

Oracle Health Insurance Back Office

JET Application Installation & Configuration Manual

Version 1.2

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CHANGE HISTORY

| Release | Version | Changes |
|-------------|---------|--|
| 10.18.1.3.0 | 0.1 | <ul style="list-style-type: none">• Creation |
| 10.18.1.3.0 | 0.2 | <ul style="list-style-type: none">• Revision 07-09-2018• Add 'Back Office' to 'Prerequisites'• Revised 'Deploy HSL and PSL services' |
| 10.18.1.3.0 | 0.3 | <ul style="list-style-type: none">• Revised PSL installation |
| 10.18.1.3.0 | 0.4 | <ul style="list-style-type: none">• Revised architecture diagram• Minor textual changes• Revised note about hsl.tokenvalidation.rotor |
| 10.18.1.3.0 | 1.0 | <ul style="list-style-type: none">• Reviewed. Slightly adjusted and updated to version 1.0. |
| 10.18.2.0.0 | 1.1 | <ul style="list-style-type: none">• Republished with new part nr. |
| 10.18.2.3.0 | 1.2 | <ul style="list-style-type: none">• Added description for PSL services deployment.• Added description of delivery of properties file templates. |

RELATED DOCUMENTS

A reference in the text (**doc[x]**) is a reference to another document about a subject that is related to this document.

Below is a list of related documents:

| | |
|---------------|---|
| Doc[1] | OHI Back Office HTTP Service Layer (HSL) Installation & Configuration Manual (CTA13681) |
|---------------|---|

Contents

| | | |
|-------|--|----|
| 1 | Introduction..... | 6 |
| 2 | Architectural overview | 7 |
| 2.1 | ZRGOHIJET Application..... | 7 |
| 2.2 | HSL and PSL services | 8 |
| 3 | Prerequisites | 10 |
| 3.1 | Weblogic Server (WLS) Preparation | 10 |
| 3.2 | Database Preparation | 10 |
| 3.2.1 | Create a HSL database account..... | 10 |
| 3.2.2 | Create a PSL database account..... | 11 |
| 3.3 | OHI Back Office | 11 |
| 3.4 | Deploy HSL and PSL services..... | 11 |
| 3.4.1 | Create WLS data source for HSL database account | 11 |
| 3.4.2 | Create WLS data source for PSL database account..... | 11 |
| 3.4.3 | Configure hsl.properties | 12 |
| 3.4.4 | Configure psl.properties | 12 |
| 3.4.5 | WLS Managed Server Start arguments for psl.properties..... | 12 |
| 3.4.6 | Deployment..... | 12 |
| 3.4.7 | Testing..... | 13 |
| 4 | Installation of ZRGOHIJET Application..... | 14 |
| 4.1 | ZRGOHIJET Deployment..... | 14 |
| 4.2 | Post Installation..... | 16 |
| 4.3 | Updating the ZRGOHIJET Application..... | 16 |
| 4.4 | Deployment validation | 17 |

1 Introduction

The OHI Back Office JET Application provides web modules for OHI Back Office users.

OHI Back Office web modules are designed from the ground up as productivity tools for power users.

Whereas most of the Forms modules help to navigate through the OHI Back Office data to support multiple potential different processes, the web modules are designed to support a specific process.

The first web module is 'ZRG3097J' (Achterafcontrole). This module is used by claims examiners to re-check the validity of pre-selected claims lines. Advanced filters help the claim examiner to mark claims lines within a selected set for further investigation, keep track of the examination process and comment on individual claims lines.

The second module is 'ZRG3098J' (Medisch advies bij zorgvoornemens). This module is used by medical advisors to save their comments on pre-authorizations.

All web modules of the ZRGOHIJET application and their supporting components are packaged as a single WAR file: ZRGOHIJET.war.

The ZRGOHIJET application is deployed to Oracle WebLogic Application Server (WLS).

In order to use the ZRGOHIJET application, the following HSL services must also be deployed:

- HSL_AUN - Authentication of OHI Back Office users
- HSL_AUZ - Authorization of OHI Back Office users
- HSL_JUP - Returns the location of HSL services used by ZRGOHIJET modules.

In order to use the ZRG3097J module the following PSL service must be deployed:

- PSL_ACL - Private HTTP service to support the claims examination process.

