

Oracle Health Insurance Back Office

JET Application Installation & Configuration Manual

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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.

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 Installation & Configuration Manual (CTA13681)

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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.

All web modules 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.

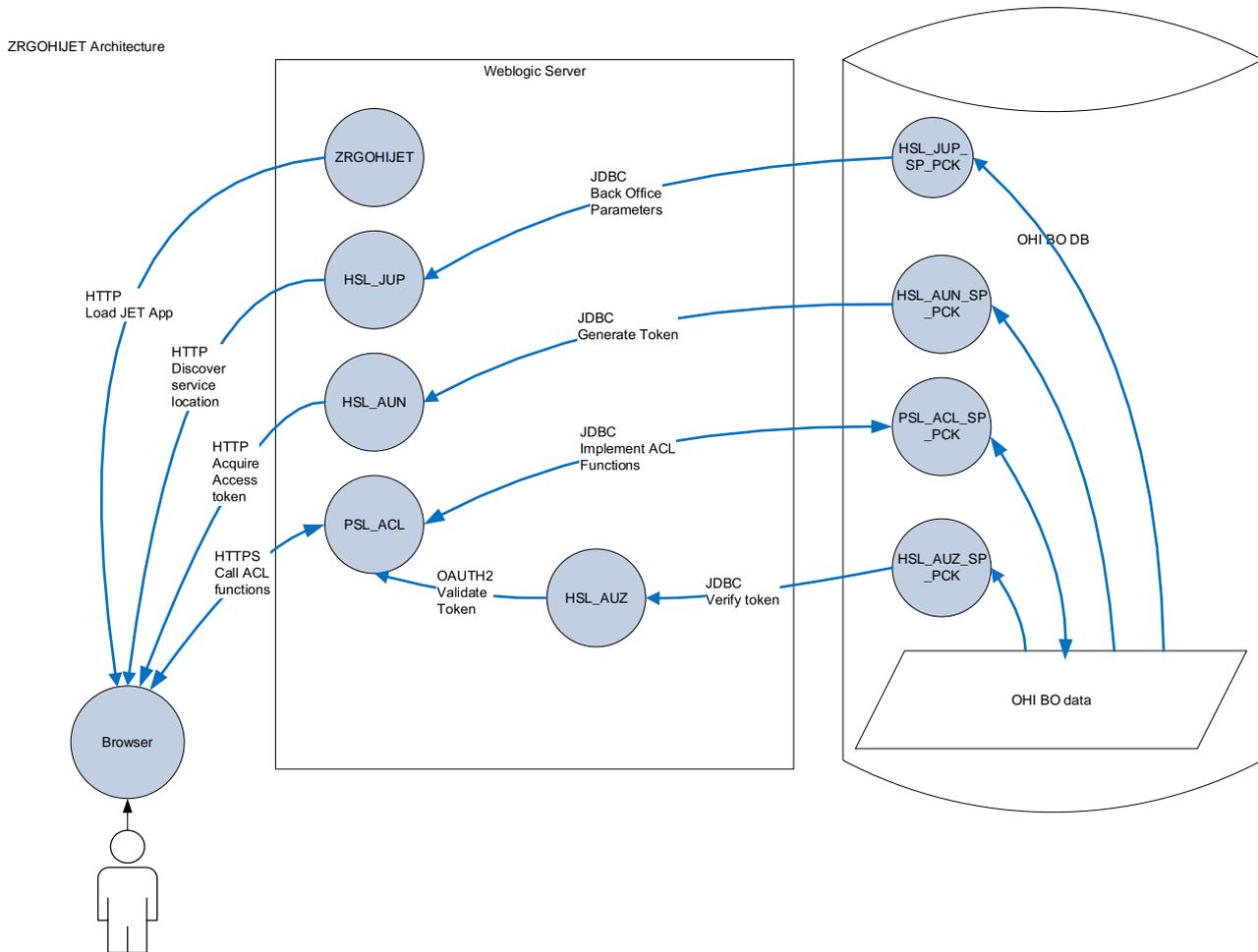
In order to use the ZRG3097J module the following services must be deployed:

- PSL_ACL - Private HTTP service to support the claims examination 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>

