Installation Guide

Apparo Fast Edit

Multi Instance

3.3.0.0

Windows / Stand-alone version

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1 Prior to Installation

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

Please be aware of the following points before starting installation:

Hardware requirements

- File system about 1000 MB
- Main Memory about 2000 MB

Supported operating systems

- Windows Server 2008-2022

Windows Domains and Single Sign On (SSO)

If Apparo must run with **single sign on**:

The web server of the Apparo Gateway and Apparo Application Server must be running in the same Windows domain. All Apparo users must be included in the Active Directory of this domain.

Supported web servers

- MS Internet Information Server (IIS)
- Apache web server 2.4 **(64 bit only, included in setup too for MS Windows)**
- IBM Webserver (IHS)

Supported security systems

- LDAP
- MS Active Directory / Kerberos

Supported virtual environments

- VMware ESX/ESXi
- VMware Player

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

1.1 Installation strategy

Following steps are necessary in this order:

1	**Database preparation for Apparo repository** Defining a security group „Apparo Designers“
2	**Installation and configuration of all Apparo application servers**
3	**Installation and configuration of Apparo Gateway**

1.2 Architecture

Possible Apparo Fast Edit architectures:

1	**Single Instance**, your existing environment is installed on **one computer only – that's suitable for testing too.** A „**Single Instance**" is useful for small environments or test systems.
2	**Multi Instance**, one or more Apparo gateways and one or more Apparo application servers are installed on one or more hosts. A „**Multi Instance**" is useful for better performance and high availability.

This document is describing the installation and configuration process for a Multi Instance.

2 Preparation

1	**Preparation** • Analysing environment • Creation of a **database user** for the Apparo repository • Defining the **security group** for all users that must be able to open the Apparo environment with full access
2	**Installation of all Apparo application servers**
3	**Configuration of all Apparo application servers** Configuration using the Apparo Configuration Manager
4	**Installation of the Apparo Gateway**
5	**Configuration Apparo Gateway** Configuration the web server (if not installed) and the Apparo Gateway using the Apparo Configuration Manager
6	**Installing client and languages** Installing a new client and languages in Apparo Designer

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 10g-latest**
- **IBM DB2 9-latest**
- **MS SQL Server 2008-2019**

The "internal database" is not ready for clustering – therefore don't use this database type.

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

You can find a detailed description in the document "Installation – creating database repository".

Essential grants:

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

Hints:

- **Oracle:** DB-User should have CONNECT, RESOURCE and UNLIMITED TABLESPACE grants. User **SYS** is not allowed.

- **IBM DB/2:** see document "Installation - creating database repository"

2.2 Defining the security group for all Apparo Administrator users

In order to have **full access** to the Apparo environment the user must be a member of a security group.

- Define a new group called **Apparo Designers** in the used security system,
  for example MS Active Directory

- Add for example the Windows user **Administrator** into this group. Later this user is able to open the Apparo environment with full access only

3 Installation of all Apparo application servers

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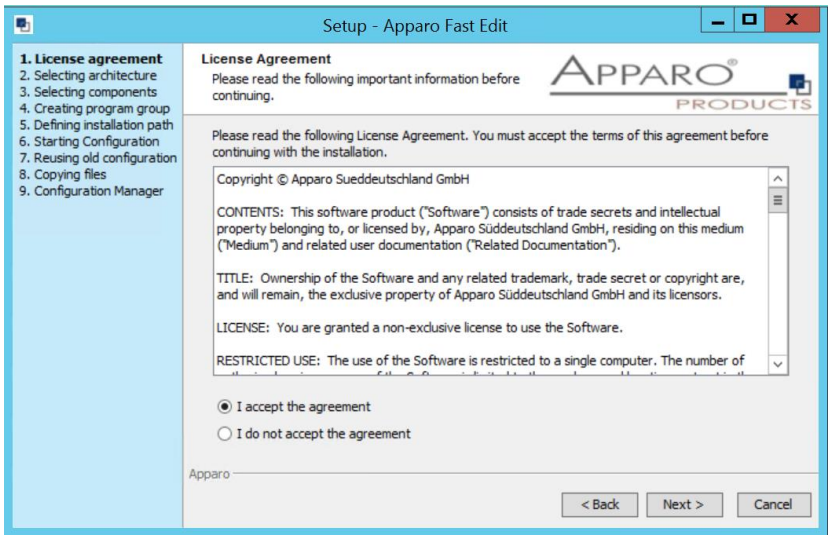
4	**Installation of the Apparo Gateway**
5	**Configuration of the Apparo Gateway** Configuration the web server (if not in installation included) and the Apparo Gateway using the Apparo Configuration Manager
6	**Installing client and languages** Installing a new client and languages in Apparo Designer

Start the Installation by execute the file

FastEdit3.3.0.0.zzz_winows_tomcat_standalone.exe

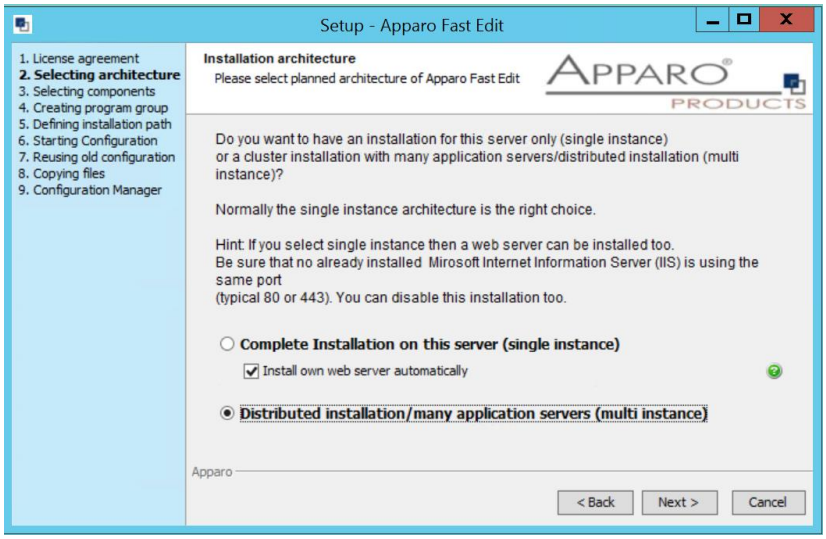
Confirm the beginning of the installation by clicking „**Next**“.

3.1 License agreement



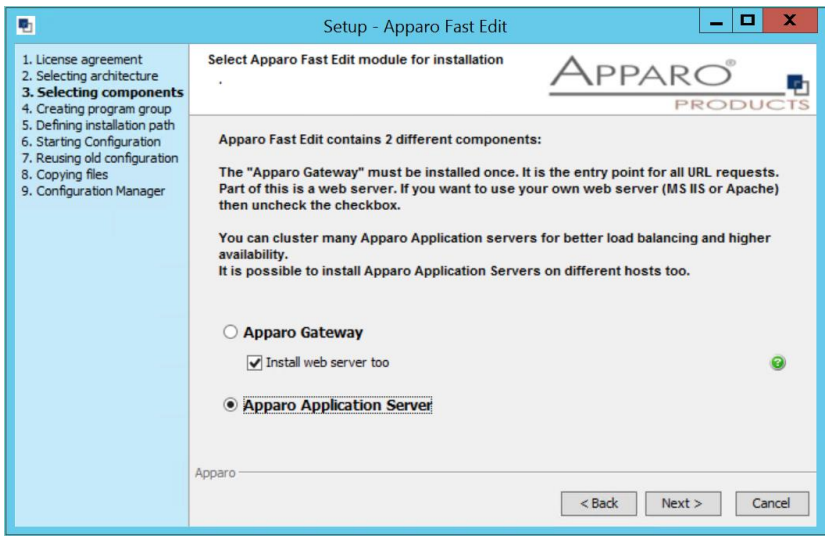
Read and confirm the license agreement by clicking „**Next**“.

3.2 Selecting the architecture



Select "**Distributed Instance**" and choose „**Next**>".

Now it's the time to choose the Apparo application server.

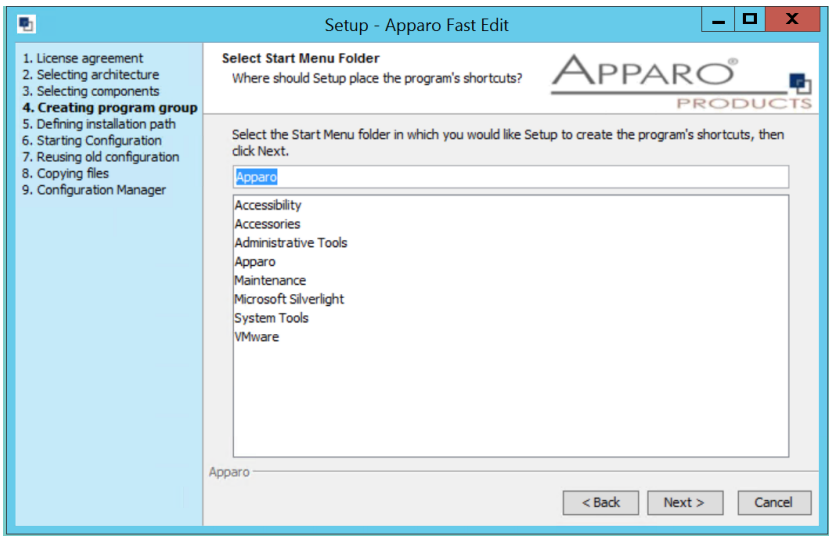


Apparo Gateway
The Gateway is the entry URL point for using Apparo Fast Edit. A web server (Apache 2.4) is automatically installed if checkbox is checked.

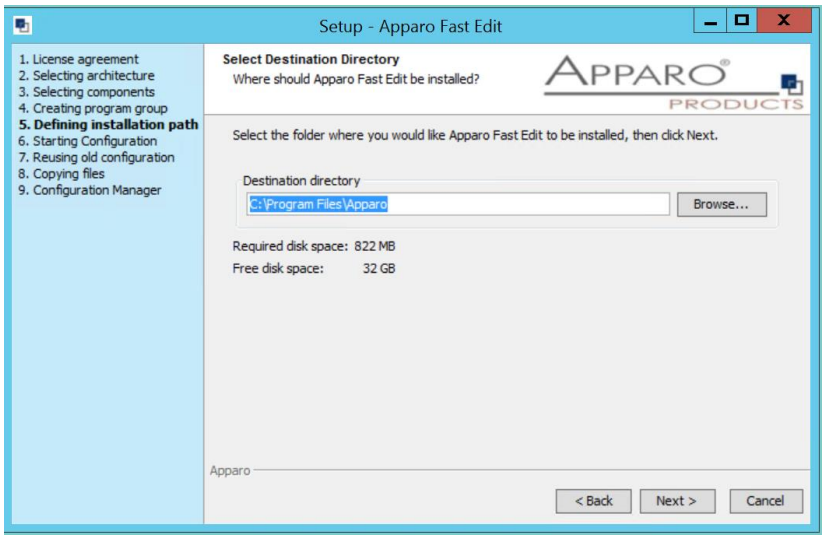
Apparo Application Server
If you want to install the Apparo Application Server

Please select "Apparo Application Server" and choose „Next".

3.3 Defining the target file directory



Choose „Next“.