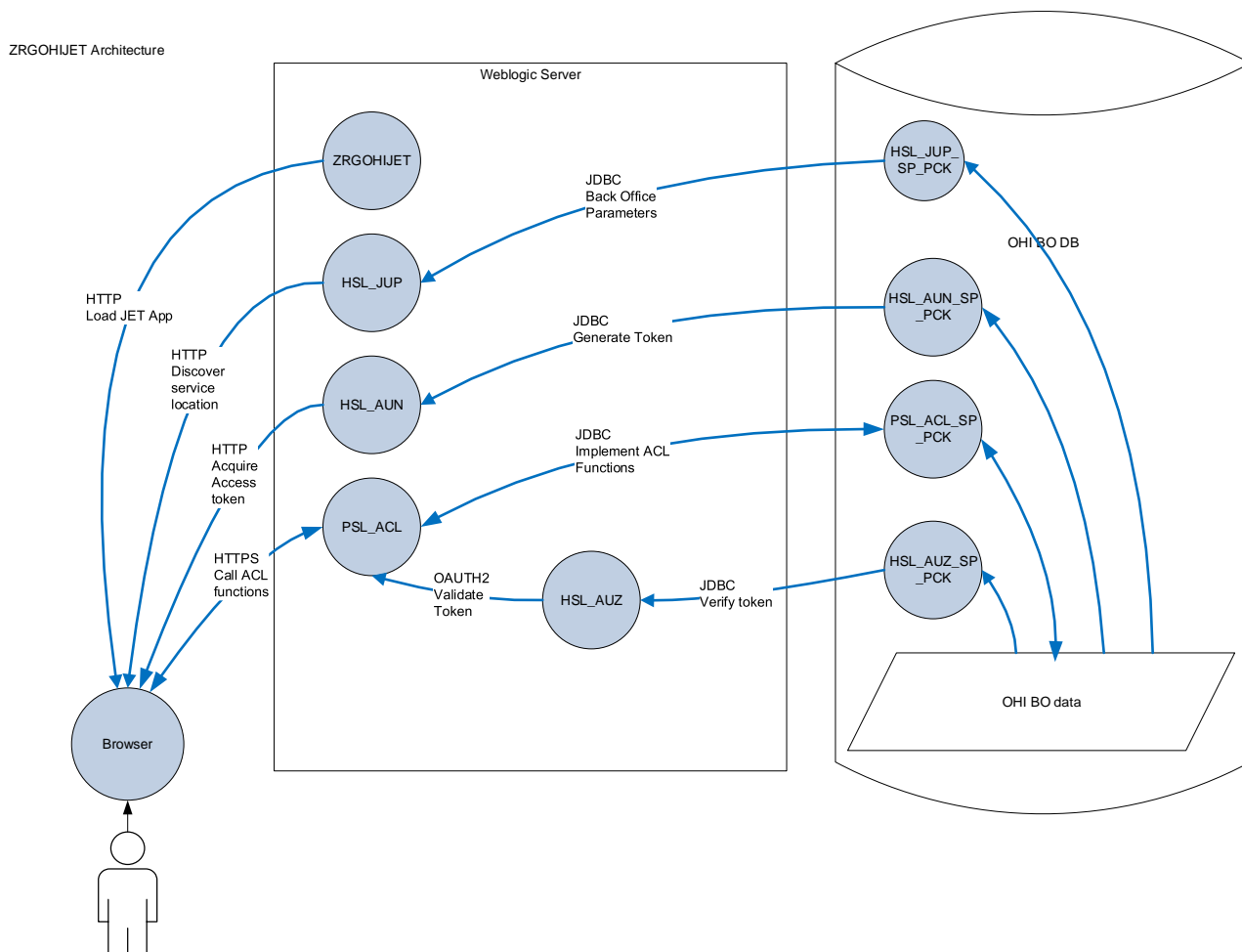
In order to use the ZRG3098J module the following PSL services must be deployed:

- PSL_ZVP - Private HTTP service to support the medical advice for pre-authorizations process.

This document describes how to install the ZRGOHIJET application and its related services.

2 Architectural overview

The diagram below shows the components of the OHI BO JET Application:



2.1 ZRGOHIJET Application



The ZRGOHIJET application was built using Oracle's "JET" toolkit for building modern web applications.

Among others, Oracle JET contains UI components, data binding support to synchronize between the front end application and a database back end, and has mobile support.

