InvoiceCurrency":
```

### DTSPAYCAT\_TRANS\_PAY Transcoding Table

This table is very important as it infers the transaction category to apply to each transaction (and indirectly the bank file format which contains the transactions) from the flow data.

Here are the data analyzed to assign the transaction category:

- Transaction Type:

## Sage XRT Administration Services

- **FT** for Treasury Transfers (**TREA** in **JSON** flow)
- **DO/IN** for Providers Transfers (**SUPP** in **JSON** flow)
- International or Domestic **DO/IN**
- Issuing Bank (BIC and name)
- Debit Bank (country, name, BIC)
- Country of Credit Bank
- Transfer Currency
- Transaction Priority

The input columns of the transcoding table consist of these data. The asterisk \* means **All**. **SEPA** means countries from the SEPA. **NSEPA** means countries out of the SEPA.

TYPE	LOCALISATION	ISSUING BANK BIC	ISSUING BANK NAME	PAYOR BANK COUNTRY CODE	PAYOR BANK NAME	PAYOR BANK BIC	PAYEE BANK COUNTRY CODE	TRANSFER CURRENCY	URGENT FLAG	TRANSACTION CATEGORY
FT	DO	*	*	SEPA	*	*	SEPA	EUR	0	[SCT VTSDOM 001.001.03][902100]
FT	DO	*	*	NSEPA	*	*	NSEPA	*	0	[VTSDO Pain 001.001.03][758796]
FT	IN	*	*	SEPA	*	*	SEPA	EUR	0	[SCT VTSIN 001.001.03][903100]
FT	IN	*	*	SEPA	*	*	NSEPA	*	0	[VTSIN Pain 001.001.03][739797]
FT	IN	*	*	NSEPA	*	*	NSEPA	*	0	[VTSIN Pain 001.001.03][739797]
FT	IN	*	*	NSEPA	*	*	SEPA	*	0	[VTSIN Pain 001.001.03][739797]

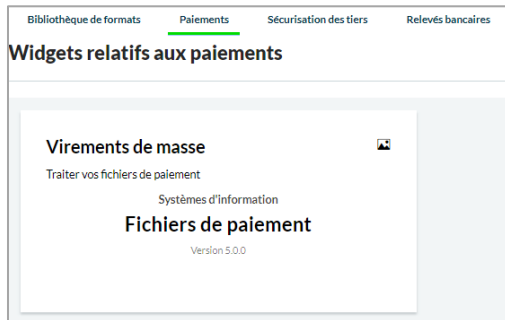
FT	DO	*	*	SEPA	*	*	SEPA	EUR	1	[SCT VTSDOM 001.001.03][902100]
FT	DO	*	*	NSEPA	*	*	NSEPA	*	1	[VTSDO Pain 001.001.03][758796]
FT	IN	*	*	SEPA	*	*	SEPA	EUR	1	[SCT VTSIN 001.001.03][903100]
FT	IN	*	*	SEPA	*	*	NSEPA	*	1	[VTSIN Pain 001.001.03][739797]
FT	IN	*	*	NSEPA	*	*	NSEPA	*	1	[VTSIN Pain 001.001.03][739797]
FT	IN	*	*	NSEPA	*	*	SEPA	*	1	[VTSIN Pain 001.001.03][739797]

The **Transaction Category** output column must respect the following syntax:

- Profile Name between brackets [ ]
- Format-Subformat Pair between brackets [ ]

### Posting JSON Flow of Transactions

From **Sage XRT Functional Service** interface, select the **Payments** menu and the **Batch Transfers** widget.



The **Job Creation** function enables the selection of the file containing the transactions to process (*JSON* flow) and the specification of the info required for the file processing.

- Info **Origin**: **SXA**, **SXBE**, **X3**
- **Number of Transactions** in the file for security control purposes
- **Use Enrichment** for the initial data transactions contained in the *JSON* flow in order to generate correct not rejected bank files (example of enrichment: Allocation of Charges, Purpose, etc.)

After specifying these elements, click **Send**.

The screenshot shows the 'Virements de masse - Accès à la création des Jobs' form in the Sage XRT Functional Service interface. The form has a left sidebar with 'Création d'un Job' and 'Suivi d'un job'. The main area contains a dashed box for file upload with the text 'Essayez de déposer le fichier ici ou cliquez pour sélectionner le fichier à télécharger.' Below this are three input fields: 'Origine:' with 'SXA' selected, 'Nombre de transactions:' with '1' entered, and 'Utilisation de l'enrichissement:' with 'Non' selected. An 'Envoyer' button is at the bottom.

The **Job ID** is automatically assigned.

Accueil

### Virements de masse - Accès à la création des Jobs

Création d'un Job

Suivi d'un job

Les transactions suivantes vont être envoyées.

```
{
  "Transaction": {
    "TransactionType": "TREA",
    "DebtorAgentBIC": "AGRIFRPP833",
    "DebtorName1": "DB NM1",
    "DebtorAcctId": "FR763333322224444444444455",
    "DebtorAcctType": "1",
    "CreditorName": "CDTR NM",
    "CreditorAgentBIC": "SOGEFRPP833",
    "CreditorAcctId": "FR769999988887777777777766",
    "CreditorAcctType": "1",
    "TransactionAmount": "2000.00",
    "TransactionAmountDecimalNb": "2",
    "TransactionTransfertCurrency": "EUR",
    "TransactionReference": "TRN REFERENCE",
    "TransactionExecutionDate": "16102018",
    "TransactionReason": "TRN MOTIF",
    "TransactionUrgentIndicator": "0"
  }
}
```

Origine:  
SXA

Nombre de transactions:  
1

Utilisation de l'enrichissement:  
Non

This process consists of some steps:

- Converting initial *JSON* flow into *XML* file for processing
- Splitting *XML* file into several according to the transaction category (the other splitting criteria are not activated)
- Use Enrichment for the initial data transactions if selected
- Data dematerialization in **Sage XRT Common Services** Database

### Monitoring Jobs of JSON Flow Processing

The **Job Monitoring** function provides the process progress for the *JSON* flow posted.

Specify the **Job ID** and the flow **Origin**. Click **Send**.

### Virements de masse - Accès au suivi des Jobs

Création d'un Job

Suivi d'un job

Id Job :

4D0096E1-1003-44D7-91D0-4A32F1EEA397

Origine :

SXA

Envoyer

Flux résultat. ?

```
{  "error": {    "description": "",    "number": 0  },  "file": "H4slAAAAAAAAEAI2OvQqDMBSFX0XuXDBJSdGMLbFTpQP43IUZ  
ZRun5J7V0svvSUpwShDOkyMjJ4ZQcr/5onprp6z1DZifB7B415Mwg  
NZMGpRjkiXnDBywwf57fMmgiZ9I2CNn8AKKq6YpwBAAA  
"idjob": "4D0096E1-1003-44D7-91D0-4A32F1EEA397"  
"message": ""  
}
```

Décodage du fichier ?

```
{  "file_list": [    {      "idfic": "105",      "statusfic": "FileGenerated",      "status_datefic": "10/21/2019 3:26:00 PM",      "exiterr": ""    }  ],  "remittance_list": [    {      "idfic": "105",      "idrm": "150018",      "refrm": "BETR191021152558",      "statusrm": "RmGenerated",    }  ]}
```

The answer may be:

- Error
- **In Progress** message if the query was raised before the storage process is complete
- *JSON* file with this type of contents:

```
{
  "file_list":[
    {
      "idfic":"108",
      "statusfic":"50007",
      "status_datefic":"11/12/2018 10:06:16 AM"
    }
  ],
  "remittance_list":[
    {
      "idfic":"108",
      "idrm":"401",
      "refrm":"BETR181112100613",
      "statusrm":"50006",
      "status_daterm":"11/12/2018 10:06:16 AM"
    }
  ],
  "trn_list":[
    {
      "idfic":"108",
      "idrm":"401",
      "idtrn":"381",
      "reftrn":"EQUILIBRAGE01/06/18",
      "statustrn":"50005",
      "status_datetrn":"11/12/2018 10:06:16 AM"
    }
  ]
}
```

## Statutes

!:	Transaction	Remittance	File	Job
Total Error				x
In progress				x
Control Error (to regenerate)	X (50 001 - TrnControlError)			
Pending	X (50 002 - TrnPending)	X (50 003 - RmPending)		
Remitted	X (50 004 - TrnRemitted)			
Generated	X (50 005 - TrnGenerated)	X (50 006 - RmGenerated)	X (50 007 - FileGenerated)	
Post-generation statuses			X (status codes for signature and com = WMFILE)	
			50 008 – ExitPostGenerationSuccess	
			ExitPostGenerationSuccess – No Action	
			50 009 - ExitPostGenerationError	

### Dematerialization in SCS Database

**DTSPAYJOB:** this table contains **JOB IDs** with gzipped base64-encoded file and creation date.

Here are the successive statuses (**JOBSTATUS** column):

- 0: Pending
- 1: In progress
- 3: Completed with errors
- 11: Completed successfully
- 13: Completed: technical error

**DTSPAYORIFILE:** for each ID JOB, it contains the ID files for each generated *XML* files.

**DTSPAYBATCH:** for each ID file, it contains the associated ID Batch.

**DTSPAYPARTIES:** it contains the entity info such as bank, applicant, payor, beneficiary, payee.

**DTSPAYAGENCE:** it contains the information for the debit and credit branches.

**DTSPAYCPTE:** it contains the information for the debit and credit accounts.

**DTSPAYVIR\_TMP:** for each ID Batch, it contains the associated transactions list and their details (no control over data).

**DTSPAYVIR:** for each ID Batch, it contains the associated transactions list and their details (no control over data) related to the linked profile.

The checking processes linked to the profile are based on *dtspay\_profilspay.xml* file in **C:\Program Files\Common Files\xrt** which uses **SXBE** variables system to determine the checks to perform on the transaction.

Here are the successive statuses (**STATUS** column):

- 1: Pending
- 6: Grouped
- 8: Generated

**DTSPAYIMPXML:** it contains the errors linked to the checks and to the associated profile (**VIRTMPERROR** column). **VIRTMPERROR** column displays the error code which is defined in *imptext.xml* (**SXBE** root folder).

**DTSPAYREMISE:** it contains the list of the remittances created from batch ID transactions.



## Sage XRT Administration Services

The grouping criteria linked to the profile are based on *dtspay\_profilspay.xml* file in **C:\Program Files\Common Files\xrt** which uses **SXBE** variables system (xxsame... ) to determine the criteria to apply.

Here are the successive statuses (**STATUS** column):

- 2: Pending
- 5: Grouped
- 7: Generated

**DTSPAYGENFILE**: it contains the list of the bank files created from batch ID transactions.

### Post-Generation Exits

After the bank file generation, an exit can be launched for this file (e.g.: to send it for signature).

**EXITSPOSTGENERATION** is a default standard table:

- Input columns are automatically completed with the data of transactions to process.
- Output columns display **POWERSHELL** scripts (stored in **C:\Program Files\Common Files\xrt\Tasks**) and their arguments.

Modification de la table EXITSPOSTGEN

Nom\*  
EXITSPOSTGEN

Description  
Exits Post génération

0 sélectionné(s) Nouvelle colonne

Nom	Type de colonne
<input type="checkbox"/> BANK	Entrée
<input type="checkbox"/> PARTIES	Entrée
<input type="checkbox"/> PROFILE	Entrée
<input type="checkbox"/> POWERSHELLSCRIPT	Sortie
<input type="checkbox"/> POWERSHELLARGS	Sortie

Enregistrer Annuler

### Modification d'une correspondance

BANK (E)\*  
AGRIFRPP

PARTIES (E)\*  
DB NM1

PROFILE (E)\*  
SCT VTSDOM 001.001.03

POWERSHELLSCRIPT (S)  
SendToSbeSign.ps1

POWERSHELLARGS (S)  
-url "http://WIN-I8LGUGG6C31:9090/sra/v1/pdssa/addfile" -protocol "Ebics" -client "SAGE" -partner "BNP" -

Enregistrer

Annuler

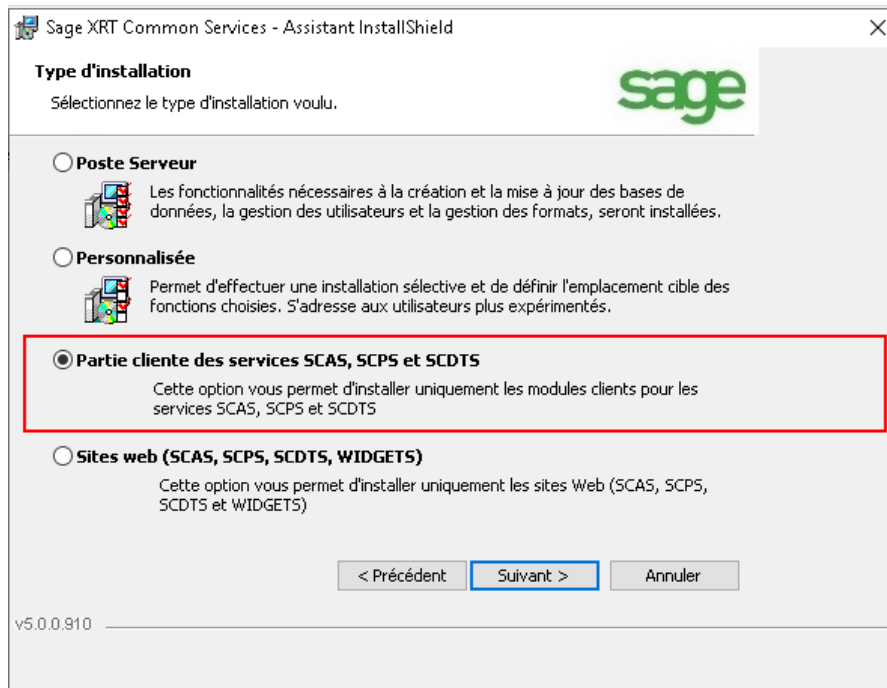
### Case study: Adding and preparing files for signature in **Sage XRT Business Exchange**

In the transcoding table, specify in the **Output** column the powershell: *SendToSbeSign.ps1*.

Enter the quadruplet to be used: [*protocol – client – partner – service*].

## Sage.FCS.Client Library

This library is a 32-bit and 64-bit compatible *DLL*. It may be used as a *.NET* Library or as a *COM* component. This library is installed on the client station through the profile: **SCAS, SCPS and SCDTS client part** of **Sage XRT Common Services** installation process.



For its integration as a *COM* component in a 32-bit application, it must be saved with *RegAsm.exe* of 32-bit *.NET* framework.

## Operation

**Sage.fcs.client** enables the use of an Rest API set hosted by **SCASServer** (authentication) **SCPSServer** (administration) and **SCDTSServer** (functions) of **Sage XRT Common Services**. So, the applications using this library only call methods. **Sage XRT Common Services** server is located using *Sage.Fcs.Client.dll.configsetup* file.

Example of Configuration File:

```
<?xml version="1.0" encoding="UTF-8" ?>

<configuration>

  <!-- The auto generate certificate CN is Sage.fcs.client -->

  <appSettings>

    <add key="securitylevel" value="http"/>

    <add key="http_servicehost_SCASServer"
value="http://localhost:80/Auth" />

    <add key="https_servicehost_SCASServer"
value="https://localhost:443/Auth" />

    <add key="http_servicehost_SCDTSServer" value="http://localhost:80" />

    <add key="https_servicehost_SCDTSServer" value="https://localhost:443"
/>

    <add key="http_servicehost_SCPSServer" value="http://localhost:80"/>

    <add key="https_servicehost_SCPSServer"
value="https://localhost:443"/>

    <add key="AutoGenerateCertificate" value="true"/>

    <add key="SerialNumber" value=""/>

    <add key="ApifmtResponseTimeout" value="180"/>

    <add key="ApifmtBaseTimeTry" value="2"/>

    <add key="ApifmtPdfViewer" value="none"/>

    <add key="ApifmtPrinter" value="none"/>

  </appSettings>

</configuration>
```

## Integrated Methods Description

### Logging

#### **void DoLogin(object p\_oReq)**

This method enables authentication and token generation to access the service. This token is transparently used during methods calls.

Request:

```
public class LoginReq : ILoginReq
{
    public LoginMode mode { get; set; }
    public string workgroup { get; set; }
    public string user { get; set; }
    public string password { get; set; }
    public string certificatebase64 { get; set; }
    public string challengerawbase64 { get; set; }
    public string challengesignedhex { get; set; }
}

public enum LoginMode
{
    SAMLV2_AUTH,
    STRONG_AUTH,
    STANDARD_AUTH
}
```

Answer:

```
public class LoginRep : ILoginRep
{
    public string authorization { get; set; }
    public string description { get; set; }
    public string twofactorauth { get; set; }
    public string fcsuser { get; set; }
    public string idpurl { get; set; }
}
```

### **void CheckSession()**

This method checks the used token.

Answer:

```
public class VerifCodeRep : IVerifCodeRep
{
    public string valid { get; set; }
}
```

### **void CheckUser(object p\_oReq)**

This method checks user access.

Request:

```
public class CheckUserReq : ICheckUserReq
{
    public string user { get; set; }
    public string password { get; set; }
    public bool ctrlpwd { get; set; }
}
```

### void Disconnect()

This method disconnects a user.

### object ConnectionString(object p\_oReq)

This function enables the retrieval of a connection string at the level of DBA, DBO or USER. This method requires the **SerialNumber** key of the configuration file to be specified or the **AutoGenerateCertificate** value to be **true**. The connection string is actually encrypted (RSA) for security reasons.

Request:

```
public class ConnectionStringReqPub : IConnectionStringReqPub
{
    public DatabaseProductID product { get; set; }
    public DatabaseOwner type { get; set; }
}
public enum DatabaseOwner
{
    DBA,
    DBO,
    USER
}
```

Answer:

```
public class ConnectionStringRep : IConnectionStringRep
{
    public string connectionstring { get; set; }
}
```

**void RefreshToken()**

## Connection Page

**void DoLoginForm(LoginProductID product, string version, string component, LanguageID language)**

This method enables authentication and token generation to access the service through a *Win32* interface. This token is transparently used during methods calls. The method manages license checking.

Request:

**Product:** Product Identifier.