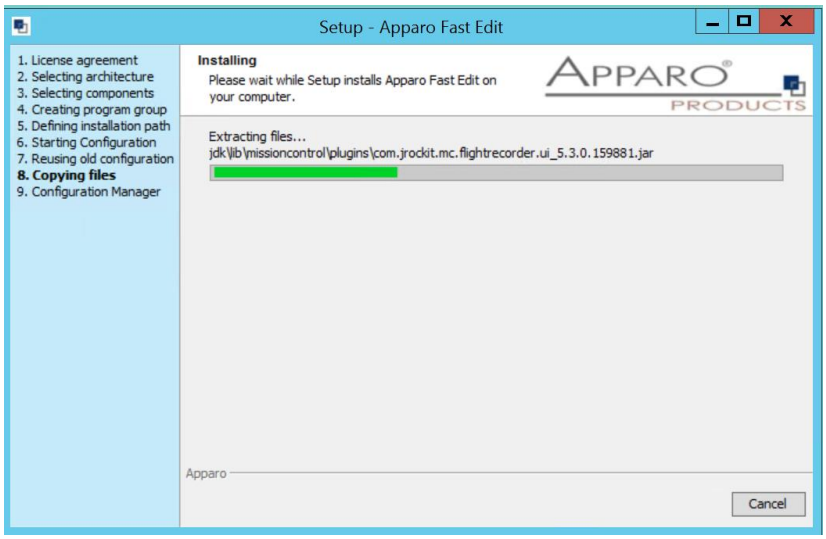
Default path is:

C:\Program Files\Apparo

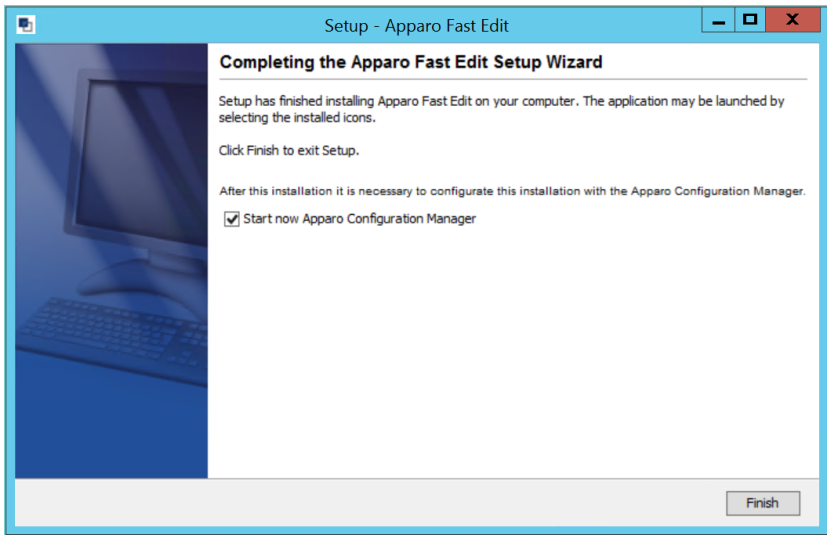
Please define the path and choose „Next“.

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 all Apparo application servers

1	**Preparation** • Analysing environment • Creation of a **database user** for the Apparo repository • Defining the **security group** for all users that must be able to open the Apparo environment with full access
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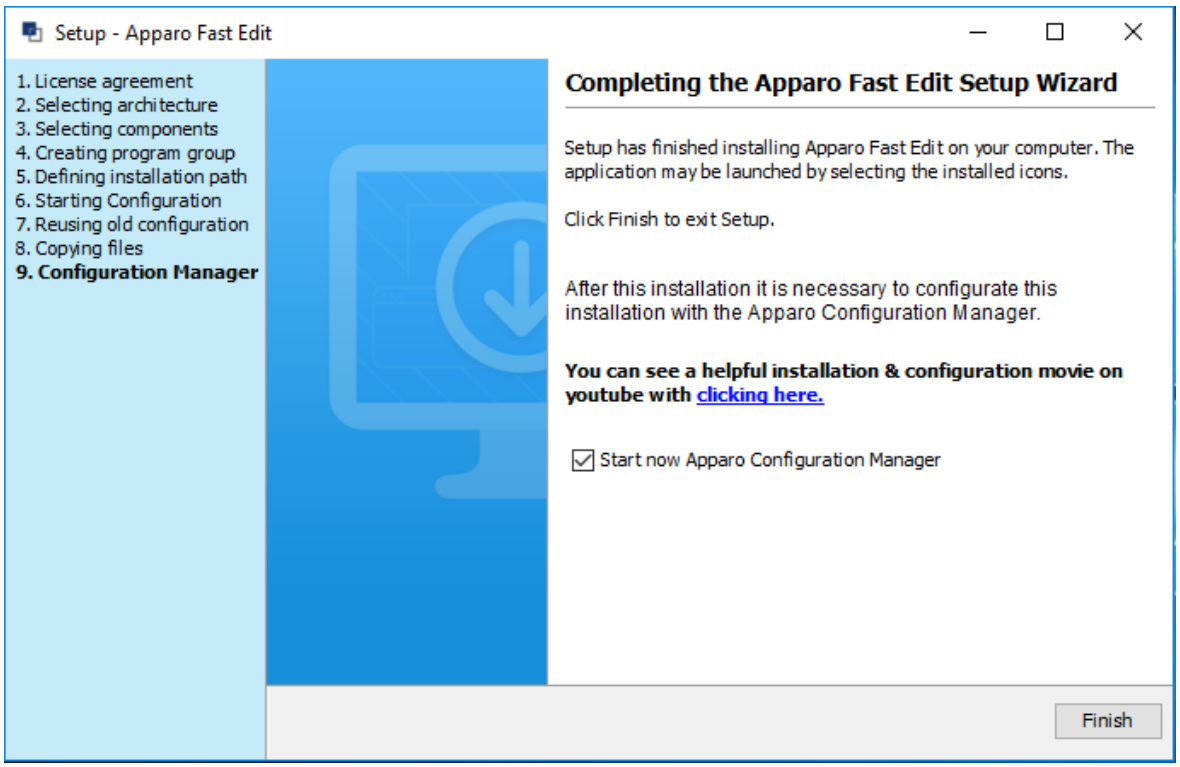
With the **Apparo Configuration Manager** you are able to configure the already installed Apparo Application Server.



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 „Start Apparo“ button for starting the application server**

4	**You can see the log file of the application server with pressing „Show Log“** **If the application server is running then you can see in the log:** **2023-11-07 02:37:41,831 INFO com** **. ++** **+ Apparo Fast Edit 3.3.0.x (Build nnn) was successfully started at 07.11.2023 02:37:41 +** **++**

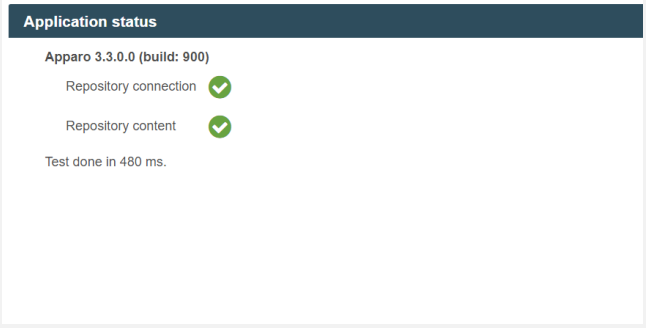
Test of an Apparo application servers without using an Apparo gateway:

http://<applicationserver:<startport>/apparo/pages/apptest.xhtml

Example: http://localhost:18000/apparo/pages/apptest.xhtml

With this URL you can test if the Apparo application server is running fine or has problems.

You should see like this:



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

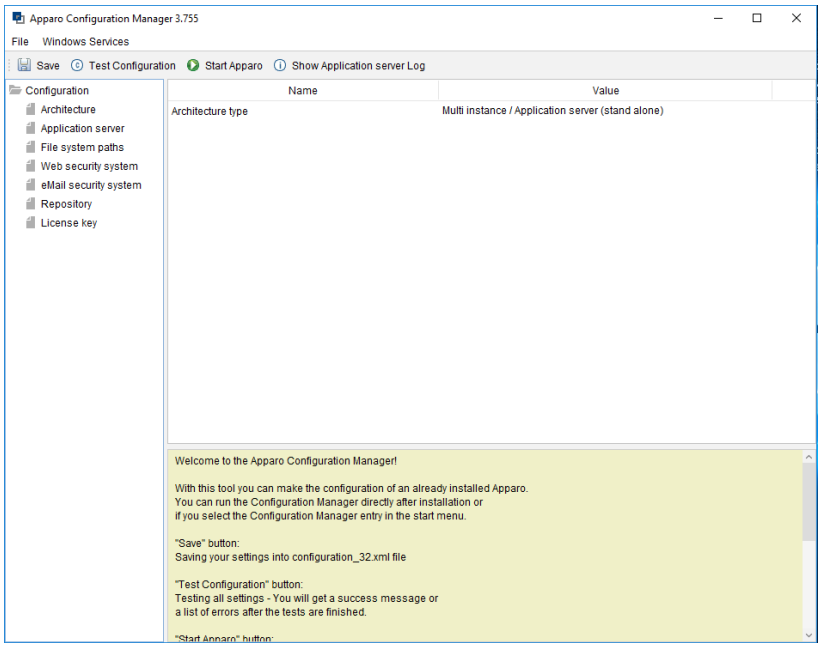
If you plan a parallel/cluster system then it's sometimes comfortable to copy this file into the target system.

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 in a comfortable way.

4.1

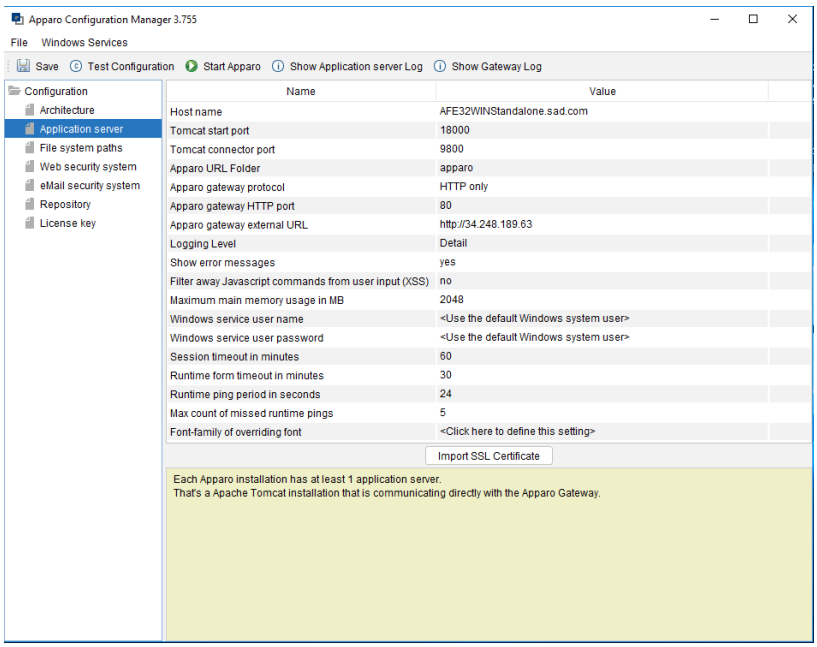
4.2 Architecture

In this section of the Configuration Manager you can find the selected Apparo Fast Edit architecture. This architecture was defined at installation time and is not changeable now.



4.3 Application server

Settings for the application server:

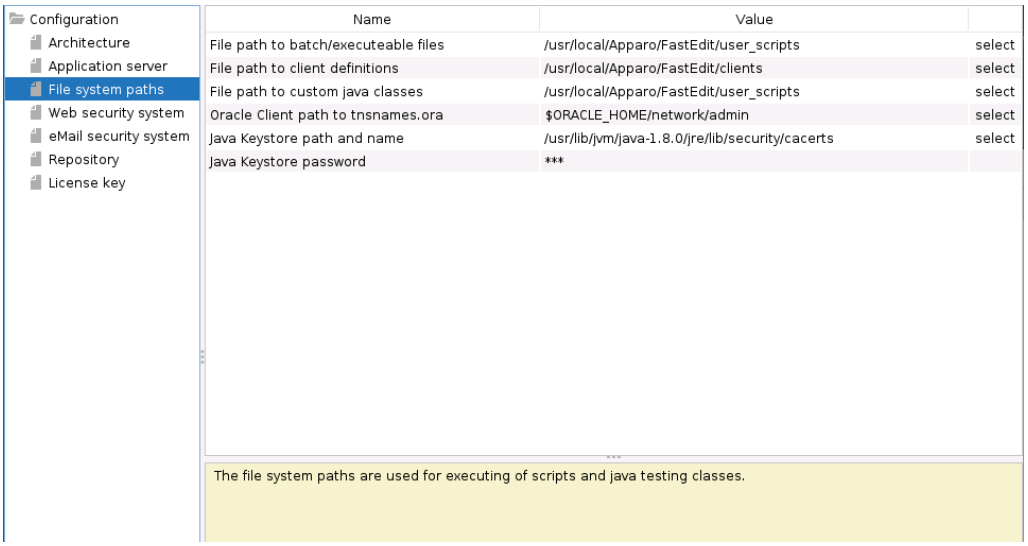


The setting **Server ID** is important in a multi-application environment.
Each application server has an unique ID starting with 1, then 2,3,4…

This Server ID must be used later in the **Apparo Gateway settings too.**

4.4 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.



4.4.1 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.

4.4.2 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.

4.4.3 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.

4.4.4 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.

4.4.5 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
The Java VM is not part the of Apparo installation and therefore you must inform Apparo about the path to this file.

You can import your certificate with following command:

For a Linux environment:

sudo keytool -importcert -file filename.cer -alias randomaliasname -keystore $JAVA_HOME/lib/security/cacerts -storepass changeit

After that you must restart the Apparo Configuration Manager again.