You can find more information on

<http://www.oracle.com/webfolder/technetwork/jet/index.html>

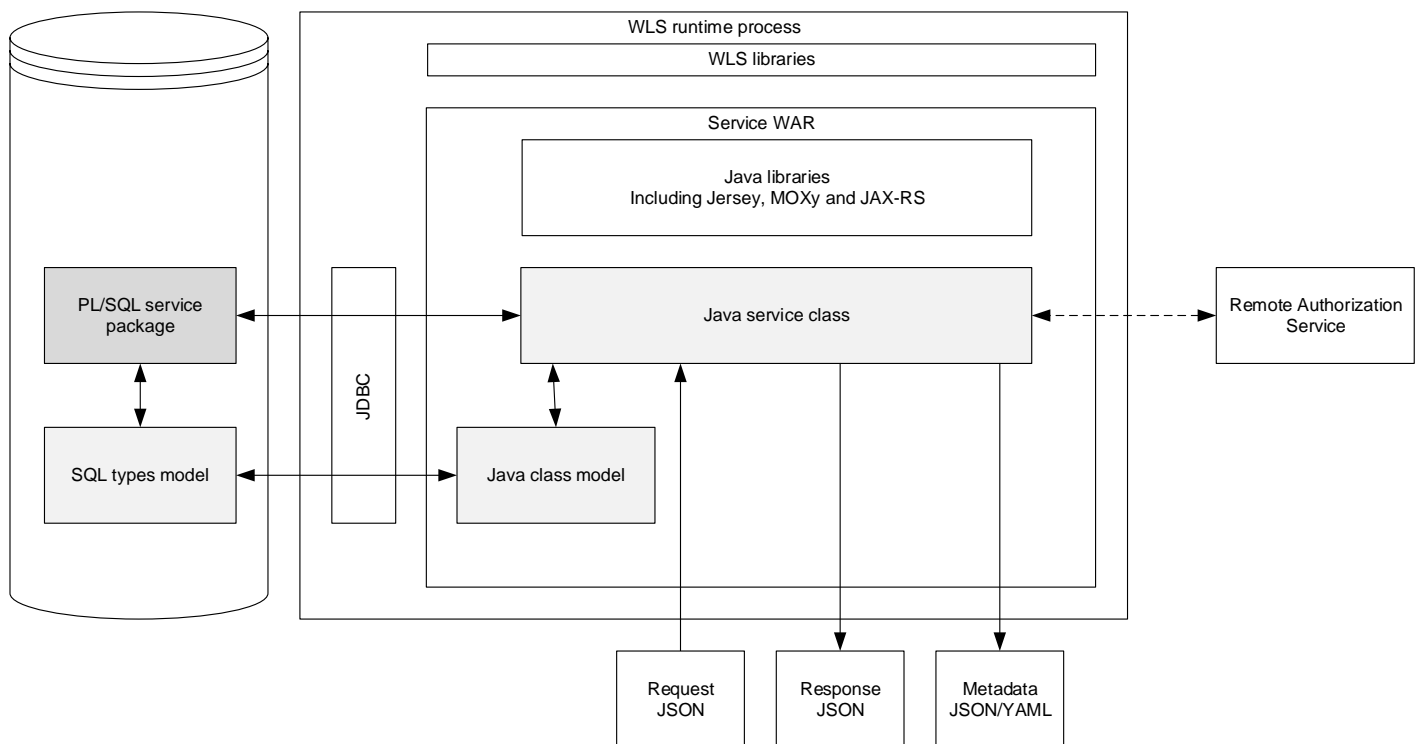
The ZRGOHIJET application is installed through a single WAR file. The web application calls HSL and PSL services to interact with the OHI Back Office database.

2.2 HSL and PSL services

The following HSL and PSL services are used to interact with the OHI Back Office database:

- **HSL_JUP**
Retrieve the OHI Back Office parameter values for 'JavaScript user interface' as a list of properties.
- **HSL_AUN**
Log on to the OHI Back Office database using the credentials entered by the user. If successful, return an OAuth2 access token and a list of 'claims', i.e. a list of modules which may be accessed by the user.
- **HSL_AUZ**
Verify that the access token provided by the user is valid for the required service operation.
- **PSL_ACL**
REST service providing functionality for ZRG3097J
- **PSL_ZVP**
REST service providing functionality for ZRG3098J

The architecture of each of the HSL and PSL services is shown below:



For more information about HSL services, see **Doc[1]**.

