

Installation Guide

Apparo Fast Edit

Single Instance

Qlik Sense

Version 3.3.0.0



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1 Prior to Installation

Installing Apparo Fast Edit can be done in 1/2 hour if you prepare your environment.

Please be aware of the following points before starting installation:

Hardware requirements

- File system about 1 GB file storage
- Main Memory about 4 GB main memory

Supported operating systems

- Windows Server 2008 – current

Supported Qlik Sense versions and products

- Qlik Sense 2020 January and higher

Supported security systems

- All security systems that are currently in use for Qlik Sense
Apparo is using the security system of Qlik Sense only

Supported virtual environments

- VMware ESX, ESXi
- Amazon AWS
- Microsoft Azure

Apparo Fast Edit must be installed using a **local Windows administrator** account.

Qlik Sense Enterprise must be already installed and running.

1.1 Installation video

You can find an installation movie on YouTube using:

<http://inst-qliksense.apparo.solutions>

Following steps are necessary in this order:

1	Database preparation for Apparo Repository
2	Installation and configuration of all Apparo Fast Edit
3	Adding Apparo Extensions into Qlik Sense

Apparo Fast Edit can be installed **parallel to the Qlik Sense installation on the same host.**



<p>1</p>	<p>Preparation</p> <ul style="list-style-type: none"> • Analysing environment • Creation of a database user for the Apparo repository
<p>2</p>	<p>Installation of Apparo Fast Edit</p>
<p>3</p>	<p>Configuration of Apparo Fast Edit Configuration using the Apparo Configuration Manager</p>
<p>4</p>	<p>Adding Apparo Extensions into Qlik Sense</p>
<p>5</p>	<p>Installing clients</p>

2 Preparation

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5	<p>Installing clients</p>

2.1 Creation of a database user for the Apparo Repository

Apparo Fast Edit requires a database repository. In this repository all of your definitions are stored.

Following databases are supported:

- Oracle
- IBM DB2
- MS SQL Server
- MS Azure SQL Database
- Internal database (**for presentation and development only**)

This database user must be defined before starting the Apparo Fast Edit setup.

You can find a detail description in the document “Installation – creating database user”.

Essential grants:

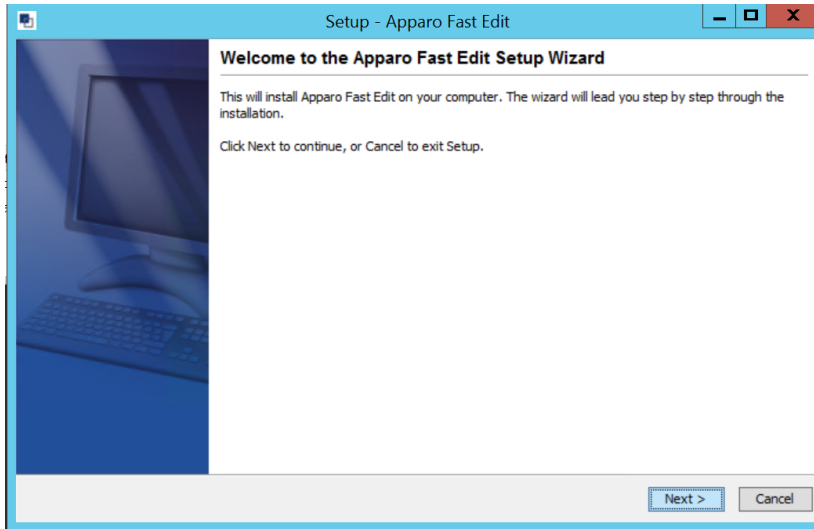
- The database user must be able to create database tables
- A Login with this user must be possible

3 Installation of Apparo Fast Edit

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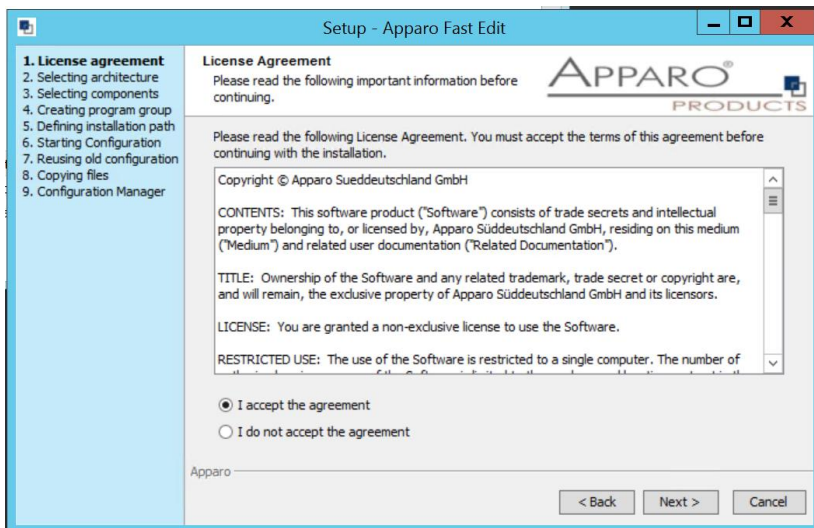
Start the Installation by execute the file

FastEdit3.3.0.0.yyy_windows_tomcat_qliksense.exe



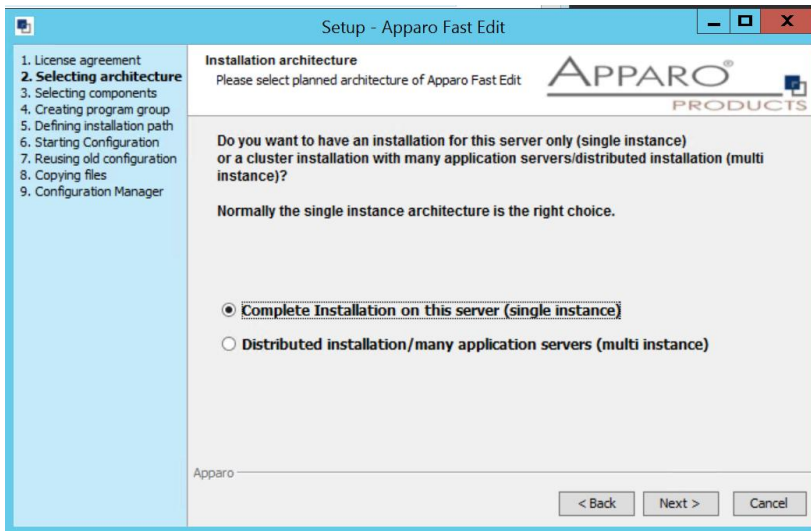
Confirm the beginning of the installation by clicking „Next“.

3.1 License agreement



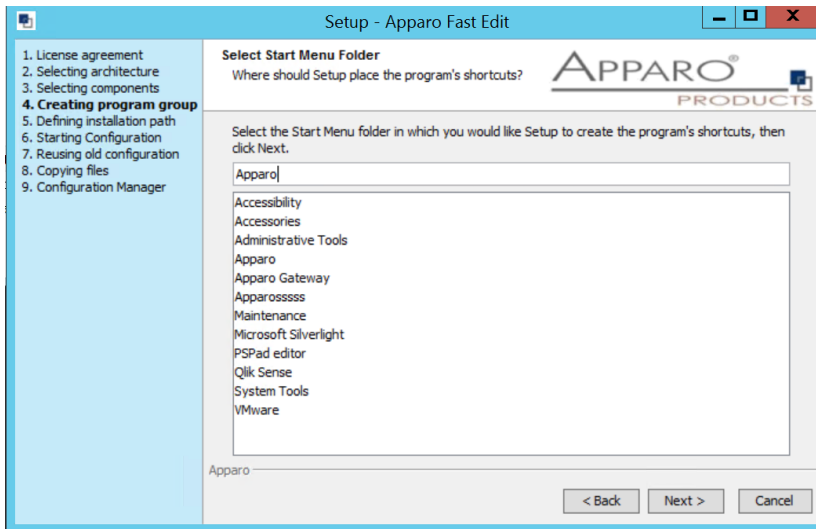
Read and confirm the license agreement by clicking „Next“.