```
public enum LoginProductID
{
    XCS,
    XBE,
    XBESign,
    U2,
    U2Sign,
    U2Com
}
```

**Version:** Product Version. E.g.: 2019

**Component:** Name of the component to connect to. E.g.: *Sage.fcs.client DLL*

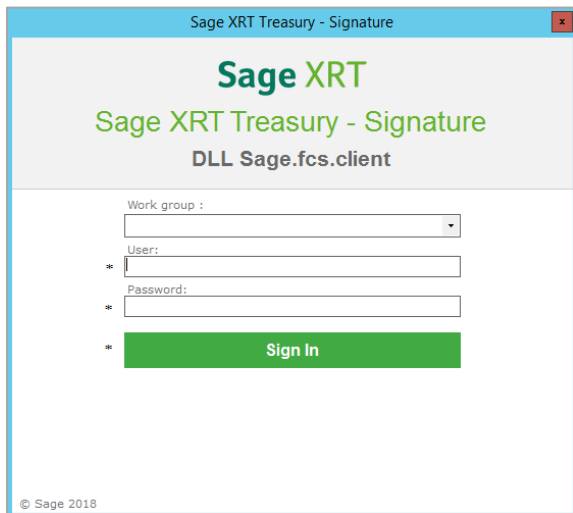
**Language:** interface language.

```
public enum LanguageID
{
    French,
    English,
    Spanish,
    German,
```



## Sage.FCS.Client Library

```
        Italian,  
        Portuguese,  
        Polish,  
        Catalan  
    }
```



### void DoLoginService(object p\_oReq)

This method enables authentication and token generation to access the service.

Request:

```
public class DoLoginServiceReq : IDoLoginServiceReq  
{  
    public ServiceName servicename { get; set; }  
    public string workgroup { get; set; }  
}  
  
public enum ServiceName  
{  
    XRTCOM,          // Service XCMonitor  
    XRTSIGN,         // Service XSMonitor  
    SRA,
```

```
RAPI,  
P5CWEB,  
P5COM,  
P5CAUT,  
XSMONITOR,  
BCPCOMM,          // BcpComm  
COMSIGNAPI,       // ComSign. Rest Api  
SXA  
}
```

## Tenants

### object WorkgroupList()

This method may be called without authentication, nor access token. It returns a table presenting the available tenant list.

Request:

```
public class WorkgroupListRep : IWorkgroupListRep  
{  
    public string selectedworkgroup { get; set; }  
    public object workgroups { get; set; }  
}
```

## Licenses

### object LicenseDetails(object p\_oReq)

This function enables the listing of detailed info. on the license for a given product.

Request:

```
public class LicenseDetailsReq : ILicenseDetailsReq  
{  
    public string product { get; set; }  
}
```

```
}
```

Answer:

```
public class LicenseDetailsRep : ILicenseDetailsRep
{
    public object features { get; set; }
}

public class Feature : IFeature
{
    public string id { get; set; }
    public string description { get; set; }
    public string value { get; set; }
}
```

### **object LicenseList()**

This function enables the listing of the available licenses.

Answer:

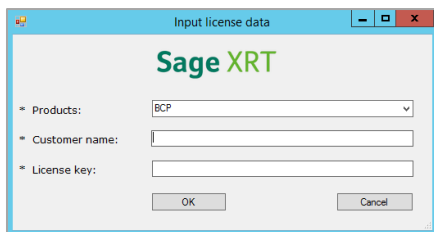
```
public class LicenseListRep : ILicenseListRep
{
    public object licenses { get; set; }
    public object products { get; set; }
}

public class License : ILicense
{
    public string product { get; set; }
    public string customer { get; set; }
    public string enddate { get; set; }
    public string key { get; set; }
}
```

```
}  
  
public class Product : IProduct  
{  
    public string product { get; set; }  
    public string name { get; set; }  
}
```

### void LicenseCreateForm()

This function enables license creation in a *Win32* graphical interface.



### void LicenseCreate()

This function enables the creation of a license.

Request:

```
public class LicenseCreateReq : ILicenseCreateReq  
{  
    public string product { get; set; }  
    public string customer { get; set; }  
    public string key { get; set; }  
}
```

Answer:

```
public class LicenseCreateRep : ILicenseCreateRep  
{  
    public string enddate { get; set; }  
}
```

### void LicenseMigrate(object p\_oReq)

This function enables the update of a license. For instance, it is used for the **Sage XRT Communication & Signature** version which operates with **Sage XRT Common Services 5.0.0** to migrate licenses to the new license management system.

Request:

```
public class LisenceMigrateReq : ILisenceMigrateReq
{
    public LicenseProductID product { get; set; }
    public string customername { get; set; }
    public string shortserialnumber { get; set; }
}
public enum LicenseProductID
{
    FORMATS,
    U2,
    PDS,
    BCP,
    CONVERTERS,
    SXA
};
```

## Profiles -Sites -Users- Setup

### object FunctionRights(object p\_oReq)

This function enables the listing of the rights associated with a function list for the connected user, the user specified as a parameter or the profile specified as a parameter.

Request:

```
public class FunctionRightsReq : IFunctionRightsReq
{
    public FunctionRightsLevel level { get; set; } =
FunctionRightsLevel.CURRENTUSER;
```

```
    public string code { get; set; }
    public string[] functions { get; set; }
public enum FunctionRightsLevel
{
    CURRENTUSER,
    USER,
    PROFILE
}
```

Answer:

```
public class FunctionRightsRep : IFunctionRightsRep
{
    public object functions { get; set; }
}
public class FuncRight: IFuncRight
{
    public string function { get; set; }
    public bool right { get; set; }
}
```

### object ProfileList()

This function enables the listing of the user profiles associated with a token tenant.

Request:

```
public class ProfileListRep : IProfileListRep
{
    public object profiles { get; set; }
}
public class Profile : IProfile
```

```
{  
    public string name { get; set; }  
    public string description { get; set; }  
    public int type { get; set; }  
    public bool active { get; set; }  
    public string lastactionuser { get; set; }  
}
```

### object UserList(object p\_oReq)

This function enables the listing of the users associated with a token tenant.

Request:

```
public class UserListReq : IUserListReq  
{  
    public bool bGetProfileList { get; set; } = false;  
    public bool bGetSiteList { get; set; } = false;  
  
}
```

Answer:

```
public class UserListRep : IUserListRep  
{  
    public object users { get; set; }  
    public object profiles { get; set; }  
    public object sites { get; set; }  
}  
  
public class User : IUser  
{  
    public string name { get; set; }  
    public string description { get; set; }  
}
```

```
    public int securitylevel { get; set; }
    public string lang { get; set; }
    public string email { get; set; }
    public int authenticationtype { get; set; }
    public bool authenticatex509 { get; set; }
    public string validtilldate { get; set; }
    public bool active { get; set; }
    public string lastactionuser { get; set; }
    public bool isvirtual { get; set; }
    public bool issecurityleveldefined { get; set; }
    public bool islanguagedefined { get; set; }
    public bool twofactorauthlevel { get; set; }
    public string tfasecretcodevalid { get; set; }
    public string lockedtilldate { get; set; }
    public string lockedtilltime { get; set; }
    public object profiles { get; set; }
    public object sites { get; set; }
}

public class Profile : IProfile
{
    public string name { get; set; }
    public string description { get; set; }
    public int type { get; set; }
    public bool active { get; set; }
    public string lastactionuser { get; set; }
}

public class Site : ISite
```



```
{  
    public string name { get; set; }  
    public string description { get; set; }  
    public int type { get; set; }  
    public bool active { get; set; }  
    public string lastactionuser { get; set; }  
}
```

#### object UserInfos(object p\_oReq)

This function retrieves a user's info.

Request:

```
public class DataUserInfosReq : IDataUserInfosReq  
{  
    public string username { get; set; }  
    public bool bGetRules { get; set; } = false;  
    public bool bGetProfilsAndSites { get; set; } = false;  
}
```

Answer:

```
public class UserInfosRep: IUserInfosRep  
{  
    public object user { get; set; }  
    public object rules { get; set; }  
}  
  
public class User : IUser  
{  
    public string name { get; set; }  
    public string description { get; set; }  
}
```

```
    public int securitylevel { get; set; }
    public string lang { get; set; }
    public string email { get; set; }
    public int authenticationtype { get; set; }
    public bool authenticatex509 { get; set; }
    public string validtilldate { get; set; }
    public bool active { get; set; }
    public string lastactionuser { get; set; }
    public bool isvirtual { get; set; }
    public bool issecurityleveldefined { get; set; }
    public bool islanguagedefined { get; set; }
    public bool twofactorauthlevel { get; set; }
    public string tfasecretcodevalid { get; set; }
    public string lockedtilldate { get; set; }
    public string lockedtilltime { get; set; }
    public object profiles { get; set; }
    public object sites { get; set; }
}

public class UserInfosRules: IUserInfosRules
{
    public int iAccountsMinDigitsInPassword { get; set; }
    public int iAccountsMinCapLettersInPassword { get; set; }
    public int iAccountsMinPasswordLength { get; set; }
    public int iAccountsCheckPasswordsHistoryLength { get; set; }
    public bool bAccountsCheckPasswordsDifferFromUserName { get; set; }
    public string sAccountsDefaultPassword { get; set; }
```

