

Installation Guide

Apparo Fast Edit

Multi Instance

3.3.0.0

IBM Red Hat / Linux

Stand-Alone





1	Prior	to Installation	4
1.1	L	Hardware requirements	4
1.2	2	Supported operating systems	4
1.3	3	Supported web server	4
1.4	1	Supported Java VM	4
1.5	5	Supported virtual environments	4
1.6	5	Supported security systems	4
1.7	7	Installation strategy	5
1.8	Architecture		6
2	Prepa	iration	8
2.1	L	Creation of a database user for the Apparo repository	9
2.2	2	Using Java 11 that is not the default VM of Linux	9
2.3	3	Defining the security group for all Apparo Administrators users	10
3	Instal	lation of all Apparo application servers	11
3.1	L	License agreement	13
3.2	2	Selecting the architecture	14
3.3	3	Defining the target file directory	15
34	1	Carrying out the installation	16
		10	
3.5	5	Installation finish	16
3.5 4 (5 Config	Installation finish guration of all Apparo application servers	16
3.5 <i>4</i> (4.1	5 Config L	Installation finish guration of all Apparo application servers Architecture	16 <i>17</i> 19
3.5 4 (4.1 4.2	5 Config L	Installation finish guration of all Apparo application servers Architecture Application server	16 <i>17</i> 19 20
3.5 <i>4</i> (4.1 4.2 4.3	5 Confi <u>i</u> L 2 3	Installation finish guration of all Apparo application servers Architecture Application server File system paths	16 <i>17</i> 19 20 21
3.5 4 (4.1 4.2 4.3	5 Confi <u>(</u> L 2 3 4.3.1	Installation finish guration of all Apparo application servers Architecture Application server File system paths File path to batch/executable files	16 17 19 20 21 21
3.5 4 (4.1 4.2 4.3	5 Confi <u>(</u> 2 3 4.3.1 4.3.2	Installation finish	16 17 19 20 21 21 21
3.5 4 (4.1 4.2 4.3	5 Config L 2 3 4.3.1 4.3.2 4.3.3	Installation finish	16 17 19 20 21 21 21 21
3.5 4 (4.1 4.2 4.3	5 Config 2 4.3.1 4.3.2 4.3.3 4.3.4 4.3.5	Installation finish	16 17 19 20 21 21 21 21 21 21 22
3.5 4 (4.1 4.2 4.3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Config L 4.3.1 4.3.2 4.3.3 4.3.4 4.3.5 4.3.6	Installation finish	16 17 19 20 21 21 21 21 21 22 22
3.5 4 (4.1 4.2 4.3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 Config L 4.3.1 4.3.2 4.3.3 4.3.4 4.3.5 4.3.6 L	Installation finish	16 17 19 20 21 21 21 21 21 22 22 22
3.5 4 (4.1 4.2 4.3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Config L 4.3.1 4.3.2 4.3.3 4.3.4 4.3.5 4.3.6 1 4.4.1	Installation finish	16 17 19 20 21 21 21 21 21 22 22 22 23 3
3.5 <i>4</i> (4.1 4.2 4.3 <i>2</i> <i>4</i> .4 <i>4</i> .4 <i>4</i> .4	5 Confi 2 3 4 .3.1 4 .3.2 4 .3.3 4 .3.4 4 .3.5 4 .3.6 1 4 .4.1 4 .4.1 4 .4.2	Installation finish	16 17 19 20 21 21 21 21 22 22 22 22 23 23 24
3.5 4 (4.1 4.2 4.3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Config Config 4 .3.1 4 .3.2 4 .3.3 4 .3.4 4 .3.5 4 .3.6 1 4 .4.1 4 .4.2 4 .4.3	Installation finish	16 17 19 20 21 21 21 21 21 21 22 22 22 23 24 25
3.5 4 (4.1 4.2 4.3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Config Config 4 .3.1 4 .3.2 4 .3.3 4 .3.3 4 .3.4 4 .3.5 4 .3.6 1 4 .4.1 4 .4.2 4 .4.3 5	Installation finish guration of all Apparo application servers Architecture Application server File system paths File path to batch/executable files File path to client definitions File path to client definitions File path to custom java classes Oracle Client path to tnsnames.ora Java Keystore path and name Java Keystore password Veb security system Setting "Web security groups for administrators": Using multiple LDAP/Active Directory servers parallel Using SASL/Kerberos eMail security system	16 17 19 20 21 21 21 21 21 21 22 22 22 23 24 25 26
3.5 4 (4.1 4.2 4.3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 Config L 2 3 4.3.1 4.3.2 4.3.3 4.3.4 4.3.5 4.3.6 4.4.1 4.4.2 4.4.3 5 5	Installation finish	16 17 19 20 21 21 21 21 21 21 22 22 22 23 23 24 25 26 27
3.5 4 (4.1 4.2 4.3 2 4.3 2 4.4 4.5 4.6 4.7	5 Config 4.3.1 4.3.2 4.3.3 4.3.4 4.3.5 4.3.6 4.4.1 4.4.2 4.4.3 5 5 7	Installation finish	16 17 19 20 21 21 21 21 21 22 22 23 23 24 25 26 27 28
3.5 4 (4.1 4.2 4.3 4.3 4.3 4.4 4.5 4.6 4.7 5	5 Config 4.3.1 4.3.2 4.3.3 4.3.4 4.3.5 4.3.6 4.4.1 4.4.2 4.4.3 5 5 7 Instal	Installation finish	16 17 19 20 21 21 22 23 24 25 26 27 28 30
3.5 4 (0 4.1 4.2 4.3 2 4.3 2 4.4 4.5 4.6 4.7 5 1 5.1	5 Config 4.3.1 4.3.2 4.3.3 4.3.4 4.3.5 4.3.6 4.4.1 4.4.2 4.4.3 5 7 Instal	Installation finish	16 17 19 20 21 21 22 22 23 24 25 26 27 28 3 27 28 3 27 28 27 28 27 28 27 28 27 28 32 32



