

# Installation guide

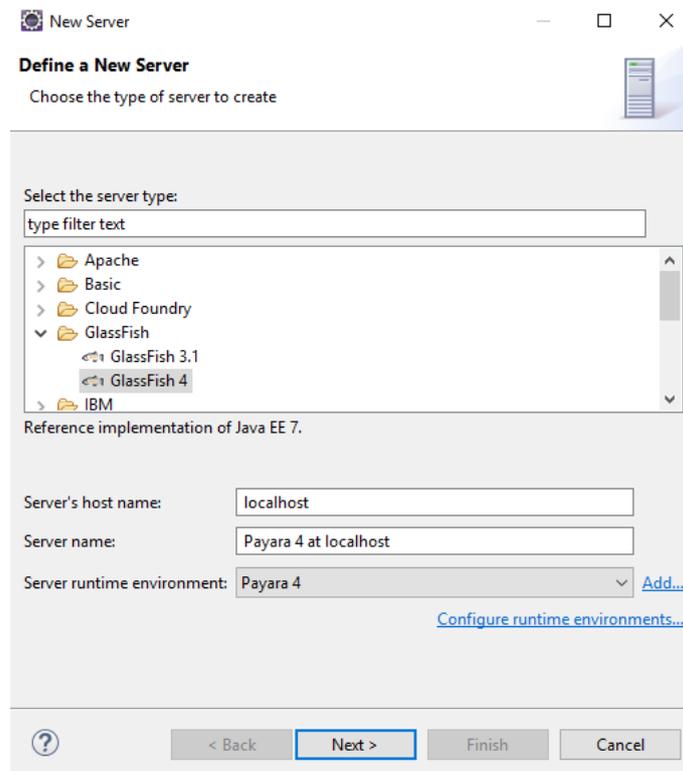
This document is a guide for installing the application starting from its source code.

## Deployment and execution using Payara Full and Eclipse

This part explains how to deploy and execute the application using an existing installation of Eclipse for Java EE (tested with Eclipse Neon v4.6 for Java EE) linked to Payara Application Server (tested with Payara Server Full 4.1.1.164).

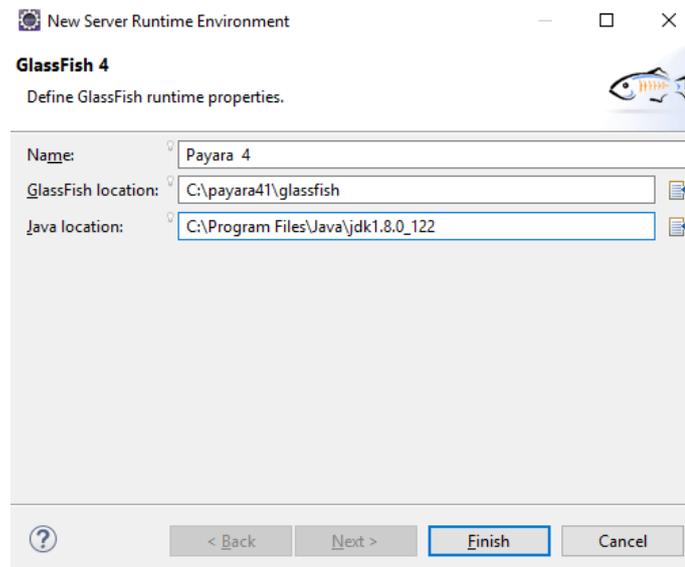
### Setup

1. Download Payara Server Full at: <http://www.payara.fish/downloads>
2. Install Payara by extracting the content of the archive in a folder of your choice (e.g. C:\payara41)
3. Install the Eclipse plugin “GlassFish Tools” that lets you set up and configure GlassFish or Payara servers directly in Eclipse. The plugin is freely available at: <https://marketplace.eclipse.org/content/glassfish-tools>
4. In Eclipse, add a new Server by selecting “File>New>Server”



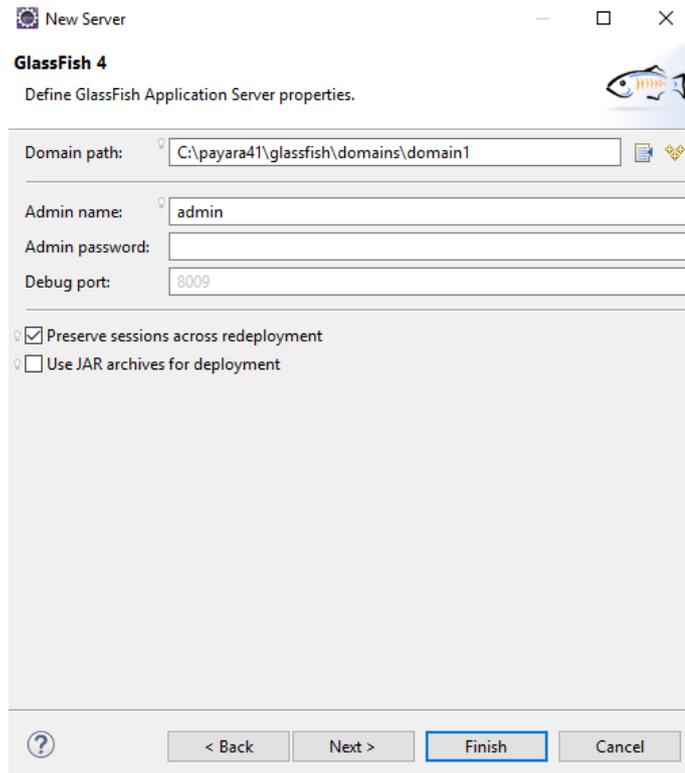
Picture 1- Starting page of the “New Server” wizard in Eclipse

5. In the first page select GlassFish 4 from the list and, in case this is the first time you add a Payara Server, you will need to add a new Server Runtime Environment by clicking on “Add...”
6. In the next page choose a name for the runtime environment; then, select the path to the “glassfish” folder (that can be found inside the installation folder of Payara) and the one to your java installation folder. Finally click on “Finish”.



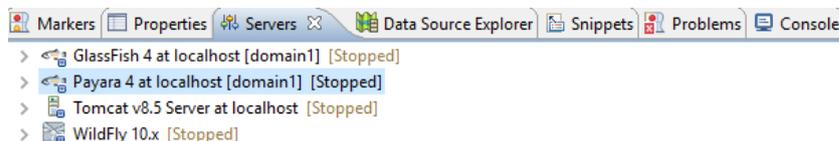
Picture 2- Page to configure a new Server Runtime Environment in Eclipse

7. Select the newly created runtime environment from the list and click “Next” to proceed with the wizard. On the next page, select a valid domain path and your admin credentials. The installation folder of Payara already contains a standard domain at the path “\*\glassfish\domains\domain1”. For testing purposes, the credentials can be left unmodified.



Picture 3- Last page of the “New Server” wizard in Eclipse

8. Click on "Finish" to complete the setup. Once completed, a new entry should have been added to the Eclipse “Servers” tab. The entry can be used to start the server, stop it, or deploy new applications from inside Eclipse itself.

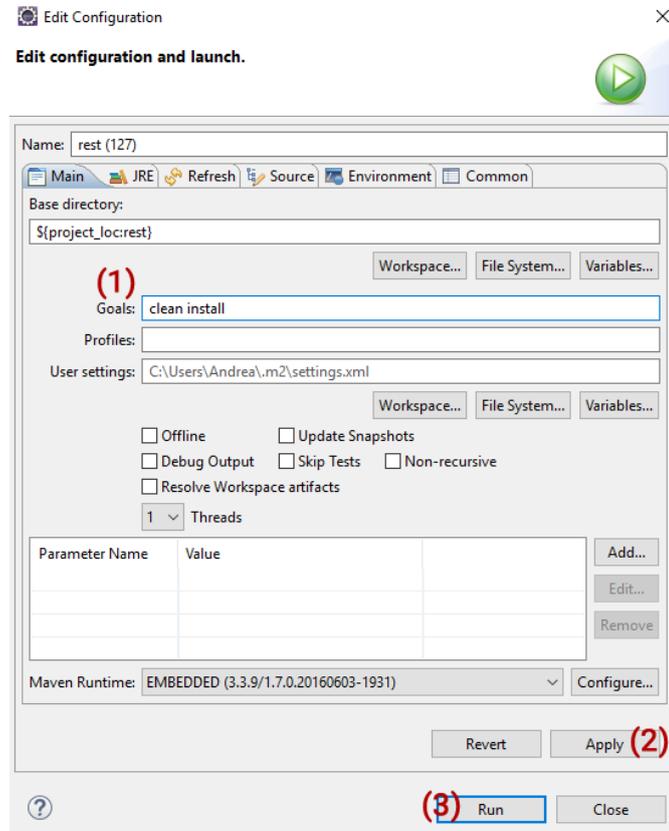


Picture 4- Newly created server (Payara 4 at localhost) in the “Servers” tab of Eclipse

### ***Application build and deploy***

1. Download the project source code and import it in Eclipse by selecting “File>Import>Existing Projects Into Workspace” from the menu.
2. Then choose “Project>Clean...” from the menu and select the imported project to clean it.
3. Right click on the project entry in the Eclipse Project Explorer and select “Maven>Update Project...” to update the project and eventually download the missing dependencies.
4. Right click on the project entry in the Eclipse Project Explorer and this time select “Run As>5 Maven Build...”