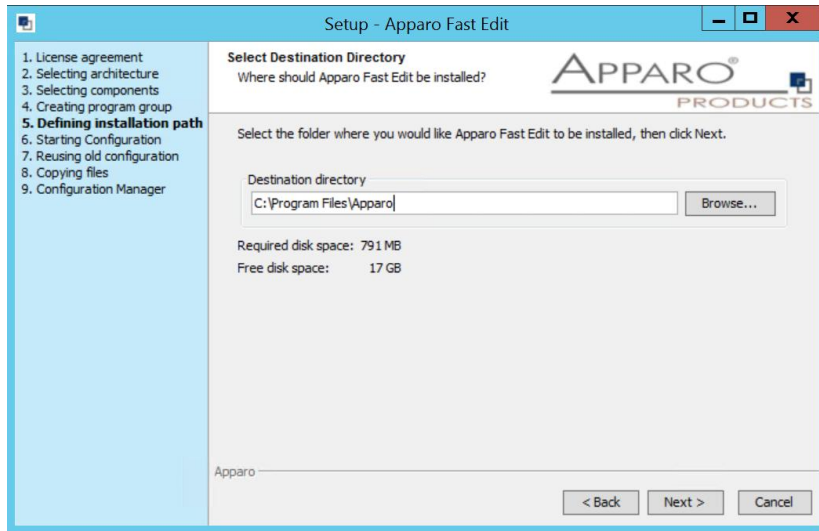
3.2 Selecting the architecture



Select “Complete Installation on this server” and click „Next>“.

3.3 Defining the start menu entry and the target file directory

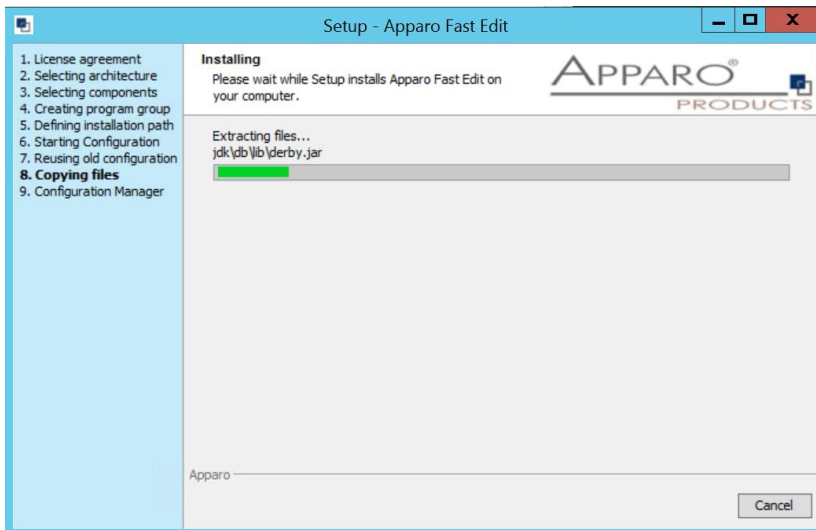




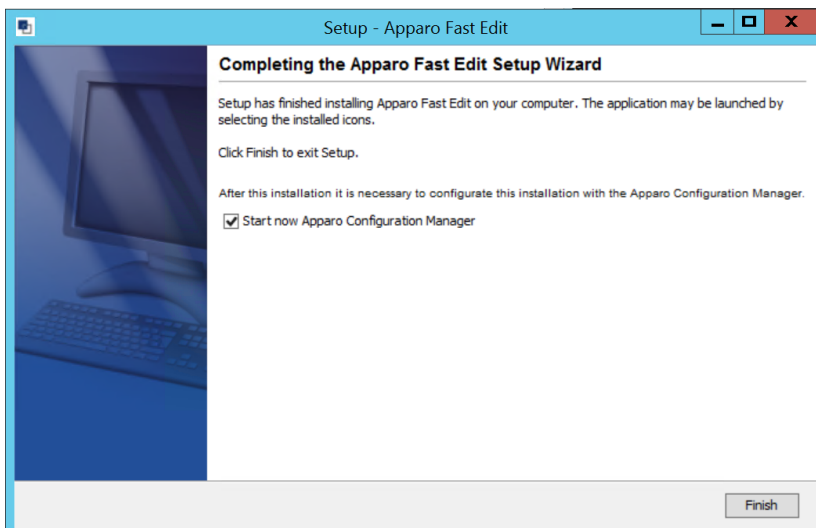
Please define the installation path and choose „Next >“.

3.4 Carrying out the installation

Finally the installation of Apparo Fast Edit with the selected architecture will start. After that this installation must be configured with the **Apparo Configuration Manager**.



3.5 Installation finish



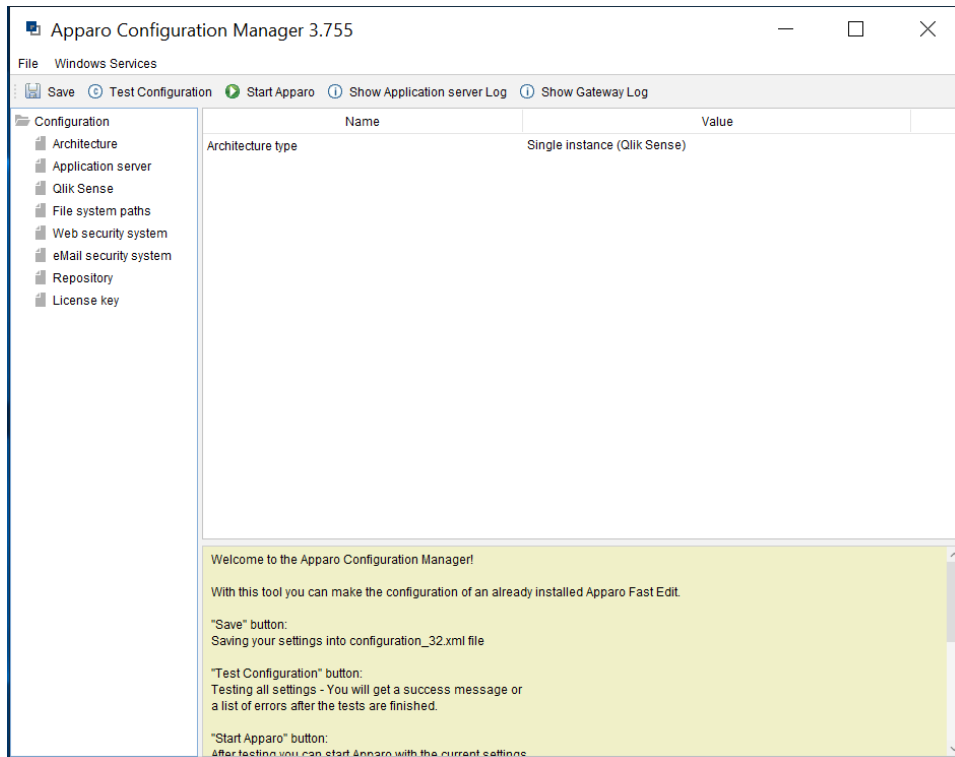
Now it's time to **configure** the installation with the **Apparo Configuration Manager**.

Click „**Finish**” for completing the installation and to start the configuration.

4 Configuration of Apparo Fast Edit

1	<p>Preparation</p> <ul style="list-style-type: none"> • Analysing environment • Creation of a database user for the Apparo repository
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With the **Apparo Configuration Manager** you are able to configure and start the already installed Apparo Fast Edit.



The settings are grouped into chapters (left side).

For each setting you can read a helpful description text in the yellow box.