5.	3	Defining the target file directory	34
5.4 Carrying out the installation		35	
5.	5	Installation finish	35
6	Confi	guration of the Apparo gateway	36
6.	1	Architecture	39
6.	2	Apparo gateway	40
6.	3	List of application servers	41
6.	4	Configuration of the Apache web server with ajp proxy	42
6.	5	Configuration of the Apache web server using Apache variable authentication	44
7	Confi	guration Manager using command line	48
8	Impo	rt/Export definitions using command line	49
8.	1	Exporting definitions	49
8.	2	Importing definitions	50
9	Start	-up of Apparo Fast Edit without Configuration Manager	51
10	Au	tomatic start-up of Apparo	52
11	Sta	rting of Apparo Configuration Manager	53
The	Арра	iro system log	54
12	On	line documentation	55
13	Bro	wser requirements	56
13	3.1	Supported browsers and versions	56
13	3.2	Supported operating systems for client browsers	56
13	3.3	Additional settings for all browsers	56
14	Sup	oport	57



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:

1.1 Hardware requirements

File system:about 2 GBMain memory:about 4 GB

1.2 Supported operating systems

- IBM Red Hat
- Suse Linux
- Debian etc.

1.3 Supported web server

• Apache web server 2.4

The web server must be already installed. It is not part of the Apparo installation.

1.4 Supported Java VM

- OpenJDK 11 (Adoptium)
- Oracle Java 11

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

1.5 Supported virtual environments

• VMware ESX/ESXi/AWS/Azure

1.6 Supported security systems

- LDAP
- MS Active Directory
- OpenID / MS Azure AD

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.



1.7 Installation strategy

Following steps are necessary in this order:

1	Database preparation for Apparo repository Defining a security group "Apparo Designers" for full access
2	Installation and configuration of all Apparo application servers
3	Installation and configuration of the Apparo gateway including web server



1.8 Architecture

Possible Apparo Fast Edit architectures:

Single Instance, your existing environment is installed on 1 one computer only - that's suitable for testing too. A "Single Instance" is useful for small environments or test systems. Multi Instance, one or more Apparo gateways and one or more 2 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.



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 Designer
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 of the Apparo gateway Configuration the web server and the Apparo gateway using the Apparo Configuration Manager
6	Installing clients Installing the clients in Apparo Designer



2 Preparation

0	 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 Designer
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 and the Apparo gateway using the Apparo Configuration Manager
6	Installing clients Installing the clients 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 current
- IBM DB/2 9 current
- MS SQL Server 2008 current
- MS Azure SQL Database

This database user must be defined <u>before</u> 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

2.2 Using Java 11 that is not the default VM of Linux

If the Linux environment is not using Java 11 as default VM then the system variable PATH must be enhanced:

export PATH=/usr/lib/jvm/jdk11/bin:\$PATH\$

In this example the Java 11 VM is installed in /usr/lib/jvm/jdk11



2.3 Defining the security group for all Apparo Administrators users

In order to be able to open Apparo Designer with full access the user must be member of am Apparo Administrators group.

- Define a new group called **Apparo Designers** in the used security system, for example MS Active Directory
- Add for example the **root** user into this group. Later this user is able to open the Apparo Designer with full access



3 Installation of all Apparo application servers

	1
0	 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 Designer
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 of the Apparo gateway Configuration the web server and the Apparo gateway using the Apparo Configuration Manager
6	Installing clients Installing the clients in Apparo Designer



Start the Installation by execute the file

FastEdit3.3.0.x.zzz_linux_tomcat_standalone.sh

Hint: You must set the variable INSTALL4J_JAVA_HOME to the Java 11 VM / OpenJDK 11

Example: export INSTALL4J_JAVA_HOME=/etc/vm/j11

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

The graphical UI (X Window) is preferred but not necessary. You can run the 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

Setup - Apparo Fast Edit	×
Select your planned architecture	TS
Do you have a small environment or a distributed environment with many servers?	
⊖ Single Instance	
Complete Apparo environment is stored on one single host	
Multi Instance	
An Apparo environment with more than one web server or application server	
Apparo	el

Select "Multi Instance" and choose "Next".

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

Setup – Apparo Fast Edit	×
Select Apparo Fast Edit module for installation PRODUC	СТЗ
Apparo Fast Edit contains 2 different modules:	
The "Apparo gateway" must be installed parallel to a web server.	
The "Apparo application server" can be installed on each host.	
Apparo gateway parallel to an existing web server (IIS or Apache) Apparo application server	
< Back Next > Can	cel

Select

- Apparo gateway The Gateway must be installed parallel to the web server
- 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

Setup – Apparo	Fast Edit ×
Select Destination Directory Where should Apparo Fast Edit be installed?	
Select the folder where you would like Ap click Next.	paro Fast Edit to be installed, then
Destination directory	
/usr/local/Apparo	Browse
Required disk space: 568.2 MB	
Free disk space: 6,783 MB	
1 mm mm	
Abbaro	< Back Next > Cancel

Default path is: /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 start. After that this installation must be configured with the **Apparo Configuration Manager**.

Setup – Apparo	o Fast Edit	×
Installing Please wait while Setup installs Apparo Fast Edit on your computer.	APPARO	СТЯ
Extracting files lib/amd64/libunpack.so		
Apparo	Ca	ncel

3.5 Installation finish

	Setup - Apparo Fast Edit	×
	Completing the Apparo Fast Edit Setup Wizard	
	Setup has finished installing Apparo Fast Edit on you computer. The application may be launched by executing the installed start scripts.	ır
	Click Finish to exit Setup.	
	After this installation it is necessary to configurate this installation with the Apparo Configuration Manager.	
0	✓ Start now Apparo Configuration Manager	
	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

0	 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 Designer
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 of all Apparo gateways Configuration the web server and the Apparo gateway using the Apparo Configuration Manager
6	Installing clients Installing the clients in Apparo Designer



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 Apparo Fast Edit with "Start Fast Edit" button.

	Apparo Configuration Manager 3.7	55 –	×
File			
🗄 🔚 Save 💿 Test Configur	ation 🚺 Start Apparo 🕕 Show Application serv	er Log	
 Configuration Architecture Application server File system paths Web security system eMail security system Repository License key 	Name Architecture type	Value Multi instance / Application server	
	Welcome to the Apparo Configuration Manager! With this tool you can make the configuration of You can run the Configuration Manager directly a if you select the Configuration Manager entry in Save button:	an already installed Apparo. after installation or the start menu.	Ô



4.1 Architecture

	Apparo Co	onfiguration Manager 3.75		×
File				
🗄 🔚 Save 💿 Test Configura	ation 🜔 Start Apparo	() Show Application serve	er Log	
 Configuration Architecture Application server File system paths Web security system eMail security system Repository License key 	Architecture type	lame	Value Multi instance / Application server.	
	Welcome to the Appar With this tool you can You can run the Config if you select the Config Save button:	o Configuration Manager! make the configuration of guration Manager directly a guration Manager entry in t	an already installed Apparo. Ifter installation or he start menu.	Ŷ



4.2 Application server

	Apparo Configuration Manager 3.7	55 _ 0	×
File			
🗄 🔚 Save 💿 Test Configur	ation 🜔 Start Apparo 🕕 Show Application serv	er Log	
🗁 Configuration	Name	Value	
Architecture	Host name	ip-172-31-18-220.eu-west-1.comp	
Application server	Tomcat start port	18000	
📒 File system paths	Tomcat connector port	9800	
📒 Web security system	Server id	1	
📒 eMail security system	Apparo URL Folder	apparo	
Repository	Logging Level	Normal	
📒 License key	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 define="" here="" setting="" this="" to=""></click>	
	Each Apparo installation has at least 1 applicati That's a Apache Tomcat installation that is comm	on server. nunicating directly with the Apparo Gatewa	ay.

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



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.

🗁 Configuration	Name	Value	
🗐 Architecture	File path to batch/executeable files	/usr/local/Apparo/FastEdit/user_scripts	select
Application server	File path to client definitions	/usr/local/Apparo/FastEdit/clients	select
📒 File system paths	File path to custom java classes	/usr/local/Apparo/FastEdit/user_scripts	select
🗐 Web security system	Oracle Client path to tnsnames.ora	\$ORACLE_HOME/network/admin	select
🗐 eMail security system	Java Keystore path and name	/usr/lib/jvm/java-1.8.0/jre/lib/security/cacerts	select
🗐 Repository	Java Keystore password	***	
🗐 License key			
	The file system paths are used for executing of	scripts and java testing classes.	

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 thsnames.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 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.

4.3.6 Java Keystore password

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



4.4 Web security system

Following security systems are supported:

- LDAP
- MS Active Directory / Kerberos
- MS Azure AD
- 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

🗁 Configuration	Name		Value		
🖆 Architecture	Authentication	Login page			
Application server	Security System	MS Active Directory			
🛑 File system paths	Active Directory host name	<click defi<="" here="" td="" to=""><td>ne this setting></td><td></td><td></td></click>	ne this setting>		
🗐 Web security system	Use SSL	no			
📒 eMail security system	Active Directory port	389			
Repository	Base Distinguished Name (DN)	-retrieve automatic	-		
🖆 License key	Authentication Method	Simple bind			
	Bind user login	<click defi<="" here="" td="" to=""><td>ne this setting></td><td></td><td></td></click>	ne this setting>		
	Password	<click defi<="" here="" td="" to=""><td>ne this setting></td><td></td><td></td></click>	ne this setting>		
	Web security groups for administ	trators <click defi<="" here="" td="" to=""><td>ne this setting></td><td></td><td></td></click>	ne this setting>		
		Test Security System Connection	Test User Login		
	How Apparo must ask for the us Login page: The user is seeing a Single Sign On (SSO): The web s The browser must deliver the us domain. If the browser is not delivering a This is possible if the web serve Single Sign On (SSO) using Apac The web server (Apparo Gatewa variable will be delivered to the That means the SAML system m	er login. a login page and the system is asking erver (Apparo Gateway) is trying to c er name automatically (there are set o user name then the browser is asking r is running with Windows only. the variable: This is helpful if you wan Apparo application server. ust fill an Apache variable with the lo	g for username and g atch the user name i tings for that) and m ng for a login. t to use Apache web rom a Apache variab gin user name.	password. from the web browser. Tust be in the same Wind server and SAML. Ile.The content of this	lows

4.4.1 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**.



4.4.2 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 (;).

File Windows Services	Apparo Configuration Manager	3.833-SNAPSHOT – 🗆 🗙
Save 🚺 🌀 Test Config	uration 🛛 🚺 Start Apparo 🗍 🕕 Show Application	server Log 🕕 Show Gateway Log
Configuration	Name	Value
Architecture	Authentication	Login page
Application server	Security System	MS Active Directory
File system paths	Active Directory host name	Host1;Host2;Host3
Web security system	Use SSL	yes
eMail security system	Active Directory port	636;636;389
Repository	Base Distinguished Name (DN)	dc=sad,dc=com
License key	Authentication Method	Simple bind
	Bind user login	sad\administrator
	Password	***
	Web security groups for administrators	Apparo Designers

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.



4.4.3 Using SASL/Kerberos

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

File Windows Services	Appar	ro Configuration Manager	3.833-SNAPS	бнот	-	\times
🔚 Save 💿 Test Config	uration 🚺 📀 Start Apparo	() Show Application	server Log	Show Gateway Log		
Configuration	Name			Value		
Architecture	Authentication		Login page			
Application server	Security System		MS Active Dir	rectory		
File system paths	Active Directory host name		Host1;Host2	;Host3		
Web security system	Use SSL		yes			
eMail security system	Active Directory port		636;636;389	1		
Repository	Base Distinguished Name (DN)	dc=sad,dc=d	com;dc=domain1,dc=com;dc=domain2	,dc=com	
License key	Authentication Method		SASL			
	Bind user login		sad\adminis	trator		
	Password		***			
	Web security groups for adminis	strators	Apparo Desi	gners		

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.

\leftarrow \rightarrow \checkmark \uparrow \blacksquare \rightarrow Th	is PC > Local Disk (C:) > Program Files	> Apparo3220 > FastEdit > c	m	
	Name	Date modified	Туре	Size
Desktop	certificate	2/7/2022 4:24 PM 1/27/2023 8:12 AM	File folder File folder	
 Documents Downloads 	input	1/27/2023 8:12 AM	File folder File folder	
E Pictures 🖈	afecm.jar	1/27/2023 7:44 AM	JAR File	503 KB
FastEdit	Cm.bat	1/27/2023 7:44 AM	Windows Batch File	1 KB
🧅 Local Disk (C:) 📕 logs	 cmc.bat configuration.log 	1/2//2023 7:44 AM 1/27/2023 8:41 AM	Windows Batch File Text Document	1 KB 400 KB
🛩 🍠 This PC	configuration_32.xml configuration_default_32.xml	1/30/2023 10:21 A 1/25/2022 3:30 PM	XML File XML File	5 KB 1 KB
 > I 3D Objects > Desktop 	createRepository.sql	7/5/2022 2:03 PM 2/7/2022 5:14 PM	Microsoft SQL Ser Configuration setti	102 KB 3 KB
> Documents	krb5_example1.ini	1/27/2023 7:44 AM	Configuration setti	1 КВ 2 КВ
> 🗢 Downloads > 🎝 Music	MakeConfigurationIIS.bat	11/12/2021 5:08 PM	Windows Batch File	6 KB



4.5 eMail security system

An eMail 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:

	Apparo Configuration Manager 3.75	55	-		×
File					
🗄 🔚 Save 💿 Test Configura	ation 🚺 Start Apparo 🕕 Show Application serve	er Log			
🖿 Configuration	Name	Value			
Architecture	eMail security system	The same as the web securit	y sys.		
Application server					
🛑 File system paths					
📒 Web security system					
📒 eMail security system					
🛑 Repository					
🕯 License key					
	Security settings for verifying security groups use If there is a web security system specified, it will this category is not editable.	ed by eMail Import Business Ca be used for the eMail security	ases. as we	ell an	d



4.6 Repository

	Apparo Configuration Manager 3.7	55 _ 🗆 X
File		
🔡 Save 💿 Test Configura	ation 🜔 Start Apparo 🕕 Show Application serv	er Log
🗁 Configuration	Name	Value
Architecture	Database connection	Oracle ~
Application server		Oracle
🛑 File system paths		Oracle (using service name)
🛑 Web security system		Oracle Client
🛑 eMail security system		MS SQL Server 2008-2019 MS SQL Server 2008-2019 (Use Windows Aut
Repository		IBM DB/2 LUW
🛑 License key		Internal database
	Following databases can be used for the Appare	Repository:
	Oracle 10g - 18c	
	MS SQL Server 2005 - 2019 IBM DB/2 9 - 11.1	
	Internal Database	
	Annaro is using the IDBC interface to connect to	the database
	Therefore a database client installation is not ne	ecessary.

In the database repository all Business Case definitions are stored.



4.7 License key

You must copy your license key for **version 3.3** into this setting.

	Apparo Configuration Manager 3.75	5	-		×
File					
🗄 🔚 Save 💿 Test Configur	ation 🚺 Start Apparo 🕕 Show Application serve	er Log			
🗁 Configuration	Name	Value			
🛑 Architecture	Type of license	Own license key		\sim	
Application server	License key	Apparo Small License			
🛑 File system paths		Own license key			
📒 Web security system					
📒 eMail security system					
Repository					
🛑 License key					
	Test Licens	se Key			
	You can choose between				^
	* Apparo Small License				
	* Own license key				
	The Apparo Small License is ready for 3 named u	sers and up to 10 Business C	ases.		~

Hint: You can't use a license key that is for version 3.1 or 3.2.

Please contact the Apparo support to get a new license key for version 3.3.0:

support@apparo.solutions



To do list:



Press the "Test Configuration" button for testing all settings.



2

Press the "Start Fast Edit" button for starting the application server

You can see the log file of the application server with pressing <u>"Show Log</u>"
 If the application server is running then you can see in the log:
 + Apparo Fast Edit 3.3.x.y (Build nnn) was successfully started at XXXX

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

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

Example: http://appserver1:18000/apparo/pages/apptest.xhtml

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

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.



5 Installation of the Apparo gateway

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 Designer
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 of all Apparo gateways Configuration the web server and the Apparo gateway using the Apparo Configuration Manager
6	Installing clients Installing the clients in Apparo Designer



Start the installation by running the file

FastEdit3.3.0.y.zzz_linux_tomcat_standalone.sh

Hint: You must set the variables **INSTALL4J_JAVA_HOME** to the Java 11 VM / OpenJDK 11 Example: export INSTALL4J_JAVA_HOME=/etc/vm/j11



Confirm the beginning of the installation by clicking "Next".



5.1 License agreement

Setup - Appar	o Fast Edit ×	
License Agreement Please read the following important information before continuing.		
Please read the following License Agreer this agreement before continuing with tl	nent. You must accept the terms of ne installation.	
Copyright © Apparo Sueddeutschland GmbH CONTENTS: This software product ("Software") consists of trade secrets and intellectual property belonging to, or licensed by, Apparo Süddeutschland GmbH, residing on this medium ("Medium") and related user documentation ("Related Documentation").		
I accept the agreement I do not accept the agreement Apparo		
	< Back Next > Cancel	

Read and confirm the license agreement by clicking "Next".



5.2 Selecting the architecture

Setup - Apparo Fast Edit	×	
Select your planned architecture	s	
Do you have a small environment or a distributed environment with many servers?		
Single Instance Complete Apparo environment is stored on one single host		
Multi Instance		
An Apparo environment with more than one web server or application server		
Apparo		
< Back Next > Cancel		

Select "Multi Instance" and choose "Next".

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

Setup – Apparo Fast Edit 🛛 🛛 🗙		
Select Apparo Fast Edit module for installation		
Apparo Fast Edit contains 2 different module	s:	
The "Apparo gateway" must be installed para	illel to a web server.	
The "Apparo application server" can be installed on each host.		
Apparo gateway parallel to an existing web server (IIS or Apache)		
○ Apparo application server		
Apparo	< Back Next > Cancel	

Select Apparo gateway and choose "Next".



5.3 Defining the target file directory

Setup – Apparo Fast Edit 🛛 🗙		
Select Destination Directory Where should Apparo Fast Edit be installed?		
Select the folder where you would like Apparo Fast Edit to be installed, then click Next.		
Destination directory		
/usr/local/ApparoGateway	Browse	
Required disk space: 371.7 MB Free disk space: 6,780 MB		
Apparo	< Back Next > Cancel	

Default path:

/usr/local/ApparoGateway

Please define the path and choose "Next".



5.4 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**.

Setup – Apparo Fast Edit		
Installing Please wait while Setup installs Apparo Fast Edit on your computer.		CTS
Extracting files lib/rt.jar		
Apparo	Can	cel

5.5 Installation finish

	Setup - Apparo Fast Edit	х
	Completing the Apparo Fast Edit Setup Wizard	
	Setup has finished installing Apparo Fast Edit on you computer. The application may be launched by executing the installed start scripts.	ır
	Click Finish to exit Setup.	
	After this installation it is necessary to configurate this installation with the Apparo Configuration Manager.	
22	✓ Start now Apparo Configuration Manager	
	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 the Apparo gateway

0	 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 Designer
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
6	Configuration of the Apparo gateway Configuration the web server and the Apparo gateway using the Apparo Configuration Manager
6	Installing clients Installing the clients in Apparo Designer



Important

Before starting of the Apparo gateway configuration it is important that the configuration of all Apparo application servers with the Apparo Configuration Manager is <u>successfully finished</u> and the application servers are already running

with pressing Button "Start Fast Edit".

	Apparo Configuration Manager 3.755	-		×
File				
🗄 🔚 Save 🚺 Deploy Config	juration			
🗁 Configuration	Name	Value		
 Architecture Apparo gateway Application servers 	Architecture type	Multi instance / Gateway.		
	Welcome to the Apparo Configuration Manager!			^
	With this tool you can make the configuration of	an already installed Appar	о.	
	Save button: Saving your settings into configuration_32.xml file	e		
	Deploying Configuration			~

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:



Press the "Deploy Configuration" button for deploying.



2

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.

	Apparo Configuration Manager 3.755	_ 0	×
File			
🔡 Save 🚺 Deploy Config	guration		
🗁 Configuration	Name	Value	
 Architecture Apparo gateway Application servers 	Architecture type	Multi instance / Gateway	
	Here you can see the selected Apparo architect The architecture choice has been already done "Single instance": Your existing environment is ir "Multi instance": One or more Apparo Gateways Application servers are installed on one or more hosts.	ure. at installation time. nstalled on one computer only. and one or more Apparo	Î
	A "Single instance" is useful for small environme	nts or test systems.	~



6.2 Apparo gateway

	Apparo Configuration Manage	er 3.755 _ 🗆 X
File		
🔡 Save 🚺 Deploy Confi	guration	
🗁 Configuration	Name	Value
🛑 Architecture	Apparo URL Folder	apparo
📒 Apparo gateway	Host name	ip-172-31-18-220.eu-we
Application servers	Apparo gateway protocol	HTTP only
	Apparo gateway HTTP port	80
	Use Single Sign On (SSO)	no



6.3 List of application servers

	Apparo Configuration Manager 3.755	_ □	×
File			
🗄 🔚 Save 🚺 Deploy Config	uration		
🖿 Configuration	Name	Value	
 Architecture Apparo gateway Application servers 	Communication port s1	ip-172-31-18-220.eu-we	
	Each Apparo application server has		Â
	* an unique server id (1,2,3,n) * an application server host name * a communication port (default: 9800) The Apparo Gateway is responsible to transport	the request from the web	
	server to an application server. Therefore it must know	all 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 a unique ID starting with 1, then 2, 3, 4, ...

This Server ID must be used in the Apparo application settings too.



6.4 Configuration of the Apache web server with ajp proxy

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 LoadModule mod_lbmethod_bytraffic modules/mod_lbmethod_bytraffic.so

2. Enhance configuration of Apache

See text file **afe.conf** in the **cgi-bin** file directory of Apparo:

```
<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=On
                     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
        SSPIAuth On
           SSPIAuthoritative On
          SSPI0fferBasic On
# SSPIBasicPreferred
          # SSPIUsernameCase lower
          require valid-sspi-user
     </Location>
</IfModule>
```

Please copy this file into the file directory conf.d of your Apache installation.



Restart the web server.

Hint if using RedHat Linux:

If you get an Apache error like: [error] (13)Permission denied: proxy: AJP: attempt to connect to <servername:9800> failed

Please enter following command:

/usr/sbin/setsebool -P httpd_can_network_connect 1

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.



6.5 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}e

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



Open the portal

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:

		Client manaç	gement and settings	Anonymous	Close Designer
	+ New 🛓 Import 🛓	; Export			
<	Installed clients				
Connections	Client ID	Client name	Associated security groups	Orde	r Actions
Business Cases	No client is currently installed. I	Please create one client first.			
¢°					
Settings					ş
*					ow de
Clients					cripti
ž About Appero					g

Please read now the document "Configuration guide".



The installation & configuration on serverside is now successfully completed.

Please also read the following chapter 'Browser requirements'.

We recommend to open the "Training" Icon in the Apparo Designer. This page contains helpful training movies.





7 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 file, default: true
-start true/false	Start Apparo Fast Edit (if no gateway), default: true



8 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.

8.1 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></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></business_case_id>	ID of a Business Case you want to export.
-clientId <client_id></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></conn_name>	Name of a database connection you want to export.
-emailc <conn_name></conn_name>	Name of an email connection you want to export.
-f <filepath></filepath>	Filename & path where to write the exported XML.
-folderPath <path></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></password>	The password used to authenticate. This setting is necessary in a secured environment non BI environment.
-u <username></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



8.2 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></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></client_id>	ID of a client that Business Cases, language definitions, database messages or connection definitions will be imported into.			
-f <file></file>	The file that contains the client, Business Case, language definition, database messages or connection definitions.			
-h	Displays this help text			
-importSecurity <true false></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></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></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></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></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></password>	The password used to authenticate. This setting is necessary in a secured environment.			
-u <username></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



9 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: 4096 (in MB)

Example:

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

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



10 Automatic start-up of Apparo

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



11 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



The Apparo system log

All start system messages of Apparo Fast Edit are stored in file

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

After start all log entries are stored in the **Apparo repository** and can be shown using the Apparo Designer or Apparo Configuration Manager.



12 Online documentation

The complete documentation is stored in

[APPARO_HOME]/FastEdit/doc



13 Browser requirements

13.1 Supported browsers and versions

Microsoft Edge

Mozilla Firefox (current version)

Google Chrome (current version)

Apple Safari (current version)

13.2 Supported operating systems for client browsers

Microsoft Windows Android Apple iOS

13.3 Additional settings for all browsers

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



14 Support

If you need support please write an eMail to:

support@apparo.solutions