```
public bool bUseCustomLDAPServer { get; set; }
public bool bSageIDEnabled { get; set; }
public bool bSAMLEnabled { get; set; }
public bool bSAMLUseMail { get; set; }
public bool bActivateUsers { get; set; }
public bool bActivateSites { get; set; }
public bool bActivateProfiles { get; set; }
public bool bActivateBlacklist { get; set; }
public bool bActivateWhitelist { get; set; }
public bool bFourEyesUsers { get; set; }
public bool bFourEyesSites { get; set; }
public bool bFourEyesProfiles { get; set; }
public bool bFourEyesParams { get; set; }
public bool bFourEyesConception { get; set; }
public bool bFourEyesCorrespondances { get; set; }
public bool bFourEyesBlacklist { get; set; }
public bool bFourEyesWhitelist { get; set; }
}
```

## Password

### void Password ()

This method enables the update of the user's password.

Request:

```
public class PasswordReq : IPasswordReq
{
    public string workgroup { get; set; }
```

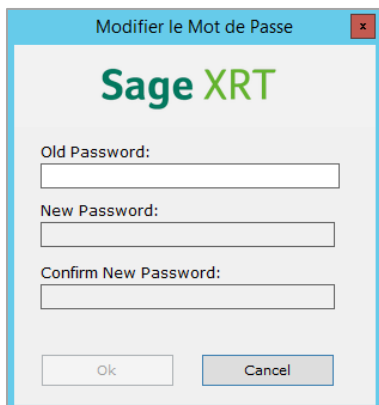
```
public string user { get; set; }  
public string old_password { get; set; }  
public string new_password { get; set; }  
}
```

Answer:

```
public class PasswordRep : IPasswordRep  
{  
    public string authorization { get; set; }  
    public string description { get; set; }  
    public string twofactorauth { get; set; }  
}
```

### **void PasswordUpdatingByActionForm()**

It enables the update of the connected user's password through the *Win32* interface.



### **void PasswordUpdatingByAction(object p\_oReq)**

It enables the update of the connected user's password.

Request:

```
public class PasswordReqByAction : IPasswordReqByAction  
{  
    public string old_password { get; set; }  
}
```

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

### object PwdInfos();

This function enables the listing of the password rules for **Sage XRT Common Services** standard users.

Answer:

```
public class PwdInfosRep : IPwdInfosRep  
{  
    public object pwd { get; set; }  
}  
  
public class DataParamsUpdatePassword : IDataParamsUpdatePassword  
{  
    public int bTrustedConnection { get; set; } = -1;  
    public int iAccountsMinDigitsInPassword { get; set; } = -1;  
    public int iAccountsMinCapLettersInPassword { get; set; } = -1;  
    public int iAccountsMinPasswordLength { get; set; } = -1;  
    public int iAccountsCheckPasswordsHistoryLength { get; set; } = -1;  
    public int bAccountsCheckPasswordsDifferFromUserName { get; set; }  
= -1;  
    public string sAccountsDefaultPassword { get; set; }  
    public int iAccountsDefaultPasswordValidityPeriodType { get; set; }  
= -1;  
    public int iAccountsDefaultPasswordValidityPeriodCount { get; set;  
} = -1;  
    public int iAccountsPasswordValidityPeriodType { get; set; } = -1;  
    public int iAccountsPasswordValidityPeriodCount { get; set; } = -1;  
    public int iAccountsLockoutAfterAttemptsCount { get; set; } = -1;
```

```
public int iAccountsLockoutPeriodType { get; set; } = -1;
public int iAccountsLockoutPeriodCount { get; set; } = -1;
}
```

## Format Library

### object ProjectList(object p\_oReq)

This function enables the listing of the format library projects associated with a product.

Request:

```
public class ProjectListReq : IProjectListReq
{
    public string product { get; set; }
}
```

Answer:

```
public class ProjectListRep : IProjectListRep
{
    public object projects { get; set; }
}

public class ProjectList : IProjectList
{
    public string code { get; set; }
    public string name { get; set; }
    public object types { get; set; }
    public int licence { get; set; }
    public ApifmtFamily family { get; set; }
    public ApifmtFormat format { get; set; }
    public int nbrwork { get; set; }
    public int productid { get; set; }
}
```

```
}
```

### object WorkList(object p\_oReq)

This function enables the listing of the format library processes associated with a product and a project.

Request:

```
public class WorkListReq : IWorkListReq
{
    public string product { get; set; }
    public string project { get; set; }
}
```

Answer:

```
public class WorkListRep : IWorkListRep
{
    public object works { get; set; }
}

public class WorkList : IWorkList
{
    public string code { get; set; }
    public string name { get; set; }
    public string version { get; set; }
    public object types { get; set; }
    public object tasks { get; set; }
}

public class ApifmtWorkType : IApifmtWorkType
{
    public int code { get; set; }
}
```

```
        public string desc { get; set; }  
    }  
  
    public class Task : ITask  
    {  
        public string param { get; set; }  
    }  
}
```

### **object TranscoTableList()**

This function enables the listing of the transcoding tables associated with a token tenant.

Answer:

```
    public class TranscoTableListRep : ITranscoTableListRep  
    {  
        public object tables { get; set; }  
    }  
  
    public class Table : ITable  
    {  
        public int id { get; set; }  
        public string name { get; set; }  
        public string description { get; set; }  
        public int input { get; set; }  
        public int output { get; set; }  
        public string lastactionuser { get; set; }  
    }  
}
```

### **object FormatList()**

This function enables the listing of the formats from format library.

Answer:

```
    public class ApifmtFormatListRep : IApifmtFormatListRep
```



```
{  
    public object formats { get; set; }  
}  
public class ApifmtFormat : IApifmtFormat  
{  
    public int id { get; set; }  
    public string name { get; set; }  
    public string desc { get; set; }  
    public int licence { get; set; }  
}
```

### object FamilyList()

This function enables the listing of the format library categories.

Answer:

```
public class ApifmtFamilyListRep : IApifmtFamilyListRep  
{  
    public object families { get; set; }  
}  
public class ApifmtFamily : IApifmtFamily  
{  
    public int id { get; set; }  
    public string name { get; set; }  
    public string desc { get; set; }  
    public FamilyType type { get; set; }  
}
```

### object ProductList();

This function enables the listing of the format library products.

Answer:

```
public class ApifmtProductListRep : IApifmtProductListRep
{
    public object products { get; set; }
}

public class ProductList : IProductList
{
    public int id { get; set; }
    public string code { get; set; }
    public string name { get; set; }
    public int nbrproject { get; set; }
```

### object WorkExec(object p\_oReq);

This function enables the execution of an **apifmt** process using the character string as it was required in the former library, into the **parameters** variable.

Examples:

1)

```
Wscript.echo "-- WorkExec BCP_SOLDE"
```

```
l_oWorkExecReq.product = 0 "BCP"
```

```
l_oWorkExecReq.project = "E_REL120"
```

```
l_oWorkExecReq.work = "BCP_SOLDE"
```

```
l_oWorkExecReq.parameters =
```

```
""C:\DATA\SBE\Payment_Fichier_import_valides_1050\AFB120\Fichier 1  
AFB120.TXT""
```

```
""C:\DATA\SBE\Payment_Fichier_import_valides_1050\AFB120\BCP_SOLDE.out""
```

2)

```
Wscript.echo "-- WorkExec Prepa"
```

```
l_oWorkExecReq.product = 2 "PDS"
```

```

l_oWorkExecReq.project = "SCT"

l_oWorkExecReq.work = "Prepa"

l_oWorkExecReq.parameters =
""C:\Users\Marc\AppData\Local\Temp\XRT\PDS\CXF{378DEF3-AE40-417E-8D57-
3D514E4FE6B3}.tmp""
""C:\Users\Marc\AppData\Local\Temp\XRT\PDS\PDF_c0b93023-fbea-4cbf-a0f5-
7c91884d6d53.TMP"" N ; PASDEVISU LANG:0C
""Provider=OraOLEDB.Oracle.1;Password=XBEUNICODE;Persist Security
Info=True;User ID=XBEUNICODE;Data Source=ORAC12C;Extended Properties=""

```

3)

