

Installation Instruction for Consistency Checker on Glassfish Server Open Source Edition

Ericsson Dynamic Activation

INSTALLATION INSTRUCTION

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Contents

1	Introduction	1
1.1	Purpose and Scope	1
1.2	Target Groups	1
1.3	Typographic Conventions	1
1.4	Prerequisites	2
2	Installation	3
2.1	Installation Prerequisites	3
2.2	Installing Consistency Checker	4
2.3	Security Hardening	5
3	Configuration of connection to the Sentinel license server	7
4	Installation Verification	9
5	Uninstallation	11
6	Upgrade Consistency Checker	13
	Glossary	15
	Reference List	17





1 Introduction

This section is an introduction to this document. It contains information about the prerequisites, purpose and scope, and target groups for the document. This section also contains explanations of typographic conventions used in this document.

1.1 Purpose and Scope

The purpose of this document is to provide knowledge to the readers about the Consistency Checker installation process.

1.2 Target Groups

The target group for this document is a user responsible for putting the system into operation, meaning installation, upgrade and configuration activities.

1.3 Typographic Conventions

This section describes the typographic conventions commonly used, see Table 1 and Table 2 for detailed information.

Table 1 Typographic Conventions

Convention	Description	Example
Output Information	Text displayed by the system is shown in monospaced font.	System awaiting input
User Input	A command that must be entered in a Command Line Interface (CLI) exactly as written is shown in bold monospaced font.	cd \$HOME
Command Variables	Command variables included in a command, are enclosed by angle brackets <>. They are shown in bold, italic monospaced font.	<home_directory>
GUI Objects	GUI objects, such as menus, fields, and buttons are shown in bold font.	Click File > Exit .
Key Combinations	Key combinations are shown in bold font. The plus sign (+) indicates that the keys must be pressed simultaneously.	Press Ctrl+X to delete the selected value.
System Elements	Command and parameter names, program names, path names, URLs, and directory names are shown in monospaced font. The use of the slash (/) is applicable for Linux™ and UNIX™ systems. Windows™ based systems use the backslash (\).	The files are located in /etc/opt/ericsson The files are located in E:\Test



Convention	Description	Example
Code Examples	Code examples are shown in monospaced font.	<code>Private Map<String, AttributeRule> attributeMap = new HashMap<String, Att</code>
Command Example	Code examples are shown in bold font.	<code>\$ more var/log/backup/backup.log.0.1.67</code>

Table 2 Product Users

User	Prompt
root	#
adm	>
Administrator included in the activation group	\$
boot prompt	ok

1.4 Prerequisites

The following are the prerequisites to make full use of this document:

- The target audience is familiar with Java™ Enterprise Edition (JEE) and the Glassfish Server Open Source Edition.
- To get an overview of the Consistency Checker and deployment scenarios, refer to *Function Specification Consistency Checker*, Reference [1].



2 Installation

The Consistency Checker is hardware and operating system independent, that is, it can be deployed on any JEE 7 compliant application server.

This document describes how to install the Consistency Checker on Glassfish Server Open Source Edition.

2.1 Installation Prerequisites

Installation of Consistency Checker requires the following:

Note: If you are installing as a non-root user on Solaris or Linux, you must have read-write access to the following directories:

- The installation directory you select.
 - The home directory of the installation user.
 - The `/var/tmp` directory.
 - The `/tmp` directory.
 - The web server installation directory and the web server instance directory, if applicable.
- Make sure the Consistency Checker software is available.
 - Make sure the latest available release of Glassfish Server Open Source Edition v4.1.1 is installed and running.
 - For installation of the Glassfish Server, follow the installation instruction described in <http://glassfish.java.net>.
 - For starting the Glassfish domain, ensure that the `PATH` environment variable includes the `<Glassfish>/bin` directory. This is to enable the possibility to call the `asadmin` command.
- Note:** When creating the Glassfish domain it is recommended to specify an administrator password. This password is later used when installing the Consistency Checker.
- Make sure the latest available release of Oracle™ JDK 8 is installed.
 - If the Glassfish domain HTTP port is changed, or if HTTP Secure (HTTPS) is used, uncomment and update the `com.ericsson.consistency.callbackURL` property in the `<CheckerHomeDir>/conf/ccengine.properties`, to update the callback URL.