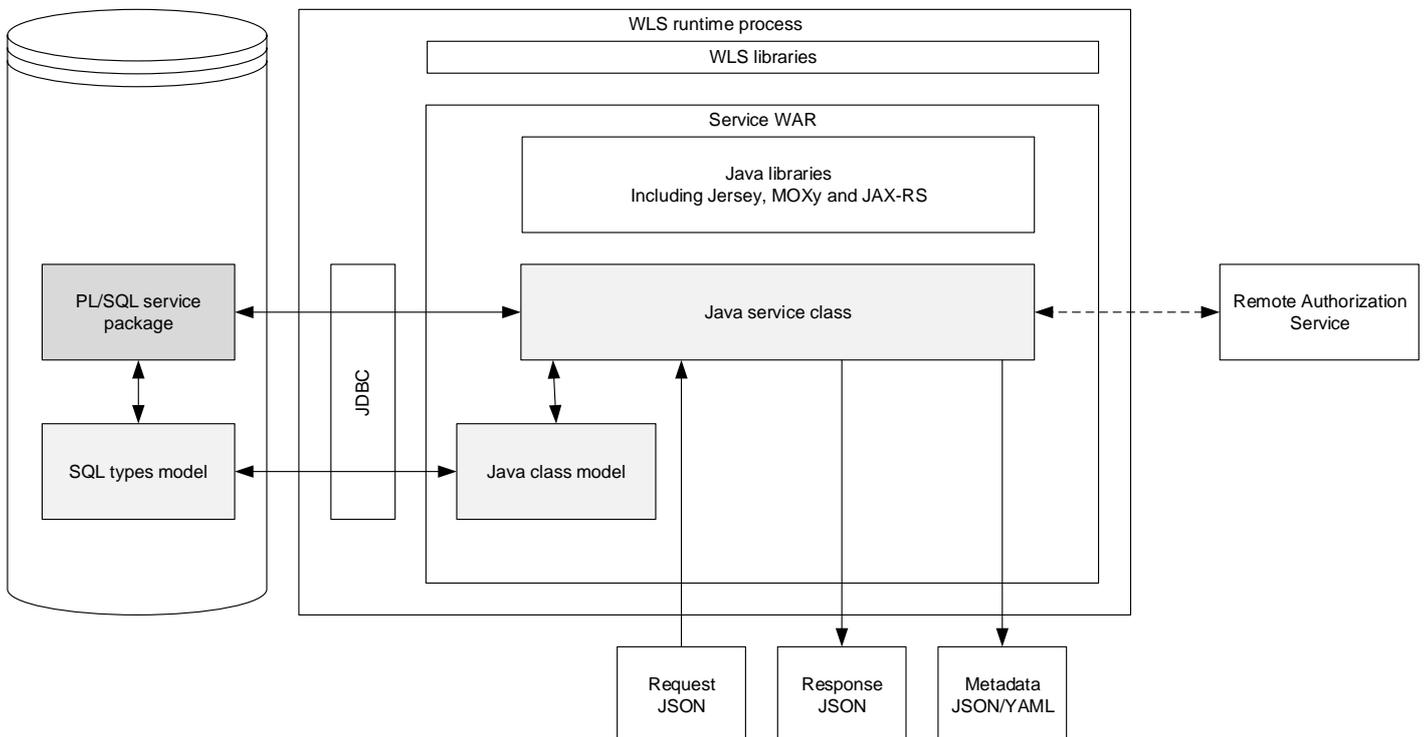
The ZRGOHIJET application is installed through a single WAR file. The web application calls HSL and PSL services to interact with the OHI Back Office database.

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

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



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

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

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 `psql` 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

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

Create a database account to call the `PSL_ACL` service, eg. `'psl_user'`.
See **Doc[1]** for more information.