```
Wscript.echo "-- WorkExec SQL_FORMULA_VISU (PRINTER)"
```

```

l_oWorkExecReq.product = 2 "PDS"

l_oWorkExecReq.project = "EDITIONS"

l_oWorkExecReq.work = "SQL_FORMULA_VISU"

l_oWorkExecReq.parameters = "status.rpt ""Provider=SQLNCLI11;Data
Source=P0150073;Initial Catalog=XRTCOM;User ID=XRTDBO;Password=XRTDBO"" IL
""title='Statuts des fichiers de
signature';partner='*';protocol='*';service='*';client='*';int=' -
';ext='';cre=' - ';sta='Fichier ajouté, Fichier archivé, Fichier préparé,
Fichier signé';l0='Signature
interne';l1='Partenaire';l2='Protocole';l3='Service';l4='Client';c1='Référ
ence';c2='Référence externe';c3='Date d'ajout';c4='Montant (EUR)';c5='Nb
signatures réalisées';c6='Première signature';c7='Premier
signataire';c8='Deuxième signature';c9='Statut';edit='Edité
le';yes='Oui';no='Non';ajoute='Ajouté';prepare='Préparé';archive='Archivé'
;signe='Signé';refustotal='Refus total';rejetstotal='Rejets
total';avecreejets='avec Refus';avecreefus='avec
Rejets';verrouille='Verrouillé'"" ""{S_TFI.CNTR_TFI} in[1,2,32,16]""

```

Request:

```

public class WorkExecReq : IWorkExecReq
{
    public ApifmtProductID product { get; set; }

    public string project { get; set; }

    public string work { get; set; }
}

```

```
        public string parameters { get; set; }
    }
    public enum ApifmtProductID
    {
        BCP
        DTS,
        PDS,
        SMP_P5,
        SXA,
        U2
    };
```

Answer:

```
public class WorkExecRep : IWorkExecRep
{
    public string trace { get; set; }
}
```

#### object GenericWorkExec(object p\_oReq);

This function enables the execution of certain **apifmt** processes pr specific processes that would have been set up.

E.g.:

```
1)l_oGenericWorkExecReq.product = 5 "U2"

    l_oGenericWorkExecReq.project = "SCTDOM"

    l_oGenericWorkExecReq.work = "SCTVTSDOM_PAIN_03"

    l_oGenericWorkExecReq.infile =
"C:\DATA\SBE\Payment_Fichier_import_valides_1050\U2\Intermedio_traspaso_te
so_v40.TRT"

    l_oGenericWorkExecReq.outfile =
"C:\DATA\SBE\Payment_Fichier_import_valides_1050\U2\Intermedio_traspaso_te
so_v40.out"
```

Request:

```
public class GenericWorkExecReq : IGenericWorkExecReq
{
    public ApifmtProductID product { get; set; }
    public string project { get; set; }
    public string work { get; set; }
    public string infile { get; set; }
    public string outfile { get; set; }
    public string cmdargs { get; set; }
}

public enum ApifmtProductID
{
    BCP,
    DTS,
    PDS,
    SMP_P5,
    SXA,
    U2
};
```

Answer:

```
public class GenericWorkExecRep : IGenericWorkExecRep
{
    public string trace { get; set; }
}
```

## Configuration File

**void SetConfigFile(object p\_oReq);**

It enables the update of the Library configuration file.

Request:

```
public class ConfigFileReq : IConfigFileReq
{
    public string securitylevel { get; set; }
    public string http_servicehost_SCASServer { get; set; }
    public string https_servicehost_SCASServer { get; set; }
    public string http_servicehost_SCDTSServer { get; set; }
    public string https_servicehost_SCDTSServer { get; set; }
    public string http_servicehost_SCPSServer { get; set; }
    public string https_servicehost_SCPSServer { get; set; }
    public string autogeneratecertificate { get; set; }
    public string serialnumber { get; set; }
    public string apifmtresponsetimeout { get; set; }
    public string apifmtbasetimetry { get; set; }
    public string apifmtpdfviewer { get; set; }
    public string apifmtprinter { get; set; }
}
```

## Sage.fcs.apifmt Application

This console application can provide the distant execution results for a Format API process.

### Installation

Installing **Sage XRT Common Services** enables the installation of **Sage.fcs.apifmt** providing the component **FCS DLLs** or **SCAS, SCPS and SCDTS client part** is selected. Unless you unselect one of these components for a custom installation, the application is automatically installed for all configurations except **Web Sites (SCAS, SCPS, SCDTS and WIDGETS)**.

Two files are installed:

- *sage.fcs.apifmt.exe*
- *sage.fcs.apifmt.exe.config*

*Sage.fcs.apifmt.exe.config* configuration file associated with *sage.fcs.apifmt.exe* is used to declare the location of the Authentication Service as well as the Data Transforming Service.

### Configuration

Here is the default content of *sage.fcs.apifmt.exe.config*:

```
<?xml version="1.0" encoding="utf-8" ?>

<configuration>

  <appSettings>

    <add key="securitylevel" value="http"/>

    <add key="http_servicehost_SCASServer"
value="http://localhost:80/Auth" />

    <add key="https_servicehost_SCASServer"
value="https://localhost:443/Auth" />

    <add key="http_servicehost_SCDTSServer" value="http://localhost:80" />

    <add key="https_servicehost_SCDTSServer" value="https://localhost:443"
/>

  </appSettings>

</configuration>
```

### Authentication Service

This file enables the declaration of the Authentication Service which is contacted for the user password checking process.

If this service operates in *https* mode, the following line must be modified as follows:

```
<add key="securitylevel" value="https"/>
```

For not secure mode, the following line is used:

```
<add key="http_servicehost_SCASServer" value="http://localhost:80/Auth" />
```

For secure mode, the following line is used:

```
<add key="https_servicehost_SCASServer" value="https://localhost:443/Auth" />
```

You must modify *value* to adapt to the particularities of each installation.

Reminder: you can use a certificate for the Authentication Service (to decrypt the password) by modifying *Sage.SCASServer.Service.exe.config* file and specifying the certificate Serial No. in the following line:

```
<add key="serialnumberforpwdcrypt" value="3526df91b8be9ab046a226d0390a764f" />
```

If the *value* is empty, then **/PWT=RSA** cannot be exploited with this Authentication Service.

### Data Transforming Service

This file is used to declare the data transforming service which is contacted for the execution of the process required.

If this service operates in *https* mode, the following line must be modified as follows:

```
<add key="securitylevel" value="https"/>
```

For not secure mode, the following line is used:

```
<add key="http_servicehost_SCDTSServer" value="http://localhost:80/Auth" />
```

For secure mode, the following line is used:

```
<add key="https_servicehost_SCDTSServer" value="https://localhost:443/Auth" />
```

You must modify *value* to adapt to the particularities of each installation.



## Permissions

In order to execute a process without error, the user passed in parameter (**/USR**) must have the profile with access to **Sage XRT Functional Service** and **Format Library - Formats - Products** and rights for:

- Viewing process details (in every case)
- Executing synchronous processes (if **/NOW:YES** is used)
- Executing asynchronous processes and obtaining the result (if **/NOW:FALSE** is used)

```

Administrateur : Invite de commandes

C:\Program Files\Common Files\xt>sage.fcs.apifmt
Usage : Sage.fcs.apifmt.exe /WKG: /USR: /PWD: [/PWT:] /PRD: /PRJ: /WRK: [/NOW:]
[/CLU:] [/RPV:] [....]

/WKG: Workgroup
/USR: User login
/PWD: Base64 password
/PWT: Password type (RSA!B64 - B64 is default value)
/PRD: Product code (BCP!DIS!PDS!SMP_P5!SKA!U2)
/PRJ: Project code (SCT!VIR_160!XML!...)
/WRK: Work code (VIR_160_VISU!XML_VISU_PAY!...)
/NOW: Execution is prioritary on server (Y!N - N is default value)

/CLU: .cli version <<number>>
/RPV: .rpt version <<number>>
OPTIONAL ARGUMENTS

Remittance slip /WRK:<REMITTANCESLIP!BORDEREAU> /FIL: /OUT:
/FIL: Input file <<path>>
/OUT: Output PDF file <<path>>

View file <general case> /FIL: /OUT:
/FIL: Input file <<path>>
/OUT: Output PDF file <<path>>

View file /WRK:<HAA_VISU!HKD_VISU!HTD_VISU> /FIL: /EBP: /OUT:
/FIL: Input file <<path>>
/EBP: Ebics partner
/OUT: Output PDF file <<path>>

View with banking rights /H00: /C00: [/C01:] /B00: /TOT: /OUT:
/H00: File .H00 <<path>>
/C00: File .C00 <<path>>
/C01: File .C01 <<path>>
/B00: File .B00 <<path>>
/TOT: File .TOT <<path>>
/OUT: Output PDF file <<path>>

View report /WRK:ODBC_TXT_VISU /RPT: [/LAN:] /ZIP: /OUT:
/RPT: Report name <without path>
/LAN: Report language (1033!1034!1036 - 1036 is default value)
/ZIP: Zipped ODBC text files <<path>>
/OUT: Output PDF file <<path>>

View report /WRK:SQL_FORMULA_VISU /RPT: [/LAN:] /PAR: [/SQL:] /OUT:
/RPT: Report name <without path>
/LAN: Report language (1033!1034!1036 - 1036 is default value)
/PAR: Formulas list
/SQL: SQL request
/OUT: Output PDF file <<path>>

View report /WRK:SQL_TABLES_VISU /RPT: [/LAN:] [/SQL:] /OUT:
/RPT: Report name <without path>
/LAN: Report language (1033!1034!1036 - 1036 is default value)
/SQL: SQL request
/OUT: Output PDF file <<path>>

Conversion <general case> /FIL: [/OUT:]
/FIL: Input file <<path>>
/OUT: Output base file name <<path>>, if not present output fi
les (*.out, .ERR) will be generated from input file name