- Make sure the Sentinel™ License server with necessary license keys installed is accessible on localhost. If there is no existing Sentinel license server, download the SW from the SW Gateway. Note that the Sentinel license server is operating system dependent, choose the SW package that is designed for the target operating system when downloading.

Note: If large amount of data will be analyzed, it is not recommended to install Consistency Checker (`<CheckerHomeDir>`) on same disk partition as the operating system, since a lot of disk space will be used.

If Consistency Checker is running out of disk space during processing of an order, a report will not be created. Thus, it will not be visible that the order has failed. In order to minimize the risk, use separate disk partition for temporary storage and dump store. That is done by point following properties to a proper partition, in the `<CheckerHomeDir>/conf/ccengine.properties` file:

```
com.ericsson.consistency.check.Constants.  
DUMP_STORE_DIRECTORY
```

```
com.ericsson.consistency.check.Constants.TEMP_DIR
```

2.2 Installing Consistency Checker

This section contains instructions on how to install the software for Consistency Checker.

By default the installation is configured to use maximum 1GB RAM memory. For production environment it is recommended to increase this value to at least 4GB.

Note: Memory configuration over 3GB requires 64 bit operating system.

To change the maximum RAM usage configuration open the `install_demo_on_GF.bat/.sh` file in a text editor and change the line that ends with `-Xmx1024m`.

To set 4GB RAM as the maximum usage, change the value for `-Xmx1024m` to `-Xmx4g`.

Perform the following:

1. Unzip the software to the desired directory, hereafter referred to as `<CheckerHomeDir>`.
2. Go to `<CheckerHomeDir>/bin` directory and start the installation script with the option `install`.

When installing in a linux/unix environment, use the `.sh` script:

```
# ./install_on_GF.sh install
```




When installing in a Windows environment, use the `.bat` script:

```
# install_on_GF.bat install
```

Answer the following questions when prompted for input:

Please enter Glassfish admin user - press `Enter` when using the default user name - `admin` - or write the user name entered during installation.

Please enter Glassfish admin password - write the password entered during Glassfish installation.

Please enter Glassfish domain - press `Enter` when using the default domain - `domain1` - or write the domain name entered during installation.

Please enter Glassfish adminport - press `Enter` when using the default port - `4848` - or write the port number entered during installation.

After the installation is completed, do not move `<CheckerHomeDir>`.

Note: The `<CheckerHomeDir>` is the actual path to the Consistency Checker installation directory.

The customizable Excel Report export is by default enabled. To disable it change the configuration in `<CheckerHomeDir>/conf/cengine.properties` (requires a restart). For information about how to customize Excel Report export, refer to *Programmers Guide for Consistency Checker*, Reference [2].

After finishing the Consistency Checker installation, continue to install integration specific content, such as customized rules, Data Models, Extraction Handlers, Resource Adapters, and so on. For information, refer to *Programmers Guide for Consistency Checker*, Reference [2].

If only **Pattern based analysis** to be use, only this command needs to be executed:

```
# asadmin deploy <CheckerHomeDir>/bin/APP_Offline.ear
```

2.3 Security Hardening

Note: This section covers only the application server and the consistency checker application.

The operation system and other applications running on the same host as Consistency Checker is not covered here.

Ericsson recommends performing the following procedures to avoid easily-foreseeable security related vulnerabilities:



- Ensure that a non-default administrator password is configured in the Glassfish application server.
- Add new Consistency Checker users in the `DefaultCCRealm` and remove default user (`super`).
- Configure `HTTP Listener` for SSL (`https`) and disable the non-SSL based `HTTP Listeners`.

For detailed instructions, refer to the Glassfish documentation.



3 Configuration of connection to the Sentinel license server

To connect to a license server, the license server's port number need to be inserted in the `ccengine.properties` file in `<CheckerHomeDir>/conf` directory:

```
com.ericsson.consistency.licensing.ServiceConfigurator.  
LICENSE_PORT = <license port>
```

Save the file and restart the application server, from the

`<GlassFishInstallation>/bin` directory:

```
> asadmin stop-domain <Checker domain>
```

```
> asadmin start-domain <Checker domain>
```





4 Installation Verification

This section contains information on how to perform a manual verification of the Consistency Checker installation.