To do list:

1	Define all settings
----------	----------------------------

2	Press the „Test Configuration“ button for testing all settings.
----------	--

3	Press the „<u>Start Apparo</u>“ button for starting the application server
----------	---

4	<p>You can see the log file of the application server with pressing „<u>Show Application server Log</u>“</p> <p>If the application server is running then you can see in the log:</p> <pre> 2023-11-07 02:37:41,831 INFO com ++ + Apparo Fast Edit 3.3.0.x (Build nnn) was successfully started at 07.03.2023 02:37:41 + ++ </pre>
----------	--

Test if the Apparo application server is running fine:

Fehler! Linkreferenz ungültig.

Example:

<http://localhost:18000/apparo/pages/apptest.xhtml>

Hint: You must test that server side, that means inside of the server and not outside.
With this URL you can test if the Apparo application server is running fine or has problems.

Output example:

Application status

Apparo 3.3.0.0 (build: 900)

- Repository connection ✔
- Repository content ✔
- Qlik Sense connection ✔

Test done in 85 ms.

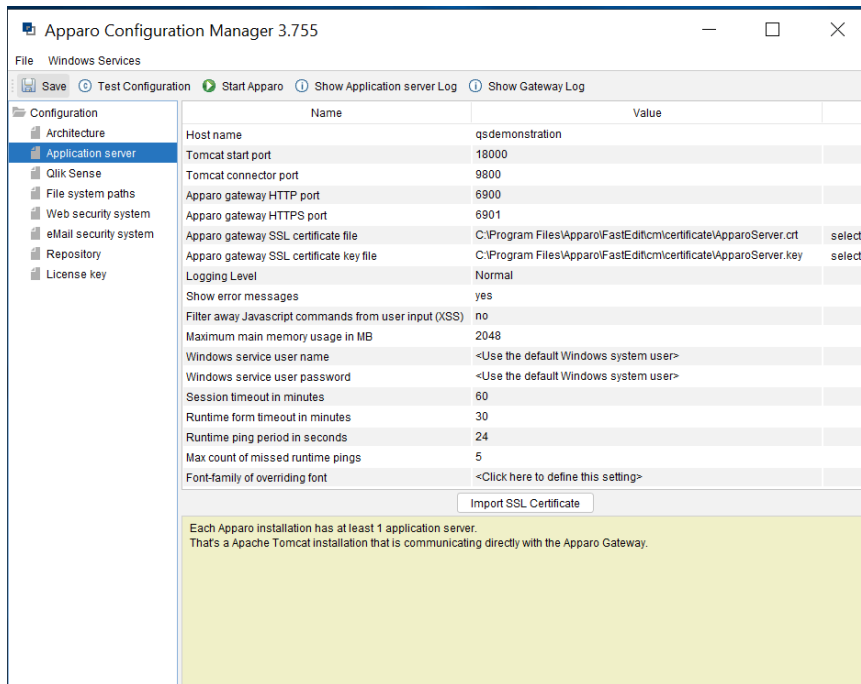
The configuration of Apparo Fast Edit is stored in file configuration.xml in file directory [APPARO_HOME]\FastEdit\cm .

If you plan a parallel/cluster system then it's sometimes comfortable to copy this file into the target system.

If you open the Apparo Configuration Manager then you will see the same configuration settings like of your source system and it's possible to change it comfortable.

4.1 Architecture

Settings for the Apparo Application Server:



Apparo is automatically reusing the self-signed SSL certificate of Qlik Sense that you have specified in tab "Qlik Sense" if you don't import an own certificate using button "Import SSL Certificate".

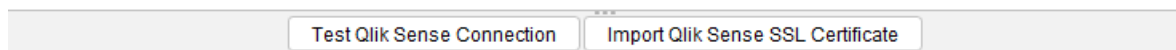
That means if your Qlik Sense environment is using a **signed certificate** then you must import that now using the button "Import SSL Certificate". Please read chapter "**Qlik Sense is using https?**".

4.2 Qlik Sense

Settings for the already installed Qlik Sense environment:

Qlik Sense host: The name that is used for calling the Qlik Sense proxy system. It can be an external host name or internal host name.

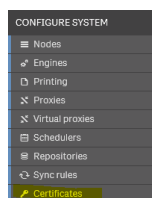
Name	Value
Qlik Sense host	supp-qs
Qlik Sense QRS port	4242
Qlik Sense admin domain	supp-qs
Qlik Sense admin login	administrator
Same host like Apparo	yes



Apparo must be able to read user data from the Qlik Sense proxy system. Because the Qlik Sense system is secured it is necessary to use a security certificate from the installed Qlik Sense system.

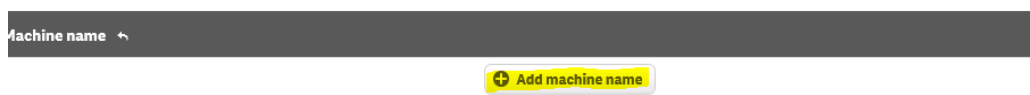
How to generate this certificate:

Please open the Qlik Sense Management Console and select “**Certificates**” from the left panel:



Press “Add machine name” and use the name of the Qlik Sense host that is defined in setting “**Qlik Sense host**” (see screenshot) , e.g. MYMACHINE.mydomain.com or if it is a internal name like srv222.

Hint: Upper/lower case is important.



After that enter the necessary password information **and include secret key:**

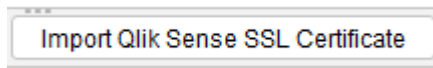
Certificate password	<input type="password" value="....."/>
Retype password	<input type="password" value="....."/>
Include secret key	<input checked="" type="checkbox"/>
Export file format for certificates	Windows format

Certificates will be exported to this disk location on the server: C:\ProgramData\Qlik\Sense\Repository\Exported Certificates

Certificates will be exported to this disk location on the server:

[Installation Drive]:\ProgramData\Qlik\Sense\Repository\Exported Certificates\[name]

- Copy the file **client.pfx** to your server for the new Apparo application server installation



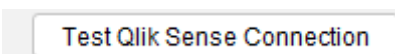
- Press the button **Import Qlik Sense SSL Certificate** in the Apparo Configuration Manager
- Select in the dialog the file and enter the password
- After that your certificate is imported.
- Please add now the Windows domain (or server name if it is not in a domain) & user name

Hint: User for login into the Qlik Sense repository service:

This Windows user must have the Qlik Sense role “RootAdmin”.

If not then the login will be not possible.

You can test your definitions with the button



4.3 File system paths

With the file systems paths you can define the place for storing batch files that can be called from a Business Case, Java test classes for data quality checks, path to the client definitions, Oracle client and Java keystore for certificates.

Name	Value
File path to batch/executeable files	C:\Program Files\Apparo3300\FastEdit\user_scripts
File path to client definitions	C:\Program Files\Apparo3300\FastEdit\clients
File path to custom java classes	C:\Program Files\Apparo3300\FastEdit\user_scripts
Oracle Client path to tnsnames.ora	\$ORACLE_HOME/network/admin
Java Keystore path and name	C:\Program Files\Apparo3300\FastEdit\OpenJDK\lib\security\cacerts
Java Keystore password	***

It is important that the Windows system user or the user that is running the Windows Service of Apparo Fast Edit has write and read access to these file directories.

Hint: If you use many application servers then all application server must use the same file directory.

Therefore it's possible to use Windows shares, e.g. [\\server1\scripts](#)

If using shares it's necessary that the Windows service of Apparo Fast Edit must not use a local system account.

Using a Windows Administrator account is for example a solution.

4.3.1 File path to batch/executable files

It is possible to call executable files, scripts, batch files, javascript files etc. in a Business Case. The Apparo system wide file directory is defined here. Every Business Case of every client can access this file directory.

Each client has an own user_scripts file directory that is accessible for Business Cases of this client **only**. You can find this file directory in the file directory of the client in the clients file directory.

4.3.2 File path to client definitions

Client depending CSS files and icons are stored in the clients file directory. In a cluster environment all Apparo instances must be able to access this file directory.

