

Setup of GlassFish and security measures

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System

- I use Debian, version 8.7 ([why?](#))
- Vi is used as a text editor in the following

Installing the JDK 8

Create a new file:

```
sudo vim /etc/apt/sources.list.d/java-8-debian.list
```

add these lines:

```
deb http://ppa.launchpad.net/webupd8team/java/ubuntu trusty main
```

```
deb-src http://ppa.launchpad.net/webupd8team/java/ubuntu trusty main
```

Close the file.

get the certif key:

```
sudo apt-key adv --keyserver keyserver.ubuntu.com --recv-keys EEA14886
```

install the JDK 8:

```
sudo apt-get update && sudo apt-get install oracle-java8-installer
```

Set the env variables straight:

```
sudo apt-get install oracle-java8-set-default
```

Installing Glassfish 4.1

We will install it in /opt/app-server

create a glassfish user (here the `-m` option creates its home directory if not already present):

INFO

maybe a good idea to choose a user name different from glassfish - default values are always to be avoided.

```
adduser glassfish -shell /bin/bash passwd glassfish adduser glassfish sudo
```

```
//ST: !  
change to user glassfish
```

```
su - glassfish
```

mkdir /opt/app-server make the user owner of /opt/app-server:

```
sudo chown -R glassfish /opt/app-server  
sudo chmod -R 700 /opt/app-server
```

download glassfish from here: <https://glassfish.java.net/download.html>

```
cd /opt/app-server  
wget http://download.java.net/glassfish/4.1.2/release/glassfish-4.1.2.zip
```

```
sudo apt-get install zip unzip unzip glassfish-4.1.2.zip
```

Glassfish is now installed.

Hardening Glassfish 4.1

We can access glassfish commande line by doing:

```
cd glassfish4/glassfish/bin
```

```
./asadmin
```

Change the masterpassword:

source: <http://ufasoli.blogspot.fr/2013/07/glassfish-changing-master-password-and.html>

```
change-master-password --savemasterpassword
```

(put "changeit" when the default password is asked, then choose your own)

We will now delete the default domain ("domain1") and create a new one. 2 reasons for this:

- We will create a domain with a custom name, to avoid using the default value.
- Create a domain from scratch allows to make use of the nice "portbase" option:

→ The "portbase" option allows for creating a set of ports different from the default ones.

(source: https://blogs.oracle.com/alexismp/entry/flexible_glassfish_domain_creation_using)

```
delete-domain domain1
```

```
create-domain --portbase 17390 yourcustomdomain
```

NOTE

just letters and numbers in the domain name.

So, with portbase 17390 (choose your own value instead), the port for the GlassFish GUI console will be $17390 + 48 = 17438$

Add a tunnel for port 17438 in your SSH connection. Restart your SSH connection.

Go back to `/opt/app-server/glassfish-4/glassfish/bin` and `./asadmin`

```
start-domain
```

If you tunneled the port 17438 in your SSH, you can now go to <http://localhost:17438>

In the GUI console,

- change the admin password
- change the "Address field" in http-listener-2 sub menu to the IP of the server.

The following tips are directly taken from <http://blog.eisele.net/2011/05/securing-your-glassfish-hardening-guide.html>

- change the content of `/domains/yourcustomdomain/docroot/index.html` → "my server is online"
- create an "errorpages" subdir in your domain root folder and an error page in `/domains/yourcustomdomain/errorpages/404.html`

Then, in the GUI console, point to this file via:

```
Configuration|Virtual Server|server
```

```
name: send-error_1
```

```
value: code=404 path=/errorpages/404.html reason=Resource_not_found
```

Hide the identity of the server in the headers:

- In Network-config → Network-listeners → http-listeners (1 et 2) → HTTP tab: turn off the "XPowered By:" header with your http-listener

- add a JVM-Option `-Dproduct.name=""`

the end

Author of this tutorial: [Clement Levallois](#)

All resources on linux security: <https://seinecle.github.io/linux-security-tutorials/>