1. Check that it is possible to log on to the GUI, via the `http://<host>:<port>/cc_management` URL, with one of the predefined users.
2. Check the application server logs in the `<GlassFishInstallation>/domains/<DomainName>/logs` directory, that no errors or warnings have occurred related to the Consistency Checker. In this case `<DomainName>` is the domain name entered when installing the Consistency Checker. The default is `domain1`.





5 Uninstallation

This section describes how to uninstall the Consistency Checker.

Please note that when using the system property `DUMP_STORE_DIRECTORY` to point to another directory for dump files other than the default one, all dump files in that directory will have to be deleted manually.

This system property is located in the `<CheckerHomeDir>/conf/ccengine.properties` file.

In order for the system to be completely clean from Consistency Checker, remove the `<CheckerHomeDir>` including its contents after the uninstallation.

In order to uninstall the Consistency Checker from Glassfish Server Open Source Edition, follow the steps:

1. Go to `<CheckerHomeDir>/bin` directory and start the installation script with the option `uninstall`.

When uninstalling in a linux/unix environment, use the `.sh` script:

```
# ./install_on_GF.sh uninstall
```

When uninstalling in a Windows environment, use the `.bat` script:

```
# install_on_GF.bat uninstall
```

Answer the following questions when prompted for input:

Please enter Glassfish admin user - press `Enter` when using the default user name - `admin` - or write the user name entered during installation.

Please enter Glassfish admin password - press `Enter` when using the default password - `adminadmin` - or write the password entered during installation.

Please enter Glassfish domain - press `Enter` when using the default domain - `domain1` - or write the domain name entered during installation.

Please enter Glassfish adminport - press `Enter` when using the default port - `4848` - or write the port number entered during installation.





6 Upgrade Consistency Checker

To upgrade the Consistency Checker from a version that is used before Multi Activation 16.2:

Note: In this section, `domain1` is used as an example.

1. Stop the application server to be upgraded.

```
# asadmin stop-domain domain1
```

2. Back up the `<CheckerHomeDir>` folder to an archive folder.

3. Install the Oracle™ JDK 8.

Note: Ensure that the JDK is installed correctly. Use the following command to check the version:

```
# java -version
```

4. Install Glassfish 4.1.1. For instructions, refer to <https://glassfish.java.net/docs/4.0/installation-guide.pdf>.

Note: Ensure that the new `asadmin` script is available in the `PATH` environment variable.

5. Start Glassfish.

```
# asadmin start-domain domain1
```

Note: Ensure that a proper Glassfish version is installed correctly. Use the following command to check the version:

```
# asadmin version
```

6. Delete the old `<CheckerHomeDir>` folder, and unpack the new Consistency Checker package to the same location. A new `<CheckerHomeDir>` is created.
7. If the old content (configuration, orders, reports, and specifications) are still applicable after upgrade, copy them from the archive folder to the new `<CheckerHomeDir>`. The content to be copied are:
 - `<CheckerHomeDir>\conf`
 - `<CheckerHomeDir>\var`
8. Install Consistency Checker. See **Installing Consistency Checker**, Step 2.



9. Customize customer specific adaptations, such as data models, extraction handlers, resource adapters. For instructions, refer to *Programmers Guide for Consistency Checker*, Reference [2].

10. Restart the Consistency Checker.

```
# asadmin stop-domain domain1  
# asadmin start-domain domain1
```

11. If there are old content to be migrate, log in to the GUI

- a. Log in to the GUI.
`http://[host]:[port]/cc_management`
- b. Go to `http://[host]:[port]/cc_management/#migrate`, and click **Start migration**.

Note: After migration, the following changes are made automatically:

- If there were several orders with the same name, their identities are suffixed with `_mig[index]`.
- If there were any, whitespaces included in the old order-identities are replaced with underscores (`_`).

12. Verify that the expected content is migrated.



Glossary

CLI

Command Line Interface

GUI

Graphical User Interface

JEE

Java Enterprise Edition





Reference List

Ericsson Documents

- [1] *Function Specification Consistency Checker*, 21/155 17-CSH 109 628 Uen
- [2] *Programmers Guide for Consistency Checker*, 25/1553-CSH 109 628 Uen