PSL services are created specifically to support OHI BO application components like the ZRGOHIJET user interface application. 'PSL' stands for 'Private Service Layer'. These services use the same technology as the HSL services but are not intended as an 'API', so may and should not be used to support custom client applications as they may be altered without any notice.

It is important to know that unless you are using an OHI BO application which requires the use of a PSL service, there is no need to install PSL services. So only deploy them when you are sure your organisation is going to use the ZRGOHIJET user interface, as this is currently the only component which needs them and which in itself is also an optional component for deployment.

Characteristics of PSL services:

- Specifically built to support OHI BO applications components. This means that PSL services are not intended to be called by customer applications. It also means that contents or operation of PSL service operations may be changed by OHI Back Office Development without notice.
- No online help documentation.
- Built on the same technology as HSL services.
- Configured through a 'psl.properties' file, similar to the 'hsl.properties' file used for HSL services.

3 Prerequisites

The following prerequisites apply before you can deploy the OHI Back Office JET Application.

3.1 Weblogic Server (WLS) Preparation

Follow the instructions in **Doc[1]** to prepare WebLogic Server.

Ensure that the following steps are completed:

- Create HSL properties file (as described in **Doc[1]**)
- Create PSL properties file (as described below)
- Add `-Dhsl.properties=<hsl_properties>` to Server Start parameter in WLS. Where `<hsl_properties>` refers to the location of the HSL properties file (as described in **Doc[1]**).
- Add `-Dpsl.properties=<psl_properties>` to Server Start parameter in WLS. Where `<psl_properties>` refers to the location of the PSL properties file (as described below).

Note: you may use the same WLS domain for PSL services as for HSL and SVL services. The only prerequisites are that ZRGOHIJET and HSL_JUP are deployed on the same managed server (so that ZRGOHIJET can find HSL_JUP) and that the PSL services, HSL_AUN and HSL_AUZ are deployed on the same managed server (because the same Backend URL parameter is used to locate all these services, as described in **Doc[1] - Appendix F**).

3.2 Database Preparation

Install the database components for OHI Back Office:

Verify that the following database packages are valid in the OHI Back Office object owner schema (in a normal situation no invalid plsql packages should exist within the object owner schema):

- HSL_JUP_SP_PCK
Interface for the HSL_JUP service
- HSL_AUN_SP_PCK
Interface for the HSL_AUN service
- HSL_AUZ_SP_PCK
Interface for the HSL_AUZ service
- PSL_ACL_SP_PCK
Interface for the PSL_ACL service
- PSL_ZVP_SP_PCK
Interface for the PSL_ZVP service

3.2.1 Create a HSL database account

Create a database account to call the HSL services, eg. 'hsl_user'.
See **Doc[1]** for more information.

3.2.2 Create a PSL database account

The PSL services require a PSL database account similar to the HSL database account:

1. Create a database account, for example PSL_USER.
2. Grant create session system privilege to the PSL database account.
3. Log on as the OHI Back Office schema owner, enable serveroutput and run:

```
alg_security_pck.psl_grants
( pi_owner    => '<ohibo_owner>'
, pi_grantee => '<psl_user_account>'
);
```

Example:

```
execute alg_security_pck.psl_grants
( pi_owner    => 'OZG_OWNER'
, pi_grantee => 'PSL_USER' );
```

The notes mentioned in **Doc[1]** in the section 'Creating a HSL database account' also apply to the PSL database account.

3.3 OHI Back Office

Do not forget to set up module authorization for the ZRGOHIJET modules:

- ZRG3097J
- ZRG3098J

To access module authorization: Systeem > Beheer > Autorisatie > Moduleautorisatie.

3.4 Deploy HSL and PSL services

The instructions for deploying the HSL services are given in **Doc[1]**.

Like HSL services, PSL services should be deployed through Weblogic Application Server (WLS). The chapter 'Installation of HSL services' in **Doc[1]** also applies to the installation of PSL services. Below instructions are additional to these general instructions.

3.4.1 Create WLS data source for HSL database account

Create a data source for connecting to the HSL user in the OHI Back Office database. Instruction can be found in section 'Creating a data source' in **Doc[1]**.