Conversion /WRK:<*_SCT_VIASBE> /FIL: /SBS: /SBF: [/OUT:]
/FIL: Input file <<path>>
/SBS: SBE service
/SBF: Finality
/OUT: Output file name <<path>>, if not present output file <
out> will be generated from input file name

Conversion /WRK:<*_VIASBE> /FIL: /SBS: [/OUT:]
/FIL: Input file <<path>>

```

## Operation

### Basic Parameters

#### Tenant /WKG

This parameter is mandatory as it specifies the database to be used with the data authentication and transformation services.

#### User /USR

This parameter is mandatory as it specifies the user for the authentication as well as the authorizations associated with their profile.

#### Password /PWD

This parameter is mandatory as it specifies the user password. It must not be displayed in plaintext but obtained through the **sage.fcs.pwdencode.exe** console application (see hereafter).

#### Password Type /PWT

This parameter is optional.

The value to use depends on the encryption chosen for the Authentication Service password. Its default value is **B64**, which corresponds to Base64-encoding only. For a different encryption type, the **RSA** value must be used for this parameter.

#### Product /PRD

This parameter is mandatory as it specifies the product code containing the process to execute (e.g.: **BCP** for **Sage XRT Treasury – Communication**).

#### Project /PRJ

This parameter is mandatory as it specifies the project code containing the process to execute (e.g.: **SCT** for SCT SEPA Format).

#### Processing /WRK

This parameter is mandatory as it specifies the code of the process to execute (e.g.: **SCT\_VISU\_PAY** for SCT SEPA Edition).

### Execution Type (/NOW)

This parameter is optional.

Its default value is **N**, which corresponds to a request for asynchronous process execution. The application asks the server if the data transformation execution has been processed, the waiting time depends on the input file size. The default waiting time is 30 seconds.

A relatively light process can be executed using **Y** for the parameter. The execution is then synchronous and the result is obtained as soon as the server process is over.

### Clint File Version /CLV

This parameter is not yet operational. It specifies the version of *.cli* file to execute when the specific *Clint* process is derived from the original *Clint* process.

### Crystal Report File Version /RPV

This parameter is not yet operational. It specifies the version of *.rpt* file to execute when the specific *Crystal Report* is derived from the original *Crystal Report*.

### Specific Parameters

Several default process families are defined and you can find help on the command line in the **OPTIONAL ARGUMENTS** topic.

Remittance slip /WRK:{REMITTANCESLIP|BORDEREAU} /FIL: /OUT:

View file (general case) /FIL: /OUT:

View file (Ebics) /WRK:{HAA\_VISU|HKD\_VISU|HTD\_VISU} /FIL: /EBP: /OUT:

View with banking rights /H00: /C00: [/C01:] /B00: /TOT: /OUT:

View report /WRK:ODBC\_TXT\_VISU /RPT: [/LAN:] /ZIP: /OUT:

View report /WRK:SQL\_FORMULA\_VISU /RPT: [/LAN:] /PAR: [/SQL:] /OUT:

View report /WRK:SQL\_TABLES\_VISU /RPT: [/LAN:] [/SQL:] /OUT:

Conversion (general case) /FIL: [/OUT:]

Conversion /WRK:{\*\_SCT\_VIASBE} /FIL: /SBS: /SBF: [/OUT:]

Conversion /WRK:{\*\_VIASBE} /FIL: /SBS: [/OUT:]

Conversion /WRK:P160\_2\_SDD\_VIA\_FRPPAIEMENT /FIL: /FPT: /FPR: [/OUT:]

Conversion /WRK:{\*\_RB7|\*\_RB9} /FIL: {/RBB: [/OUT:]

Prepare file /WRK:Prepa /FIL: /OUT:

## Sage.fcs.apifmt Application

Invalid records /WRK:DelRejet /FIL: /REJ: /OUT:

Valid records /WRK:DelSigne /FIL: /REJ: /OUT:

Bank Import /WRK:{BCP\_GEN\_CERG|CONV\_FMT\_CERG} /FIL: /OUT:

Filter bank statements /WRK:UPDATEFILE /FIL: /UFP: /UFT: {/UFS: /UFC: /OUT:

Bank Import /WRK:BFI\_MQ /FIL: /QUE: /BNK: /OUT:

File generation for U2 /FIL: /OUT:

Execute /ARG: [/FIL: /OUT:]

## Examples

You must deal with the basic parameters (see the dedicated paragraphs) before the specific parameters of the following examples.

E.g.: When an **XRT** user, with **XRT** password wants to execute a synchronous process for the **SXBE32T064** workgroup, this piece of code must be added:

```
Sage.fcs.apifmt.exe /NOW:Y /WKG: SXBE32T064 /USR:XRT /PWD:WFJU
```

### Remittance slip /WRK:{REMITTANCESLIP|BORDEREAU} /FIL: /OUT:

```
/PRD:BCP /PRJ:VIR_160 /WRK:BORDEREAU /FIL:"C:\file.160" /OUT:"C:\file.pdf"
```

### View file (general case) /FIL: /OUT:

```
PRD:SMP_P5 /PRJ:SCT /WRK:SCT_VISU_PAY /FIL:"C:\file.xml"  
/OUT:"C:\file.pdf"
```

### View file (Ebics) /WRK:{HAA\_VISU|HKD\_VISU|HTD\_VISU} /FIL: /EBP: /OUT:

```
/PRJ:EBICS_Requests /WRK:HKD_VISU /FIL:"C:\file.hkd" /EBP:Partner  
/OUT:"C:\file.pdf"
```

### View with banking rights /H00: /C00: [/C01:] /B00: /TOT: /OUT:

```
/PRD:PDS /PRJ:SCT /WRK:SCT_VISU_PAY /H00:"C:\file.H00" /C00:"C:\file.C00"  
/B00:"C:\file.B00" /TOT:"C:\file.TOT" /OUT:"C:\file.pdf"
```

### View report /WRK:ODBC\_TXT\_VISU /RPT: [/LAN:] /ZIP: /OUT:

```
/PRD:SMP_P5 /PRJ:EDITIONS /WRK:ODBC_TXT_VISU /RPT:ticketr.rpt  
/ZIP:"C:\file.zip" /OUT:"C:\file.pdf"
```

**View report /WRK:SQL\_FORMULA\_VISU /RPT: [/LAN:] /PAR: [/SQL:] /OUT:**

```
/PRD:SMP_P5 /PRJ:EDITIONS /WRK:SQL_FORMULA_VISU /RPT:status.rpt
/PAR:"title='Statuts des fichiers de
signature';partner='*';protocol='*';service='*';client='*';int=' -
';ext='';cre=' - ';sta='Fichier ajouté, Fichier archivé, Fichier bloqué,
Fichier préparé, Fichier signé';l0='Signature
interne';l1='Entité';l2='Protocole';l3='Service';l4='Client';c1='Référence
';c2='Référence externe';c3='Date d'ajout';c4='Montant';c5='Nb signatures
réalisées';c6='Première signature';c7='Premier signataire';c8='Deuxième
signature';c9='Statut';edit='Edité
le';yes='Oui';no='Non';ajoute='Ajouté';prepare='Préparé';bloque='Bloqué';a
rchive='Archivé';signe='Signé';refustotal='Refus
total';rejetstotal='Rejets total';avecreejets='avec Rejets';avecerefus='avec
Refus';verrouille='Verrouillé';afrejet='modifié par le module anti-
fraude'" /SQL:"{S_TFI.CNTR_TFI} in[1,2,64,32,16]" /OUT:"C:\file.pdf"
```

**View report /WRK:SQL\_TABLES\_VISU /RPT: [/LAN:] [/SQL:] /OUT:**

```
/PRD:SMP_P5 /PRJ:EDITIONS /WRK:SQL_TABLES_VISU /LAN:1033 /RPT:client.rpt
/SQL:"{S_SES."VPS_SES"}='BNP' AND {S_SES."PRO_SES"}=134217728 AND
{S_SES."VFS_SES"}='AFB160' AND {S_SES."CLIENT_SES"}='SAGE' AND
{S_SES."SIGNINT_SES"}=0" /OUT:"C:\file.pdf"
```

**Conversion (general case) /FIL: [/OUT:]**

```
/PRD:SMP_P5 /PRJ:CONVERTISSEURS /WRK:VIR160_TO_SCT03 /FIL:"C:\file.160"
```

**Conversion /WRK:{\*\_SCT\_VIASBE} /FIL: /SBS: /SBF: [/OUT:]**

```
/PRD:SMP_P5 /PRJ:VIR_160 /WRK:VIR160_TO_SCT_VIASBE /FIL:"C:\file.160"
/SBS:SCT /SBF:SALARY
```

**Conversion /WRK:{\*\_VIASBE} /FIL: /SBS: [/OUT:]**

```
/PRD:SMP_P5 /PRJ:PRE_160 /WRK:PREL160_TO_SDD_VIASBE /FIL:"C:\file.160"
/SBS:SDD
```

**Conversion /WRK:P160\_2\_SDD\_VIA\_FRPPAIEMENT /FIL: /FPT: /FPR: [/OUT:]**