4.3.3 File path to custom java classes

It is possible to call Java classes in a Business Case. The Apparo system wide file directory is defined here. Every Business Case of every client can access this file directory.

4.3.4 Oracle Client path to tnsnames.ora

If you want to use an Oracle Client that is installed server-side then you must define the path to the used tnsnames.ora file.

4.3.5 Java Keystore path and name

If you want to use TLS/SSL connections to other servers like application servers, databases or LDAP/Active Directory servers and the certificate is not public available then you must add your certificates into the Java machine that is used for Apparo.

The certificates are stored in [JAVA_HOME]\lib\security\cacerts

You can import your certificate with following command.

In this example Apparo is installed in "C:\Program Files\Apparo", the certificate file has the name "C:\myCertificate.crt" and the default password of the key store is "changeit".

```
"C:\Program Files\Apparo\FastEdit\OpenJDK\bin\keytool" -importcert -file C:\myCertificate.crt -alias my.company.com -keystore " C:\Program Files\Apparo\FastEdit\OpenJDK\lib\security\cacerts" -storepass changeit
```

After that you must restart the Apparo Configuration Manager again.

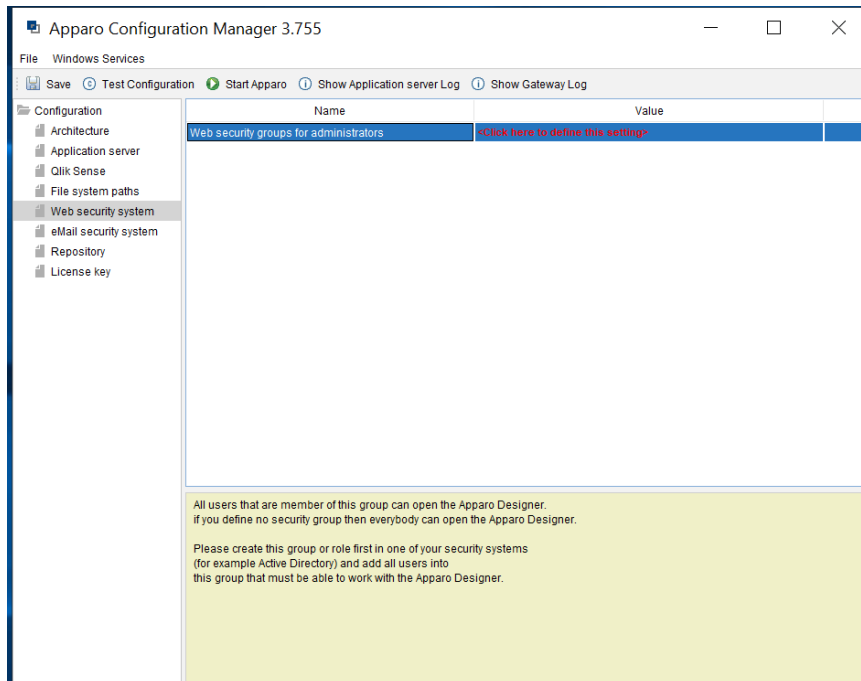
4.3.6 Java Keystore password

The Java key store is secured with a password. Default password is "changeit".

4.4 Web security system

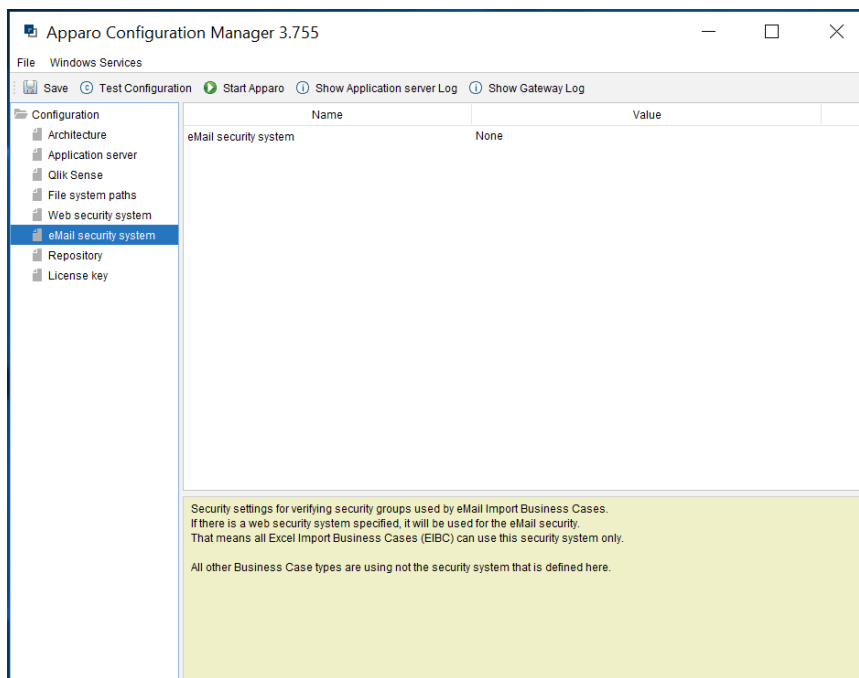
In this chapter you can define the **security group** of all users that is necessary to be able to open the Apparo Designer **with full access**.

If there is no security group defined then all users can open the Apparo Designer with full access.



4.5 eMail security system

The Excel Import Business Case is running outside of the Qlik Sense security and need therefore an own security system.

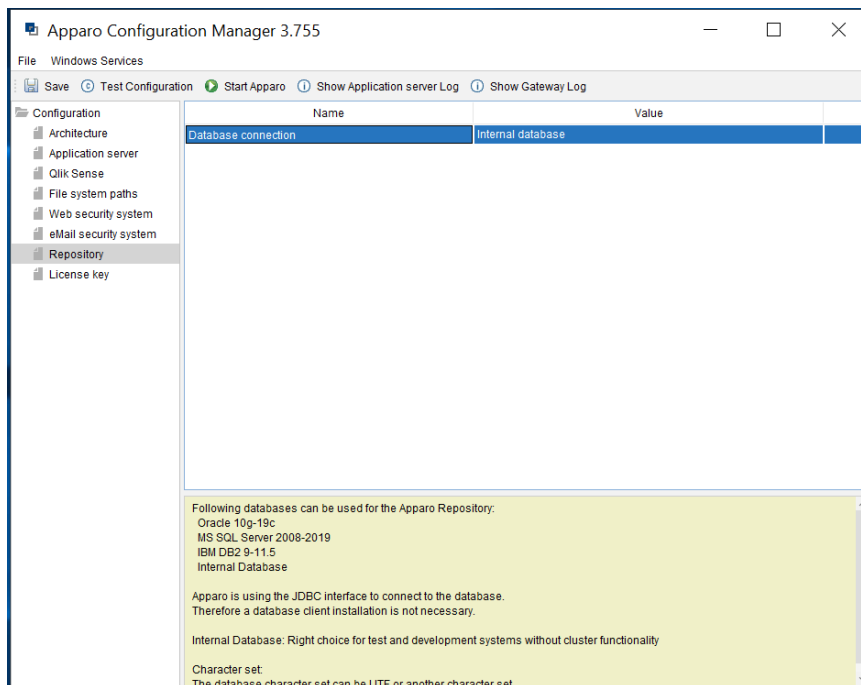


4.6 Apparo Database Repository

The database connection to the Apparo repository.
The repository are many database tables in that all definitions are stored.

For **testing** you can use the “**internal database**” too.

This database is slower than a normal database like Oracle, MS SQL Server or IBM DB2 but you don’t need an installation.

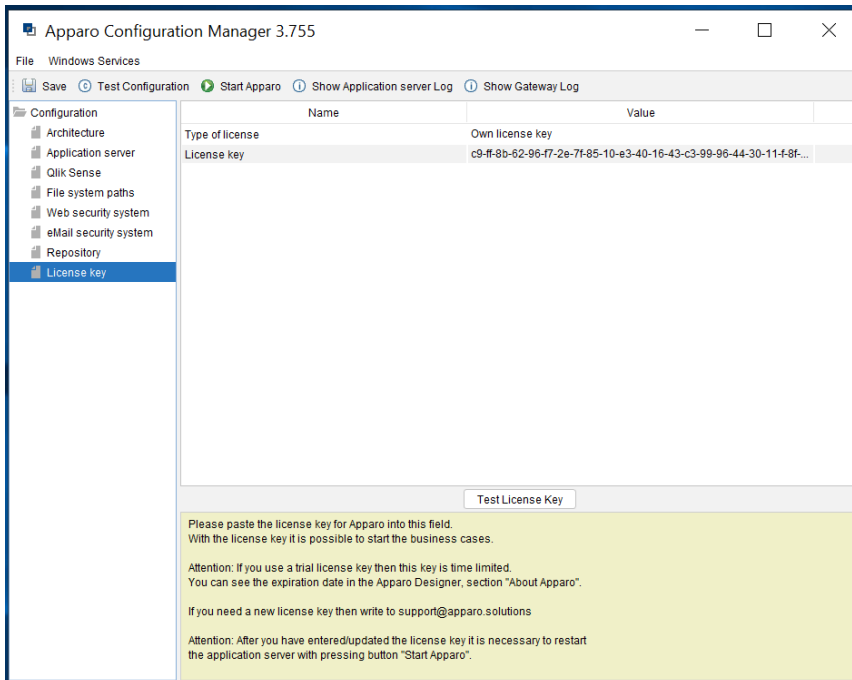


4.7 License key

In this section you can add & change the license key. This key is necessary to run Apparo Fast Edit.

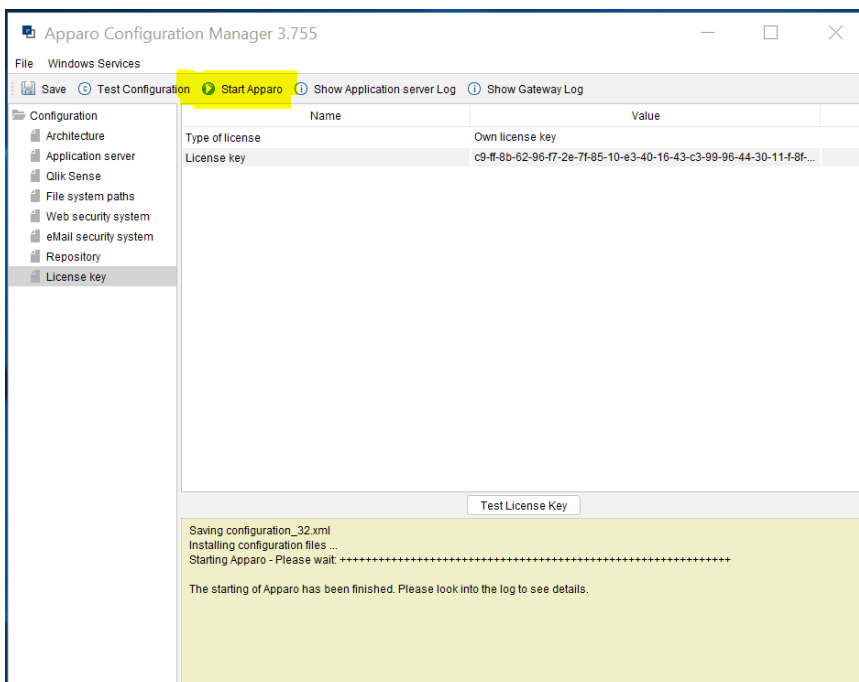
You can choose the “APPARO SMALL LICENSE” too.

This license is **for up to 3 named users and 10 Business Cases. It is not limited in time.**



4.8 Starting Apparo

After you have entered all setting values it is time to start Apparo with pressing “Start Apparo” button:



4.9 Testing your installation

Often there are **firewalls** that are blocking the communication between client web browser and server.

Therefore, following tests are helpful:

4.9.1 Test if the Apparo Gateway is running

Open a web browser **inside the server** and enter following URL:

If using TLS/SSL: <https://localhost:6901>

If using http only: <http://localhost:6900>

You must get a response like



Your connection is not private

Attackers might be trying to steal your information from **localhost** (for example, passwords, messages, or credit cards). [Learn more](#)

NET:ERR_CERT_COMMON_NAME_INVALID

🔒 To get Chrome's highest level of security, [turn on enhanced protection](#)

Advanced

Back to safety

Or a page with

Test Page for Apache Installation

Apache/2.4 OpenSSL

.... Then the Apparo Gateway is running fine.

If you get no response then the Apparo Gateway has troubles.

4.9.2 Test if the Apparo Gateway is accessible outside of the server

Open a web browser in a **client** computer and enter following URL.

Take the domain name of your Qlik Sense environment and put it into this URL.

If you have installed Apparo completely on a different server then take this external name:

It must be the name of this setting:

	Name	Value
Configuration		
Architecture	Host name	qliksense-demo.apparo.biz
Application server	Tomcat start port	18000
Qlik Sense	Tomcat connector port	9800
File system paths	Apparo gateway HTTP port	6900
Web security system	Apparo gateway HTTPS port	6901
eMail security system	Apparo gateway SSL certificate file	C:\Program Files\Apparo\East\Edit\em\certificate\ApparoServer.crt

If using TLS/SSL: <https://SERVERNAME:6901>

If using http only: <http://SERVERNAME:6900>

You must get a response like



Your connection is not private

Attackers might be trying to steal your information from **localhost** (for example, passwords, messages, or credit cards). [Learn more](#)

NET:ERR_CERT_COMMON_NAME_INVALID

To get Chrome's highest level of security, [turn on enhanced protection](#)

Advanced

Back to safety

Or a page with

Test Page for Apache Installation

Apache/2.4 OpenSSL

.... Then the Apparo Gateway is running fine.

If you get no response then you have a firewall that is blocking ports 6900 and 6901 and it is necessary to open that first.

5 Qlik Sense is using https?

If your Qlik Sense environment is running with **https** then Apparo is called **automatically** using https too. In this case the Apparo Gateway need an **SSL certificate** too – same like the Qlik Sense proxy.

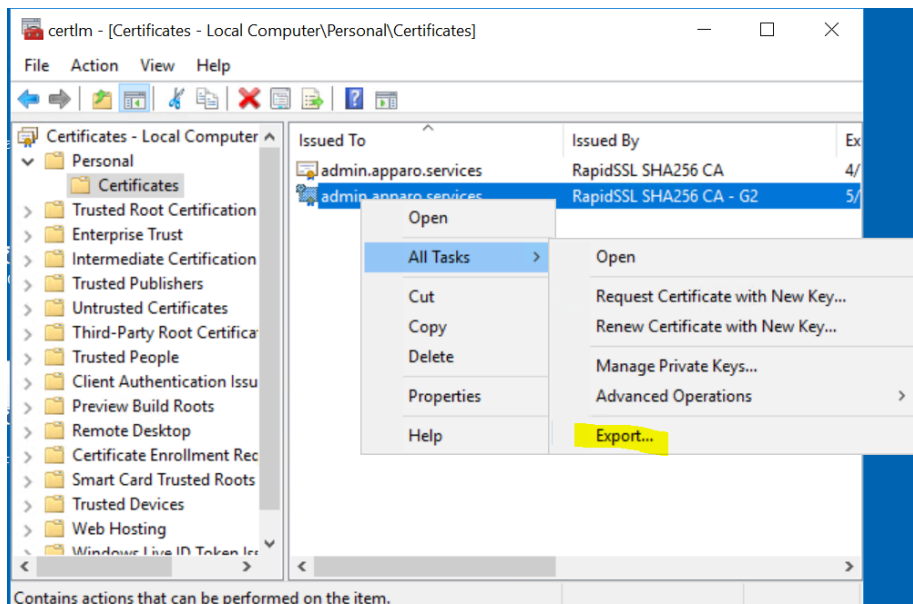
5.1 Importing certificate of Qlik Sense

If your Qlik Sense environment is using a certificate for using https then Apparo must use this certificate too. It must be imported into Apparo Configuration Manager.

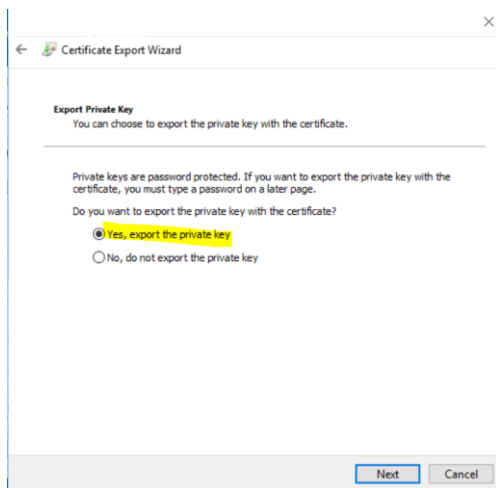
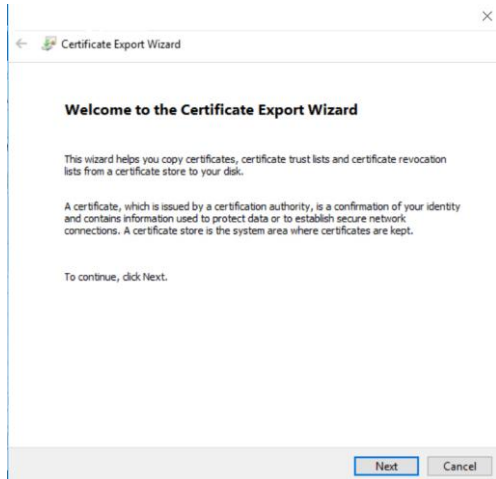
5.1.1 Export of the Qlik Sense certificate from the certificate store



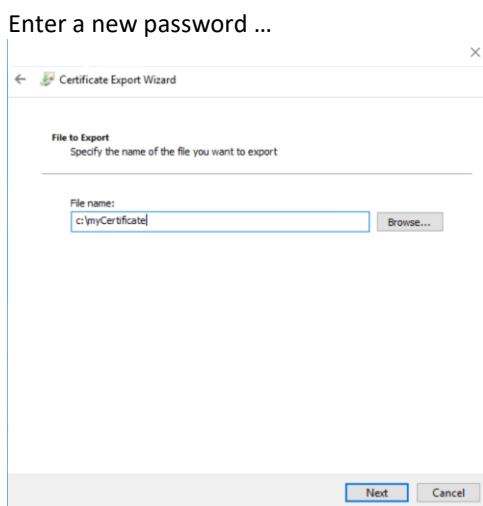
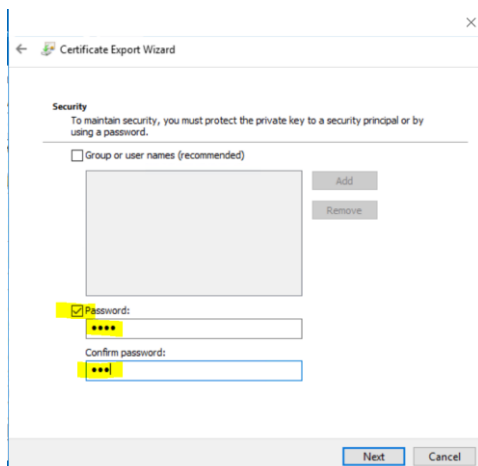
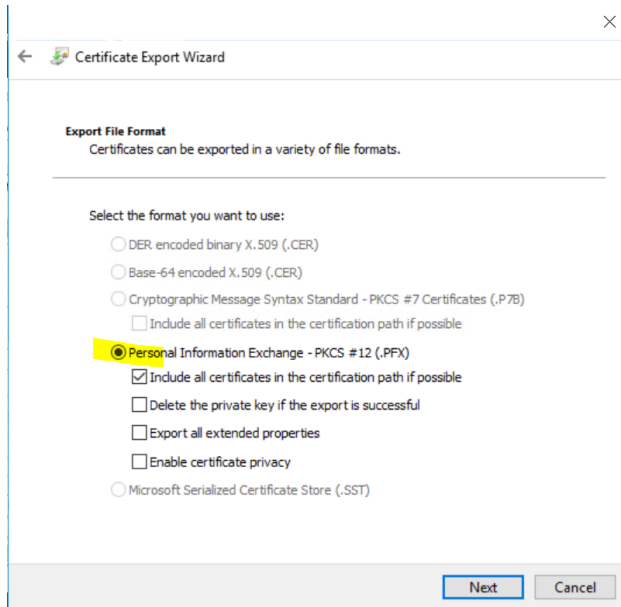
Search for “computer cert” and select “**Manage computer certification**”.



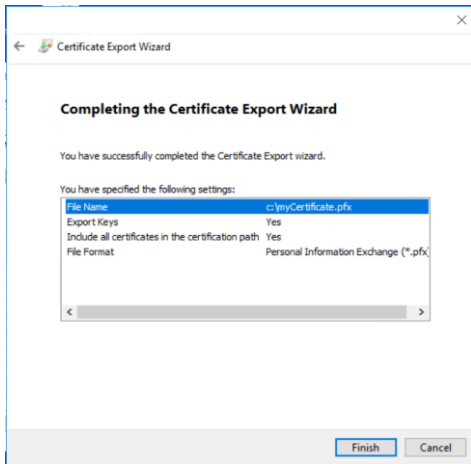
Search for your certificate, press right mouse button and select "Export".



Export the key with the private key...

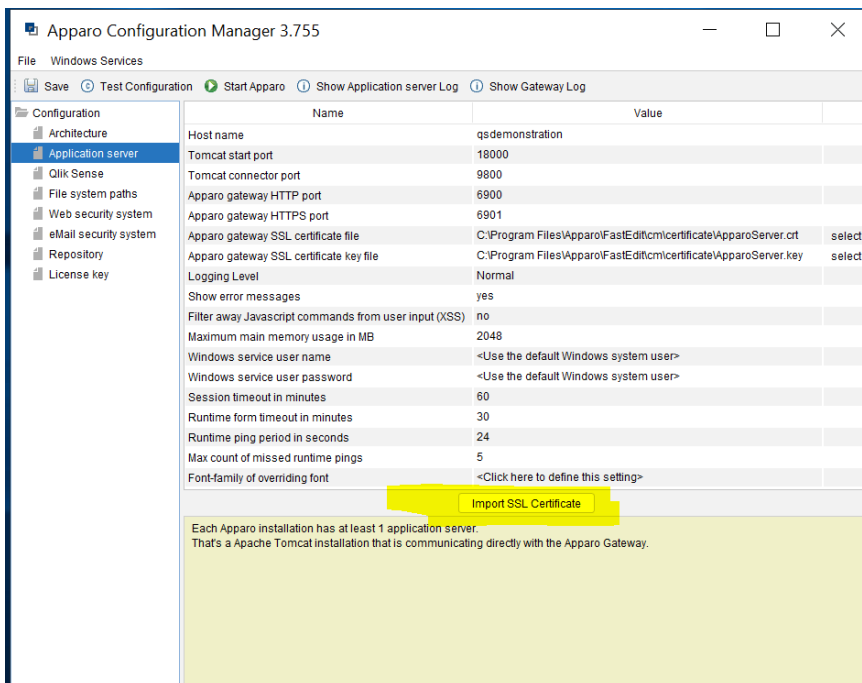


.. and store it.

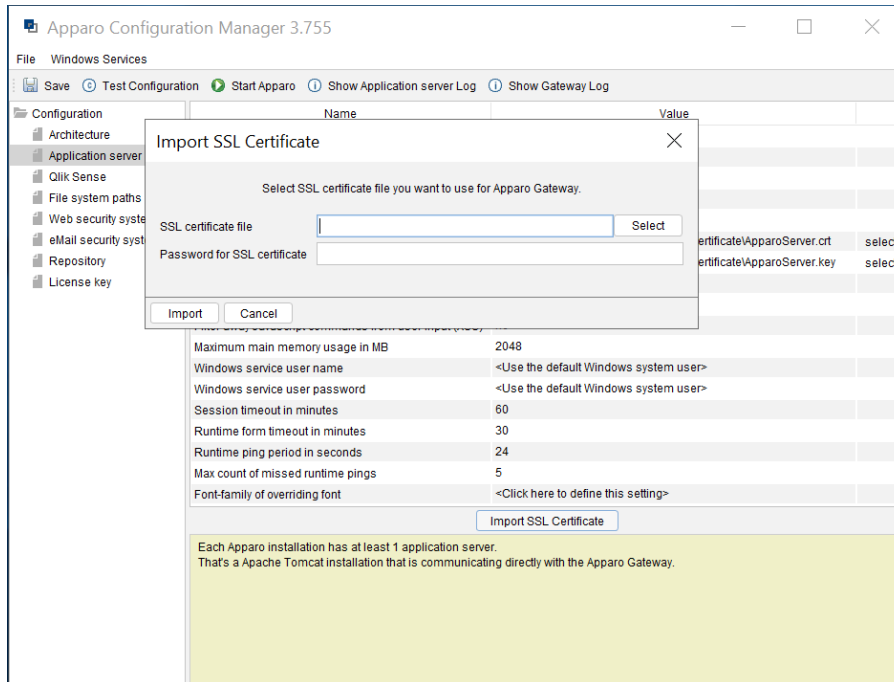


5.1.2 Import the certificate into Apparo

In the Apparo Configuration Manager select chapter “Application Server”...



... and press button “Import SSL Certificate”.



Select your certificate file, enter the password and press button “Import”.

After that please press the “Start Apparo” button for restarting Apparo.

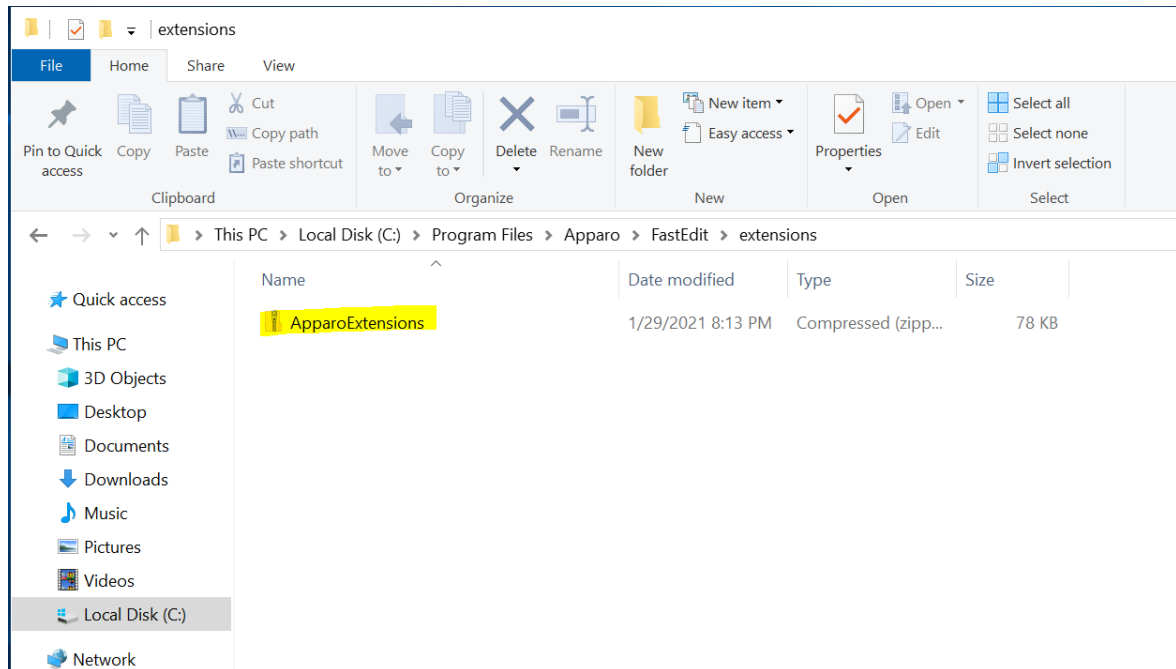
6 Adding Qlik Sense Extensions

Apparo Fast Edit is using Qlik Sense Extensions.

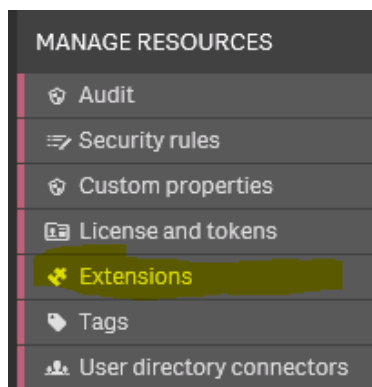
Therefore, they must be first installed into your existing Qlik Sense system after you hv installed Apparo.

Open your Windows Explorer in [APPARO_HOME]\FastEdit\extensions

You can see:




Please open now the Qlik Sense Management Console and select “Extensions”:





Please import now the file ApparoExtensions.zip


After that please open Qlik Sense Hub and create a new App.


Now you can see some new Apparo widgets:


-  Apparo BC

-  Apparo Button BC

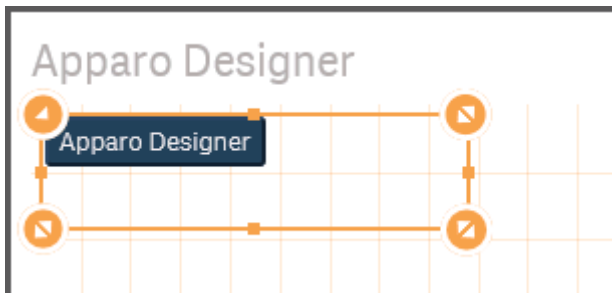
-  Apparo Check

-  Apparo Comment

-  Apparo Designer Button

-  Apparo Table

Drag & Drop the new widget “Apparo Designer” into your sheet and press the button.



You should see:

Apparo Fast Edit Client management and settings Administrator

The table below lists all existing clients of this environment. A client is a separated world with own connections, Business Cases, languages and security.

[+ New](#) [Import](#) [Export](#)

Installed clients					
<input type="checkbox"/>	Client ID	Client name	Associated security groups	Order	Actions
<i>No client is currently installed. Please create one client first</i>					

[Show description](#)

7 Installation Apparo clients

1	<p>Preparation</p> <ul style="list-style-type: none"> • Analysing environment • Creation of a database user for the Apparo repository
2	<p>Installation of Apparo Fast Edit</p>
3	<p>Configuration of Apparo Fast Edit Configuration using the Apparo Configuration Manager</p>
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Now it is necessary to install the clients.

The table below lists all existing clients of this environment. A client is a separated world with own connections, Business Cases, languages and security.

[+ New](#) [Import](#) [Export](#)

Client ID	Client name	Associated security groups	Order	Actions
<i>No client is currently installed. Please create one client first</i>				

[Show description](#)

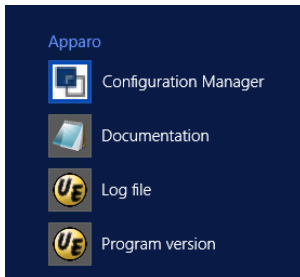
Please read now the document “**Configuration Guide**” for defining/importing clients.

The installation & configuration on server side is now successfully completed.

8 Training movies & documentation

You can find all text documentations in

Windows Start (left corner) / All Programs / Apparo / Documentation



You can find all training movies in the Apparo Designer, choosing chapter “Training”:

Apparo Fast Edit Training Administrator

Training

Here you will find tutorial videos, the client to practice, as well as other helpful documents and links.

[Download: Apparo Tutorials Client Definition](#)

- Contains the client including online database access for practicing and following the tutorial videos
- Download, unzip and import the client file in Apparo Designer, menu client

[Video 0200: Basics for Qlik Sense](#)

- Calling the Apparo Designer
- Adding the first client
- Creating database connections
- Creating list views and masks
- Filtering data

[Video 0060: Embedding Business Cases](#)

- Embedding Business Cases
- Filtering BCs with Qlik Sense

[Video 0061: Embedded Master Detail Apps](#)

- Loading detail window with hyperlink
- Refreshing Master with triggered script file

Show description

General documentation about Apparo Fast Edit:

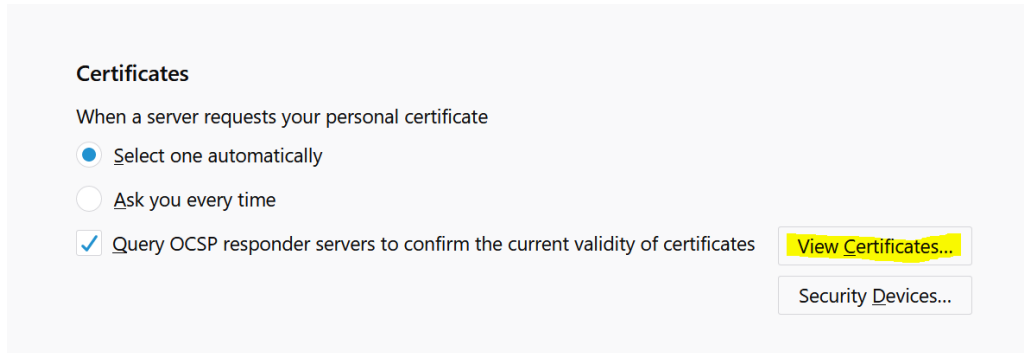
<http://doc.apparo.solutions>

9 Firefox browser, HTTPS and self signed certificates

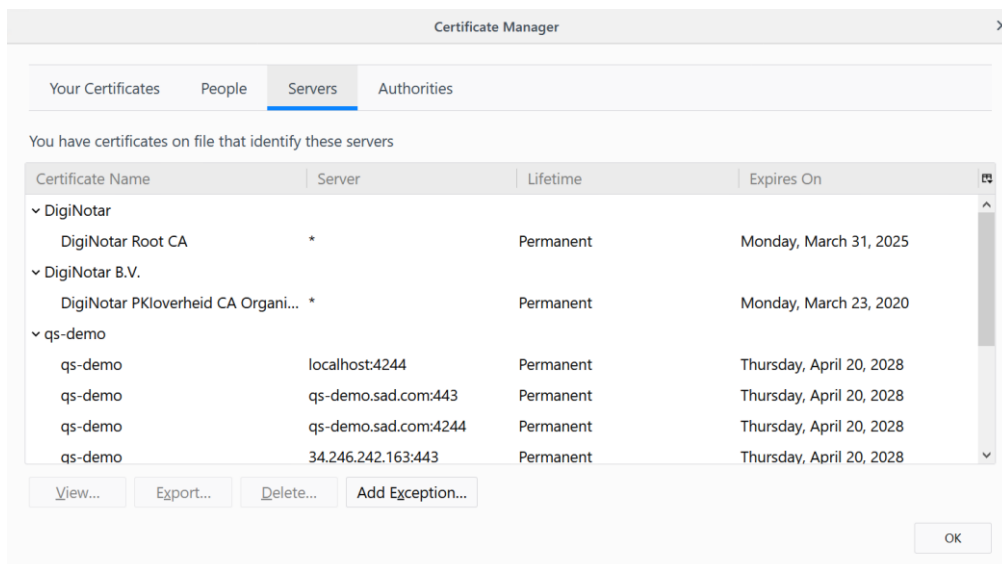
If you use a **self-signed certificate** then Firefox is complaining about that and need an exception.

Please use the domain that is used for calling Qlik Sense and use the http-port for Apparo. Default is 6901.

Open the Firefox options and look for:

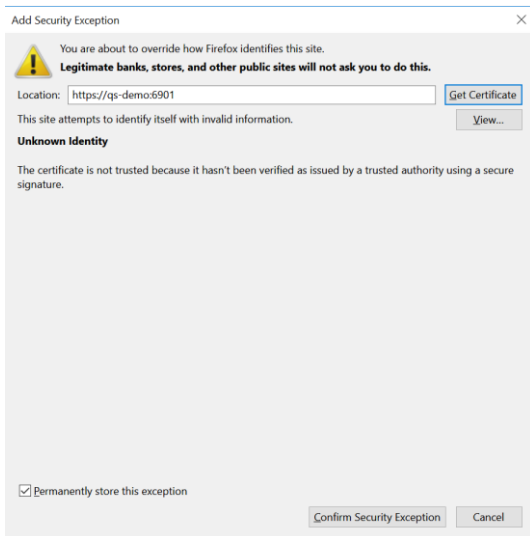
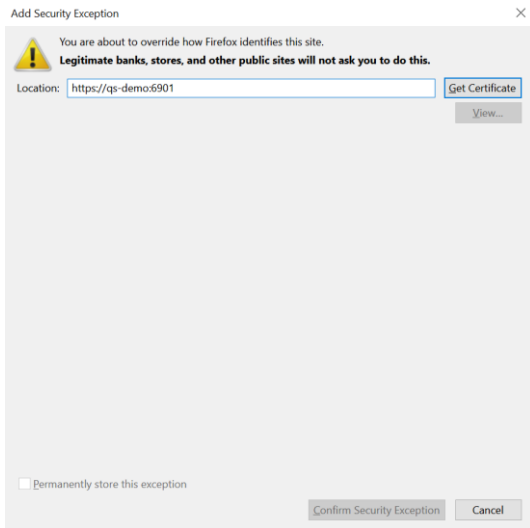


Press the “View Certificates...” button.



Now press button “Add Exception...”:

Enter **https://<domain>:6901** and press the “Get Certificate” button.



Press "Confirm Security Exception".

10 Browser requirements

10.1 Supported browsers

- Microsoft Edge (current version)
- Mozilla Firefox (current version)
- Google Chrome (current version)
- Apple Safari (current version)

11 Import/Export definitions using command line

You can export and import clients (including languages, folder, Business Cases, connections, DB-messages), Business Cases, folder and connections using scripts.

11.1 Exporting definitions

The export program is stored in the file directory “export”: [APPARO_HOME]\FastEdit\export

Use script **afe-export.bat**

If you start the script without arguments then you can see the possible arguments:

-afeUrl <URL>	The Apparo Fast Edit URL address that will export the data. Example: http://localhost:18000/KFE. If you don't use this argument then the export is using the application server of this installation and its installation port.
-bcid <BUSINESS_CASE_ID>	ID of a Business Case (or a list) you want to export.
-clientId <CLIENT_ID>	ID of a client you either want to export or an ID of a client the target object (Business Case, folder or connection) belongs to.
-dbc <CONN_NAME>	Name of a database connection you want to export.
-emailc <CONN_NAME>	Name of an email connection you want to export.
-f <FILEPATH>	Filename & path where to write the exported XML.
-folderPath <PATH>	Path of a folder you want to export. It should start with a slash character '/' which should also be used as a path separator.
-h	Displays this help text
-k <password>	This password is defined in Apparo Configuration Manager and is used for command line import and export only.

All export activities are logged server side in file directory logs, file afeexport.log

Sample: **afe-export.bat -f \etc\definition.xml -clientId DemoClient -k mypassw**

12 Support

If you need support please write an eMail to:

support@apparo.solutions