3.4.2 Create WLS data source for PSL database account

Create a data source for PSL services, similar to 'Creating a data source' for the HSL services (as described in **Doc[1]**). But then refer to the PSL database account instead of the HSL database account.

Also be sure to use the 'psl_grants' packaged procedure instead of the 'hsl_grants' version.

3.4.3 Configure hsl.properties

The properties controlling the HSL_AUN, HSL_AUZ and HSL_JUP services are set in the hsl.properties file. Ensure that these values are set as described in Appendix E & F in **Doc[1]**.

3.4.4 Configure psl.properties

Before deploying any PSL modules, ensure that the correct properties are set.

With the OHI Back Office release installation, a properties file template called psl.properties.template is distributed to the \$OZG_BASE/conf/Back-Office directory. Each OHI Back Office release, may overwrite this template with an updated version. The psl.properties.template can be used as an example to create your own psl.properties file (for example in \$OZG_BASE/conf).

Please note that all values are examples. You should consider if these values are appropriate for your installation and replace them with your own values if needed. Values indicated with \${some_name} in the templates are placeholders and must be replaced. This notation is intended to make scripted deployment easier. Also make sure not to set log level to FINE, FINER or FINEST in production mode, use SEVERE or WARNING instead.

The PSL services use the same generic properties as the HSL services (but prefixed with psl instead of hsl). These generic properties are described in more detail in chapter 'Configuration Files for HSL services' in **Doc[1]**.

OHI advises you to use the PSL services with OAUTH 2.0 (a 'Bearer' HTTP Authorization header with a JWT token) as authorization method, which is enforced by setting the psl.<app>.authorization or the default psl.authorization property to TOKEN. When the authorization is set to TOKEN, a number of specific usercontext and tokenvalidation properties must be set. These properties are explained in more detail in Appendix A, sections 'Setting user context' and 'Access Token Validation'.

3.4.5 WLS Managed Server Start arguments for psl.properties

The instructions for setting the psl.properties parameter are similar to those for setting 'hsl.properties' as described in the 'Installation of HSL services' chapter in **Doc[1]**.

You will need to set -Dpsl.properties=<filename>

Example:

```
-Dpsl.properties=/ohi/envBase/vohi/conf/psl.properties
```

Add the line to file \$DOMAIN_HOME/bin/setUserOverrides.sh:

```
JAVA_OPTIONS="-Dpsl.properties="/ohi/envBase/vohi/conf/psl.properties" ${JAVA_OPTIONS}"
```

3.4.6 Deployment

After the weblogic setup is completed and the properties files are configured, the web services can be deployed.

The procedure for deploying the HSL services is described in section '(Re)deployment of the HSL Application' and Appendix E & F in **Doc[1]**. The procedure to deploying the PSL services is similar to that of the HSL services.

Deploy HSL_JUP, HSL_AUN, HSL_AUZ and the available PSL services with 'Custom Roles and Policies'.

New deployments are not initially active. Either start the new deployments through the WLS console or restart the managed server(s) to which the applications are deployed.

3.4.7 Testing

When you have deployed a PSL service you can test whether it is working by first getting a JWT token through the HSL_AUN service and pass it on a PSL service.

An example call for service PSL_ACL:

[illegible]

The long string after Bearer is the access token as returned by the HSL_AUN service.

4 Installation of ZRGOHIJET Application

The OHI Back Office web modules are packaged in a single archive named 'ZRGOHIJET.war'. This WAR file must be deployed to WLS.

4.1 ZRGOHIJET Deployment











Make sure that you deploy ZRGOHIJET.war on the same Managed Server as HSL_JUP.war. Both applications must be accessible through the same Managed Server and port number.

Deploy ZRGOHIJET.war using default settings.

Although the procedure is similar to deploying HSL and PSL services you may find it useful to look at the step-by-step instructions below.