3.3 OHI Back Office

3.3.1 OHI Back Office Parameters

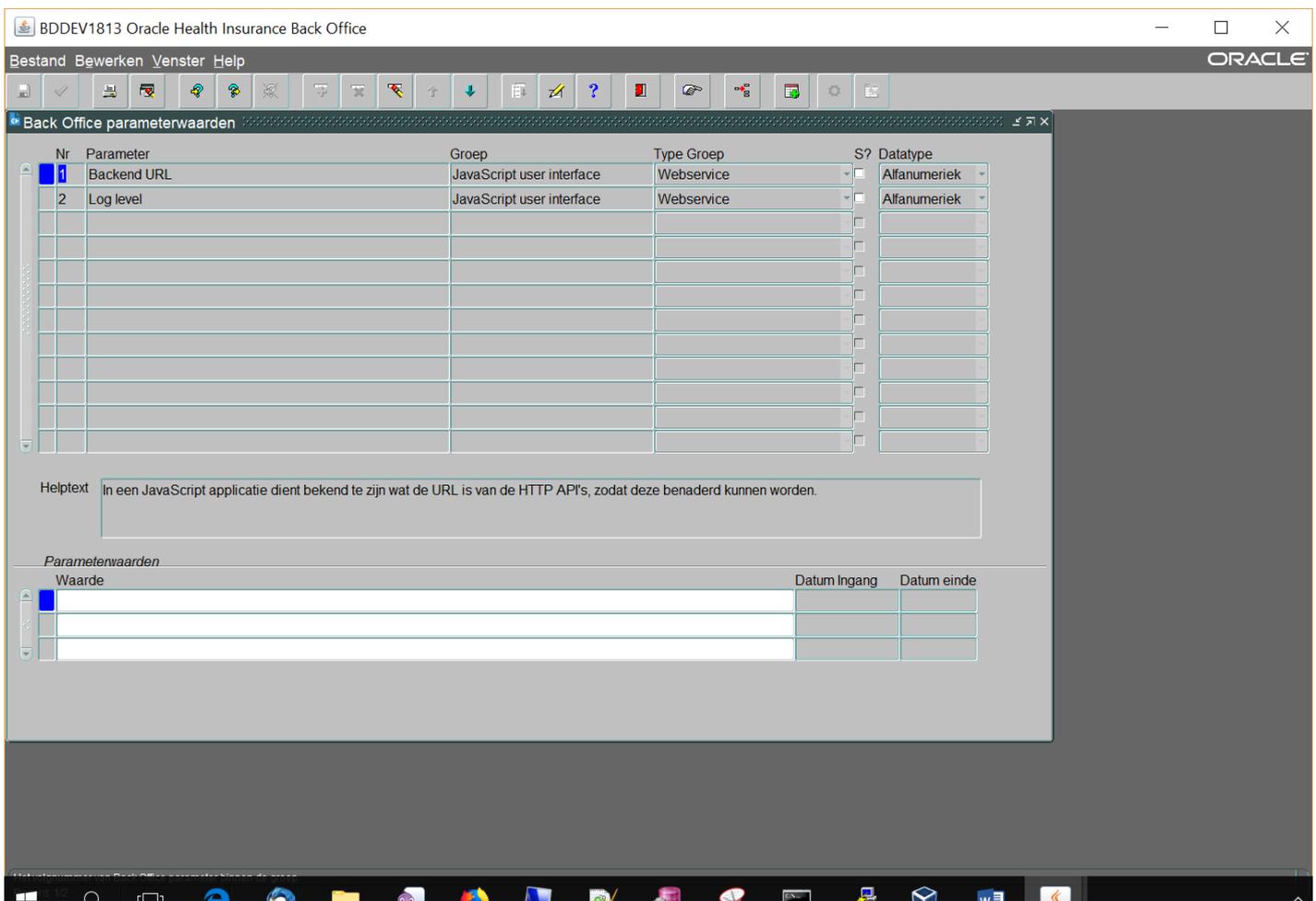
The `ZRGOHIJET` application calls `HSL_AUN` and `HSL_AUZ` for authentication and authorization of its users. It uses `PSL_ACL` as a back end to access OHI Back Office

data.

Before it can do so, it needs to locate a Base URL where these services can be found. This is where HSL_JUP comes in. This service, running at the same WLS domain as ZRGOHIJET itself, will connect to the OHI Back Office database and retrieve the OHI Back Office parameters of group 'Javascript user interface' to retrieve the backend url and log level.

To set the Back Office parameters:

- Open the Forms GUI and select 'Systeem > Algemeen > Back Office parameter waarden'.
- Select group 'Javascript user interface' and engage Execute Query.
- Set 'Backend URL' to the Base URL of the HSL_AUN, HSL_AUZ and PSL_ACL services that you will use.
The format is `https://server:port`
Example: `https://localhost:8888`
- Optionally, set the log level.



3.3.2 Module Authorization

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

- ZRG3097J

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

3.4 Deploy HSL and PSL services

The instructions below are complementary to the general instructions for deploying HSL and PSL services given in **Doc[1]**.

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.

3.4.2 Create WLS data source for PSL database account

Create a data source for connecting to the PSL user in the OHI Back Office database.

3.4.3 Configure hsl.properties

The `hsl.tokenvalidation.rotor` property is used by:

- HSL_AUN (authenticate OHI Back Office user and issue access token); and
- HSL_AUZ (authenticate access token and verify authorization)

Ensure that this value is set. Refer to Appendix F in **Doc[1]** for more information.

3.4.4 Configure psl.properties

Before deploying any PSL modules, ensure that the following properties are set:

```
psl.authorization=TOKEN
psl.usercontext.control=TOKEN
psl.usercontext.token.type=JWT
psl.usercontext.claim=prn
psl.tokenvalidation.authentication=Basic BASE64_USERNAME_PASSWORD
psl.tokenvalidation.url=https://server:port/HSL_AUZ/auz/v1/authorization/verify
psl.tokenvalidation.method=post
psl.tokenvalidation.bodyparam={ "method" : "#method#", "token" : "#jwt#" ,
"resource" : "#path#" }
```

Notes

- The tokenvalidation URL must match the Base URI of the HSL_AUZ service.
- The value for `psl.tokenvalidation.authentication` is a base64 encoded `username:password` string prepended with 'Basic'.
The `username:password` combination must refer to a valid Weblogic user which has access to the HSL_AUZ service.
You may use <https://www.base64encode.org/> to generate the base64 encoded string.

See Appendix E in **Doc[1]** for more information about authentication and authorization and an actual example of a base64 encoded string.

3.4.5 Deploy HSL_JUP

Before deploying HSL_JUP, create entries for HSL_JUP in the HSL properties file: data source, log configuration, allowed origins, usercontext etc.

Ensure that the following properties are set:

```
hsl.jup.authorization=NONE
# anyone can call HSL_JUP to retrieve the OHI BO params for the Javascript UI
```

Notes:

- The data source (`hsl.jup.jndiname`) is used to retrieve Back Office Parameters for the ZRGOHIJET Application. The 'Backend Url' parameter should point at the base URL for the PSL_ACL, HSL_AUN and HSL_AUZ services.

Deploy HSL_JUP with 'Custom Roles and Policies'.

3.4.6 Deploy HSL_AUN

Before deploying HSL_AUN, create entries for HSL_AUN in the HSL properties file: data source, log configuration, allowed origins etc.

Ensure that the following properties are set:

```
hsl.aun.authorization=NONE
# anyone can call HSL_AUN and provide user/pass to login to the database
```

Deploy HSL_AUN with 'Custom Roles and Policies'.

3.4.7 Deploy HSL_AUZ

Before deploying HSL_AUZ, create entries for HSL_AUZ in the HSL properties file: data source, log configuration, allowed origins etc.

Ensure that the following properties are set:

```
hsl.auz.authorization=BASIC
# any weblogic user can call HSL_AUZ to verify token for token bearer.
# deploy with 'custom roles and policies' to fine-tune access through WLS
```

Deploy with 'Default Descriptors' if any weblogic user may call this service.

Deploy HSL_AUZ with 'Custom Roles and Policies' if you want to fine-tune access through WLS.

3.4.8 Deploy PSL_ACL

Before deploying PSL_ACL, create entries for PSL_ACL in the PSL properties file: data source, log configuration, allowed origins etc.

Deploy PSL_ACL with 'Custom Roles and Policies'.

3.5 Deployment Activation

New deployments are not initially active.

Either start the new deployments through the WLS console or restart the managed server(s) to which the new application is/are deployed.

