

Apparo Fast Edit

Installation Guide

3.2.2

IBM Red Hat / IBM AIX / Suse

Stand-Alone version



Table of content

1	<i>Prior to Installation</i>	4
1.1	Hardware requirements	4
1.2	Supported operating systems	4
1.3	Supported web server	4
1.4	Supported Java VM	4
1.5	Supported virtual environments.....	4
1.6	Architecture.....	5
1.7	Overview installation steps	6
2	<i>Preparation</i>	7
2.1	Creation of a database user for the Apparo repository	8
2.2	Defining the security group	9
3	<i>Installation</i>	10
3.1	License agreement	12
3.2	Selecting the architecture	13
3.3	Defining the target file directory	13
3.4	Carrying out the installation	14
3.5	Installation finish	14
4	<i>Configuration</i>	15
4.1	Architecture.....	17
4.2	Application server	18
4.3	File system path.....	19
4.4	Web security system	20
4.5	eMail security system	21
4.6	Repository	22
4.7	License key	23
4.8	Testing configuration	24
5	<i>Configuration of the Apparo gateway</i>	25
5.1	Configuration of the Apache web server	26
5.2	Configuration of the Apache web server using Apache variable authentication	28
6	<i>Open the portal</i>	29
7	<i>Installation clients</i>	32
8	<i>Configuration Manager using command line</i>	34
9	<i>Import/Export definitions using command line</i>	35
9.1	Exporting definitions.....	35

9.2	Importing definitions	36
10	<i>Start-up of Apparo Fast Edit without Configuration Manager</i> _____	37
11	<i>Automatic start-up of Apparo</i> _____	37
12	<i>Starting of Apparo Configuration Manager</i> _____	38
13	<i>The Apparo system log</i> _____	39
14	<i>Online documentation</i> _____	40
15	<i>Browser requirements</i> _____	41
15.1	Supported browsers and versions.....	41
15.2	Supported operating systems for client browsers	41
15.3	Additional settings for Microsoft Internet Explorer only.....	41
15.4	Additional settings for all browsers	42
16	<i>Support</i> _____	43

1 Prior to Installation

Installing Apparo Fast Edit can be done in 30 minutes if you prepare your environment.

Please be aware of the following points before starting installation:

1.1 Hardware requirements

File system: about 1000 MB

Main memory: about 2000 MB

1.2 Supported operating systems

- IBM Red Hat
- IBM AIX
- Linux

1.3 Supported web server

- Apache web server 2.4
- IBM Webserver (IHS)

1.4 Supported Java VM

- OpenJDK 8 (build 202 or higher)

The Java VM must be already installed. It is not part of the Apparo installation.

1.5 Supported virtual environments

- VMware ESX/ESXi (for Linux)

Apparo Fast Edit must be installed using a **root** account.

This version is running only on the *Apache Tomcat 9 Application Server*.
This Tomcat server will be installed automatically.

1.6 Architecture

Possible Apparo Fast Edit architectures:

<p>1</p>	<p>Single Instance, the complete Apparo Fast Edit including web server is installed on <u>one computer only – that’s suitable for testing</u></p> <p>A „Single Instance“ is useful for small environments or test systems.</p>
<p>2</p>	<p>Multi Instance, one or more Web servers and one or more Apparo application servers are installed on one or more hosts.</p> <p>A „Multi Instance“ is useful for better performance and high availability.</p>

You can find an Apparo Fast Edit architecture document in the setup file too.

This document is describing the installation and configuration of a Single Instance.

You can find a document “Installation cluster” for Multi Instance too.

1.7 Overview installation steps

<p>1</p>	<p>Preparation</p> <ul style="list-style-type: none"> • Creation of a database user for the Apparo repository • Defining the security group for all users that must be able to open the Apparo Designer
<p>2</p>	<p>Installation Starting setup file for installation of the files</p>
<p>3</p>	<p>Configuration the Apparo application server Using Apparo Configuration Manager to configure the installation</p>
<p>4</p>	<p>Configuration the Apparo gateway Configuration the web server</p>
<p>5</p>	<p>Open the portal</p>
<p>6</p>	<p>Installing clients Installing the clients in Apparo Designer</p>

2 Preparation

1	<p>Preparation</p> <ul style="list-style-type: none"> • Creation of a database user for the Apparo repository • Defining the security group for all users that must be able to open the Apparo Designer
2	<p>Installation</p> <p>Starting setup file for installation of the files</p>
3	<p>Configuration the Apparo application server</p> <p>Using Apparo Configuration Manager to configure the installation</p>
4	<p>Configuration the Apparo gateway</p> <p>Configuration the web server</p>
5	<p>Open the portal</p>
6	<p>Installing clients</p> <p>Installing the clients in Apparo Designer</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 10g – 19c
- IBM DB/2 9.0 – 11.5
- MS SQL Server 2005 - 2019
- Internal database (**for test and development systems only; NOT FOR CLUSTER SYSTEMS**)

This database user must be set up 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 and sequences.
- A login with this user must be possible.

Hints:

- **Oracle:** DB-User must have CONNECT, RESOURCE and UNLIMITED TABLESPACE grants. User **SYS** is not allowed.
- **IBM DB/2:** see document “Installation - creating database user”

2.2 Defining the security group

Apparo Fast Edit can use following security systems:

- **LDAP**
- **MS Active Directory (including Single Sign On) / Kerberos**
- **Apache Variable (for SAML)**

The Apparo Designer is secured – just users with a defined security group can open the Designer.

Therefore, it's necessary to define a new group with the name "**Apparo Designers**" (for example) in your security system first.