```
/PRD:U2 /PRJ:PRE_160 /WRK:P160_2_SDD_VIA_FRPPAIEMENT /FIL:"C:\file.160"
/FPT:160 /FPR:1
```

**Conversion /WRK:{\*\_RB7}\*\_\*\_RB9} /FIL: /RBB: [/OUT:]**

```
/PRD:SMP_P5 /PRJ:CONVERTISSEURS /WRK:VIR160_TO_SCT_RB7 /FIL:"C:\file.160"
/RBB:1
```

**Prepare file /WRK:Prepa /FIL: /OUT:**

```
/PRD:PDS /PRJ:SCT /WRK:Prepa /FIL:"C:\file.xml" /OUT:"C:\file.zip"
```

### Invalid records /WRK:DelRejet /FIL: /REJ: /OUT:

```
/PRD:PDS /PRJ:SCT /WRK:DelRejet /REJ:"C:\fil.rej" /FIL:"C:\file.xml"  
/OUT:"C:\filereject.xml"
```

### Valid records /WRK:DelSigne /FIL: /REJ: /OUT:

```
/PRD:PDS /PRJ:SCT /WRK:DelSigne /REJ:"C:\fil.rej" /FIL:"C:\file.xml"  
/OUT:"C:\fileaccept.xml"
```

### Bank Import /WRK:{BCP\_GEN\_CERG|CONV\_FMT\_CERG} /FIL: /OUT:

```
/PRD:BCP /PRJ:AEB43 /WRK:BCP_GEN_CERG /FIL:"C:\file.aeb43"  
/OUT:"C:\file.conv"
```

### Filter bank statements /WRK:UPDATEFILE /FIL: /UFP: /UFT: /UFS: /UFC: /OUT:

```
/PRD:BCP /PRJ:AEB43 /WRK:UPDATEFILE /FIL:"C:\file.aeb43" /UFP:INTER  
/UFT:FILE /UFS:AEB43 /UFC:SAGE /OUT:"C:\file.out"
```

### Bank Import /WRK:BFI\_MQ /FIL: /QUE: /BNK: /OUT:

```
/PRD:BCP /PRJ:AEB43 /WRK:BFI_MQ /FIL:"C:\file.aeb43" /QUE:QU1 /BNK:BNP  
/OUT:"C:\file.out"
```

### File generation for U2 /FIL: /OUT:

```
/PRD:U2 /PRJ:AFB320 /WRK:Standard /FIL:"C:\file.320" /OUT:"C:\file.conv"
```

### Execute /ARG: [/FIL: /OUT:]

```
/PRD:PDS /PRJ:SCT /WRK:SCT_TEST /ARG:"$INPUTFILE$ Y P $OUTPUTFILE$"  
/FIL:"C:\file.xml" /OUT:"C:\file.pdf"
```

In this case, **SCT\_TEST** process has been created by copying SCT\_VISU\_DET process, and deleting **File viewing process** and **Banking rights management view**.

## Sage.fcs.pwdencode.exe Application

This console application can encode the user password to avoid its plaintext circulation on the network.

The password can be base64-encoded only (by default), or encrypted with the public key of the Authentication Service, then base64-encoded.

### Installation

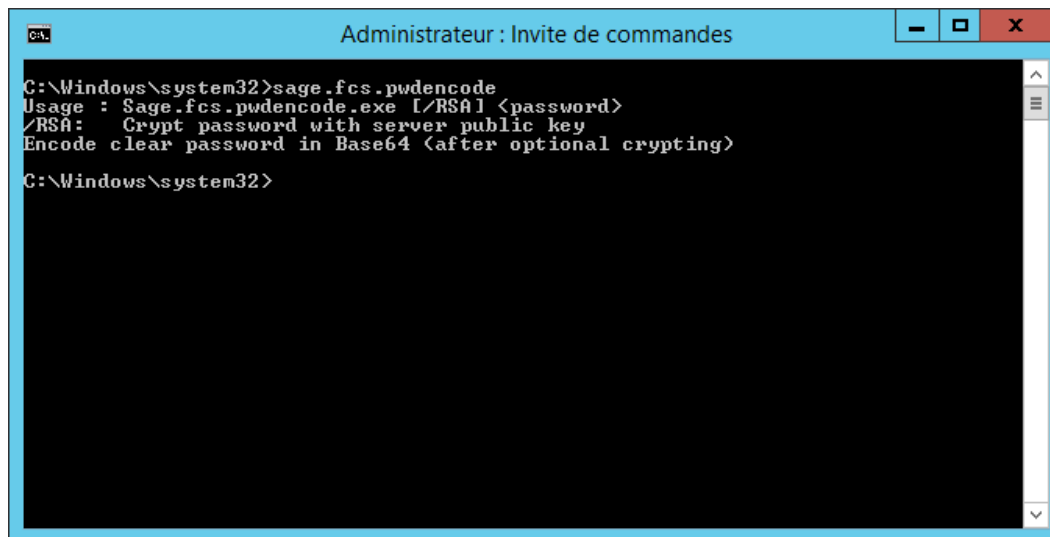
Installing **Sage XRT Common Services** enables the installation of **Sage.fcs.apifmt** providing the component **FCS DLLs** or **SCAS, SCPS and SCDTS client part** is selected. Unless you unselect one of these components for a custom installation, the application is automatically installed for all configurations, except **Web Sites (SCAS, SCPS, SCDTS and WIDGETS)**.

Two files are installed:

- *sage.fcs.pwdencode.exe*
- *sage.fcs.pwdencode.exe.config*

**sage.fcs.pwdencode.exe.config** file associated with **sage.fcs.pwdencode.exe** is used to declare the location of the Authentication Service for encryption cases (to obtain the certificate public key).

### Operation



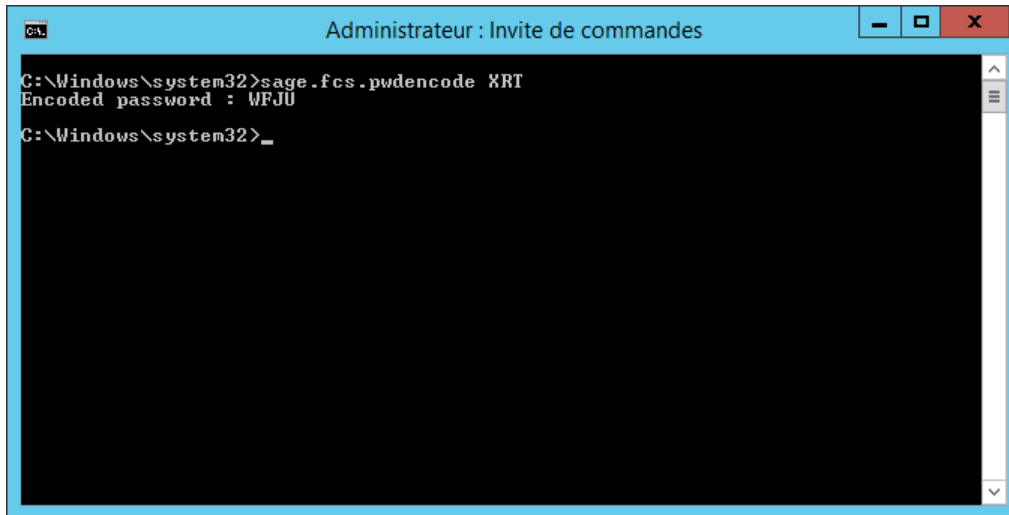
```
C:\Windows\system32>sage.fcs.pwdencode
Usage : Sage.fcs.pwdencode.exe [/RSA] <password>
/RSA:  Crypt password with server public key
Encode clear password in Base64 <after optional crypting>
C:\Windows\system32>
```



### Base64-encoding Only

Using the *sage.fcs.pwdencode.exe.config* file is not required in this case since the encoding is performed locally (no point in contacting the Authentication Service).

The password: **XRT** translates as **WFJU**.



### Encryption and Base64-encoding

#### Description of Configuration File

Here is the default content of the file:

```
<?xml version="1.0" encoding="utf-8" ?>

<configuration>

  <appSettings>

    <add key="securitylevel" value="http"/>

    <add key="http_servicehost_SCASServer"
value="http://localhost:80/Auth" />

    <add key="https_servicehost_SCASServer"
value="https://localhost:443/Auth" />

  </appSettings>

</configuration>
```

## Sage.fcs.pwdencode.exe Application

This file enables the declaration of the Authentication Service which must be contacted for the user password checking process.

If this service operates in *https* mode, the following line must be modified as follows:

```
<add key="securitylevel" value="https"/>
```

For not secure mode, the following line is used:

```
<add key="http_servicehost_SCASServer" value="http://localhost:80/Auth" />
```

For secure mode, the following line is used:

```
<add key="https_servicehost_SCASServer" value="https://localhost:443/Auth" />
```

You must modify *value* to adapt to the particularities of each installation.

### Reminder:

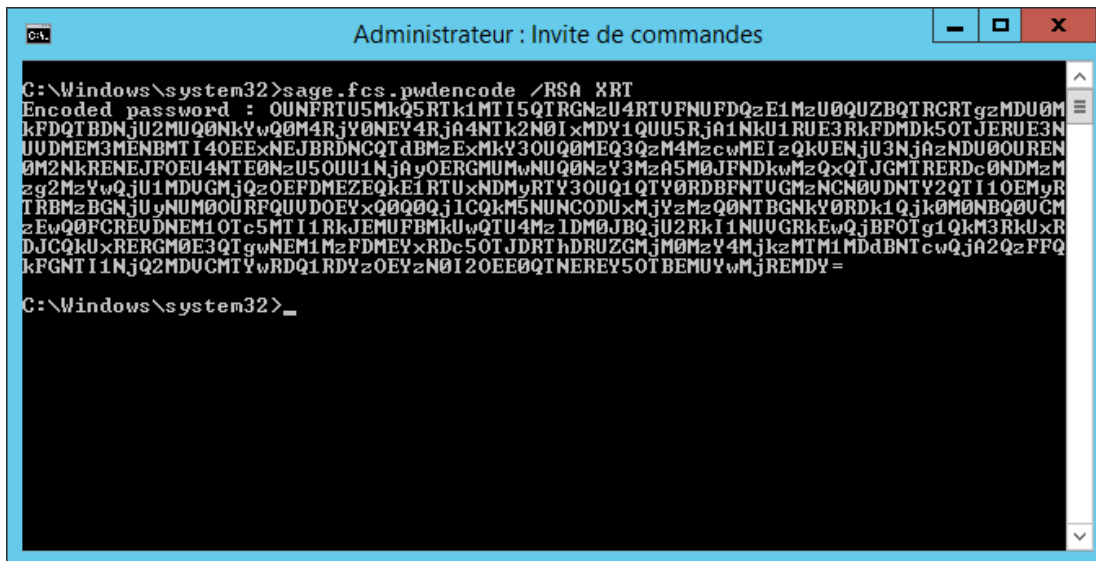
you can use a certificate for the Authentication Service (to decrypt the password) by modifying *Sage.SCASServer.Service.exe.config* file and specifying the certificate Serial No. in the following line:

```
<add key="serialnumberforpwdcrypt" value="3526df91b8be9ab046a226d0390a764f" />
```

If *value* is empty, then **/RSA** cannot be exploited with this Authentication Service.

### Using Executable

To use encryption, the **/RSA** parameter is added into the command line.



```
C:\Windows\system32>sage.fcs.pwdencode /RSA XRT
Encoded password : OUNFRIU5MkQ5RTk1MTI5QTIRGNzU4RTUvFNUFDQzE1MzU0QUZBQTRCRTgzMDU0M
kFDQITBDNjU2MUQ0NkYwQ0M4RjY0NEY4RjA4NTk2N0IxdmY1QUU5RjA1NkU1RUe3RkFDMk50TJERUE3N
UUDMEM3MENBMTI4OEExNEJBRDNCQTdBMzExMkY3OUQ0MEQ3QzM4MzZcwMEIzQkUENjU3NjA2NDU0OUREN
0M2NkRENEJFOEU4NTE0NzU5OUU1NjA5OERGNUMwNUQ0NzY3MzA5M0JFNDkwMzQxQTJGMTRERDc0NDMzM
zg2MzYwQjU1MDUGMjQzOEFDMZEZEQkE1RTUxNDMyRTY3OUQ1QTY0RDBFNTUGMzNCN0UDNTY2QTI1OEMyR
IRBMzBGNjUyNUM0URFQUVD0EYxQ0Q0Qj1CQkM5NUNCODUxMjYzMzQ0NTBGNkY0RDk1Qjk0M0NBQ0UCM
zEwQ0FCREVDNEM1OTc5MTI1RkJEUFBMkUwQTU4Mz1DM0JBQjU2RkI1NUUGRkEwQjBFOTg1QkM3RkUxR
DJCQkUxRERGM0E3QTg0NEM1MzFDMFYxRDc5OTJDRThtDRUZGMjM0MzY4MjkzMTM1MDdBNTcwQjA2QzFFQ
kFGNTI1NjQ2MDUCMTYwRDQ1RDYzOEYzN0I2OEEOQTNEREY5OTBEMUYwMjREMDY=

C:\Windows\system32>
```

We recommend you redirect the console output into a file to retrieve the encrypted/encoded password for future use (e.g.: **> pwd.txt**).

## Appendix

CATEGORY(S) column of the transcoding table named TC DTSPAYCAT TRANS PAY:

[SCT VTSDOM 001.001.03][902100]  
[SCT VTSIN 001.001.03][903100]  
[VTSDO Pain 001.001.03][740796]  
[VTSIN Pain 001.001.03][739797]  
[VTSDO Pain 001.001.02][740802]  
[VTSIN Pain 001.001.02][739801]  
[VTSDO Pain 001.001.03 CBI][740825]  
[VTSDO Pain 001.001.03 CBI NS][740826]  
[VTSIN Pain 001.001.03 CBI][739798]  
[VTSIN Pain 001.001.03 CBI NS][739799]  
[SCT VTSDOM 001.001.03 BANK OF SPAIN][770002]  
[SCT VTSDOM 001.001.03 CBI][770003]  
[SCT VTSDOM 001.001.03 CBI NS][770004]  
[SCT VTSIN 001.001.03 CBI][771005]  
[SCT VTSIN 001.001.03 CBI NS][771006]  
[AFB320URG-VTS][003800]  
[MT101VTS][001101]  
[AEB34VTS][016116]  
[AFB160VTS][010191]  
[DTAUSDTE-VTS][011111]  
[DTAZVEUE-VTS][004105]  
[PAY912VTSDO][008108]  
[PAY912VTSIN][002102]

## Appendix

[PAY96AABNVTSDO][710733]  
[PAY96AABNVTSIN][711734]  
[PAY96ABOAVTSDO][724757]  
[PAY96ABOAVTSIN][725759]  
[PAY96ACHVTSDO][510561]  
[PAY96ACHVTSIN][610611]  
[PAY96ADBVTSDO][712737]  
[PAY96ADBVTSIN][713738]  
[PAY96ASCBVTSDO][722753]  
[PAY96ASEBVTSDO][717745]  
[PAY96ASEBVTIN][718746]  
[PAY96AVTSDO][500502]  
[PAY96AVTSIN][600603]  
[SCT VDOM 001.001.02][738774]  
[SCT VDOM 001.001.03][756793]  
[SCT VDOM 001.001.03 BANK OF SPAIN][738823]  
[SCT VDOM 001.001.03 CBI][738819]  
[SCT VDOM 001.001.03 CBI NS PMRQ][738820]  
[SCT VDOM 001.003.03][780001]  
[VDOM Pain 001.001.02][740776]  
[VDOM Pain 001.001.03][758795]  
[SCT VINT 001.001.02][737773]  
[SCT VINT 001.001.03][755792]  
[SCT VINT 001.001.03 CBI][737821]  
[SCT VINT 001.001.03 CBI NS PMRQ][737822]  
[SCT VINT 001.003.03][781002]

## Appendix

[VINT Pain 001.001.02][739775]  
[VINT Pain 001.001.03][757794]  
[VINT Pain 001.001.03 CBI][757828]  
[VINT Pain 001.001.03 CBI NS][757829]  
[AEB3412DOM][060060]  
[AEB3412VINT][070070]  
[AEB341VDOM][734734]  
[AEB341VINT][729729]  
[AEB34VDOM][016116]  
[AEB68VDOM][732768]  
[AFB160][010110]  
[AFB320][003103]  
[CBIIPCVDOM][014162]  
[CIRI128VDOM][022187]  
[CLIEOP3VDOM][012112]  
[CMI101][001129]  
[DTA826VDOM][759798]  
[DTA827VDOM][520562]  
[DTA830VINT][620621]  
[DTA836VINT][630631]  
[DTAUSDTE-VDOM][011111]  
[DTAUSIZV-VDOM][011111]  
[DTAUSVDOM][011111]  
[DTAZV-AZV][004104]  
[DTAZV-ESU][004106]  
[DTAZV-EUE][004105]

## Appendix

[ETB101][001127]  
[FIN101][001130]  
[MT100][005105]  
[MT101][001101]  
[MT101C2B][741777]  
[MT103][726760]  
[MX101C2B][753789]  
[OPAE22VDOM][706729]  
[OPAE27VDOM][707730]  
[PAY912VDOM][008108]  
[PAY912VINT][002102]  
[PAYEXT96ABOAVDOM][724756]  
[PAYEXT96ABOAVINT][725758]  
[PAYMUL96AABNVDOM][710733]  
[PAYMUL96AABNVINT][711734]  
[PAYMUL96ACHVDOM][510561]  
[PAYMUL96ACHVINT][610611]  
[PAYMUL96ACRGVDOM][500501]  
[PAYMUL96ACRGVINT][600601]  
[PAYMUL96ADBVDOM][712735]  
[PAYMUL96ADBVINT][713736]  
[PAYMUL96ASCBVDOM][723754]  
[PAYMUL96ASCBVINT][722752]  
[PAYMUL96ASEBVDOM][717744]  
[PAYMUL96ASEBVINT][718746]  
[PS2VDOM][015115]