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

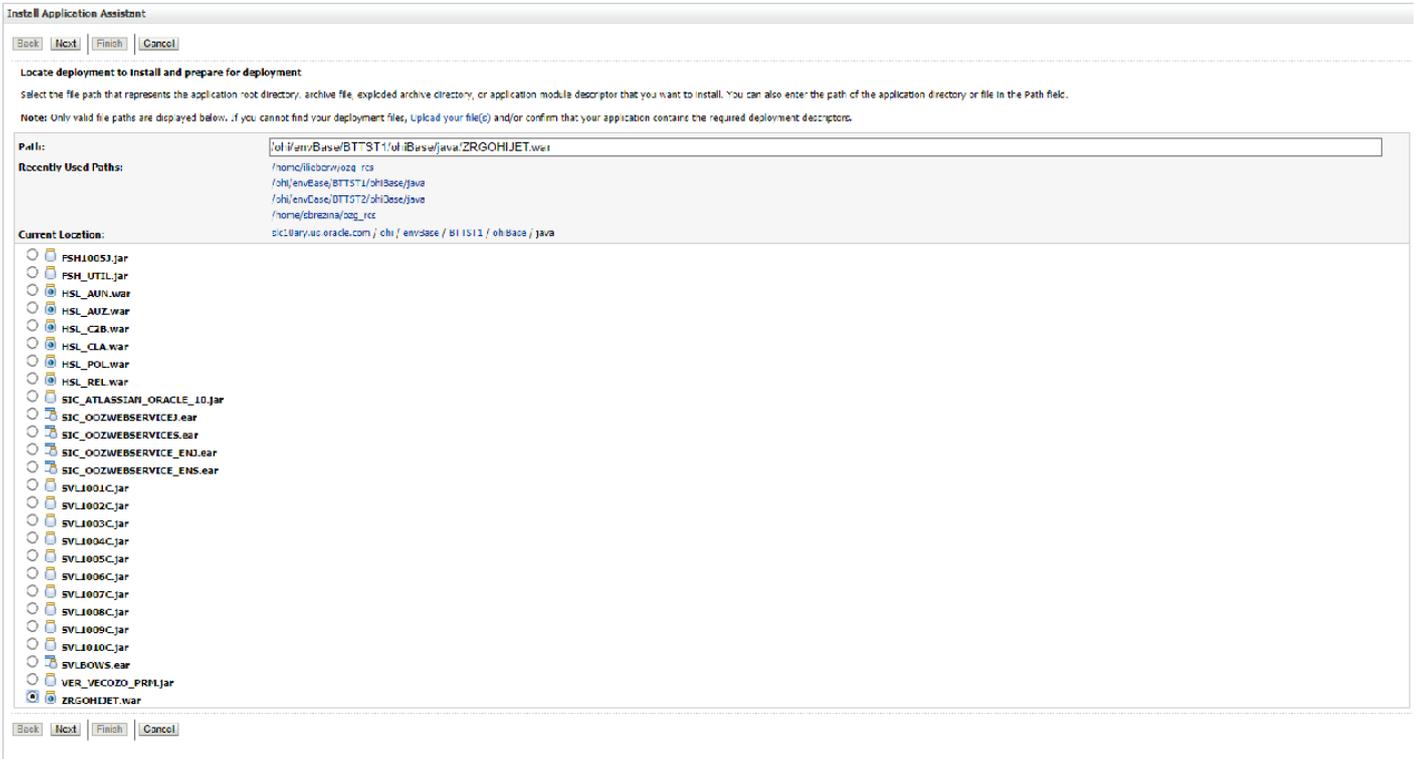
Name	State	Health	Type	Targets	Scope	Domain Partitions	Deployment Order
HSL_AUN (v4.10)	Active	OK	Web Application	MS_SVLBDSPC31	Global		100
HSL_AUZ (v4.9)	Active	OK	Web Application	MS_SVLBDSPC31	Global		100
HSL_C2B (v4.21)	Active	OK	Web Application	MS_SVLBDSPC31	Global		100
HSL_DOS (v4.1)	Active	OK	Web Application	MS_SVLBDSPC31	Global		100
HSL_JUP (v4.2)	Active	OK	Web Application	MS_SVLBDSPC31	Global		100
HSL_POL (v4.37)	Active	OK	Web Application	MS_SVLBDSPC31	Global		100
HSL_REL (v4.24)	Active	OK	Web Application	MS_SVLBDSPC31	Global		100
OHIJET_prototype	Active	OK	Web Application	MS_SVLBDSPC31	Global		100
PSL_ACL (v4.2)	Active	OK	Web Application	MS_SVLBDSPC31	Global		100
state-management-provider-memory-rar	Active	OK	Resource Adapter	MS_SVLBDSPC31, MS_SVLBDSPC32	Global		100