5. The “Edit Configuration” page should open. Add “clean install” to the “Goals” textbox, click on “Apply” and then on “Run”.



Picture 5- Maven configuration page. Add (1) "clean install" in the "Goals" textbox, then (2) click on "Apply" and finally (3) "Run"

6. Maven will now build the project and create the .war file to deploy.
7. Right click on the previously installed Payara Server inside the Eclipse “Servers” tab and select “Add and Remove...”
8. Select the application from the list on the left and add it to the server by clicking on “Add” (the application entry should move to the list on the right) and then on “Finish”.

## Execution

1. Start the database integrated in Payara from the asadmin console using the command: “start-database”. The console executable can be found inside the bin folder in the Payara installation directory (e.g. C:\payara41\asadmin.bat start-database). The database needs to be started every time the application is used.
2. Select the server in the Eclipse “Servers” tab and press “Ctrl+Alt+R” to start it. The server will initiate the startup procedure and, if the application has been added as shown previously, the application will be deployed.

- Once the server startup operation is over, the deployed application should be tagged as [Synchronized].
- To check the correct functioning of the application, go to <http://localhost:8080/rest/tuProlog/main> and a service descriptor XML should show.



Picture 6- getInfo() results shown in a browser, proof that the application is running

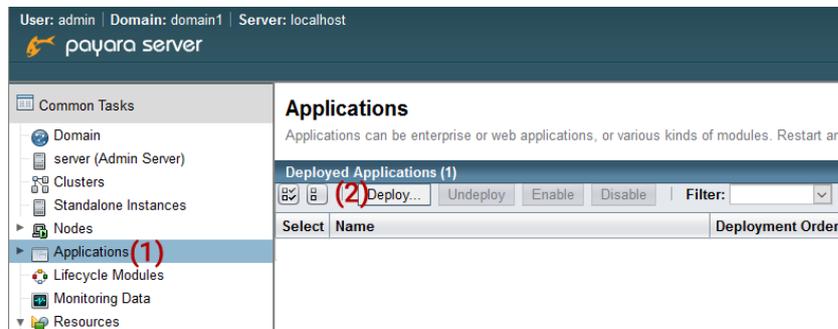
## Deployment and execution with Maven and Payara/Payara Micro

### Build the project using Maven

- Download and install Maven (you can find it at <https://maven.apache.org/download.cgi>).
- Download the project source code.
- Inside the project main folder, execute the command: “mvn clean install” to build the project and create the “rest.war” archive.

## Deploy and execution with Payara Server Full

1. Download Payara Server Full at <http://www.payara.fish/downloads>
2. Install Payara by extracting the content of the archive in a folder of your choice (e.g. C:\payara41)
3. Start the database integrated in Payara from the asadmin console using the command: “start-database”. The console executable can be found inside the bin folder in the Payara installation directory (e.g. C:\payara41\asadmin.bat start-database). The database needs to be started every time the application is used.
4. Use again the asadmin console to start the server with the command “start-domain” (e.g. C:\payara41\asadmin.bat start-domain).
5. Open the Payara admin GUI at <http://localhost:4848/>



Picture 7- Payara admin GUI. To deploy an application select “Applications” from the menu (1) and then “Deploy...” (2) to select the archive containing the application to deploy.

6. Select “Applications” from the menu on the left and then “Deploy...” to the deploy the “rest.war” archive on the Application Server.
7. The application should now be listed in the “Deployed Applications” tab and it can be checked at <http://localhost:8080/rest/tuProlog/main>

## Deploy and execution with Payara Micro Edition

1. Download Payara Micro at <http://www.payara.fish/downloads>
2. Move the Payara Micro .jar file in a directory of your choice and create a new folder to be used as root folder for Payara Micro (e.g. move the .jar file to C:\payara41 and create to folder C:\payara41\rootDir)
3. Start both the server and the application with a single command:

```
java -jar payara-micro.jar --rootDir .\rootDir  
--deploy rest.war --noCluster
```

4. As long as the server is running, the application can be found at <http://localhost:8080/rest/tuProlog/main>