3 Installation

1	<p>Preparation</p> <ul style="list-style-type: none"> • Creation of a database user for the Apparo repository • Defining the security group for all users that must be able to open the Apparo Designer
2	<p>Installation</p> <p>Starting setup file for installation of the files</p>
3	<p>Configuration the Apparo application server</p> <p>Using Apparo Configuration Manager to configure the installation</p>
4	<p>Configuration the Apparo gateway</p> <p>Configuration the web server</p>
5	<p>Open the portal</p>
6	<p>Installing clients</p> <p>Installing the clients in Apparo Designer</p>

Start the installation by executing the file

- `FastEdit3.2.2.0.zzz_linux_tomcat_standalone.sh` or
- `FastEdit3.2.2.0.zzz_aix_tomcat_standalone.sh` or

Please use the chmod command: `chmod 777 FastEdit*.sh`

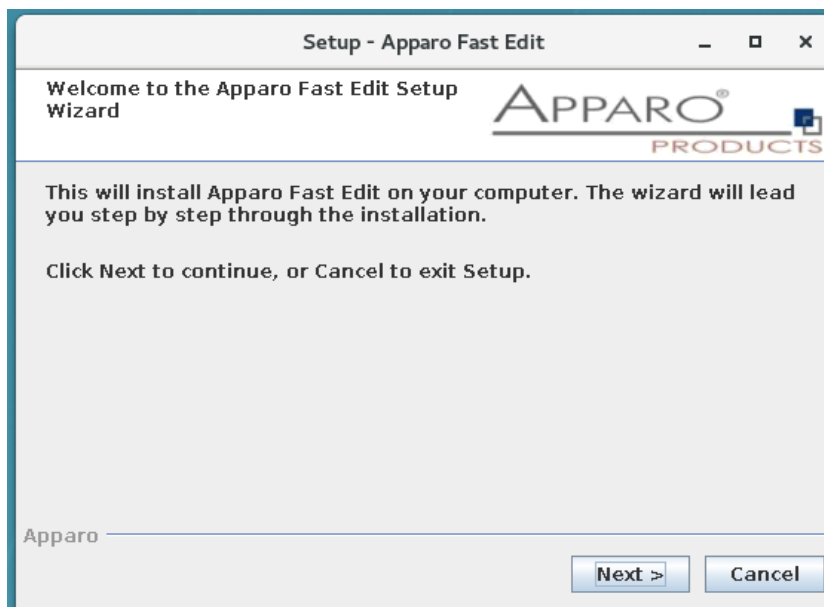
Hint: You must set the variables

- `INSTALL4J_JAVA_HOME`
to the Java 8 VM / OpenJDK 8

Example: `export INSTALL4J_JAVA_HOME=/etc/vm/j8`

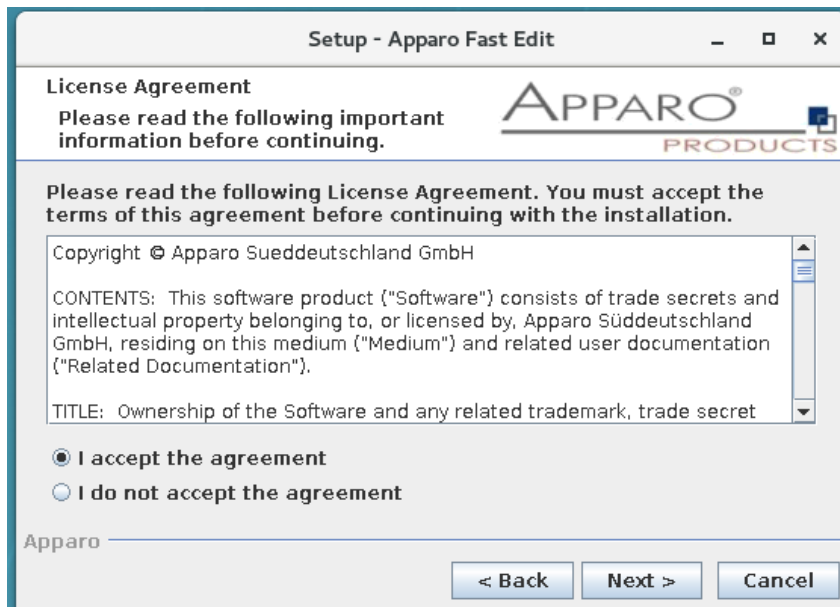
The graphical UI (X Window) is preferred but not necessary.
You can run the Apparo setup in **text mode** too using the `-c` parameter.

The Apparo Configuration Manager is running in graphical mode only.



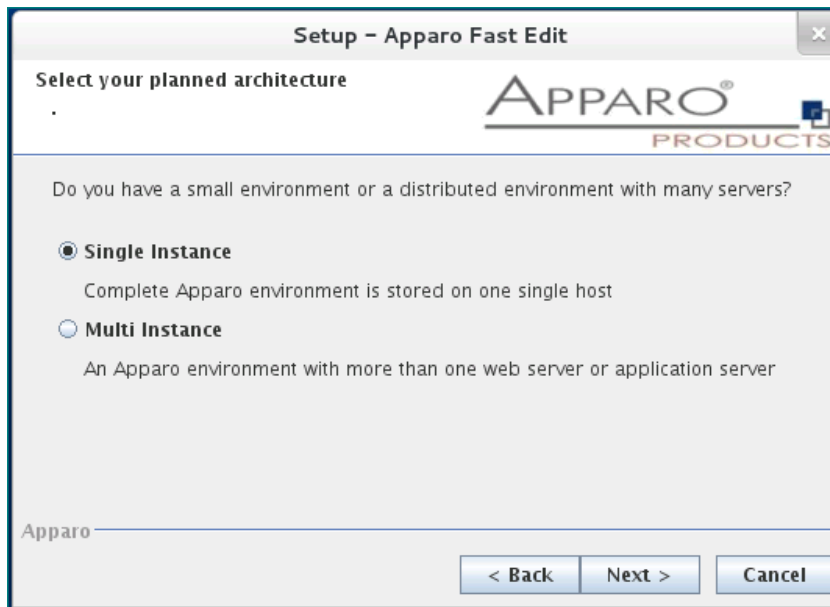
Confirm the beginning of the installation by clicking „**Next**“.