Install Update Delete

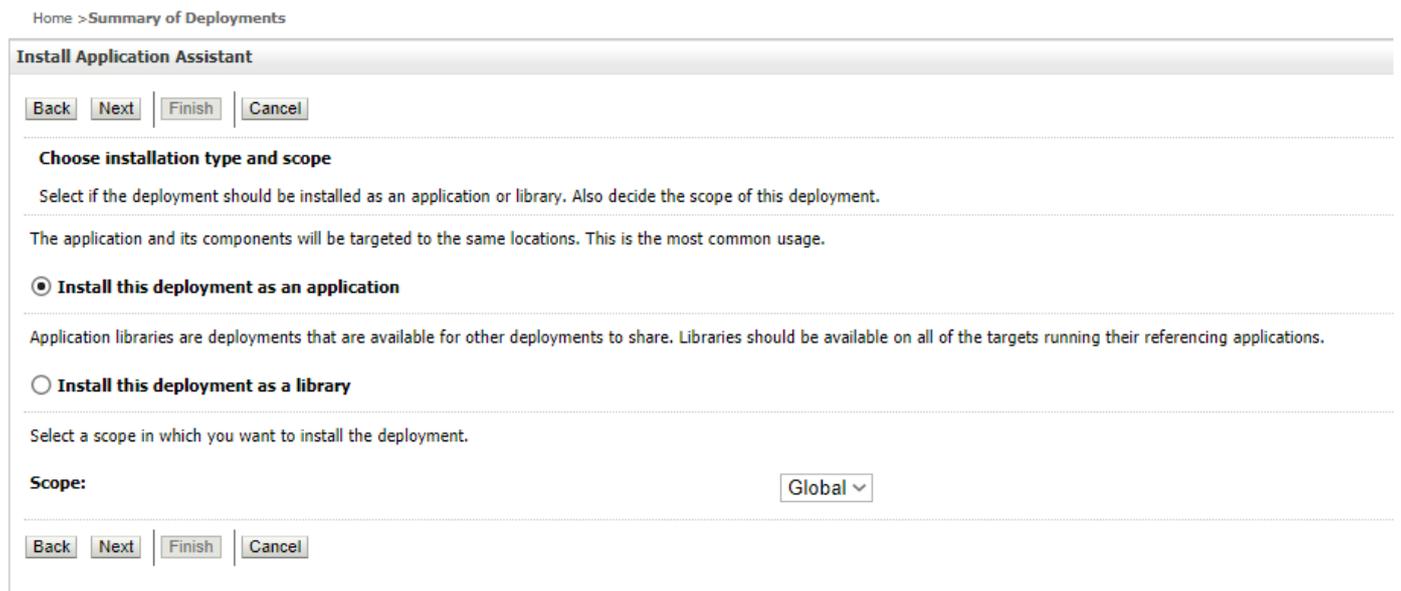
Showing 1 to 10 of 11 Previous Next

Select 'Install' to create a new deployment.

Select 'ZRGOHIJET.war'



Select to install the deployment as an application



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.

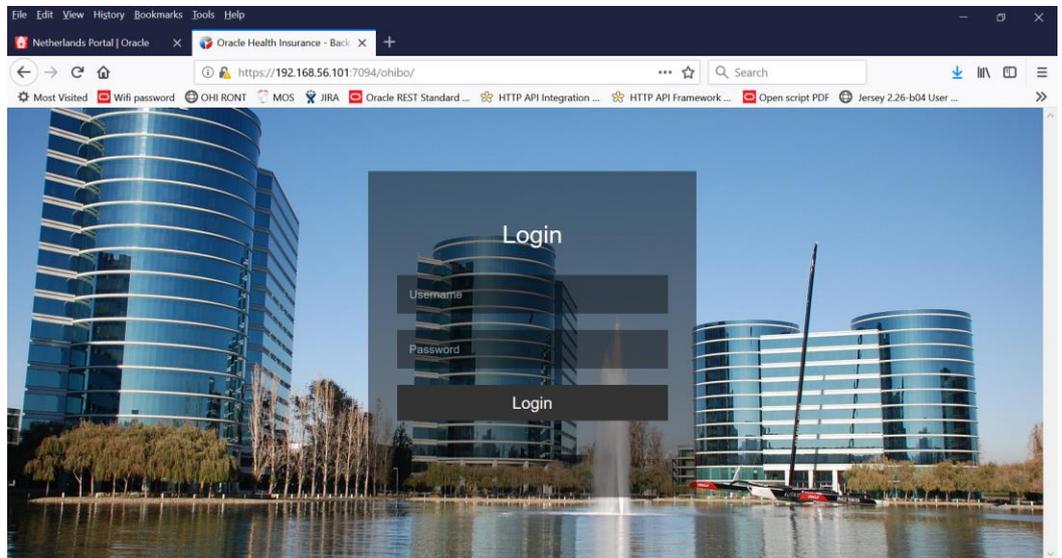
Before you continue:

- 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.