4.4.6 Java Keystore password

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

4.5 Web security system

Following security systems are supported:

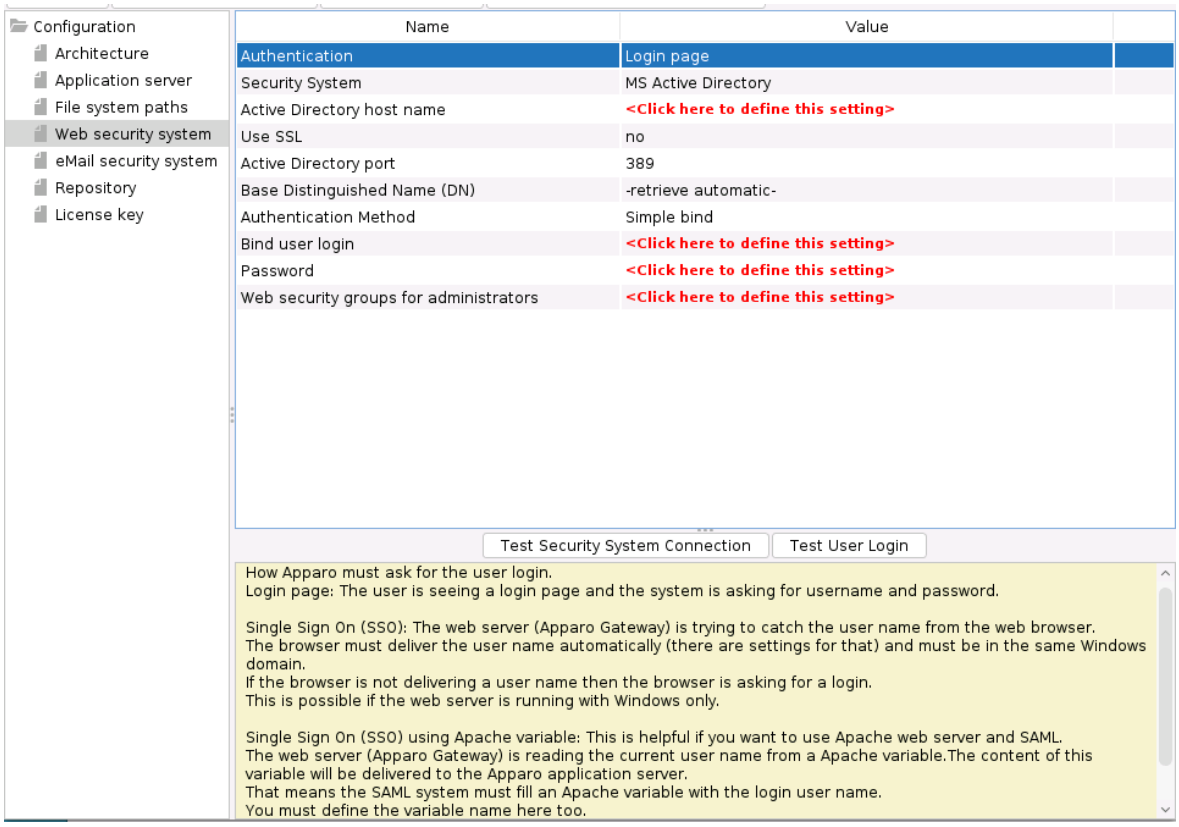
- LDAP
- Active Directory / Kerberos
- No security system

If you want to use Microsoft Azure Active Directory then you must use the version 3.3 of Apparo.

Following authentication ways are possible:

- No logon, no security
- Logon page
- Single Sign On (Apache web server using Apache environment variable for login name, e.g. for SAML)

Bind user login for Active Directory: Please use the domain name too, e.g. APP2/Administrator



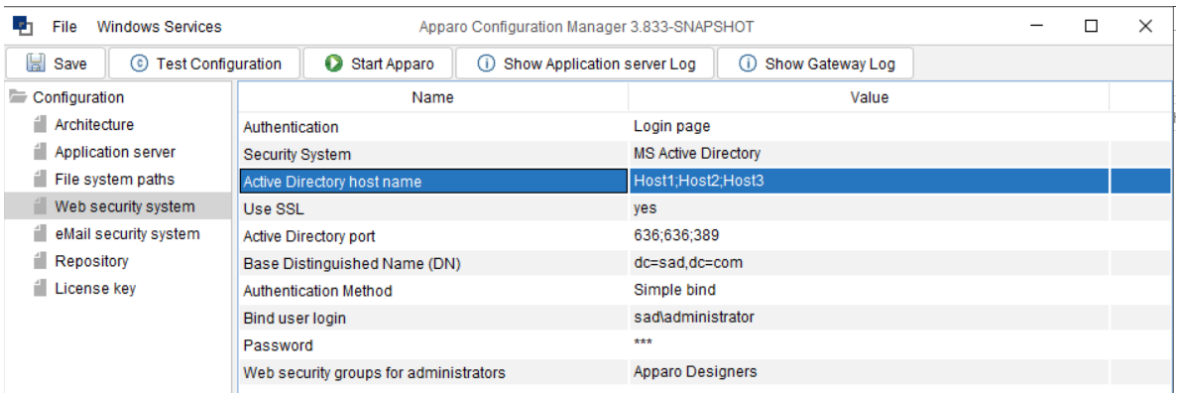
4.5.1 Setting “Web security groups for administrators”:

If a user is member of the security group that is here defined then this user has **full access** and can see and change the content of all clients in the Apparo Designer.

If this setting remains **empty** then everybody has **full access**.

4.5.2 Using multiple LDAP/Active Directory servers parallel

If you use multiple Active Directorys and the simple bind protocol, you can use a list with multiple entries of AD hostnames, AD ports and Base Distinguished Names separated by semicolons (;).



The order is important and the number of values should match, if there are three AD servers, they should be entered like host1;host2;host.

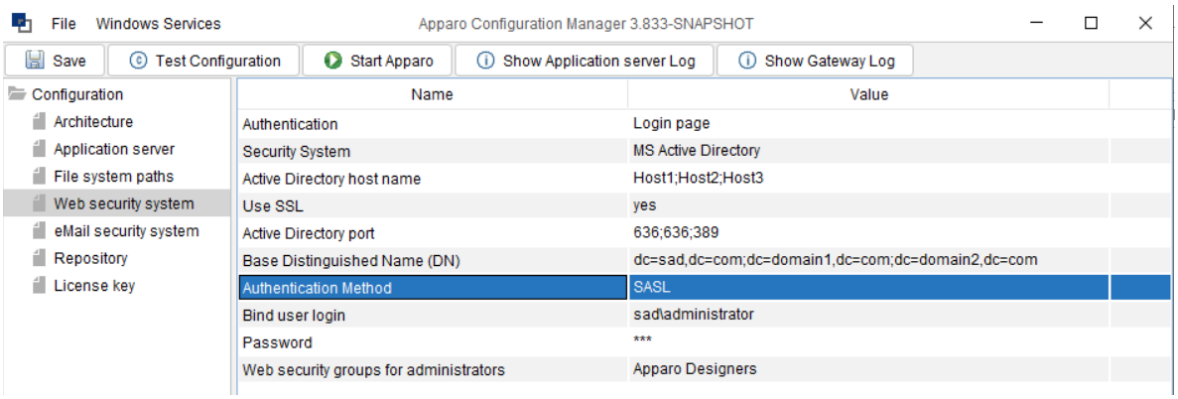
If they all use the same port, it can be entered only once, for example 636.
Otherwise, you need to enter three values like 636;636;389.

This also applies to the Base Distinguished Names, if they are all the same, this only needs to be entered once. Multiple Base Distinguished Names work with SASL/Kerberos only.

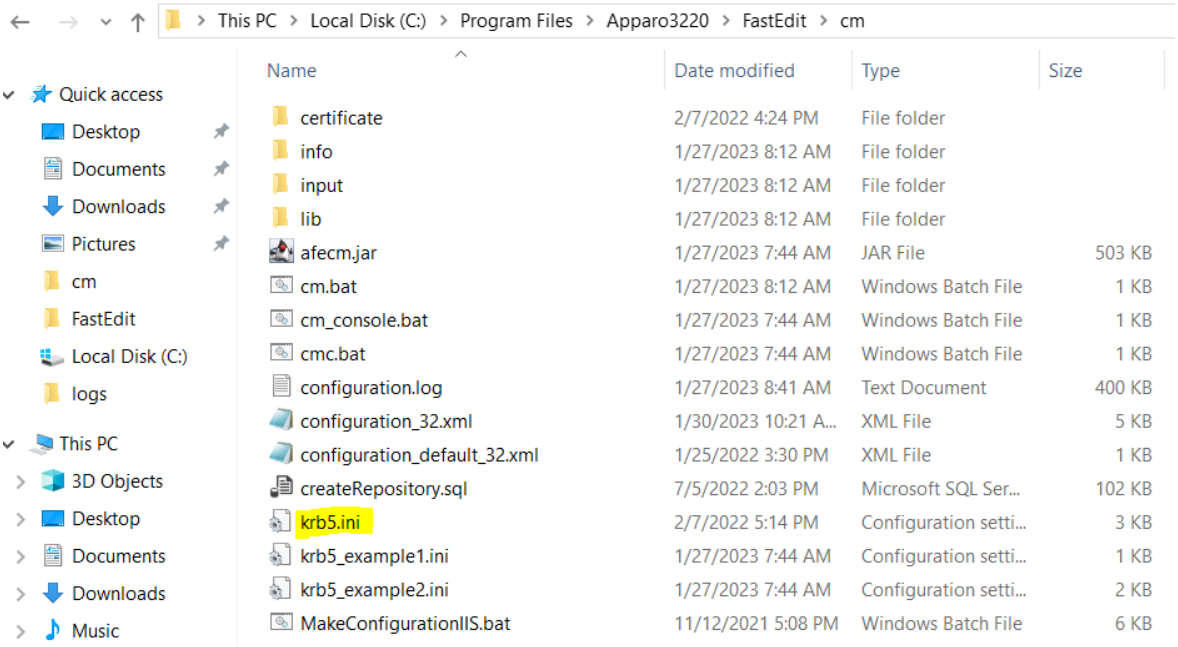
When the user logs in, the first hostname is used along with the first port and the first Base DN,
If the first server is offline or the user is not found there, the system will automatically try to connect to the next AD server.

4.5.3 Using SASL/Kerberos

For using Kerberos, you have to set the Authentication Method to SASL security protocol.

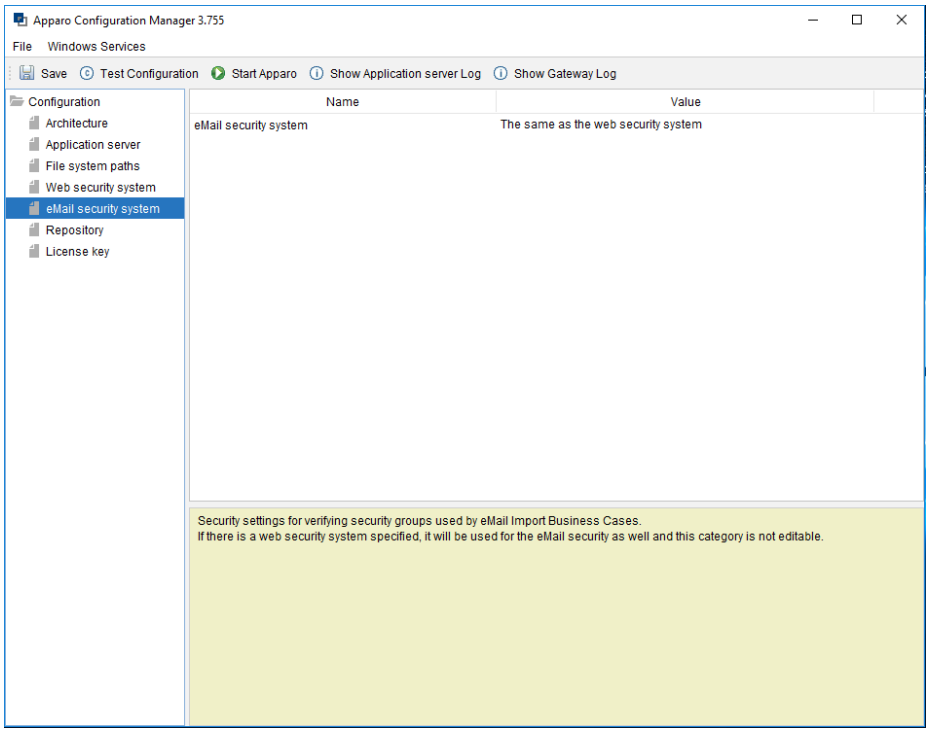


Important!
If you select SASL, you must also edit the krb5.ini text file.
You can find this file in the **cm directory,** including example files.