3.1 License agreement



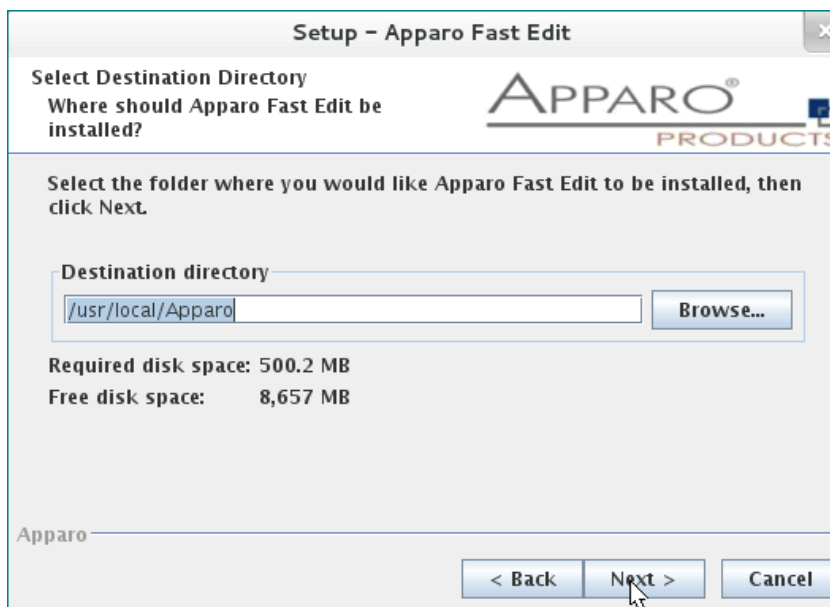
Read and confirm the license agreement by clicking „Next“.

3.2 Selecting the architecture



Please select “**Single Instance**” and choose „**Next**>“.

3.3 Defining the target file directory

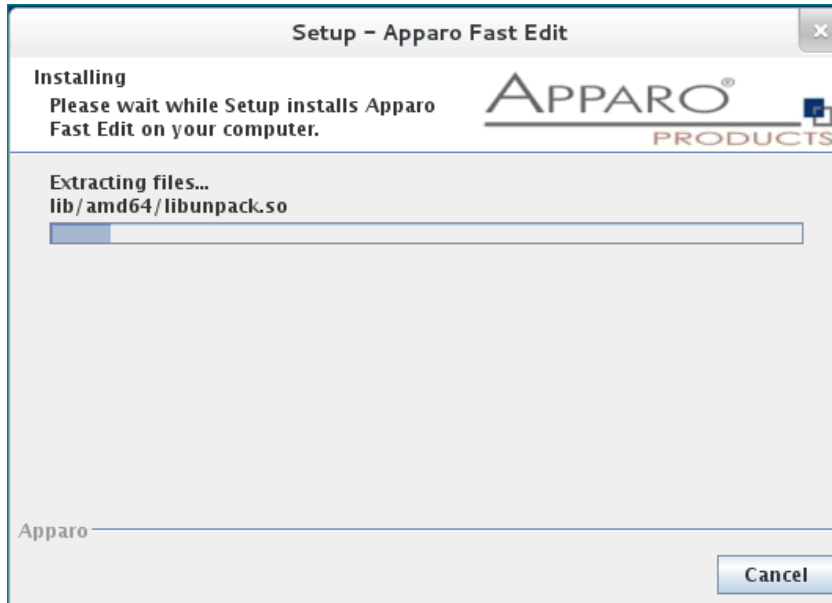


Default file directory for Linux environments: **/usr/local/Apparo**

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

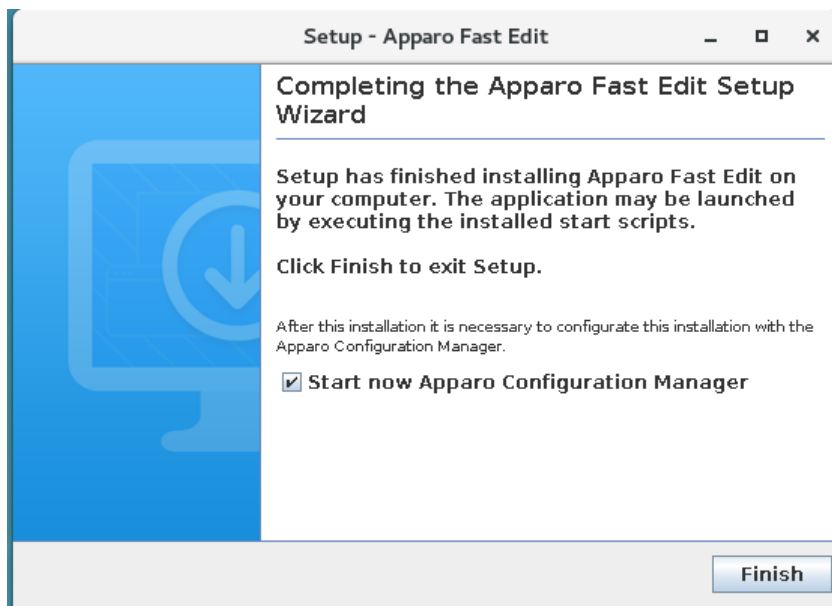
3.4 Carrying out the installation

Finally the installation of Apparo Fast Edit with the selected architecture will be installed.



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

<p>1</p>	<p>Preparation</p> <ul style="list-style-type: none"> • Creation of a database user for the Apparo repository • Defining the security group for all users that must be able to open the Apparo Designer
<p>2</p>	<p>Installation</p> <p>Starting setup file for installation of the files</p>
<p>3</p>	<p>Configuration the Apparo application server</p> <p>Using Apparo Configuration Manager to configure the installation</p>
<p>4</p>	<p>Configuration the Apparo gateway</p> <p>Configuration the web server</p>
<p>5</p>	<p>Open the portal</p>
<p>6</p>	<p>Installing clients</p> <p>Installing the clients in Apparo Designer</p>