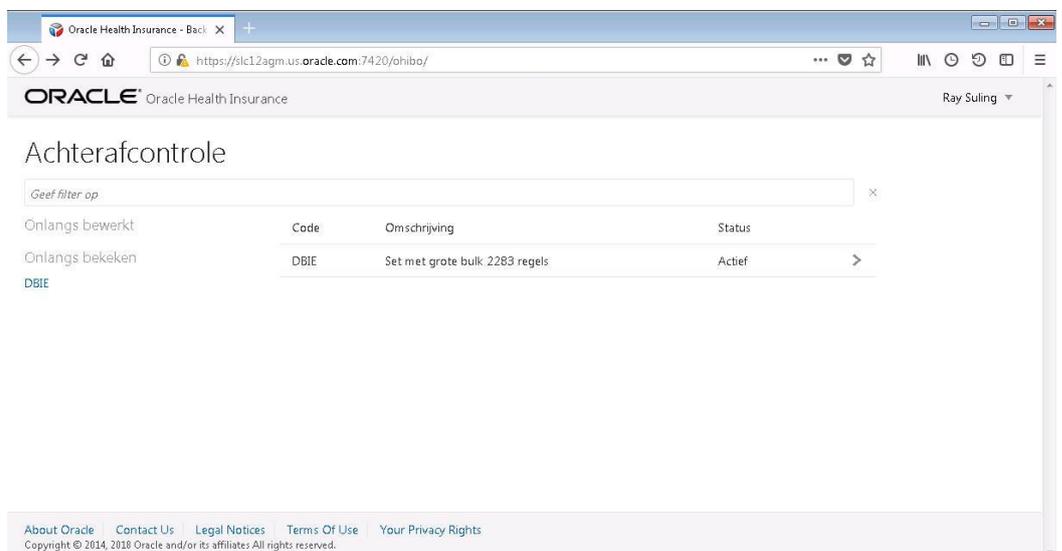
To verify the deployment, browse

<https://server:port/ohibo>

Example:



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



5 Appendix A – Samples for HSL and PSL Properties Files

5.1 HSL Properties File Sample

The sample below may help you put together a PSL properties for testing.

Note:

- You will have to set your own values for the values shown in *italics*
- Do NOT set the log level to FINEST in production mode as this considerably slows down the service execution. Use ERROR instead.

```
# HSL properties sample for testing.
#
hsl.aun.authorization=NONE
hsl.aun.jndiname=HSL_BDSPC31
hsl.aun.logfile=/home/oracle/hsl.aun.log
hsl.aun.loglevel=FINEST
hsl.aun.usercontext=MANAGER
#
hsl.auz.authorization=BASIC
hsl.auz.jndiname=HSL_BDSPC31
hsl.auz.logfile=/home/oracle/hsl.auz.log
hsl.auz.loglevel=FINEST
hsl.auz.usercontext=MANAGER
#
hsl.jup.authorization=NONE
#hsl.jup.jndiname=HSL_BDSPC31
hsl.jup.jndiname=HSL_BDDEV1814
hsl.jup.logfile=/home/oracle/hsl.jup.log
hsl.jup.loglevel=FINEST
hsl.jup.usercontext=MANAGER
#
hsl.tokenvalidation.rotor=testing
```

5.2 PSL Properties File Sample

The sample below may help you put together a PSL properties for testing.

Note:

- You will have to set your own values for the values shown in *italics*
- Do NOT set the log level to FINEST in production mode. Use ERROR instead.
- The value for psl.tokenvalidation.authentication is a base64 encoded string. The username:password combination must refer to a valid Weblogic user which has access to the HSL_AUZ service. You may use <https://www.base64encode.org/> to generate the base64 encoded string.

```
# PSL properties sample for testing.
#
psl.tokenvalidation.authentication=Basic cmVzdHVzZXI6b3B1bnpvcmc5OQ==
psl.tokenvalidation.url=https://ol6ohi.ohi.oracle.com:7094/HSL_AUZ/auz/v1/authorization/verify
psl.tokenvalidation.method=post
psl.tokenvalidation.bodyparam={ "method" : "#method#", "token" : "#jwt#" , "resource" : "#path#" }
psl.authorization=TOKEN
psl.usercontext.control=TOKEN
psl.usercontext.token.type=JWT
psl.usercontext.claim=prn
#
psl.acl.jndiname=HSL_BDSPC31
psl.acl.loglevel=FINEST
psl.acl.logfile=/home/oracle/psl.acl.log
```