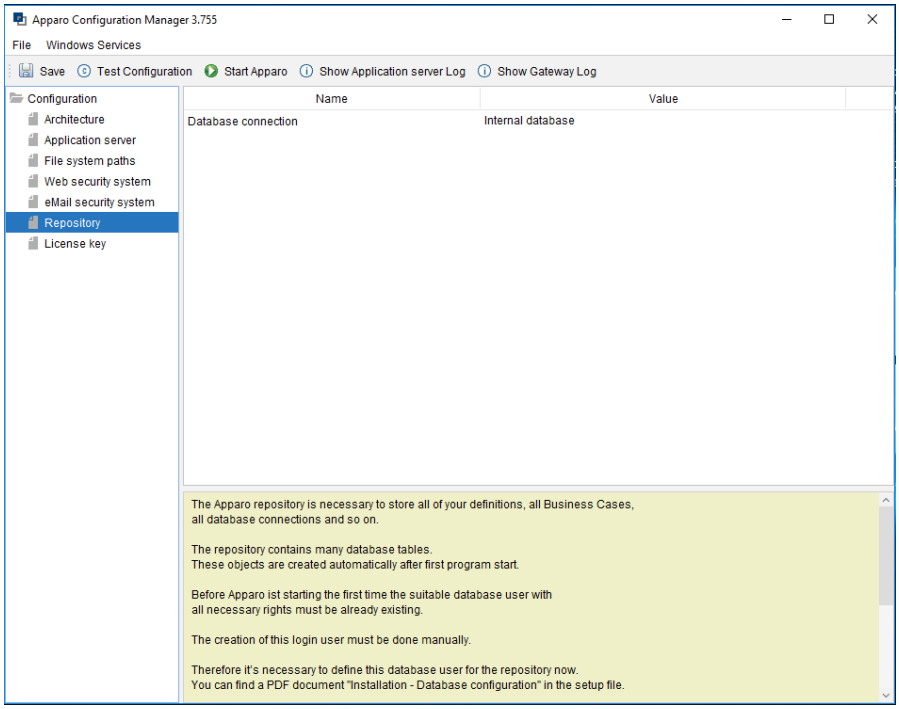
4.6 eMail security system

All Business Cases of type “eMail Excel import Business Case” can import data of Excel sheets that are delivered by eMail.
It is possible to define here the used security system too.



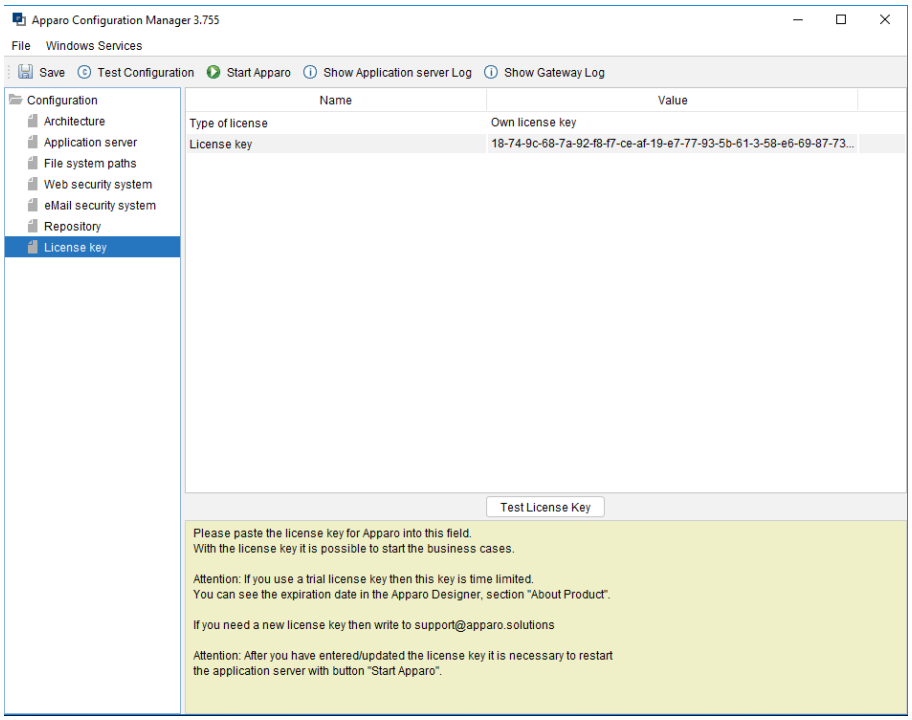
4.7 Repository

The database connection to the Apparo repository:



4.8 License key

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



5 Installation of all Apparo gateways

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2	**Installation of all Apparo application servers**
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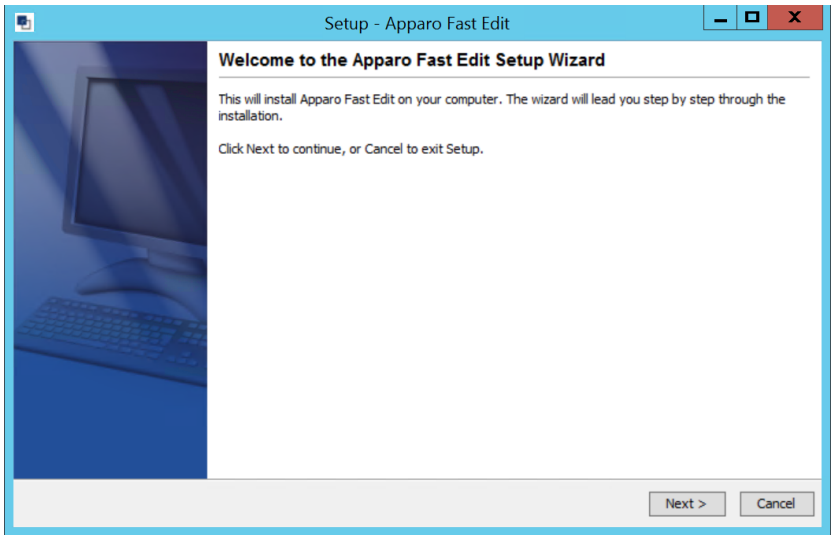
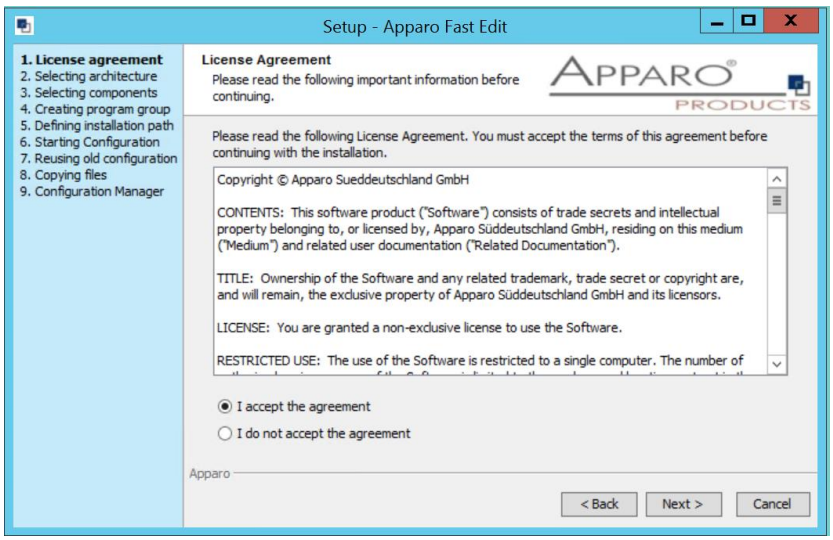
Start the installation by opening the file

FastEdit3.3.0.0.yyy_windows_tomcat_standalone.exe



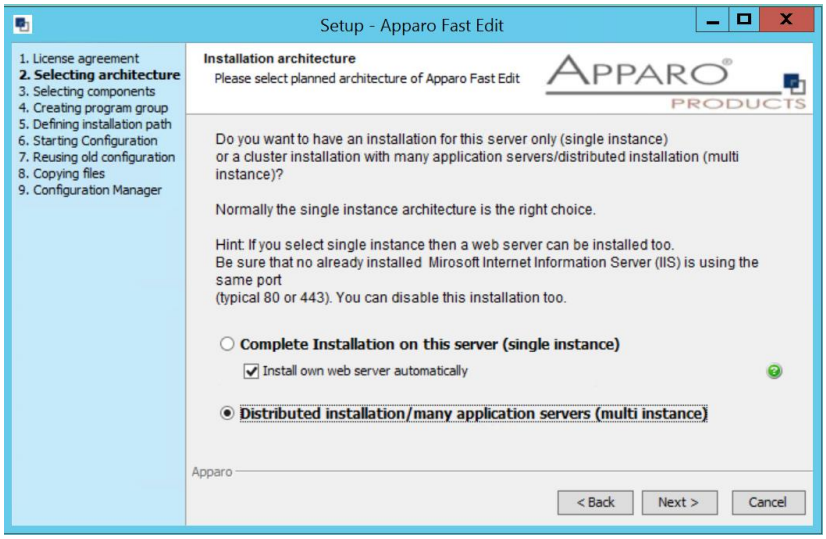
Confirm the beginning of the installation by clicking „**Next**“.

5.1 License agreement



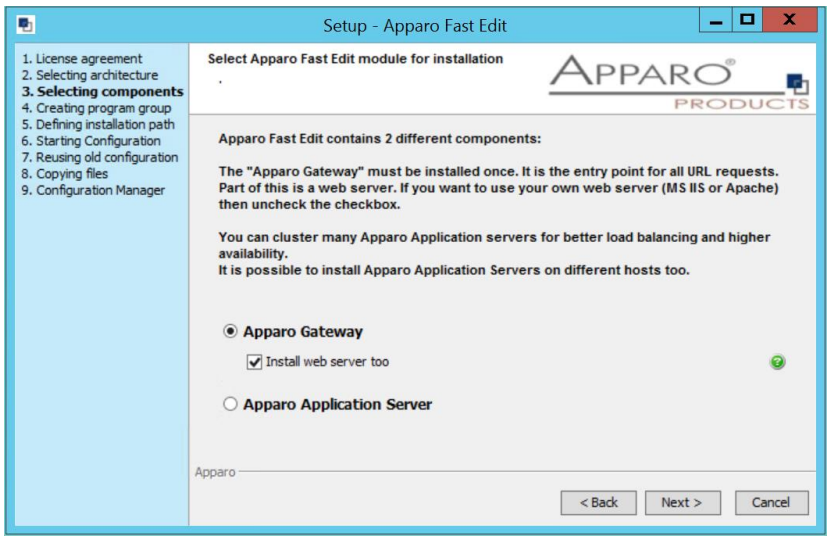
Read and confirm the license agreement by clicking „**Next**“.

5.2 Selecting the architecture



Select "**Distributed installation**" and choose „**Next**".

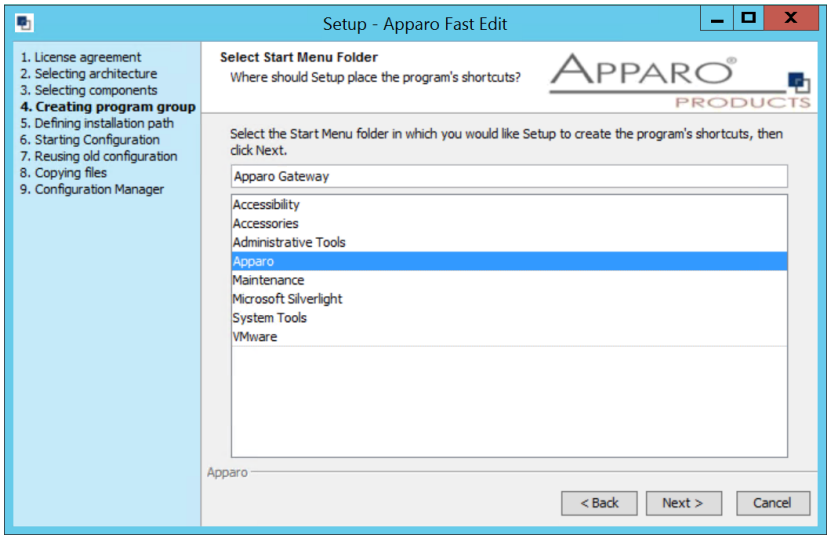
Now it's the time to choose the Apparo Gateway.



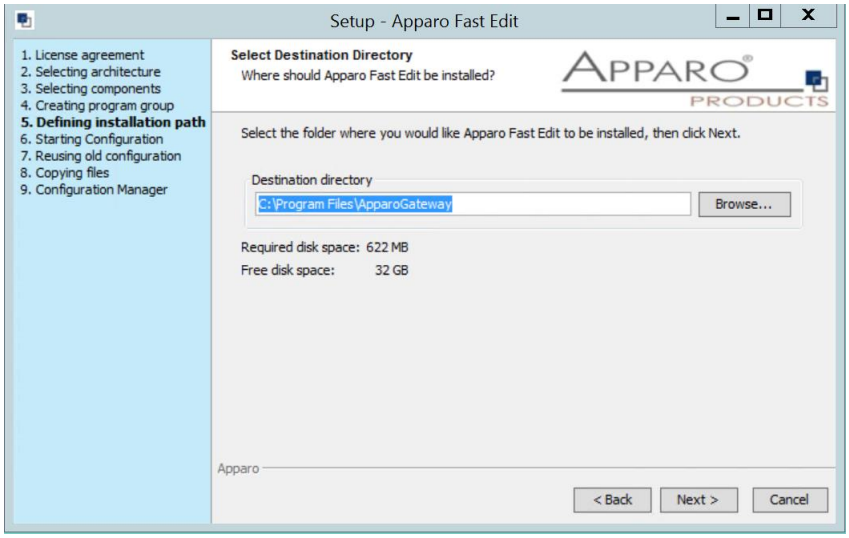
Install web server too: If checked then the setup is automatically installing Apache 2.4 too.
If you want to use your own web server – for example IIS – then uncheck it.

Select **Apparo Gateway** and choose „**Next**".

Defining the target file directory



The default name is “Apparo Gateway”.



Default path:

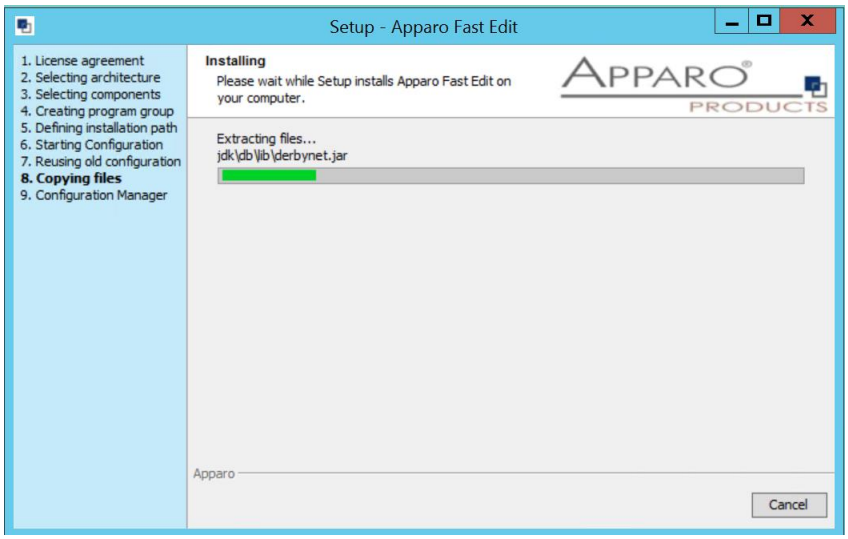
C:\Program Files\ApparoGateway

Please use for each module (Gateway, Application server) an own installation path.

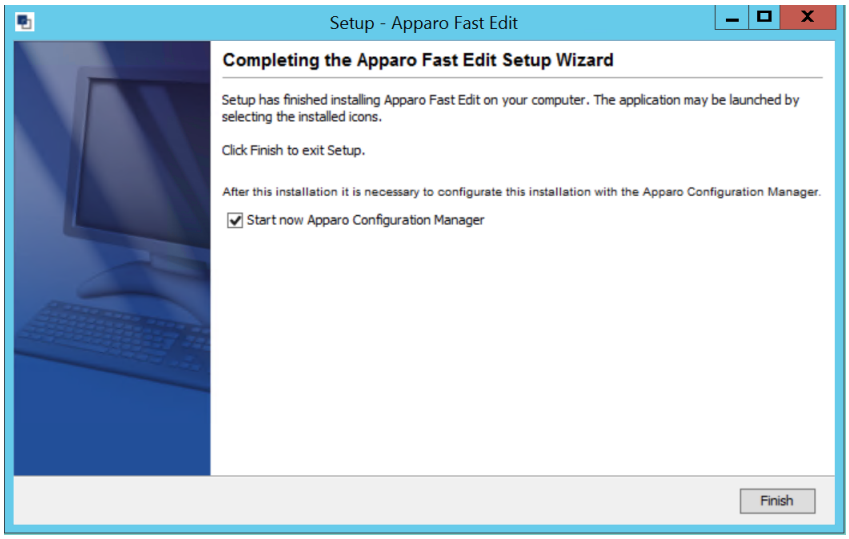
Please define the path and choose „**Next**“.

5.3 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**.



5.4 Installation finish



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

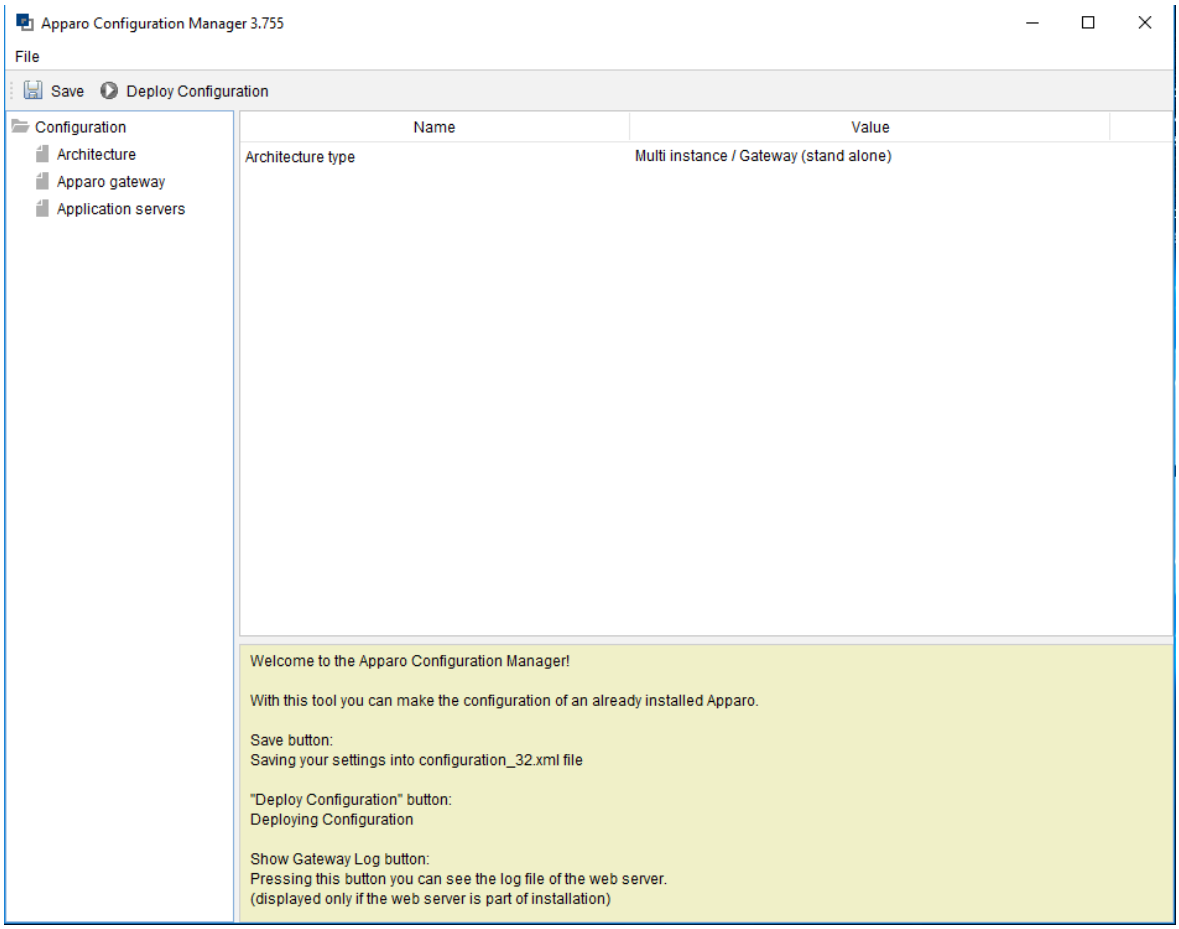
Click „**Finish**" for completing the installation and to start the configuration.

6 Configuration of all Apparo gateways

1	**Preparation** • Analysing environment • Creation of a **database user** for the Apparo repository • Defining the **security group** for all users that must be able to open the Apparo environment with full access
2	**Installation of all Apparo application servers**
3	**Configuration of all Apparo Application Servers** Configuration using the Apparo Configuration Manager
4	**Installation of the Apparo Gateway**
5	**Configuration Apparo Gateway** Configuration the web server (if not installed) and the Apparo Gateway using the Apparo Configuration Manager
6	**Installing client and languages** Installing a new client and languages in Apparo Designer

Before starting of the Apparo gateway configuration it is important that the configuration of all Apparo application servers with the Apparo Configuration Manager is successfully finished and the application servers are already running with pressing Button "Start Apparo".

With the **Apparo Configuration Manager** you are able to configure the already installed Apparo gateway.



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 „Deploy Configuration“ button for deploying.**

3	**Press the „Save“ button for storing the settings.**

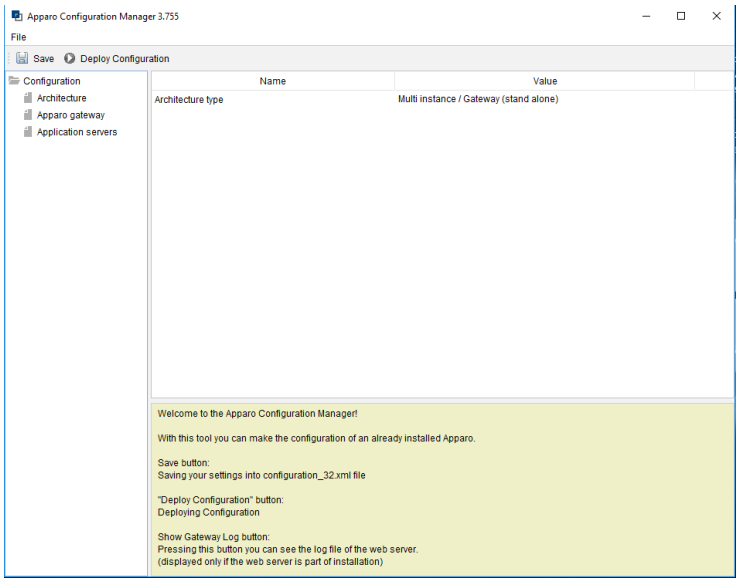
The configuration of Apparo Fast Edit is stored in file configuration.xml in file directory [APPARO_HOME]\FastEdit\cm

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

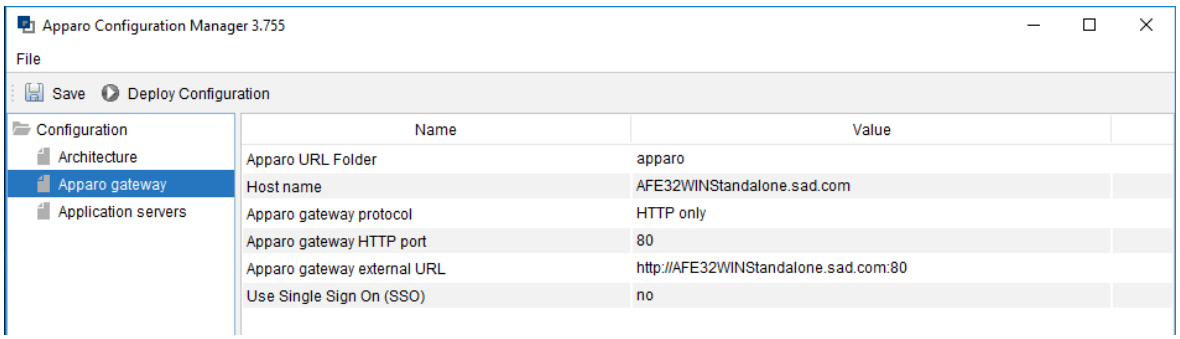
If you open the Apparo Configuration Manager then you will see the same configuration settings like of your source system and it’s possible to change it in a comfortable way.

6.1 Architecture

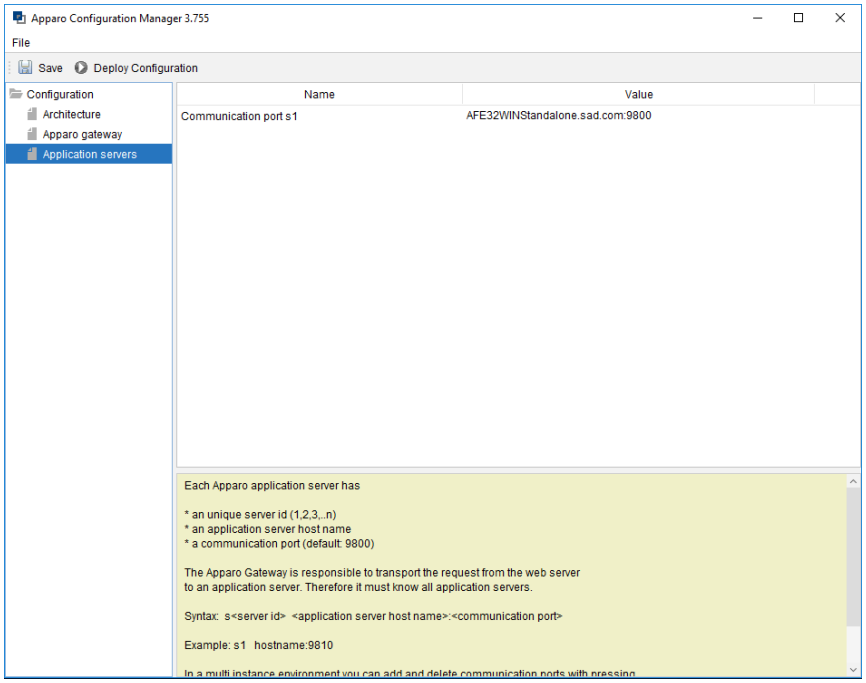
In this section of the Configuration Manager you can find the selected
Apparo Fast Edit architecture. This architecture was defined at installation time and is not changeable now.



6.2 Gateway settings



6.3 List of application servers



You can add an Apparo application server entry with pressing the right mouse button.

The setting **Server ID** is important in a multi-application environment.
Each application server has an unique ID starting with 1, then 2, 3, 4,…

This Server ID must be used in the **Apparo Application server settings too.**

That means: Communication port s1 is for Application Server #1

7 Open the Apparo Portal

The URL for opening the Apparo Portal:

http://servername/apparo

or

http://servername

Hint: If you have changed the folder name in the Apparo Configuration Manager then you must use this name instead of “apparo”.

If you have changed the Apparo gateway protocol to https then you must use https.

Example:

http://aqserver11/apparo

Now try to start the Apparo Portal – just **use the link in your web browser.**

8 Open the Apparo Designer

The URL for opening the Apparo Designer:

http://servername/apparo/designer

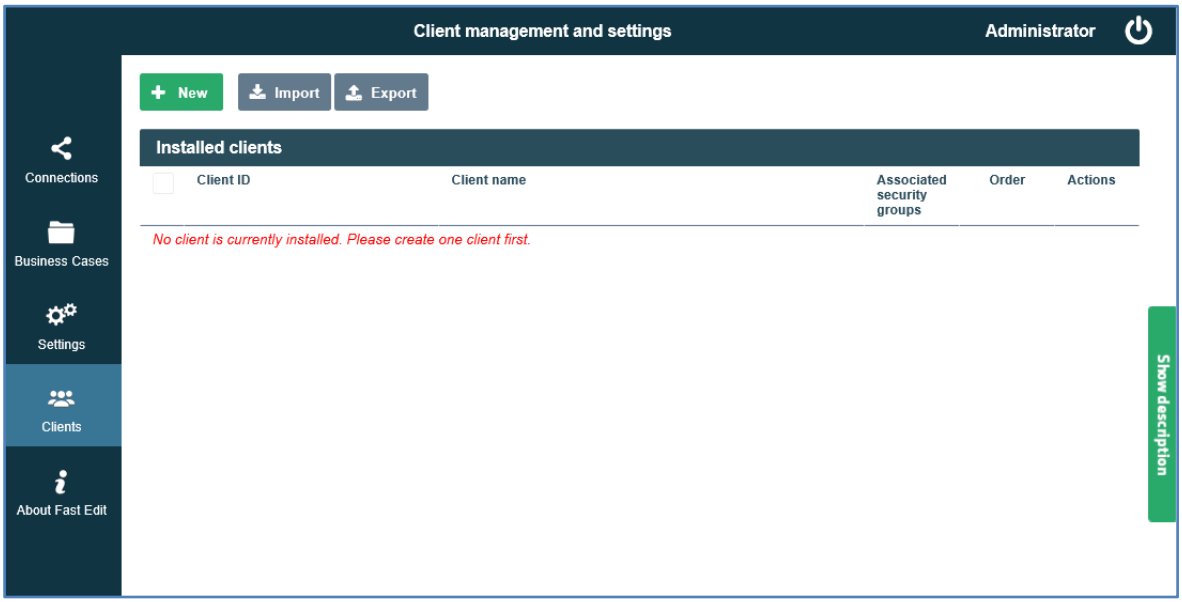
Hint: If you have changed the folder name in the Apparo Configuration Manager then you must use this name instead of “apparo”.

If you have changed the Apparo gateway protocol to https then you must use https.

8.1 Installation of the client

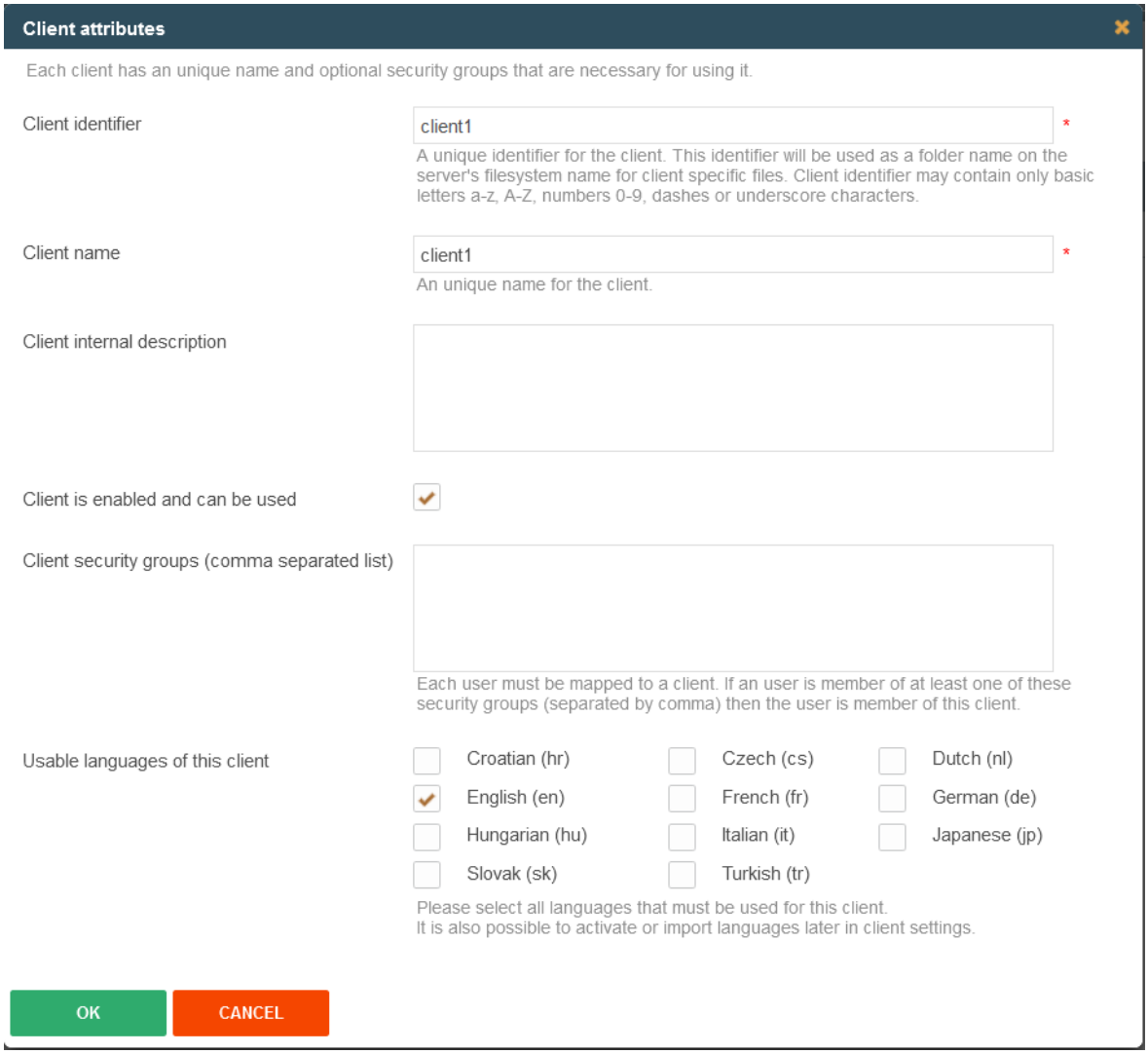
1	**Preparation** • Analysing environment • Creation of a **database user** for the Apparo repository • Defining the **security group** for all users that must be able to open the Apparo environment with full access
2	**Installation of all Apparo application servers**
3	**Configuration of all Apparo application servers** Configuration using the Apparo Configuration Manager
4	**Installation of the Apparo Gateway**
5	**Configuration Apparo Gateway** Configuration the web server (if not installed) and the Apparo Gateway using the Apparo Configuration Manager
6	**Installing client and languages** Installing a new client and languages in Apparo Designer

Now it is necessary to install a client.

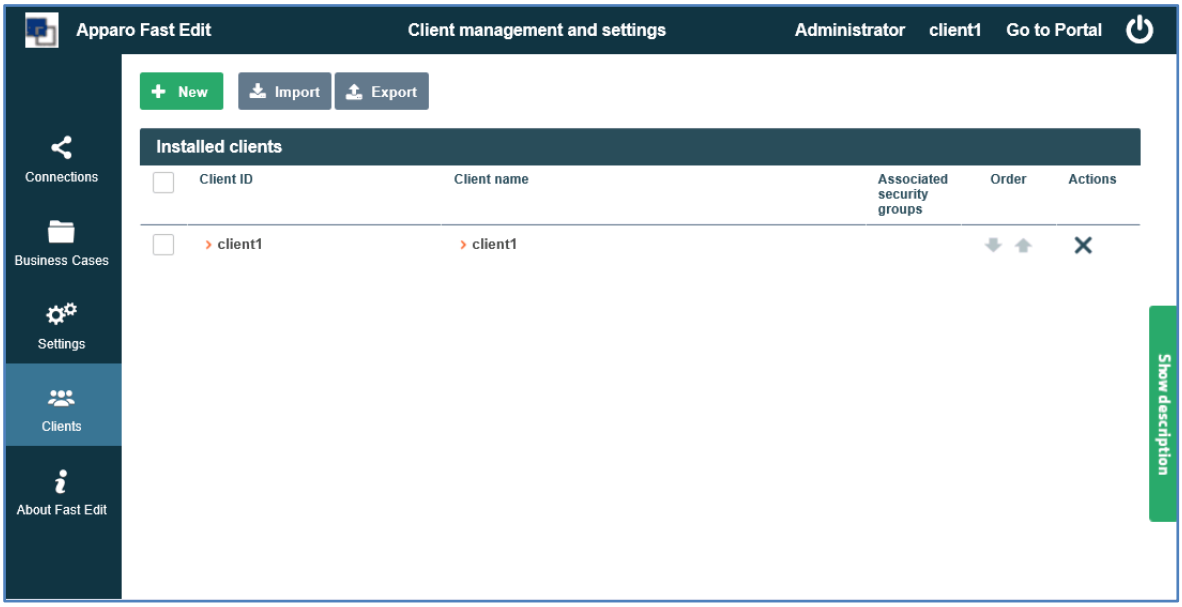


Please select “Show description” button on the right side to see descriptions for each feature.

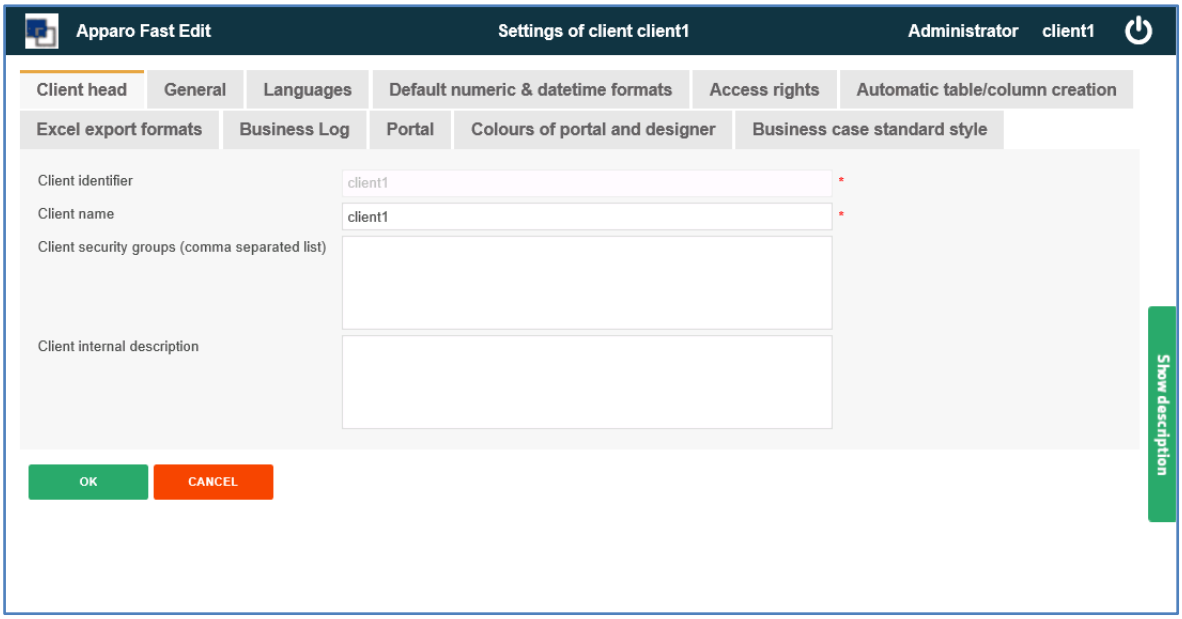
Press the “**New**” button and create a new client.



Define a client identifier and a name, select the desired languages and press the **OK** button.

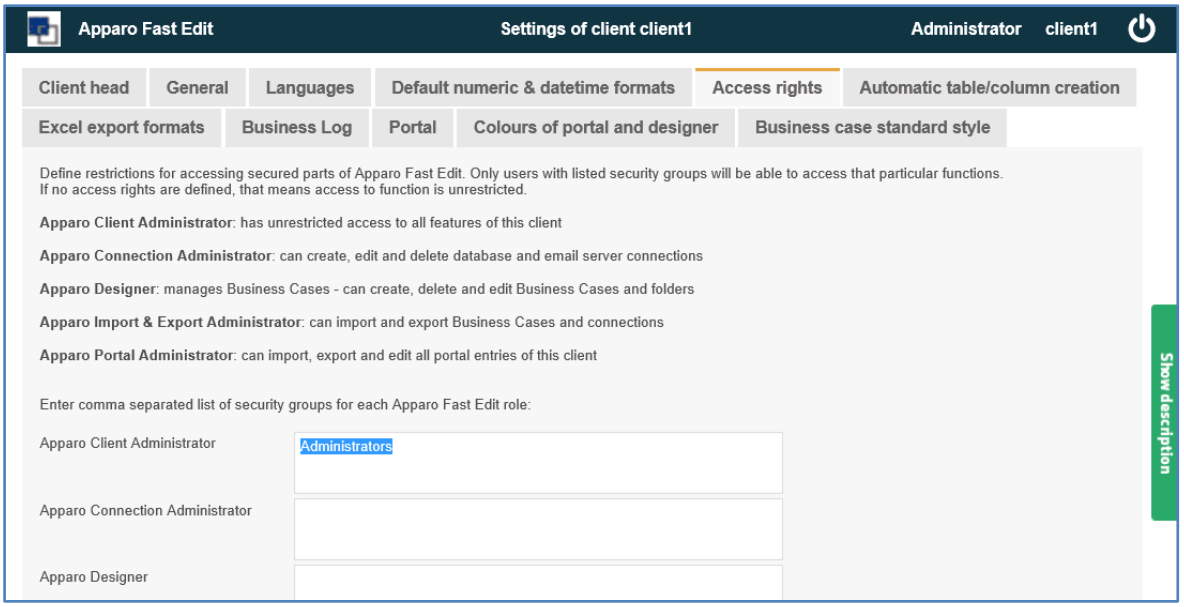


Now select the client (here: client1) to get the properties of the client:



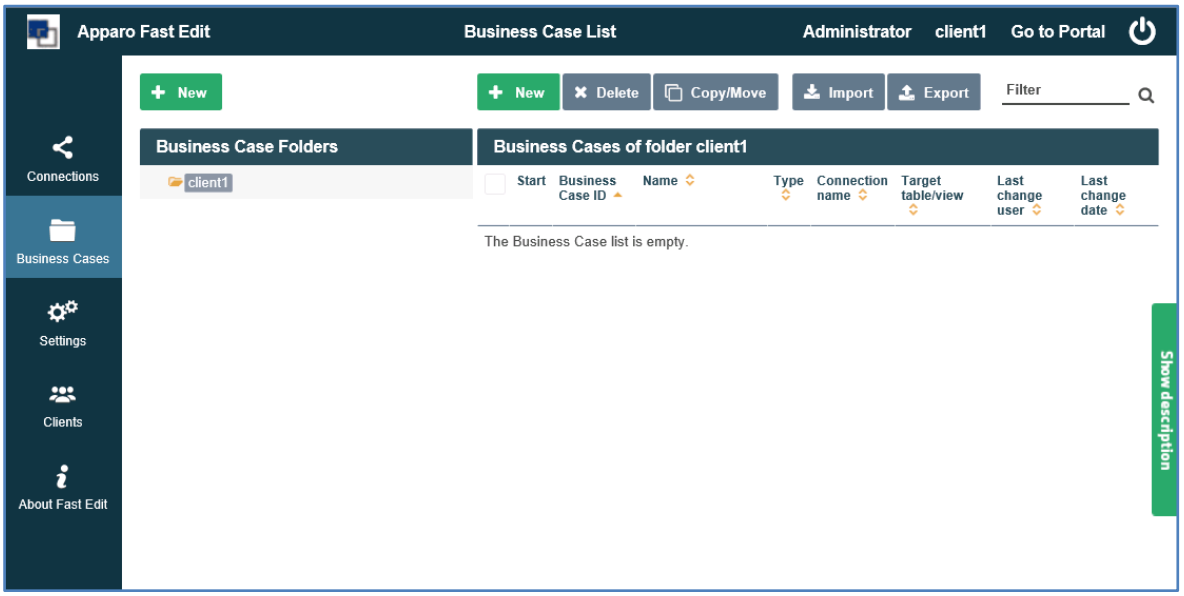
In tab “Access rights” you can define all **security groups for different features.**

These settings are optional.



After that please press the OK for leaving the client settings.

Now you can press the “Business Cases” Icon on the left side and you see the entry page for this client:



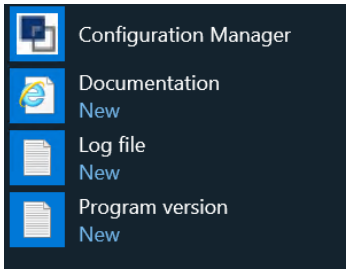
The installation & configuration on server-side is now successfully completed.

Please also read the following chapter 'Browser requirements'.

We recommend to read the document "**Training Guide**" for the fundamental usage for the first steps.

You can find all documentations and movies in

Windows Start (left corner) / Apparo / Documentation



Movies about Apparo Fast Edit:

http://movies.apparo.solutions

9 Configuration Manager using command line

It is possible to automate the configuration process of the Configuration Manager.

The complete configuration is stored in the file **configuration.xml**

You can find this file in the [APPARO_HOME]/FastEdit/cm file directory.

Using this command line the configuration can be restored:

```
[APPARO_HOME]/FastEdit/cm/cmc.sh parameter1 parameter2 …
```

Parameter name	Functionality
-?,--help	Displays this help text
-deploy true/false	Configuration Manager will deploy the setting files
-start true/false	Start Apparo Fast Edit (if no gateway)

10 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.

10.1 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 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
-p <password>	The password used to authenticate. This setting is necessary in a secured environment.
-u <username>	The user used to authenticate. This setting is necessary in a secured environment.

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

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

10.2 Importing definitions

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

Use script **afe-import.bat (**If you start the script without arguments then you 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.
-clientId <CLIENT_ID>	ID of a client that Business Cases, language definitions, database messages or connection definitions will be imported into.
-f <FILE>	The file that contains the client, Business Case, language definition, database messages or connection definitions.
-h	Displays this help text
-importSecurity <true|false>	Business cases and folders may contain a list of user groups defining who can access them. If this option is set to false, such security information will not be imported.
-overwriteBc <true|false>	If true then Business Cases from the import file will overwrite already existing Business Cases if their Business Case ID are the same. If false, Business Cases with such conflicting identifiers will be skipped.
-overwriteClient <true|false>	If true then clients from the import file will overwrite already existing clients with the same identifiers including client content like Business Cases. If false then clients with such conflicting identifiers will be skipped.
-overwriteClientButRescueExistingConnections <true|false>	If this parameter is used, then all connections of an existing client that is currently being re-imported (and overwritten if present) will be left unchanged. Default=false. New connections are created.
-overwriteConnection <true|false>	If true then database and email connections from the import file will overwrite already existing connections with the same names. If false then connections with such conflicting names will be skipped.
-p <password>	The password used to authenticate. This setting is necessary in a secured environment.
-u <username>	The user used to authenticate. This setting is necessary in a secured environment.

All import activities are logged server side in file directory logs, file afeimport.log

Sample: **afe-import.bat –f \etc\definition.xml –u aferep –p aferep -clientId Sales**

11 Making own XML import files

You can import database connection and email connection definitions using own xml files.

These files have encrypted settings – like database name.

If you want to write your own xml files then you must change following XML-setting first:

Set

<encryptedXmlData>**true**</encryptedXmlData>

To

<encryptedXmlData>**false**</encryptedXmlData>

Example:

1. Define own database connection in Apparo Designer
2. Export this connection into a xml file
3. Now you can see the expected xml structure
4. Please change the encryptedXMLData tag

12 Browser requirements

12.1 Supported browsers and versions

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

12.2 Supported operating systems for client browsers

Microsoft Windows
Apple iOS
Android

12.3 Additional settings for all browsers

- Popup blocker must be **disabled**
- File download (Excel files) must be allowed

13 Using https

13.1 Self signed certificate

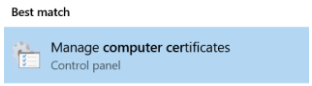
If your Apparo environment should run with **https** then in this case the Apparo Gateway need an SSL certificate.

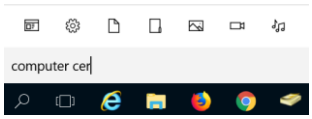
Apparo is using **automatically** a self signed certificate.

13.2 Using a certifcate

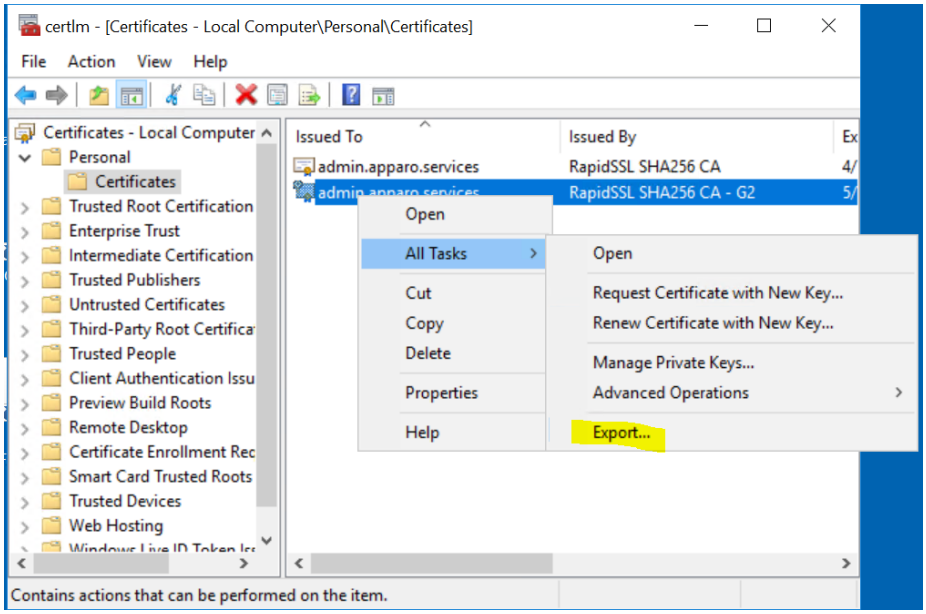
If you already have a certificate imported into MS certificate store then you can import this certificate into Apparo using Apparo Configuration Manager.

13.2.1 Export of the certificate from the certificate store

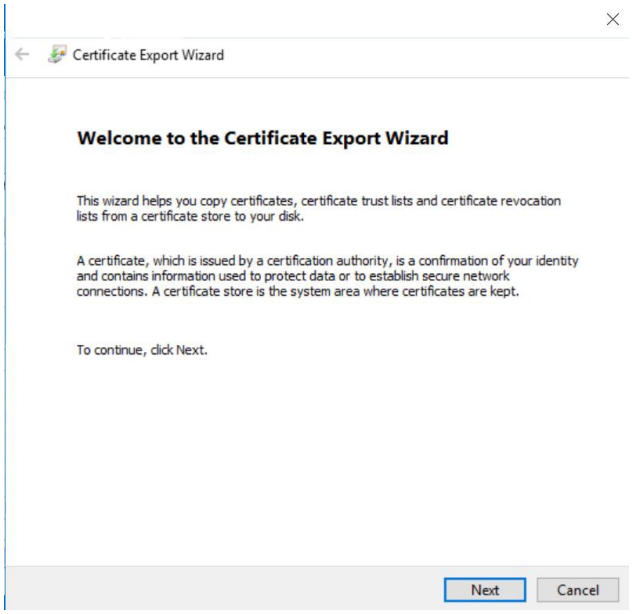


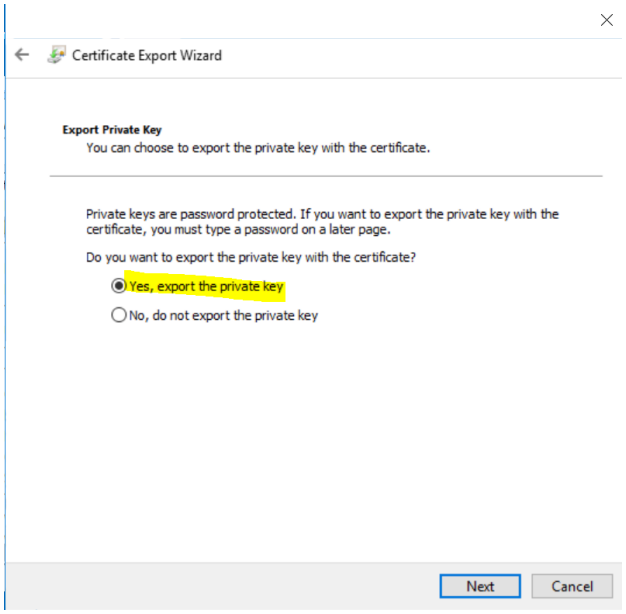


Search for “computer cert” and select “**Manage computer certification**”.

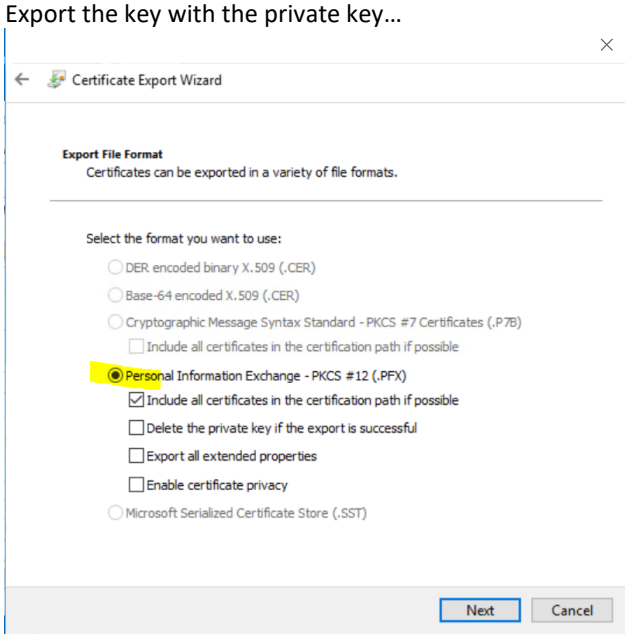


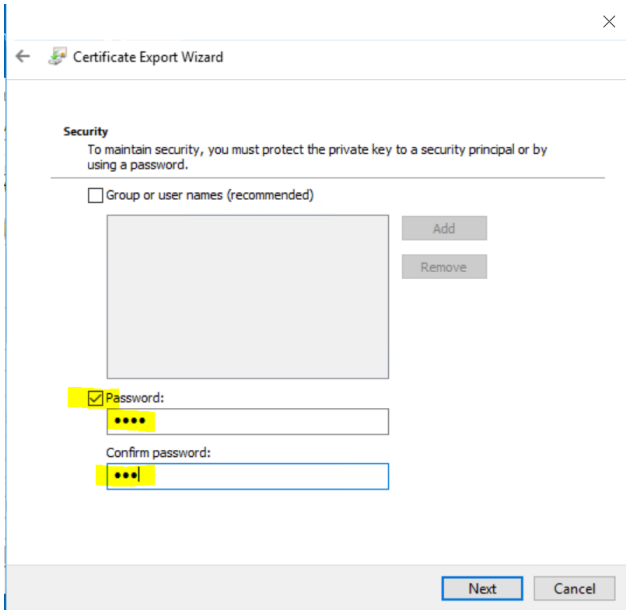
Search for you certificate, press right mouse button and select “Export”.



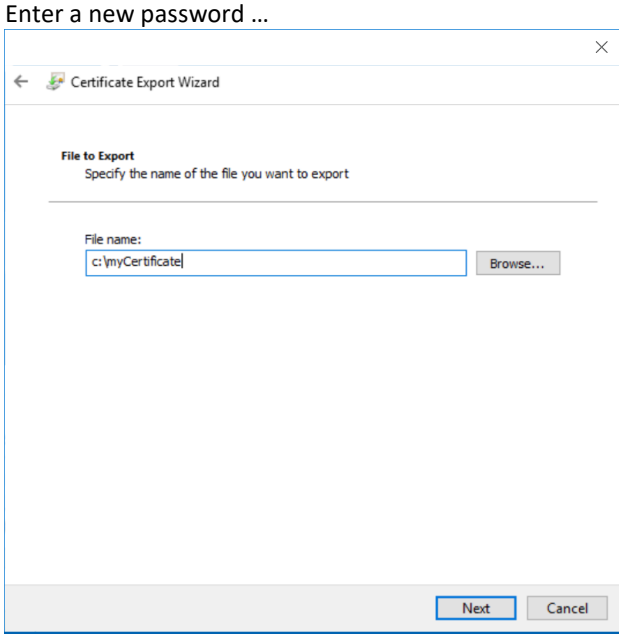


Export the key with the private key…

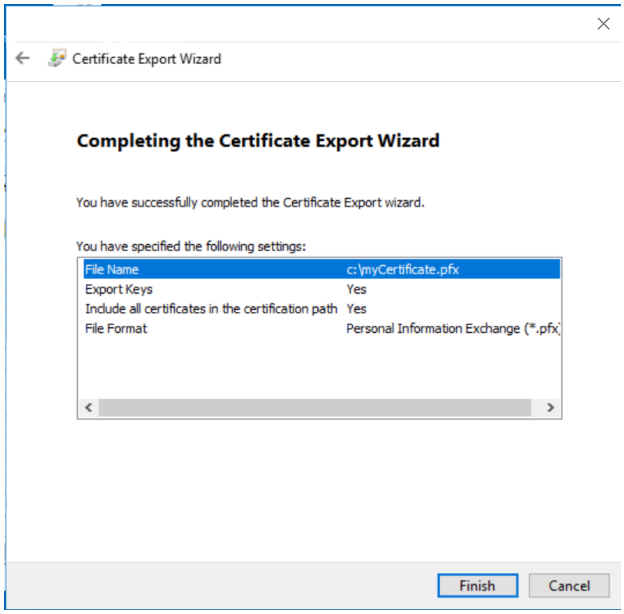




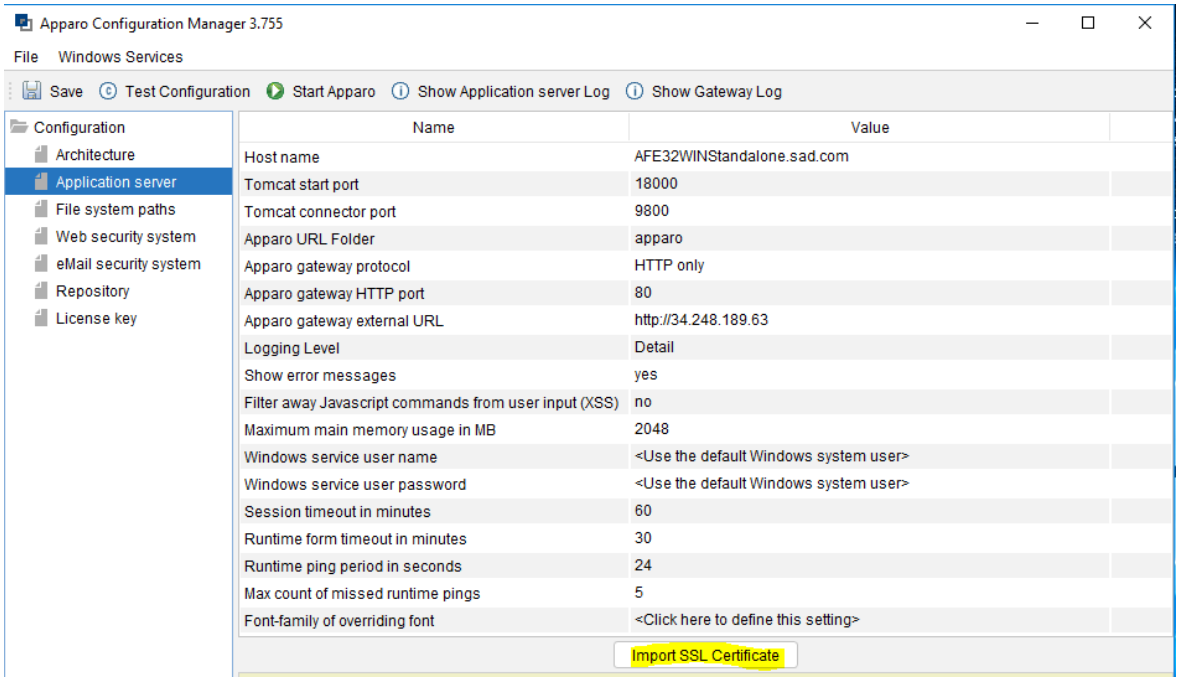
Enter a new password …



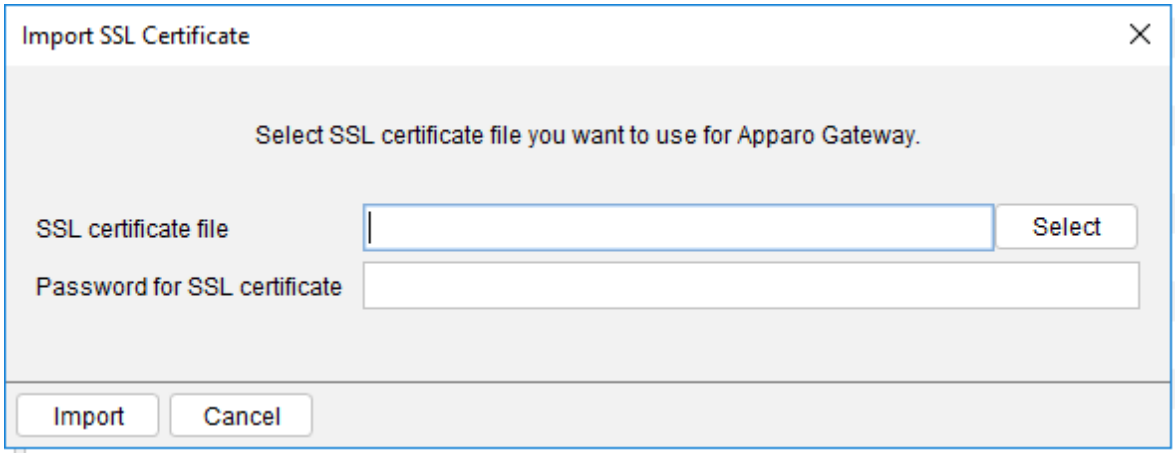
.. and store it.


Certificate Export Wizard
Completing the Certificate Export Wizard
You have successfully completed the Certificate Export wizard.
You have specified the following settings:
File Name
c:\myCertificate.pfx
Export Keys
Yes
Include all certificates in the certification path
Yes
File Format
Personal Information Exchange (*.pfx
Finish
Cancel

In the Apparo Configuration Manager select button “Import SSL Certificate”…



… and press button “Import SSL Certificate”.



Select your certificate file, enter the password and press button “Import”.
After that this certificate will be used.

14 Support

If you need support, please write an email to:

support@apparo.solutions