Select 'Deployments' from the WLS console:

[Customize this table](#)

| Deployments | | | | | | | | |
|---|--|--------|---|------------------|------------------------------|--------|-------------------|------------------|
| Install Update Delete | | | Showing 1 to 10 of 11 Previous Next | | | | | |
| <input type="checkbox"/> | Name | State | Health | Type | Targets | Scope | Domain Partitions | Deployment Order |
| <input type="checkbox"/> |  HSL_AUN (v4.10) | Active | OK | Web Application | MS_SVLB0SPC31 | Global | | 100 |
| <input type="checkbox"/> |  HSL_AUZ (v4.9) | Active | OK | Web Application | MS_SVLB0SPC31 | Global | | 100 |
| <input type="checkbox"/> |  HSL_C2B (v4.21) | Active | OK | Web Application | MS_SVLB0SPC31 | Global | | 100 |
| <input type="checkbox"/> |  HSL_DOS (v4.1) | Active | OK | Web Application | MS_SVLB0SPC31 | Global | | 100 |
| <input type="checkbox"/> |  HSL_JUP (v4.2) | Active | OK | Web Application | MS_SVLB0SPC31 | Global | | 100 |
| <input type="checkbox"/> |  HSL_POL (v4.37) | Active | OK | Web Application | MS_SVLB0SPC31 | Global | | 100 |
| <input type="checkbox"/> |  HSL_REL (v4.24) | Active | OK | Web Application | MS_SVLB0SPC31 | Global | | 100 |
| <input type="checkbox"/> |  OHIJET_prototype | Active | OK | Web Application | MS_SVLB0SPC31 | Global | | 100 |
| <input type="checkbox"/> |  PSL_ACL (v4.2) | Active | OK | Web Application | MS_SVLB0SPC31 | Global | | 100 |
| <input type="checkbox"/> |  state-management-provider-memory-rar | Active | OK | Resource Adapter | MS_SVLB0SPC31, MS_SVLB0SPC32 | Global | | 100 |
| Install Update Delete | | | Showing 1 to 10 of 11 Previous Next | | | | | |

Select 'Install' to create a new deployment.

Select 'ZRGOHIJET.war'

Install Application Assistant

Back Next Finish Cancel

Locate deployment to install and prepare for deployment

Select the file path that represents the application root directory, archive file, exploded archive directory, or application module descriptor that you want to install. You can also enter the path of the application directory or file in the Path field.

Note: Only valid file paths are displayed below. If you cannot find your deployment files, Upload your file(s) and/or confirm that your application contains the required deployment descriptors.

Path: /ol:/env/Base/DTTST1/ohBase/java/ZRGOHIJET.war

Recently Used Paths:

- /home/lliborw/ozq_rcs
- /ohi/envBase/DTTST1/ohBase/java
- /ohi/envBase/DTTST2/ohBase/java
- /home/brezina/ozq_rcs

Current Location: s1c10ary.us.oracle.com / ch1 / envBase / DT1S12 / ohBase / java

- ☐ PSH10053.jar
- ☐ PSH_UTIL.jar
- ☒ HSL_AUN.war
- ☒ HSL_AUZ.war
- ☒ HSL_CAB.war
- ☒ HSL_CLA.war
- ☒ HSL_POL.war
- ☒ HSL_REL.war
- ☐ SIC_ATLASSIAN_ORACLE_ID.jar
- ☐ SIC_OOZWEBSERVICES.ear
- ☐ SIC_OOZWEBSERVICES.ear
- ☐ SIC_OOZWEBSERVICE_END.ear
- ☐ SIC_OOZWEBSERVICE_END.ear
- ☐ SVL1001C.jar
- ☐ SVL1002C.jar
- ☐ SVL1003C.jar
- ☐ SVL1004C.jar
- ☐ SVL1005C.jar
- ☐ SVL1006C.jar
- ☐ SVL1007C.jar
- ☐ SVL1008C.jar
- ☐ SVL1009C.jar
- ☐ SVL1010C.jar
- ☐ SVLBOWS.ear
- ☐ VER_VECCOZO_PRT.jar
- ☒ ZRGOHIJET.war

Back Next Finish Cancel

Select to install the deployment as an application

Home > Summary of Deployments

Install Application Assistant

Back Next Finish Cancel

Choose installation type and scope

Select if the deployment should be installed as an application or library. Also decide the scope of this deployment.

The application and its components will be targeted to the same locations. This is the most common usage.

☒ **Install this deployment as an application**

Application libraries are deployments that are available for other deployments to share. Libraries should be available on all of the targets running their referencing applications.

☐ **Install this deployment as a library**

Select a scope in which you want to install the deployment.

Scope: Global ▾

Back Next Finish Cancel

Target the application at the managed server to which HSL_JUP is deployed:

Install Application Assistant

Back Next Finish Cancel

Select deployment targets

Select the servers and/or clusters to which you want to deploy this application. (You can reconfigure deployment targets later).