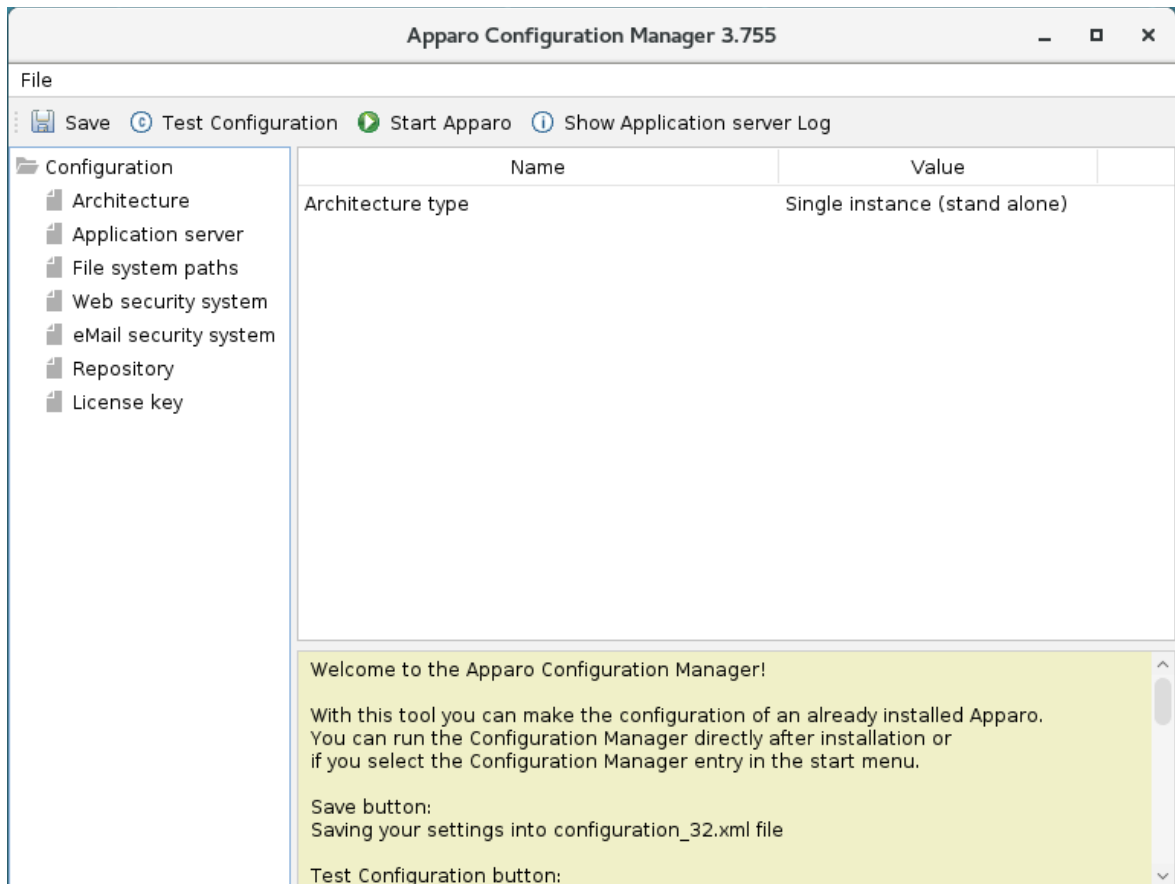
With the Apparo Configuration Manager you are able to configure the already installed Apparo Fast Edit.

You can now configure for the selected architecture all necessary settings.

The settings are grouped into chapters (left side).

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

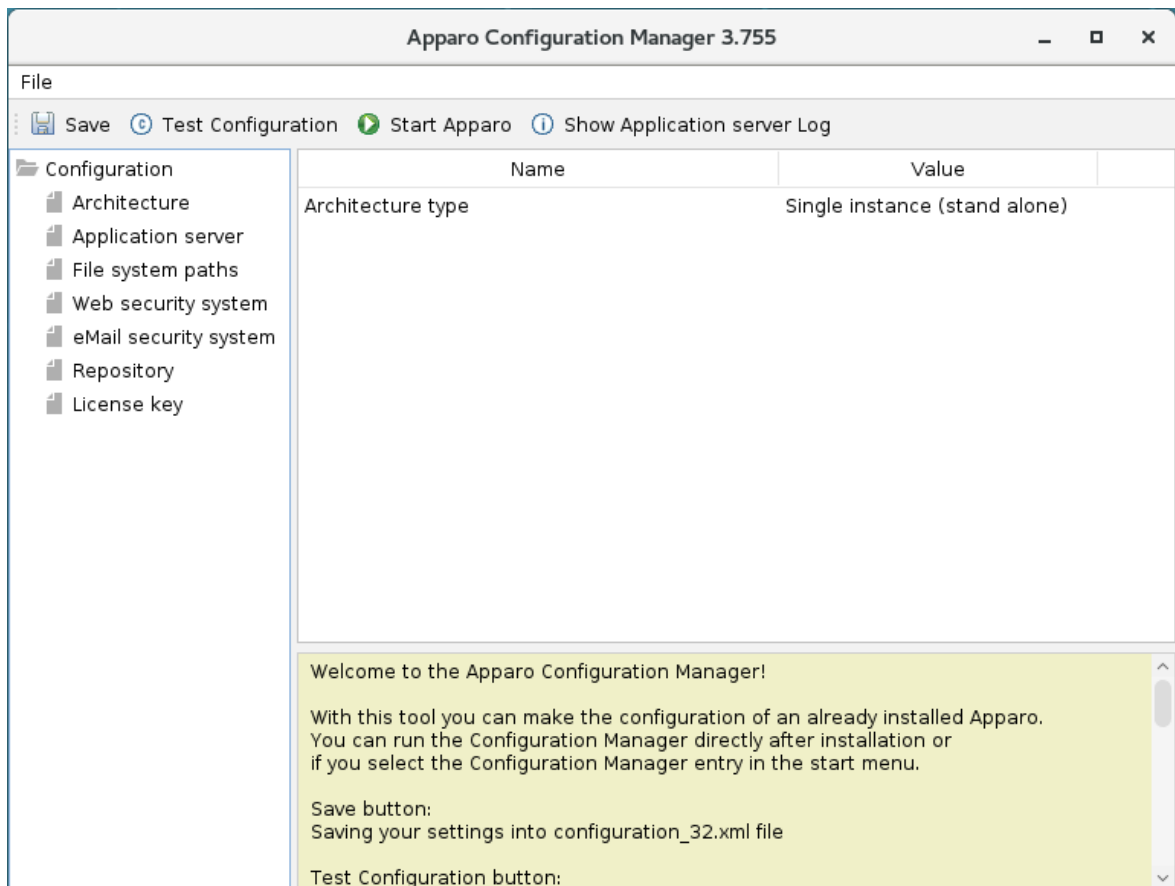
After you have defined all settings you can start and deploy configuration of Apparo Fast Edit with “Start Fast Edit” button.



4.1 Architecture

The architecture can be “Single instance” (complete Apparo Fast Edit is installed on one server including the web server” and

“Multi instance”: The Apparo gateway is installed parallel to the web server and the application server(s) are installed on another server.



4.2 Application server

The settings for the Tomcat application server, like memory, ports etc.

The screenshot shows the 'Apparo Configuration Manager 3.755' window. On the left is a navigation tree with 'Application server' selected. The main area displays a table of configuration parameters for the application server.

Name	Value
Host name	ip-172-31-18-220.eu-west-1.comp...
Tomcat start port	18000
Tomcat connector port	9800
Server id	1
Apparo URL Folder	apparo
Logging Level	Normal
Show error messages	yes
Filter away Javascript commands from user inp...	no
Maximum main memory usage in MB	2048
Session timeout in minutes	60
Runtime form timeout in minutes	30
Runtime ping period in seconds	24
Max count of missed runtime pings	5
Font-family of overriding font	<Click here to define this setting>

Each Apparo installation has at least 1 application server.
That's a Apache Tomcat installation that is communicating directly with the Apparo Gateway.

4.3 File system path

With the file systems paths you can define the place for storing batch files that can be called from a Business Case or Java test classes for data quality checks.

Using an Oracle client it is necessary to define the place of the tnsnames.ora file.

The screenshot shows the 'Apparo Configuration Manager 3.755' window. The 'File system paths' section is selected in the left-hand navigation pane. The main area displays a table with the following configuration items:

Name	Value	
File path to batch/executeable files	/usr/local/Apparo3220/FastEdit/u...	select
File path to client definitions	/usr/local/Apparo3220/FastEdit/cli...	select
File path to custom java classes	/usr/local/Apparo3220/FastEdit/u...	select
Oracle Client path to tnsnames.ora	\$(ORACLE_HOME)/network/admin	select

Below the table, a yellow box contains the text: "The file system paths are used for executing of scripts and java testing classes."

4.4 Web security system

Following security systems are supported:

- LDAP
- Active Directory / Kerberos
- No security system

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

The screenshot shows the 'Apparo Configuration Manager 3.755' window. The left sidebar is expanded to 'File system paths'. The main area contains a table with the following data:

Name	Value	
File path to batch/executeable files	/usr/local/Apparo3220/FastEdit/u...	select
File path to client definitions	/usr/local/Apparo3220/FastEdit/cli...	select
File path to custom java classes	/usr/local/Apparo3220/FastEdit/u...	select
Oracle Client path to tnsnames.ora	\$(ORACLE_HOME)/network/admin	select

Below the table, a yellow box contains the text: "The file system paths are used for executing of scripts and java testing classes."

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 eMail security system

An eMail Excel Import Business Case can import data of Excel files that are delivered using an eMail. It is possible to restrict the usage for member of security groups only.

Apparo Fast Edit is using in this case following security system:

The screenshot shows the Apparo Configuration Manager 3.755 interface. The left sidebar contains a tree view with the following items: Configuration, Architecture, Application server, File system paths, Web security system, eMail security system (highlighted), Repository, and License key. The main area displays a table with the following data:

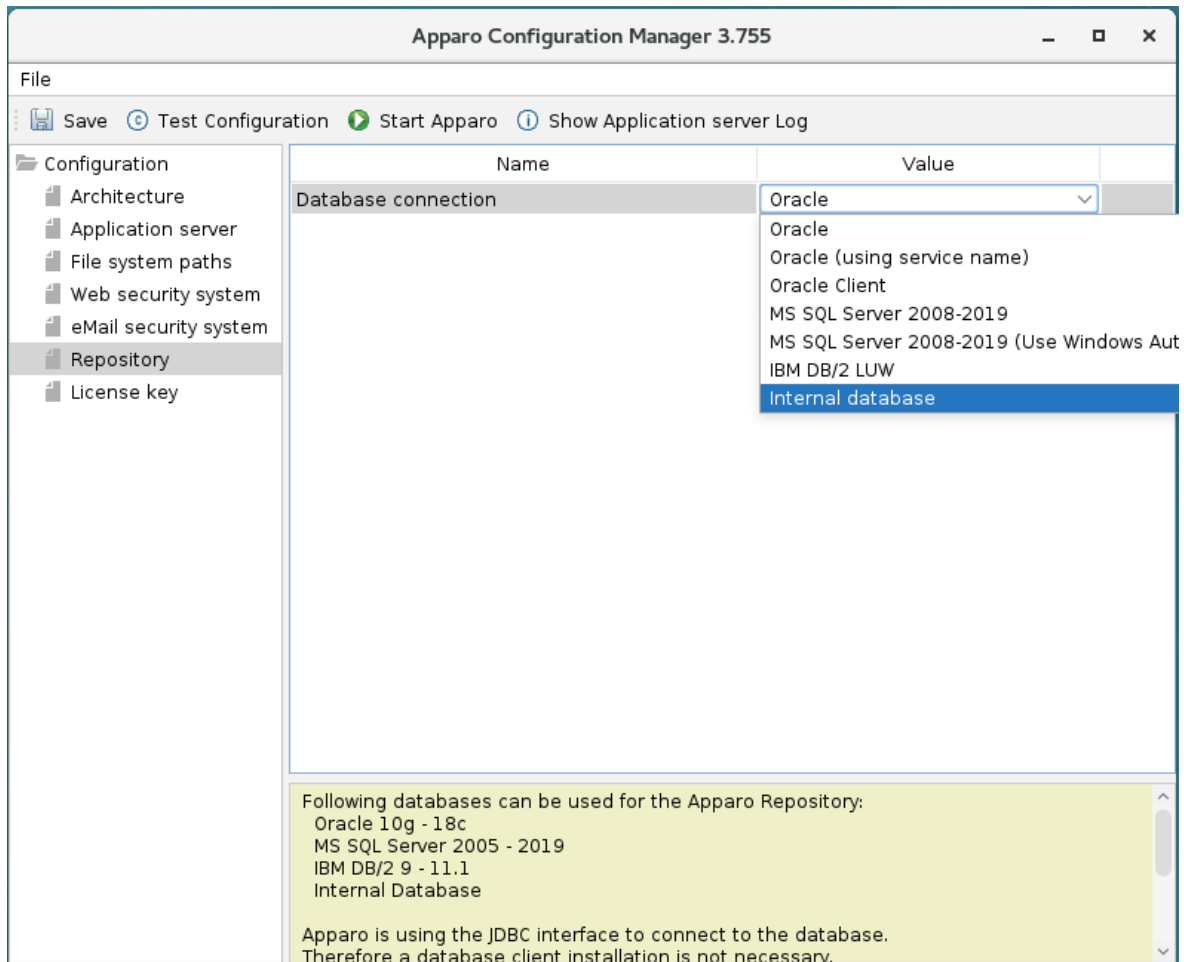
Name	Value
eMail security system	The same as the web security sys...

Below the table, there is a yellow highlighted box containing the following text:

Security settings for verifying security groups used by eMail Import Business Cases. If there is a web security system specified, it will be used for the eMail security as well and this category is not editable.

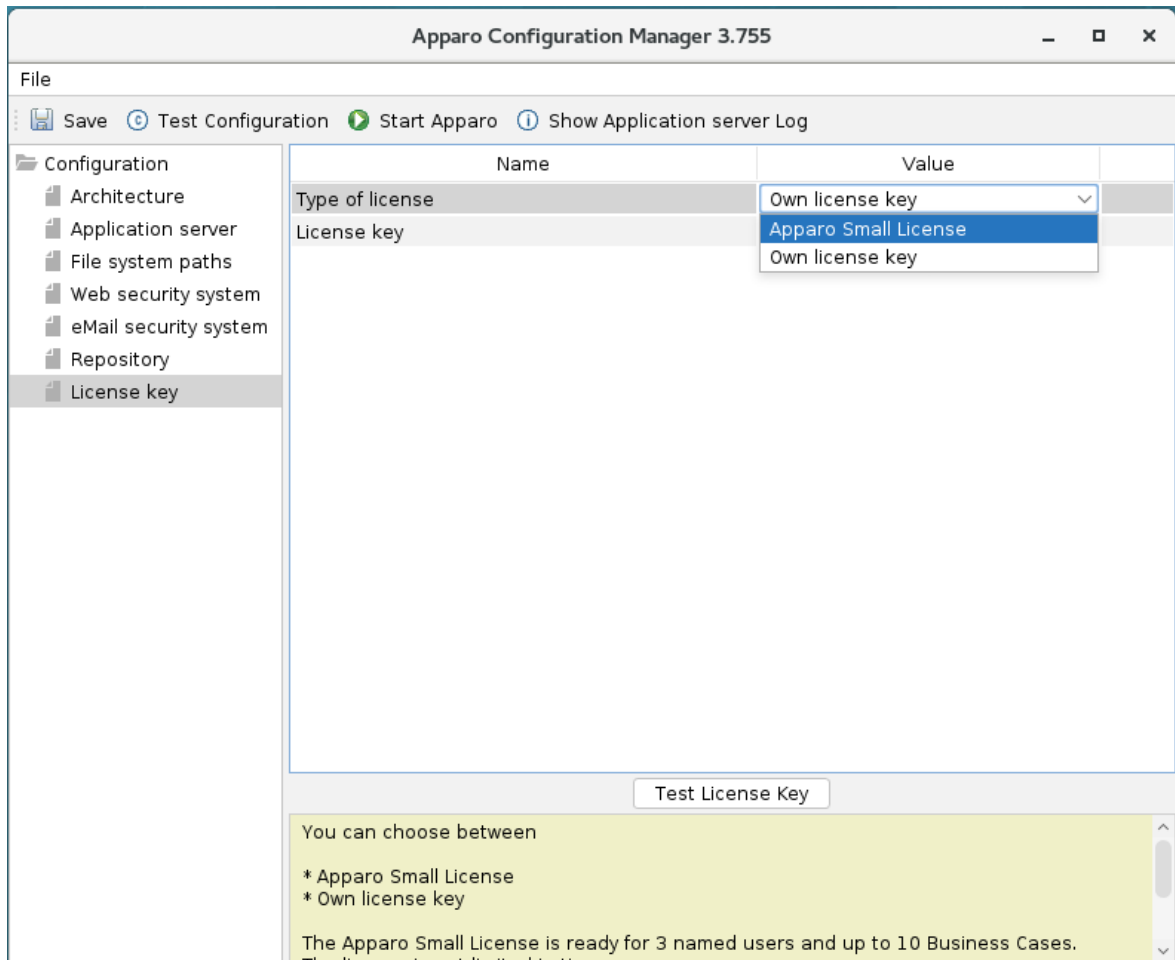
4.6 Repository

In the database repository all Business Case definitions are stored.



4.7 License key

You must copy your license key into this setting.



4.8 Testing configuration

Apparo Fast Edit is running if you can see following message in the Log file:

```
+++++  
+ Apparo Fast Edit 3.2.x.y was successfully started at <Start time and date>  
+++++
```

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

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

Example: <http://server1:18000/apparo/pages/apptest.xhtml>

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

If you want to use the EIBC (eMail Import Business Case) then Apparo Fast Edit need 2 GB main memory.

5 Configuration of the Apparo gateway

1	<p>Preparation</p> <ul style="list-style-type: none"> • Creation of an database user for the Apparo repository • Defining the security group for all users that must be able to open the Apparo Designer
2	<p>Installation</p> <p>Starting setup file for installation of the files</p>
3	<p>Configuration the Apparo application server</p> <p>Using Apparo Configuration Manager to configure the installation</p>
4	<p>Configuration the Apparo gateway</p> <p>Configuration the web server</p>
5	<p>Open the portal</p>
6	<p>Installing clients</p> <p>Installing the clients in Apparo Designer</p>

5.1 Configuration of the Apache web server

This chapter is describing the configuration of Apache web server 2.4 and higher.

Hint: The configuration of Apparo Fast Edit using Apparo Configuration Manager must be already finished before you can continue.

Following installation steps are necessary:

1. Enable the ajp proxy and the ajp proxy balancer modules, by modifying **httpd.conf** of your Apache web server:

```
LoadModule proxy_module modules/mod_proxy.so
LoadModule proxy_ajp_module modules/mod_proxy_ajp.so
LoadModule proxy_balancer_module modules/mod_proxy_balancer.so
```

2. Enhance the Apache configuration using conf.d:

Open text file „**afe.conf**“, that is stored in directory **cgi-bin** in a text editor.

Example content:

```
<IfModule mod_proxy.c>
  ProxyPass /apparo balancer://ApparoFastEdit/apparo
  ProxyPassReverse /apparo balancer://ApparoFastEdit/apparo
  ProxyIOBufferSize 65536
  <Proxy balancer://ApparoFastEdit>
    BalancerMember ajp://ip-172-31-18-220.eu-west-1.compute.internal:9800 route=s1 loadfactor=1
    ProxySet timeout=3000
    ProxySet lbmethod=bytraffic
    ProxySet nofailover=0n
    ProxySet stickysession=JSESSIONID|jsessionid
  </Proxy>
  <Location /balancer-manager>
    SetHandler balancer-manager
  </Location>
</IfModule>

<IfModule mod_authnz_sspi.c>
  <Location /apparo/>
    AuthName "A Protected Place"
    AuthType SSPI
    SSPIAuth On
    SSPIAuthoritative On
    SSPIOfferBasic On
    # SSPIBasicPreferred
    # SSPIUsernameCase lower
    require valid-sspi-user
  </Location>
</IfModule>
```

Copy the file afe.conf into the file directory conf.d of your Apache installation.

Restart the web server.

Server Time out:

Please check that your Apache web server configuration has the setting

TimeOut 1800

Apparo Fast Edit need much time for importing/exporting/upgrading and Excel import.

Now the installation of the Apparo gateway for Apache web server is finished.

5.2 Configuration of the Apache web server using Apache variable authentication

If using the **Apache variable authentication mode** in tab “Web security system”:

Authentication	Single Sign On (SSO) using Apache variable
Apache variable name	myVariable

You will find in the generated afe.conf file following entry:

RequestHeader set X-APPARO_USERNAME %{myVariable}

That means that the Apache variable “myVariable” (you can change the name in Configuration Manager) must contain the valid user name.

6 Open the portal

1	<p>Preparation</p> <ul style="list-style-type: none"> • Creation of a database user for the Apparo repository • Defining the security group for all users that must be able to open the Fast Edit Designer
2	<p>Installation</p> <p>Starting setup file for installation of the files</p>
3	<p>Configuration the Apparo application server</p> <p>Using Apparo Configuration Manager to configure the installation</p>
4	<p>Configuration the Apparo gateway</p> <p>Configuration the web server</p>
5	<p>Open the portal</p>
6	<p>Installing clients</p> <p>Installing the clients in Apparo Designer</p>

The URL for opening the Apparo Portal:

<http://servername/apparo>

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.

Opening the Apparo Designer:

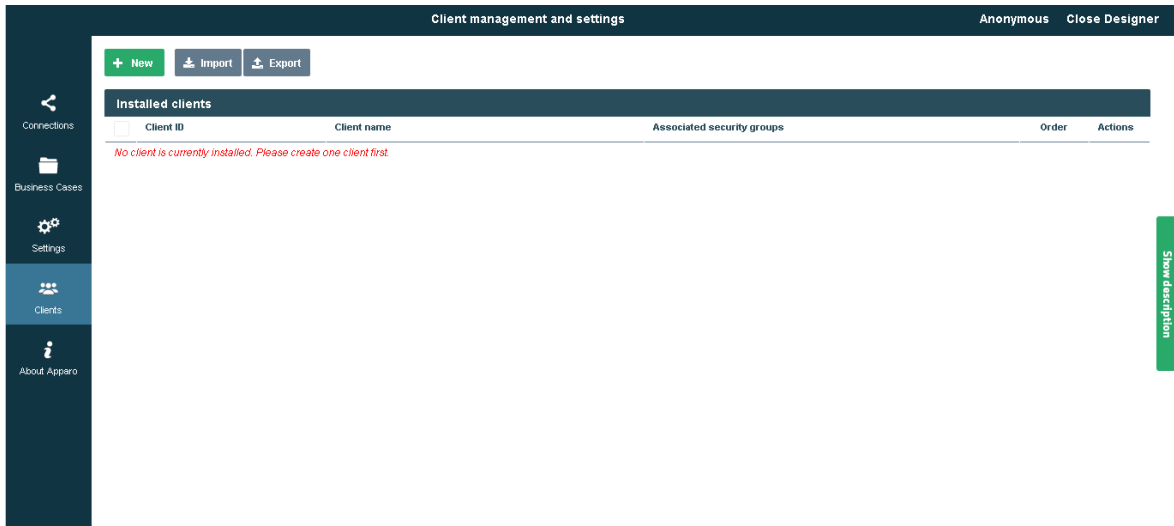
<http://servername/apparo/designer>

Example:

<https://aqserver11/apparo>

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

The following window should open if the repository is empty:



In this example the repository is empty and no clients are installed.

7 Installation clients

1	<p>Preparation</p> <ul style="list-style-type: none"> • Creation of a database user for the Apparo repository • Defining the security group for all users that must be able to open the Apparo Designer
2	<p>Installation</p> <p>Starting setup file for installation of the files</p>
3	<p>Configuration the Apparo application server</p> <p>Using Apparo Configuration Manager to configure the installation</p>
4	<p>Configuration the Apparo gateway</p> <p>Configuration the web server</p>
5	<p>Open portal</p>
6	<p>Installing clients</p>

Please read the document “**Configuration Guide**” for how to install clients etc.

The installation & configuration on serverside 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

[APPARO_HOME]/FastEdit/doc

Training material about Apparo Fast Edit:

<http://training.apparo.services>

8 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
-?	Displays this help text
-deploy true/false	Configuration Manager will deploy the setting files, default:true
-start true/false	Start Apparo Fast Edit (if no gateway), default: true

9 Import/Export definitions using command line

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

9.1 Exporting definitions

The export program is stored in the file directory "export": [APPARO_HOME]/FastEdit/export

Use script **afe-export.sh**

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/apparo. 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 non BI environment.
-u <USERNAME>	The user used to authenticate. This setting is necessary in a secured non BI environment.

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

Sample: **afe-export.sh -f /etc/definition.xml -clientId DemoClient**

9.2 Importing definitions

The import program is stored in the file directory "import": [APPARO_HOME]/FastEdit/import

Use script **afe-import.sh** (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/apparo. 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.sh -f /etc/definition.xml -u aferep -p aferep -clientId Sales**

10 Start-up of Apparo Fast Edit without Configuration Manager

Apparo Fast Edit can be started using the script

startService.sh

it is stored in

[APPARO_HOME]/FastEdit/bin

Following arguments are necessary:

1. Start port of Tomcat, default: 18000 (see settings in Configuration Manager)
2. Main memory max, default: 1024 (in MB)

Example:

```
cd /usr/local/Apparo/FastEdit/bin  
./startService.sh 18000 4096 &
```

The & is necessary to start the script in the background.

11 Automatic start-up of Apparo

See chapter before, add that into your startup script of the operating system.

12 Starting of Apparo Configuration Manager

The Apparo Configuration Manager can be started using:

```
./cm.sh
```

it is stored in

```
[APPARO_HOME]/FastEdit/cm
```

Example:

```
cd /opt/Apparo/FastEdit/cm
```

```
./cm.sh
```

13 The Apparo system log

All internal system message of Apparo Fast Edit are stored in

afe.log

it is stored in:

[APPARO_HOME]/FastEdit/logs

Example:

cd /opt/Apparo/FastEdit/logs

gedit afe.log

The Tomcat system log is stored in:

[APPARO_HOME]/FastEdit/tomcat/logs

Example:

cd /opt/Apparo/FastEdit/tomcat/logs

gedit catalina.log

14 Online documentation

The complete documentation is stored in

[APPARO_HOME]/FastEdit/doc

15 Browser requirements

15.1 Supported browsers and versions

Microsoft Internet Explorer 11 (**Hint: Compatibility mode for Internet Explorer must be disabled.**)

Microsoft Edge

Mozilla Firefox (current version)

Google Chrome (current version)

Apple Safari (current version)

15.2 Supported operating systems for client browsers

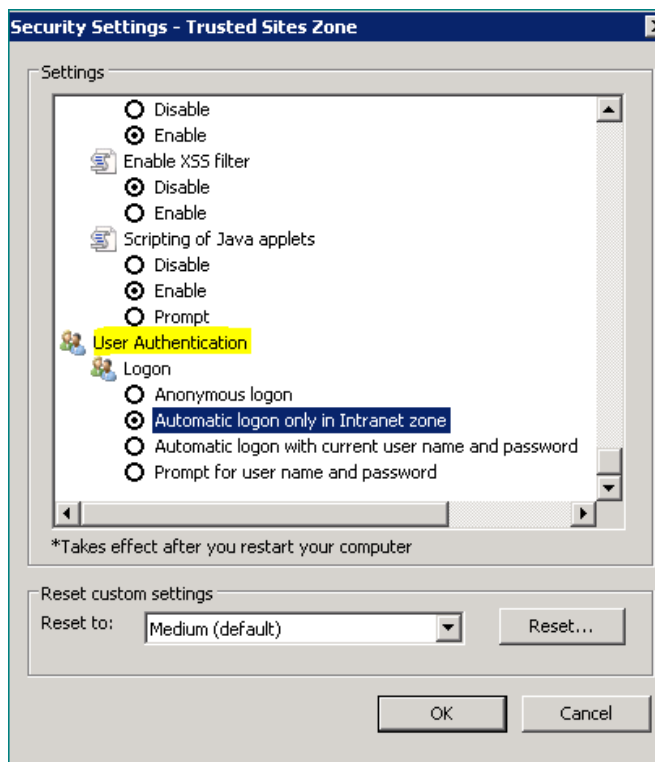
Microsoft Windows

Apple macOS, iOS

15.3 Additional settings for Microsoft Internet Explorer only

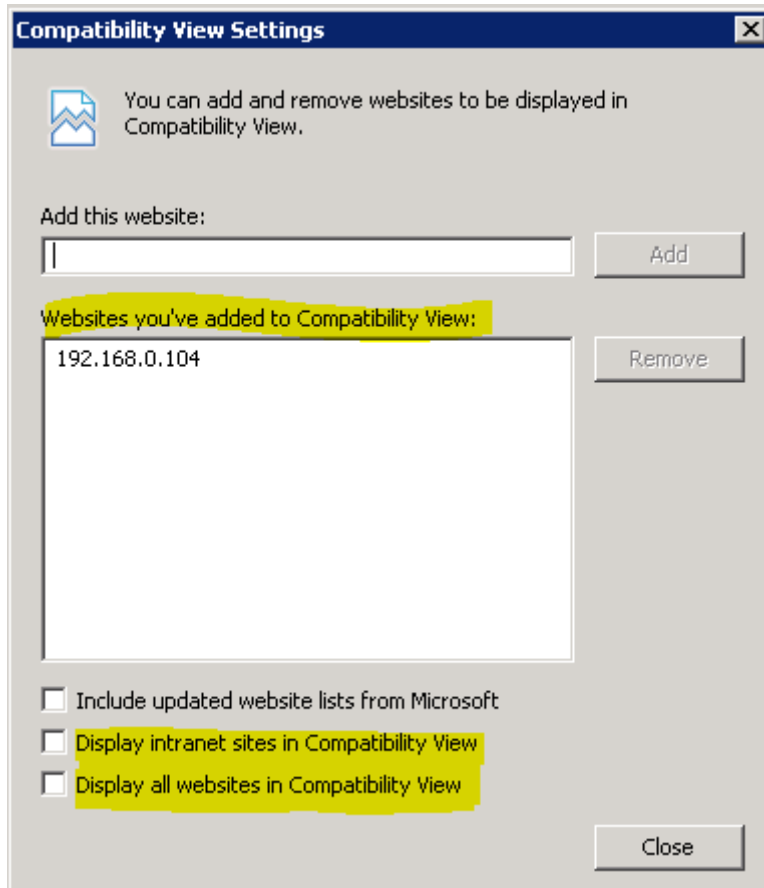
- Domain name of Apparo Fast Edit web server must be in trusted sites
- “about:blank” must be in trusted sites

Settings for Single Sign On (SSO) for standalone versions of Apparo Fast Edit:



Hint: Apparo Fast Edit is not supporting Internet Explorer 7.

Therefore the settings “**Display intranet in Compatibility View**” and “**Display all websites in Compatibility View**” must be **disabled**.



Solution: Placing these domains into the “Websites you’ve added to Compatibility View” because in this case Apparo Fast Edit can disable the Compatibility View automatically.

15.4 Additional settings for all browsers

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

16 Support

If you need support please write an eMail to:

support@apparo.solutions