Available targets for ZRGOHIJET :

| Servers |
|--|
| <input type="checkbox"/> AS_SVL12212 |
| <input checked="" type="checkbox"/> MS_SVLBTTST1 |
| <input type="checkbox"/> MS_SVLBTTST2 |

Back Next Finish Cancel

Finish the deployment using 'DD Only' (use the application's deployment descriptors):

Install Application Assistant

Back Next Finish Cancel

Optional Settings

You can modify these settings or accept the defaults.
* Indicates required fields

General

What do you want to name this deployment?

* Name: ZRGOHIJET

Archive Version: v4.1

Deployment Plan Version:

Security

What security model do you want to use with this application?

☒ DD Only: Use only roles and policies that are defined in the deployment descriptors.

☐ Custom Roles: Use roles that are defined in the Administration Console; use policies that are defined in the deployment descriptor.

☐ Custom Roles and Policies: Use only roles and policies that are defined in the Administration Console.

☐ Advanced: Use a custom model that you have configured on the realm's configuration page.

Source Accessibility

How should the source files be made accessible?

☒ Use the defaults defined by the deployment's targets

Recommended selection.

☐ Copy this application onto every target for me

During deployment, the files will be copied automatically to the Managed Servers to which the application is targeted.

☐ I will make the deployment accessible from the following location

Location: /home/lileberw/ozg_rcs/ZRGOHIJET.war

Provide the location from where all targets will access this application's files. This is often a shared directory. You must ensure the application files exist in this location and that each target can reach the location.

The application is now deployed.

4.2 Post Installation

When the application is initially deployed, it needs to be activated.

Either activate the deployment through WLS console or restart the managed server(s) to which the application is deployed.

4.3 Updating the ZRGOHIJET Application

In time, more modules will be added to the ZRGOHIJET application.

When deploying a newer version of the ZRGOHIJET application, select 'Update' to update the application (ensure that the new ZRGOHIJET.war is copied to the existing location).

Alternatively, select 'Delete' to delete the existing ZRGOHIJET application and create a new deployment as described above.

4.4 Deployment validation

When validating the deployment, all components must be correctly installed and deployed.

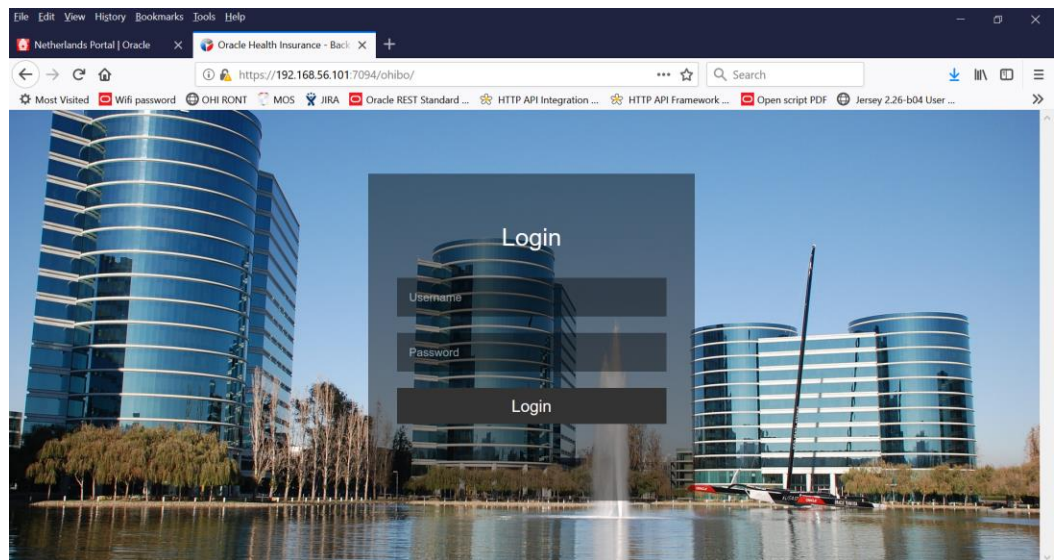
Before you continue:

- verify that you have completed all steps in 'Prerequisites'.
- verify that you have deployed and started the ZRGOHIJET.war application as described in this chapter.

To verify the deployment, browse

<https://server:port/ohibo>

Example:



When you have successfully logged on with your OHI username and password, the screen should look like this:

