

IDCS-OBAPI Setup Guide
Oracle Banking APIs
Release 21.1.0.0.0

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ORACLE®

IDCS-OBAPI Setup Guide

May 2021

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1. Preface

1.1 Intended Audience

This document is intended for the following audience:

- Customers
- Partners

1.2 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

1.3 Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

1.4 Structure

This manual is organized into the following categories:

Preface gives information on the intended audience. It also describes the overall structure of the User Manual.

The subsequent chapters describes following details:

- Introduction
- Preferences & Database
- Configuration / Installation.

1.5 Related Information Sources

For more information on Oracle Banking APIs Release 21.1.0.0.0, refer to the following documents:

- Oracle Banking APIs Installation Manuals

2. Pre-requisite step:

2.1 To create groups and user in IDCS

1. Access your Oracle Identity Cloud Service instance (for example: <https://<tenant-base-url>/ui/v1/adminconsole>) and log in with your Identity Domain Administrator credentials.

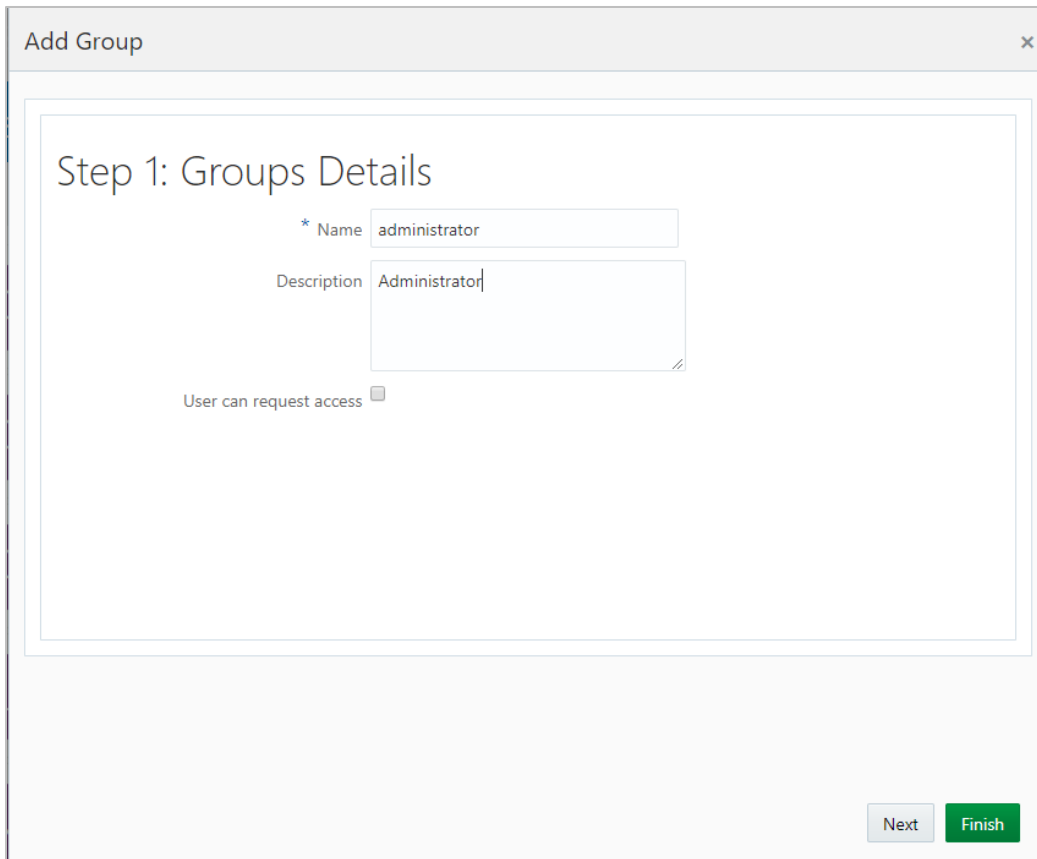
Glossary of Parameters:

<tenant-name>	Tenant name of your IDCS instance
<tenant-base-url>	Tenant base URL used to access your IDCS instance
<base-url>	Base URL used to access your IDCS instance without tenant name

2. Click on **Add a group** button shown below.

The screenshot displays the Oracle Identity Cloud Service (IDCS) admin console interface. At the top, the header shows 'ZigBank Identity Cloud Service' and a user profile icon labeled 'AO'. Below the header, a green banner welcomes the user as 'admin@oracle.com' and lists several actions: 'Watch the Video', 'Learn More', and 'What's New'. A section titled 'Here's what you can do:' lists tasks such as 'Onboarding Users and Groups', 'Onboarding Applications', 'Auditing the System, Users, and Groups', 'Managing Security Settings', 'Performing Self-Service Diagnostics', 'Customizing the Service', and 'Performing End-User Self Service'. Below this, a 'Filter by Date Range' dropdown is set to 'Last 30 Days'. The main dashboard features six tiles: 'Users' (190 Total, 9 Created, 0 Removed), 'Applications' (50 Total, 8 Created, 0 Removed), 'Groups' (9 Total, 0 Created, 0 Removed) with an 'Add a group' button, 'Passwords' (27 Total), 'Logins' (219 Total), and 'All Reports' (5 Total).

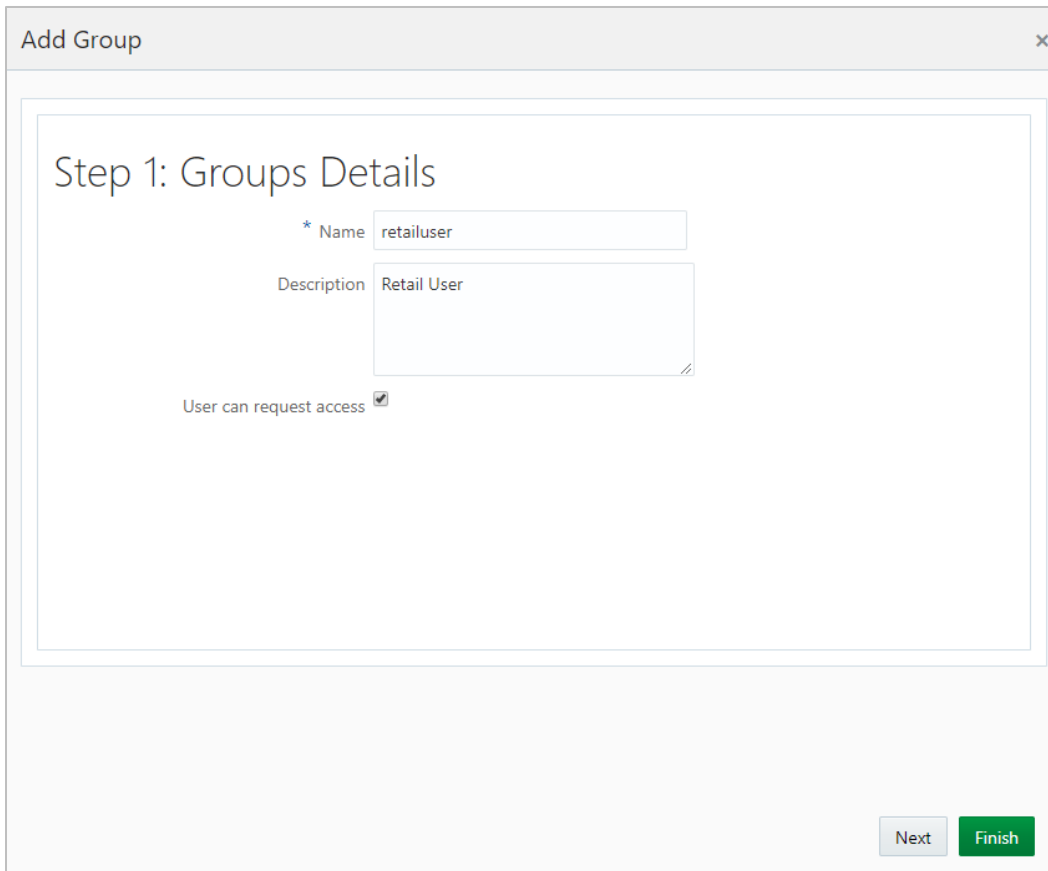
3. Enter the group name and group description for 'administrator' as shown below.



The screenshot shows a window titled "Add Group" with a close button (X) in the top right corner. Inside the window, the title "Step 1: Groups Details" is displayed. Below the title, there are two input fields: a text box for "Name" containing the text "administrator" and a larger text area for "Description" containing the text "Administrator". Below these fields is a checkbox labeled "User can request access" which is currently unchecked. At the bottom right of the window, there are two buttons: a "Next" button and a "Finish" button.

4. Click **Finish**. You will get a message 'Group administrator has been successfully added.'

5. On **Groups** screen, click on **Create a group** button. Enter the group name and group description for 'retailuser' as shown below.



The screenshot shows a window titled "Add Group" with a close button (X) in the top right corner. Inside the window, there is a section titled "Step 1: Groups Details". Below this title, there are three input fields: a text box for "Name" containing "retailuser", a text area for "Description" containing "Retail User", and a checkbox labeled "User can request access" which is checked. At the bottom right of the window, there are two buttons: "Next" and "Finish".

6. Click **Finish**. You will get a message 'Group retailuser has been successfully added.'

7. On **Groups** screen, click on **Create a group** button. Enter the group name and group description for 'corporateuser' as shown below.

The screenshot shows a dialog box titled "Add Group" with a close button (X) in the top right corner. Inside the dialog, there is a section titled "Step 1: Groups Details". Below this title, there are two input fields: one for "Name" containing the text "corporateuser" and one for "Description" containing the text "Corporate User". Below the description field, there is a checkbox labeled "User can request access" which is checked. At the bottom right of the dialog, there are two buttons: "Next" and "Finish".

8. Click **Finish**. You will get a message 'Group corporateuser has been successfully added.'

9. Click on **Add a user** button on **Dashboard** screen as shown below.

The screenshot displays the ZigBank Identity Cloud Service dashboard for user admin@oracle.com. The dashboard features a header with the service name and a user profile icon (AO). Below the header, there are navigation buttons for 'Watch the Video', 'Learn More', and 'What's New'. A 'Here's what you can do:' section lists tasks such as onboarding users, auditing, and performing self-service diagnostics. A 'Filter by Date Range' dropdown is set to 'Last 30 Days'. The main content area consists of six summary cards: 'Users' (190 total, 9 created, 0 removed), 'Applications' (50 total, 8 created, 0 removed), 'Groups' (9 total, 0 created, 0 removed), 'Passwords' (27 total), 'Logins' (218 total), and 'All Reports' (5 total). An 'Add a user.' tooltip is visible over the 'Add user' icon in the Users card.

Category	Total	Created	Removed
Users	190	9	0
Applications	50	8	0
Groups	9	0	0
Passwords	27	-	-
Logins	218	-	-
All Reports	5	-	-

10. On the next screen, enter details of a new user 'superadmin' shown below.

The screenshot shows a window titled "Add User" with a close button (x) in the top right corner. Inside the window, the heading "Step 1: Add User Details" is displayed. Below the heading, a note states: "The user name will be used to log in, and the email address will be flagged as the primary email address for the user." The form contains four required fields, each marked with an asterisk (*):

- * First Name: super
- * Last Name: admin
- * User Name: superadmin
- * Email: john.doe@domain.com

Below the email field, there is a checkbox labeled "Use the email address as the user name" which is currently unchecked. At the bottom right of the window, there are two buttons: "Next" (disabled) and "Finish" (active).

11. Click **Next**. You will get a list of existing groups in IDCS to which the user 'superadmin' can be assigned. Select group '**administrator**'.

Pre-requisite step:

The screenshot shows a window titled "Add User" with a close button (X) in the top right corner. The main content area is titled "Step 2: Assign User to Groups (Optional)". Below the title, there is a "Select All" checkbox and a search input field with a magnifying glass icon. A status bar indicates "Selected: 1" and a "Clear Selection" link. The main area contains a table with the following data:

	Name	Description
<input type="checkbox"/>	Admin	New role for PSD2 purpose
<input checked="" type="checkbox"/>	administrator	Administrator
<input type="checkbox"/>	Administrators	Administrators
<input type="checkbox"/>	Anonymous	Anonymous
<input type="checkbox"/>	corporateuser	Corporate User
<input type="checkbox"/>	Customer	Customer
<input type="checkbox"/>	Operators	Operators

At the bottom of the dialog, there is a pagination control showing "Page 1 of 1 (1-8 of 8 items)" and navigation arrows. To the right of the pagination are two buttons: "Back" and "Finish". The "Finish" button is highlighted in green.

12. Click **Finish**. The user 'superadmin' will be created and assigned 'administrator' group.

2.2 **Install OpenSSL**

Eg. [root@obapiohs devops]# yum install openssl*

2.3 **OAM installation not required**

Oracle Access Manager installation is not required for this setup.

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3. Apply Oracle OPSS SCIM Identity Store OPatch on Weblogic server

1. Download the patch from the below link.
ARU 22260908
2. Extract the zip on weblogic machine.
3. Shutdown Managed and Admin weblogic server.

Glossary of Parameterized path:

oracle-home-path	Oracle Home path of Fusion Middleware Application (Weblogic/OHS)
jre-path	Location where jre is installed
local-patch-path	Location where relevant patch folder is stored locally. Eg. Location of 27644158 folder
weblogic-domain-path	Location where weblogic domain is installed
jdk-path	Location of JDK
ohs-domain-path	Location where OHS domain is installed

4. Run below commands on Weblogic machine.

```
[devops@obapiwls ~]$ export ORACLE_HOME=<oracle-home-path>
```

Eg. `export ORACLE_HOME=/home/devops/Oracle/Middleware/Oracle_Home/`

```
[devops@obapiwls ~]$ export PATH=$PATH:<oracle-home-path>/OPatch/
```

Eg. `export PATH=$PATH:/home/devops/Oracle/Middleware/Oracle_Home/OPatch/`

```
[devops@obapiwls ~]$ opatch lsinventory -jre <jre-path>
```

Eg. `opatch lsinventory -jre /home/devops/jdk18/jre/`

[devops@obapiwls ~]\$ cd <local-patch-path>

Eg. cd /scratch/obapi/wls/p27644158_122130_Generic/27644158/

[devops@obapiwls 27644158]\$ opatch apply

```
@obdwls/scratch/obdx/wls/Setup/27644158
Bugs Fixed:
25559137, 25232931, 24811916
Patch 26051289 : applied on Fri May 04 10:58:03 UTC 2018
Unique Patch ID: 21485037
Patch description: "One-off"
Created on 31 Jul 2017, 22:11:57 hrs UTC
Bugs fixed:
26051289
-----
OPatch succeeded.
[devops@obdwls Oracle_Home]$ cd /scratch/obdx/wls/Setup/27644158/
[devops@obdwls 27644158]$ ls -la
total 32
drwxrwxr-x 4 54322 54322 4096 Oct 12 08:01 .
drwxrwxr-x 3 54322 54322 4096 Oct 12 08:01 ..
-rw-rw-r-- 1 54322 54322 27 Jun 14 19:41 README.html
-rw-rw-r-- 1 54322 54322 8898 Jun 14 19:41 README.txt
drwxrwxr-x 3 54322 54322 4096 Oct 12 08:01 etc
drwxrwxr-x 6 54322 54322 4096 Oct 12 08:01 files
[devops@obdwls 27644158]$ opatch apply
Oracle Interim Patch Installer version 13.9.2.0.0
Copyright (c) 2018, Oracle Corporation. All rights reserved.

Oracle Home      : /home/devops/Oracle/Middleware/Oracle_Home
Central Inventory : /home/devops/oraInventory
   from           : /home/devops/Oracle/Middleware/Oracle_Home/oraInst.loc
OPatch version   : 13.9.2.0.0
OUI version      : 13.9.2.0.0
Log file location : /home/devops/Oracle/Middleware/Oracle_Home/cfgtoollogs/opatch/opatch2018-10-12_08-03-04AM_1.log

OPatch detects the Middleware Home as "/home/devops/Oracle/Middleware/Oracle_Home"

Verifying environment and performing prerequisite checks...
OPatch continues with these patches: 27644158

Do you want to proceed? [y/n]
```

5. Press 'y'

```
@obdwls/scratch/obdx/wls/Setup/27644158
-----
OPatch succeeded.
[devops@obdwls Oracle_Home]$ cd /scratch/obdx/wls/Setup/27644158/
[devops@obdwls 27644158]$ ls -la
total 32
drwxrwxr-x 4 54322 54322 4096 Oct 12 08:01 .
drwxrwxr-x 3 54322 54322 4096 Oct 12 08:01 ..
-rw-rw-r-- 1 54322 54322 27 Jun 14 19:41 README.html
-rw-rw-r-- 1 54322 54322 8898 Jun 14 19:41 README.txt
drwxrwxr-x 3 54322 54322 4096 Oct 12 08:01 etc
drwxrwxr-x 6 54322 54322 4096 Oct 12 08:01 files
[devops@obdwls 27644158]$ opatch apply
Oracle Interim Patch Installer version 13.9.2.0.0
Copyright (c) 2018, Oracle Corporation. All rights reserved.

Oracle Home      : /home/devops/Oracle/Middleware/Oracle_Home
Central Inventory : /home/devops/oraInventory
   from           : /home/devops/Oracle/Middleware/Oracle_Home/oraInst.loc
OPatch version   : 13.9.2.0.0
OUI version      : 13.9.2.0.0
Log file location : /home/devops/Oracle/Middleware/Oracle_Home/cfgtoollogs/opatch/opatch2018-10-12_08-03-04AM_1.log

OPatch detects the Middleware Home as "/home/devops/Oracle/Middleware/Oracle_Home"

Verifying environment and performing prerequisite checks...
OPatch continues with these patches: 27644158

Do you want to proceed? [y/n]
y
User Responded with: Y
all checks passed.

Please shutdown Oracle instances running out of this ORACLE_HOME on the local system.
(Oracle Home = '/home/devops/Oracle/Middleware/Oracle_Home')

Is the local system ready for patching? [y/n]
```

6. Press 'y'

```
@bbdwls/scratch/obdw/wls/Setup/27644158
Oracle Interim Patch Installer version 13.9.2.0.0
Copyright (c) 2018, Oracle Corporation. All rights reserved.

Oracle Home      : /home/devops/Oracle/Middleware/Oracle_Home
Central Inventory : /home/devops/orainventory
   from           : /home/devops/Oracle/Middleware/Oracle_Home/orainst.loc
OPatch version   : 13.9.2.0.0
OUI version      : 13.9.2.0.0
Log file location : /home/devops/Oracle/Middleware/Oracle_Home/cfgtoollogs/patch/patch2018-10-12_08-03-04AM_1.log

OPatch detects the Middleware Home as "/home/devops/Oracle/Middleware/Oracle_Home"
Verifying environment and performing prerequisite checks...
OPatch continues with these patches: 27644158

Do you want to proceed? [y|n]
y
User Responded with: Y
All checks passed.

Please shutdown Oracle instances running out of this ORACLE_HOME on the local system.
(Oracle Home = '/home/devops/Oracle/Middleware/Oracle_Home')

Is the local system ready for patching? [y|n]
y
User Responded with: Y
Backing up files...
Applying interim patch '27644158' to OH '/home/devops/Oracle/Middleware/Oracle_Home'

Patching component oracle.opss.core, 12.2.1.3.0...
Patching component oracle.opss.jrf, 12.2.1.3.0...
Patching component oracle.opss.jrf, 12.2.1.3.0...
Patching component oracle.opss.wls, 12.2.1.3.0...
Patch 27644158 successfully applied.
Log file location: /home/devops/Oracle/Middleware/Oracle_Home/cfgtoollogs/patch/patch2018-10-12_08-03-04AM_1.log

OPatch succeeded.
[devops@bbdwls 27644158]#
```

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4. Extending Weblogic Domain to load 'Oracle OPSS SCIM Identity Store' template

1. Run the below commands.

```
[devops@obapiwls fmwconfig]$ cd <ORACLE-HOME-PATH>/oracle_common/common/bin/
```

Eg. cd /home/devops/Oracle/Middleware/Oracle_Home/oracle_common/common/bin/

```
[devops@obapiwls bin]$ ./wlst.sh
```

[This will take you to Weblogic Server Administration Scripting Shell]

```

@obdwls:~/Oracle/Middleware/Oracle_Home/oracle_common/bin
Log file location : /home/devops/Oracle/Middleware/Oracle_Home/cfgtoollogs/patch/patch2018-10-12_08-03-04AM_1.log

OPatch detects the Middleware Home as "/home/devops/Oracle/Middleware/Oracle_Home"
Verifying environment and performing prerequisite checks...
OPatch continues with these patches: 27644158
Do you want to proceed? [y|n]
y
User Responded with: Y
All checks passed.

Please shutdown Oracle instances running out of this ORACLE HOME on the local system.
(Oracle Home = '/home/devops/Oracle/Middleware/Oracle_Home')

Is the local system ready for patching? [y|n]
y
User Responded with: Y
Backing up files...
Applying interim patch '27644158' to OH '/home/devops/Oracle/Middleware/Oracle_Home'
Patching component oracle.opss.core, 12.2.1.3.0...
Patching component oracle.opss.jrf, 12.2.1.3.0...
Patching component oracle.opss.jrf, 12.2.1.3.0...
Patching component oracle.opss.wls, 12.2.1.3.0...
Patch 27644158 successfully applied.
Log file location: /home/devops/Oracle/Middleware/Oracle_Home/cfgtoollogs/patch/patch2018-10-12_08-03-04AM_1.log
OPatch succeeded.
[devops@obdwls 27644158]$ cd /home/devops/Oracle/Middleware/Oracle_Home/oracle_common/common/bin/
[devops@obdwls bin]$ ./wlst.sh

Initializing WebLogic Scripting Tool (WLST) ...
Welcome to WebLogic Server Administration Scripting Shell
Type help() for help on available commands

wls:/offline>

```

2. Run the below commands in wlst :

```
wls:/offline>readDomain("<weblogic-domain-path>")
```

Eg. readDomain("/home/devops/domain/obapi_domain")

```
wls:/offline/obapi_domain>selectTemplate("Oracle OPSS SCIM Identity Store")
```

```
wls:/offline/obapi_domain>loadTemplates()
```

```
wls:/offline/obapi_domain>updateDomain()
```

```
wls:/offline/obapi_domain>closeDomain()
```

```
wls:/offline/obapi_domain>exit()
```

Extending Weblogic Domain to load 'Oracle OPSS SCIM Identity Store' template

```
@obdowls~/Oracle/Middleware/Oracle_Home/oracle_common/common/bin
Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

wls:/offline> exit
<function exit 2>
wls:/offline> exit()

Exiting WebLogic Scripting Tool.

[devops@obdowls bin]$ ./wlst.sh

Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

wls:/offline> readDomain("home/devops/domain/obdx_domain")
wls:/offline/obdx_domain>selectTemplate("Oracle OPSS SCIM Identity Store")
Traceback (innermost last):
  (no code object) at line 0
  File "<console>", line 1
    ?selectTemplate("Oracle OPSS SCIM Identity Store")
    ^
SyntaxError: Lexical error at line 1, column 1. Encountered: "\ufffd" (65533), after : ""
wls:/offline/obdx_domain>selectTemplate("Oracle OPSS SCIM Identity Store")
Traceback (innermost last):
  (no code object) at line 0
  File "<console>", line 1
    ?selectTemplate("Oracle OPSS SCIM Identity Store")
    ^
SyntaxError: Lexical error at line 1, column 1. Encountered: "\ufffd" (65533), after : ""
wls:/offline/obdx_domain>selectTemplate("Oracle OPSS SCIM Identity Store")
wls:/offline/obdx_domain>loadTemplates()
wls:/offline/obdx_domain>updateDomain()
Oct 12, 2018 9:36:14 AM oracle.mds
WARNING: MDS-11019: The default CharSet US-ASCII is not a unicode character set. File names with non-ASCII characters may not operate as expected. Check locale settings
wls:/offline/obdx_domain>closeDomain()
wls:/offline>
```

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5. Change JPS configurations

1. Add the following to the **jps-config.xml** at `<weblogic-domain-path>/config/fmwconfig/`
2. Remove *GenericIdentityStoreProvider* *serviceProvider* inside **<serviceProviders>** tag:
 - ```
<serviceProvider
class="oracle.security.jps.internal.idstore.generic.GenericIdentityStoreProvider"
name="custom.provider" type="IDENTITY_STORE">
<description>Custom IdStore Provider</description>
</serviceProvider>
```
3. Remove *idstore.custom* *serviceInstance* inside **<serviceInstances>** tag:
  - ```
<serviceInstance location="dumb" name="idstore.custom" provider="custom.provider">
<description>Custom Identity Store Service Instance</description>
<property name="idstore.type" value="CUSTOM"/>
<property name="ADF_IM_FACTORY_CLASS"
value="com.ofss.sms.dbAuthenticator.providers.db.DBIdentityStoreFactory"/>
<property name="DATASOURCE_NAME" value="DIGX"/>
</serviceInstance>
```

Inside the `<jpsContext name="default">` tag, if *idstore.custom* is present, then:

- Change `<serviceInstanceRef ref="idstore.custom"/>` to `<serviceInstanceRef ref="idstore.scim"/>`

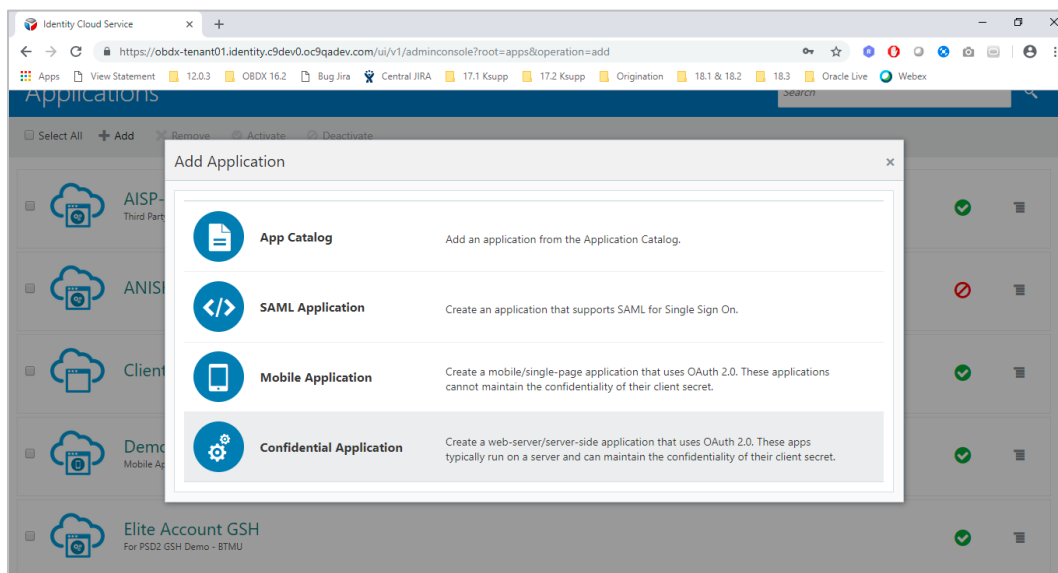
[Home](#)

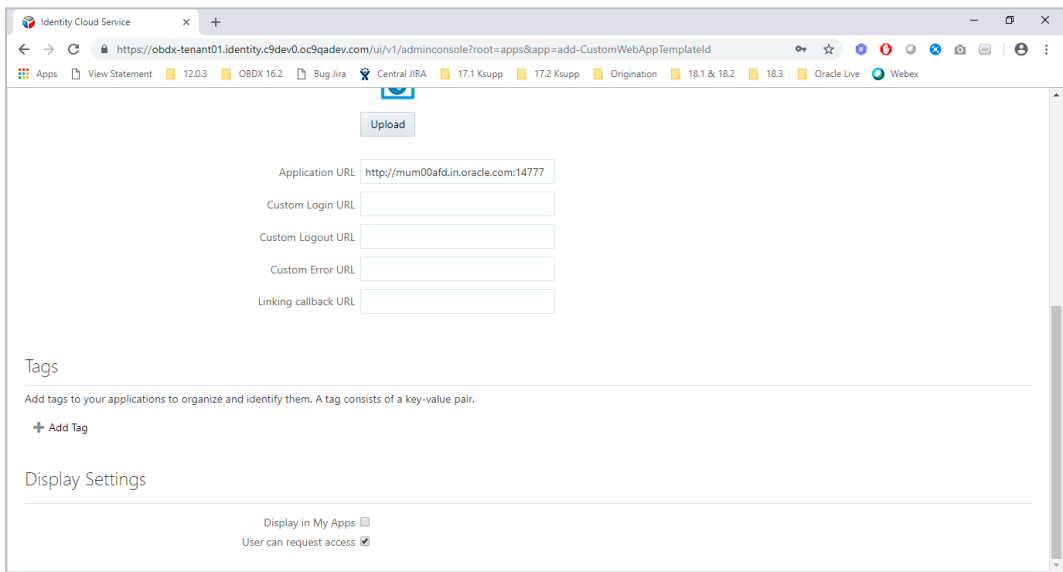
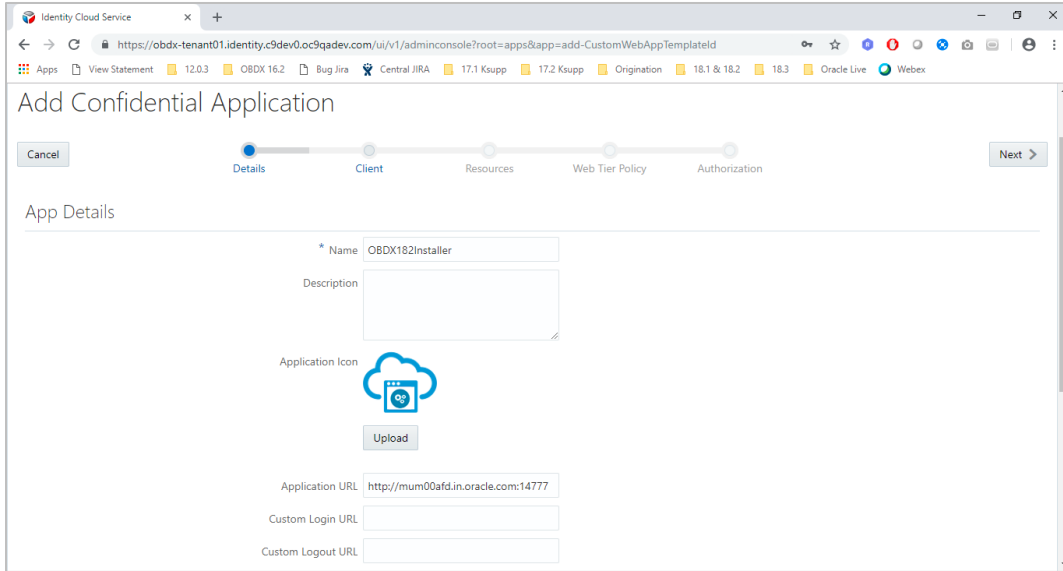
6. Create an OBAPI Client Application in IDCS Console

1. Go to IDCS Admin Console → Enter Admin user name and Password.
2. On Applications tab → Click on + sign → Confidential Application

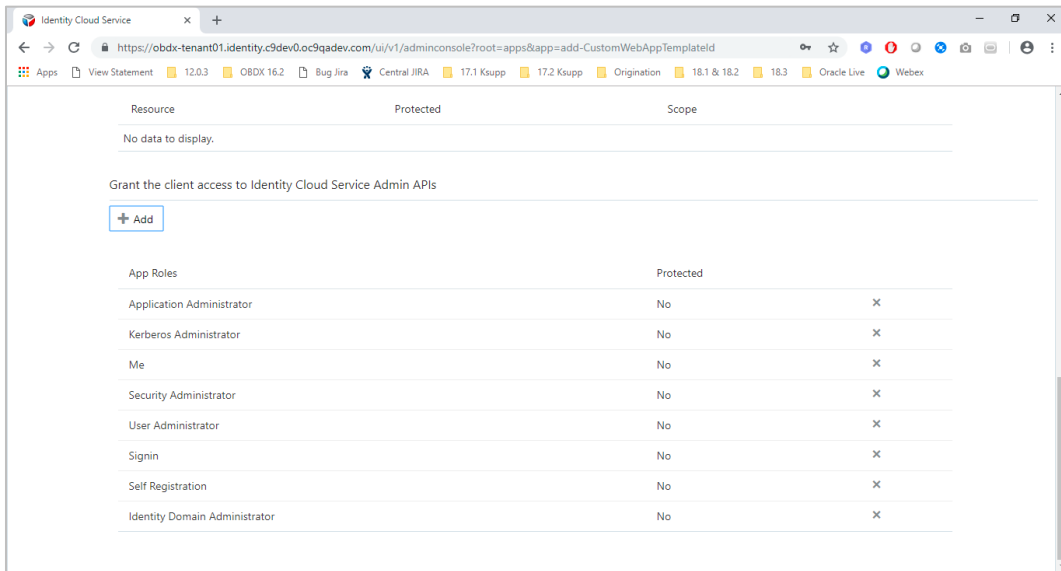
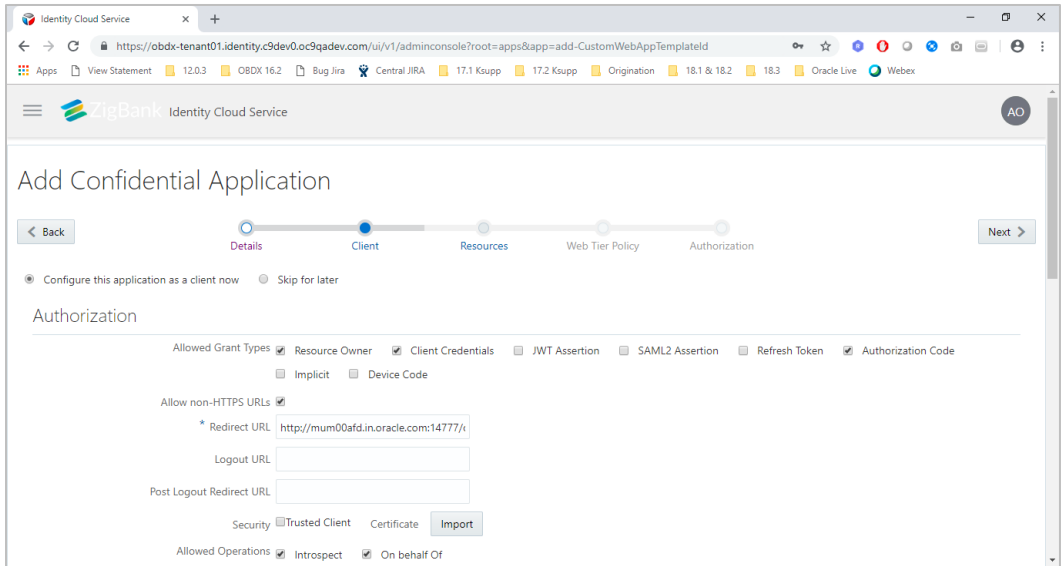
OBAPI Client application details in IDCS:

Name	Is the OBAPI Client Application Name in IDCS. Give a suitable name.
connection_scheme	http or https
webserver_host_name	Host name of web server
webserver_port	Port of web server
Application URL	<connection_scheme>://<webserver_host_name>:<webserver_port>
Redirect URL	<Application URL>/oauth/callback
Primary Audience	<Name>
Secondary Audience	<Application URL>

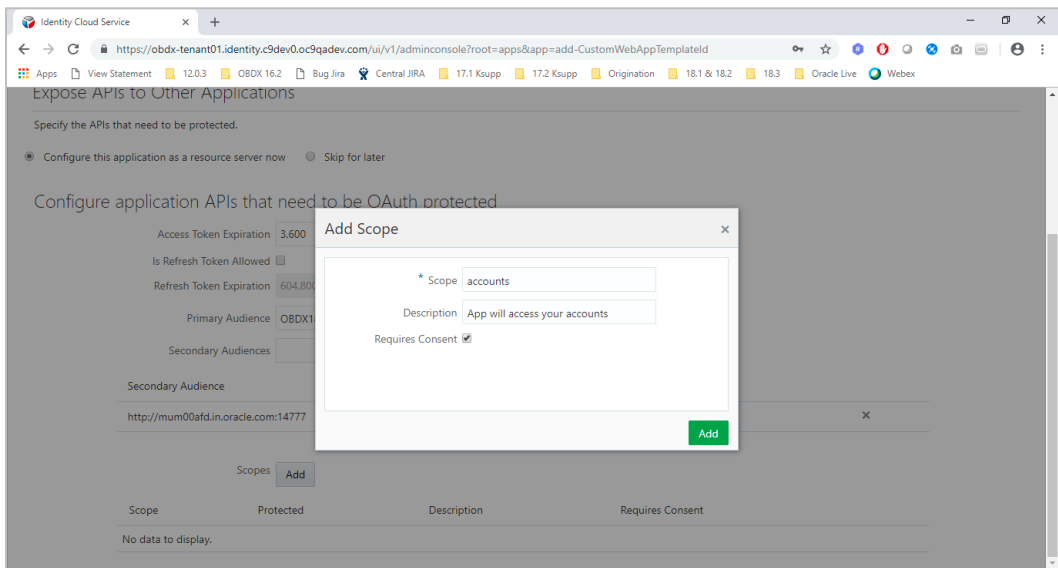
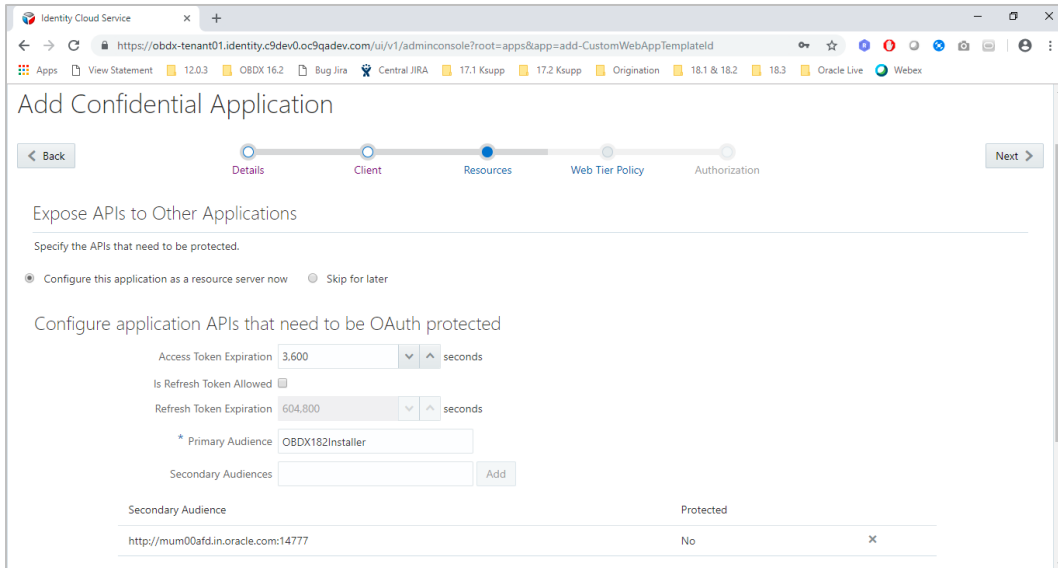


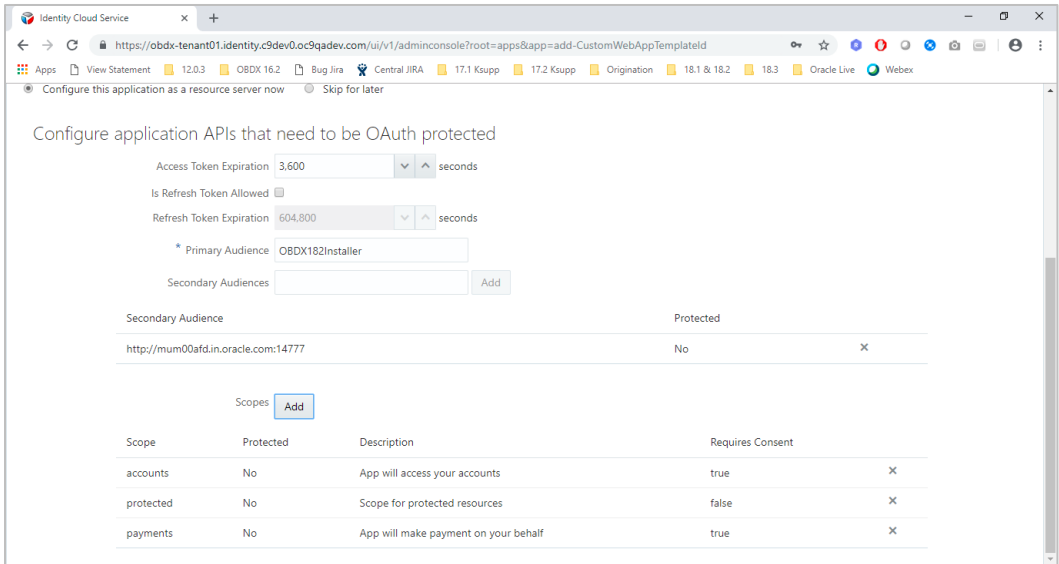


3. Click **Next**

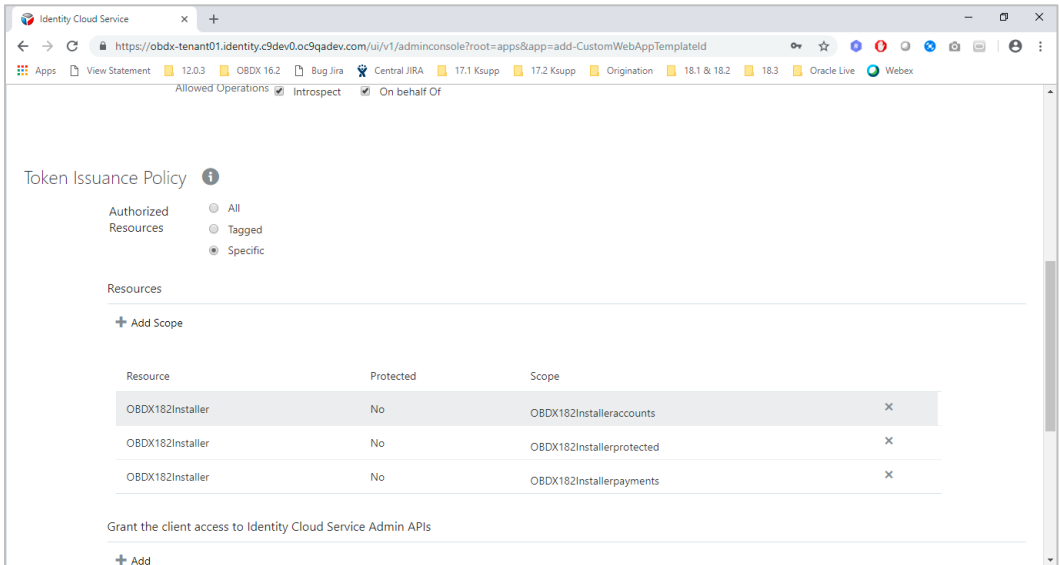


4. Click **Next**





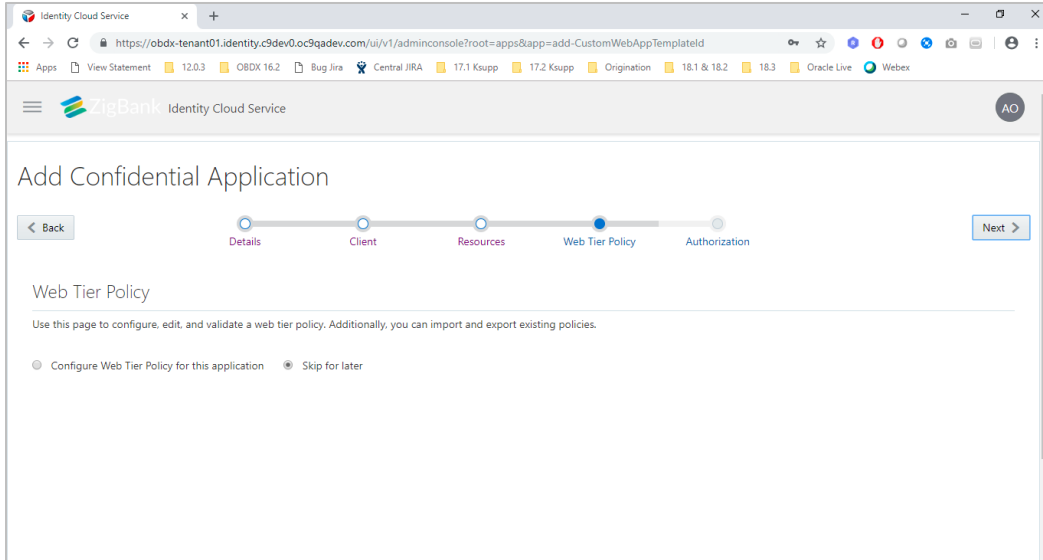
5. Go Back to **Client** tab and **Add Scope**



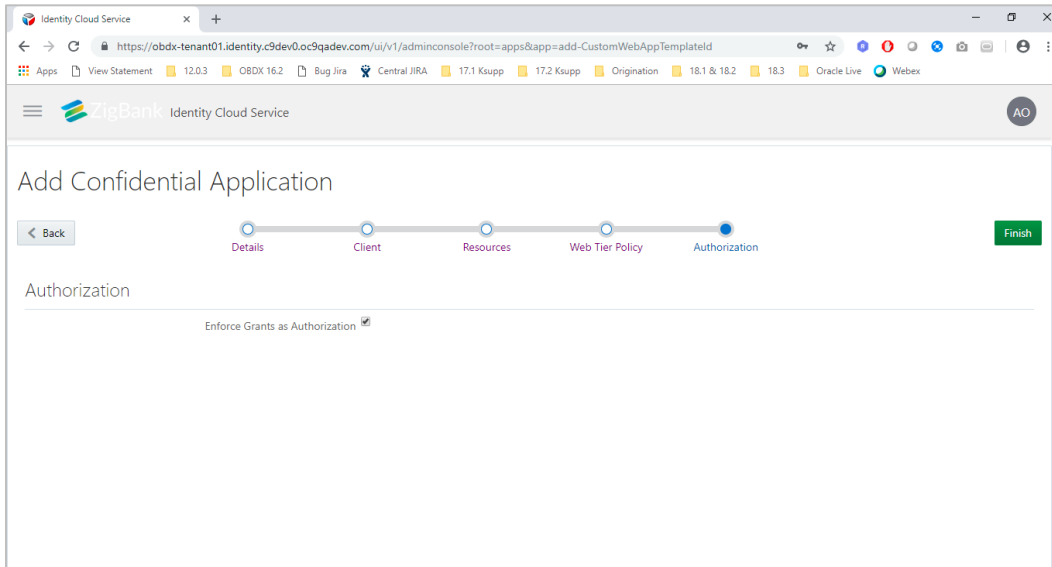
6. Note down the name of protected scope above.

allowed_scope_name_of_protected_in_OBAPI_Client_App	Name of Protected scope. Eg. OBAPI182Installerprotected
--	---

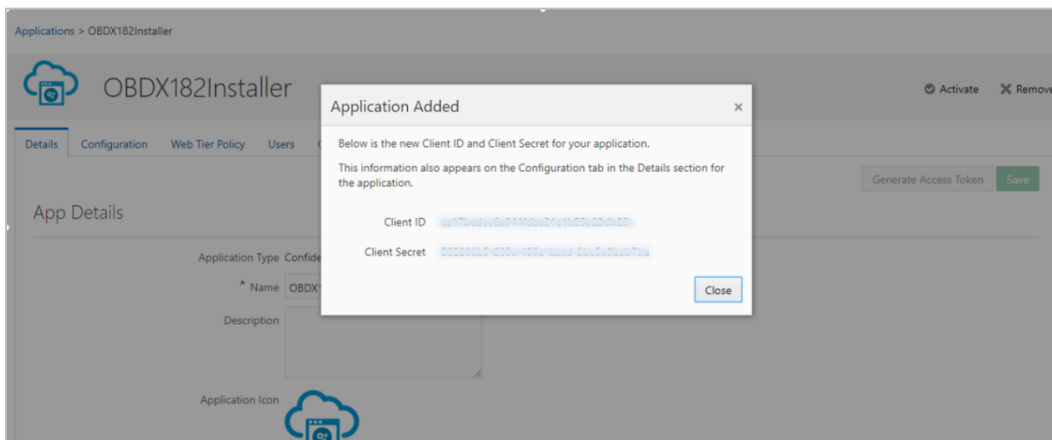
7. Next Go to **Web Tier Policy** tab.



8. Click **Next**



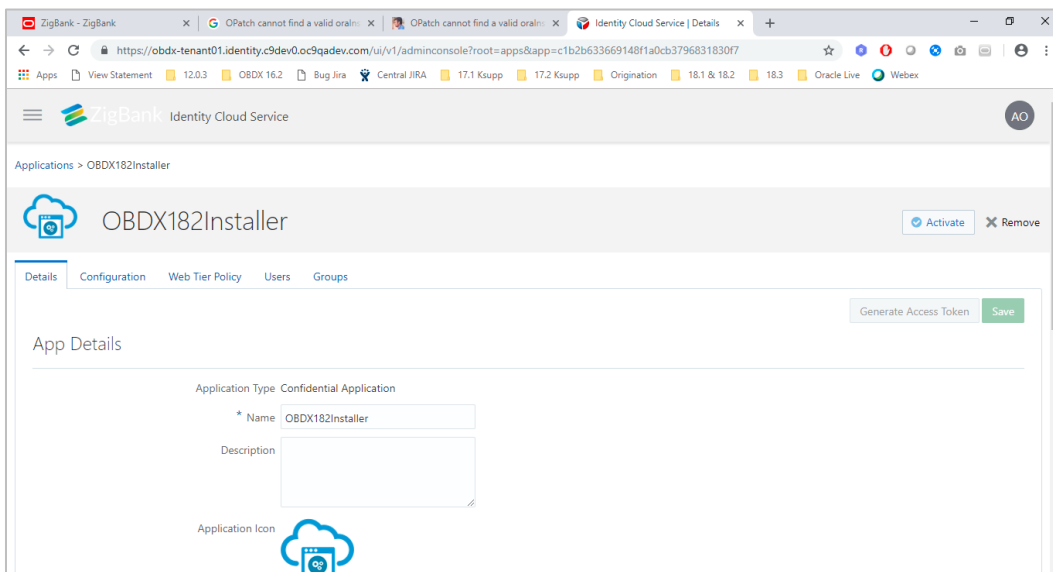
9. Click on **Finish**.



10. You will get **Client ID** and **Client Secret** on successful creation.

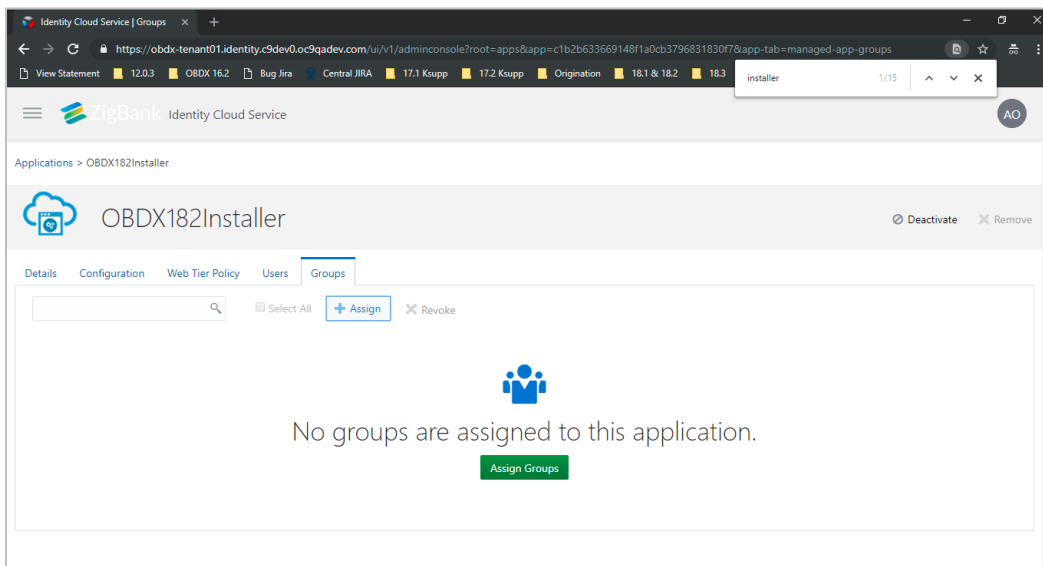
Glossary of parameters:

<client_id_of_OBAPI_client_in_IDCS>	Client ID given above
<client_secret_of_OBAPI_client_in_IDCS>	Client Secret given above

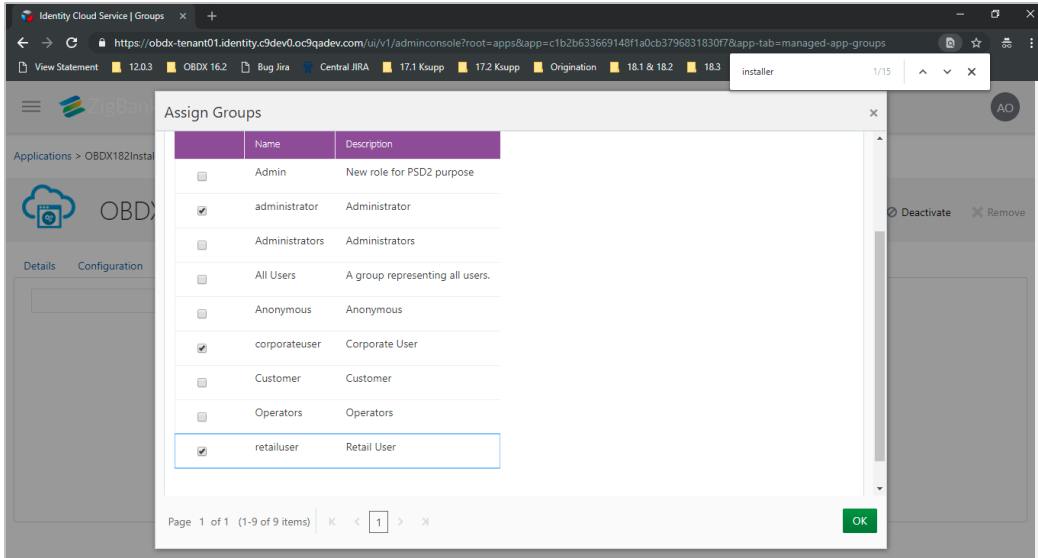


11. Click on **Activate** button.

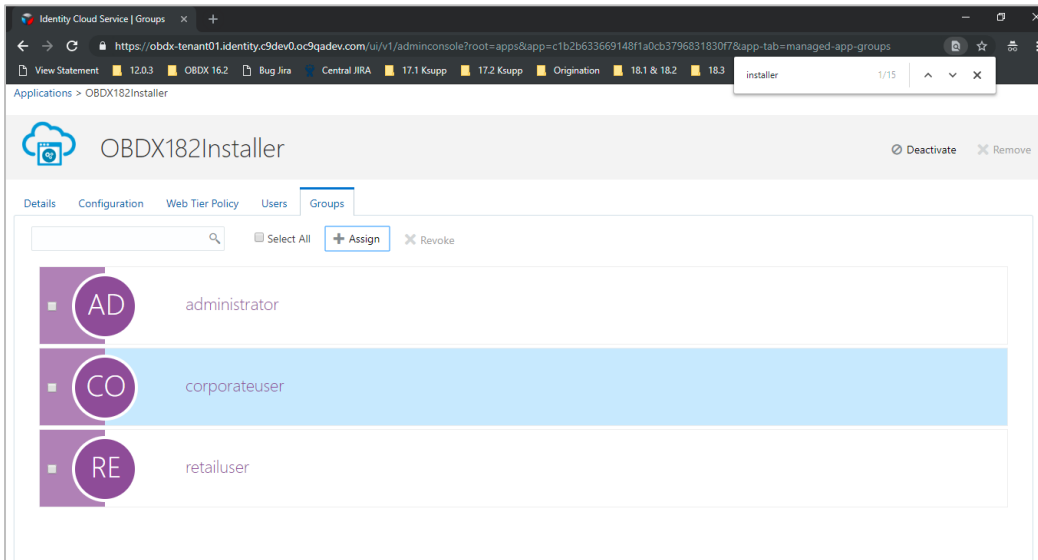
12. Search for created application and go to **Groups** tab.



13. Click on **Assign**.



14. Click **Add**.



15. Above groups are added.

[Home](#)

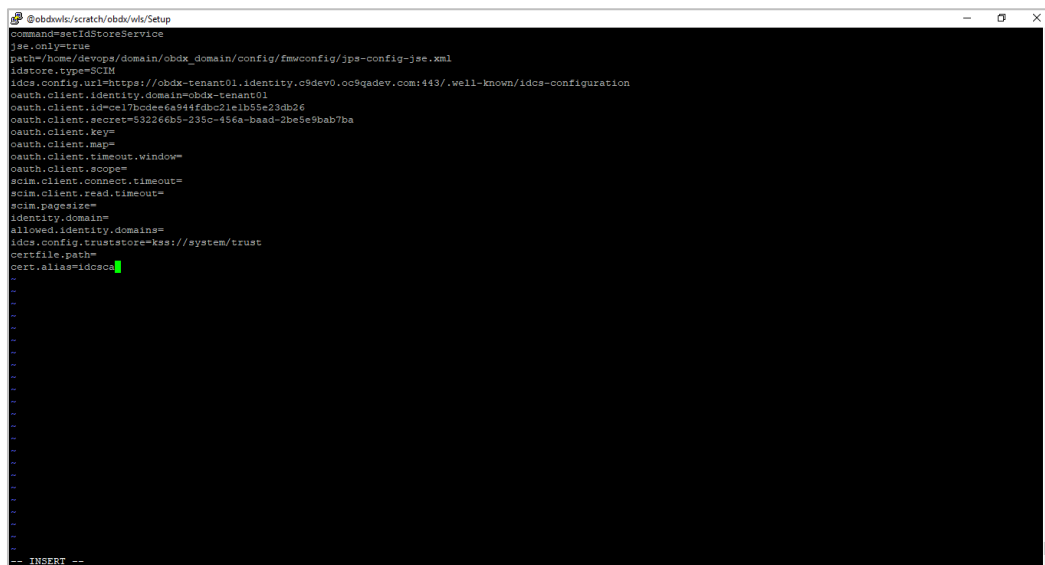
7. Configure OPSS IDCS Identity Store Service

1. Back up `jps-config-jse.xml` at [<weblogic-domain-path>/config/fmwconfig/](#)

Prepare a command property file named `opss_idcs_cmd.props`

`opss_idcs_cmd.props`:

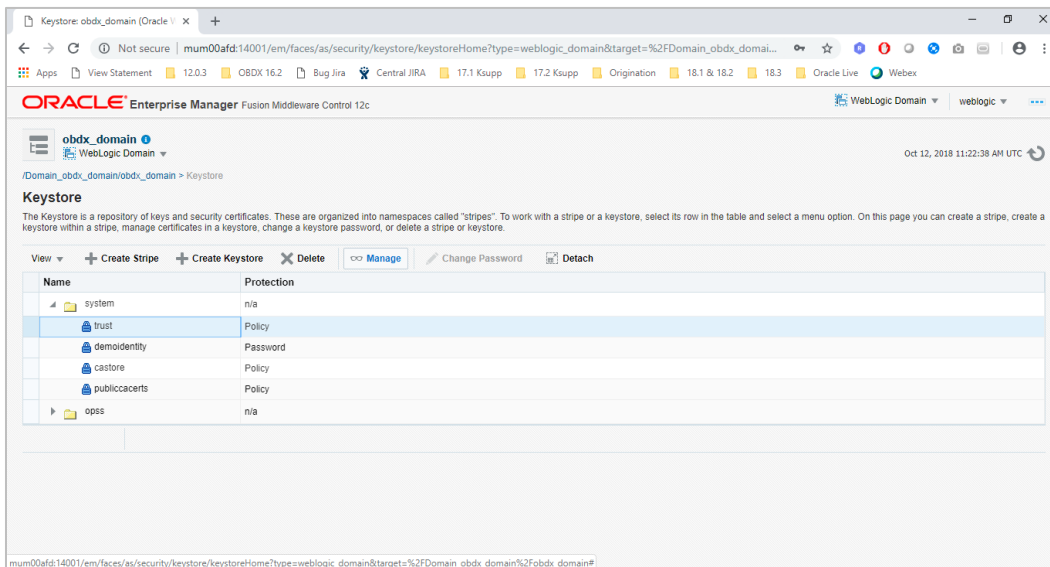
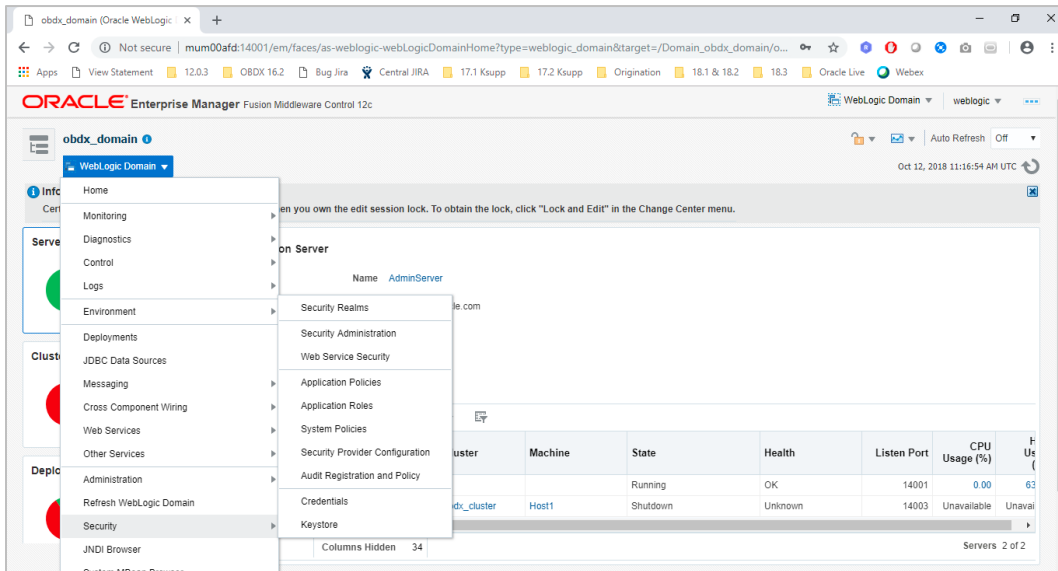
```
command=setIdStoreService
jse.only=true
path=<weblogic-domain-path>/config/fmwconfig/jps-config-jse.xml
idstore.type=SCIM
idcs.config.url=https://<tenant-base-url>:443/.well-known/idcs-configuration
oauth.client.identity.domain=<tenant-name>
oauth.client.id=<client id of OBAPI client in IDCS>
oauth.client.secret=<client secret of OBAPI client in IDCS>
oauth.client.key=
oauth.client.map=
oauth.client.timeout.window=
oauth.client.scope=
scim.client.connect.timeout=
scim.client.read.timeout=
scim.pagesize=
identity.domain=
allowed.identity.domains=
idcs.config.truststore=kss://system/trust
certfile.path=
cert.alias=idcsca
```

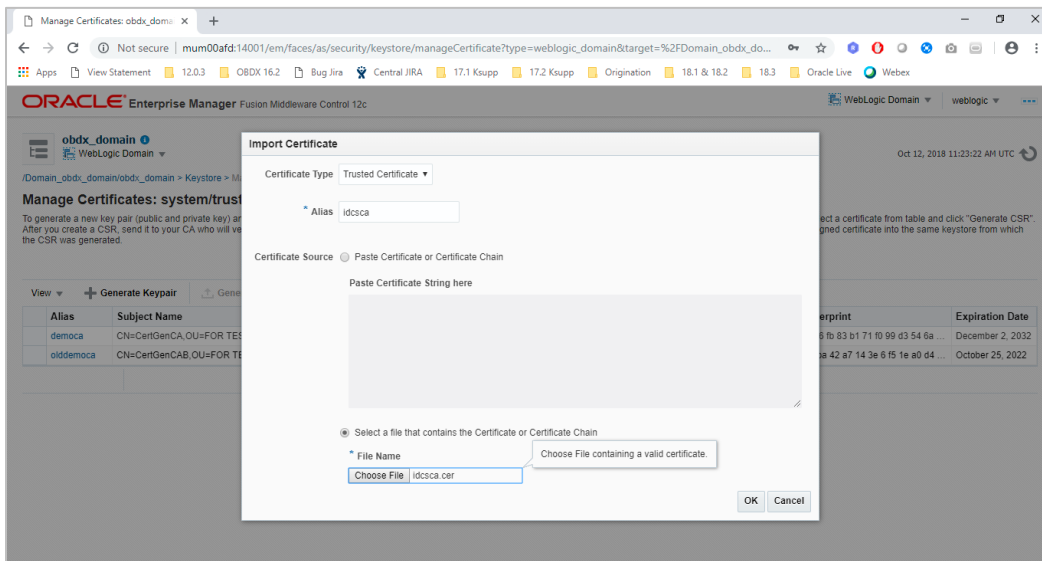
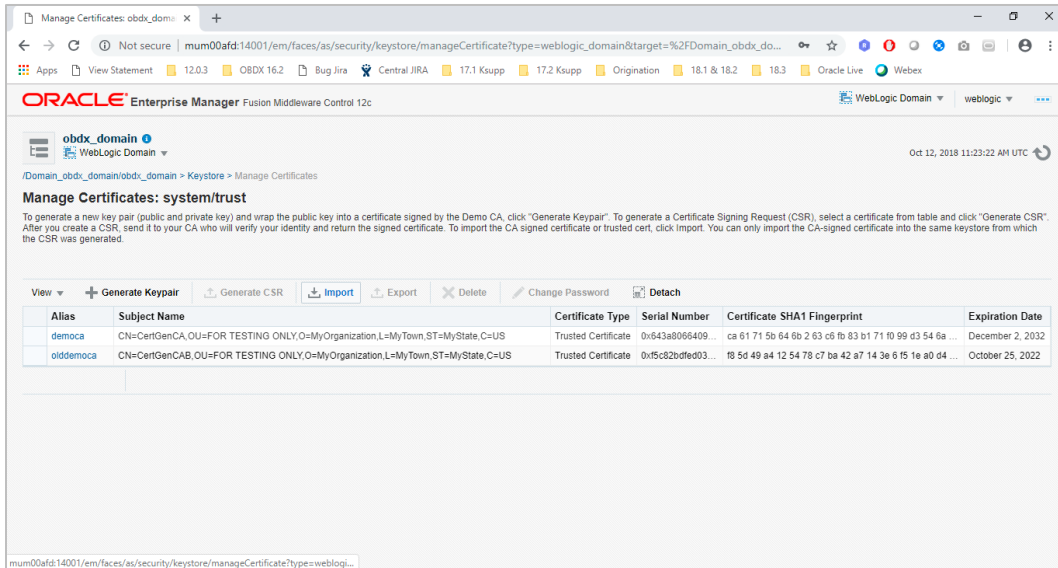


```
@ebdavis/scratch/obdx/wls/Setup
command=setIdStoreService
jse.only=true
path=/home/devops/domain/obdx_domain/config/fmwconfig/jps-config-jse.xml
idstore.type=SCIM
idcs.config.url=https://obdx-tenant01.identity.c9dev0.oc9qadev.com:443/.well-known/idcs-configuration
oauth.client.identity.domain=obdx-tenant01
oauth.client.id=ca17fcd4e6a544fd8c21e135e23db2f
oauth.client.secret=932266b5-235c-456a-baad-2be5e9bab7ba
oauth.client.key=
oauth.client.map=
oauth.client.timeout.window=
oauth.client.scope=
scim.client.connect.timeout=
scim.client.read.timeout=
scim.pagesize=
identity.domain=
allowed.identity.domains=
idcs.config.truststore=kas://system/trust
certfile.path=
cert.alias=idcsca
-- INSERT --
```

2. Go to [<jdk-path>/bin](#)

4. Login to weblogic Enterprise Manager (EM) and Import this certificate in EM as 'idcsca' under kss://system/trust.



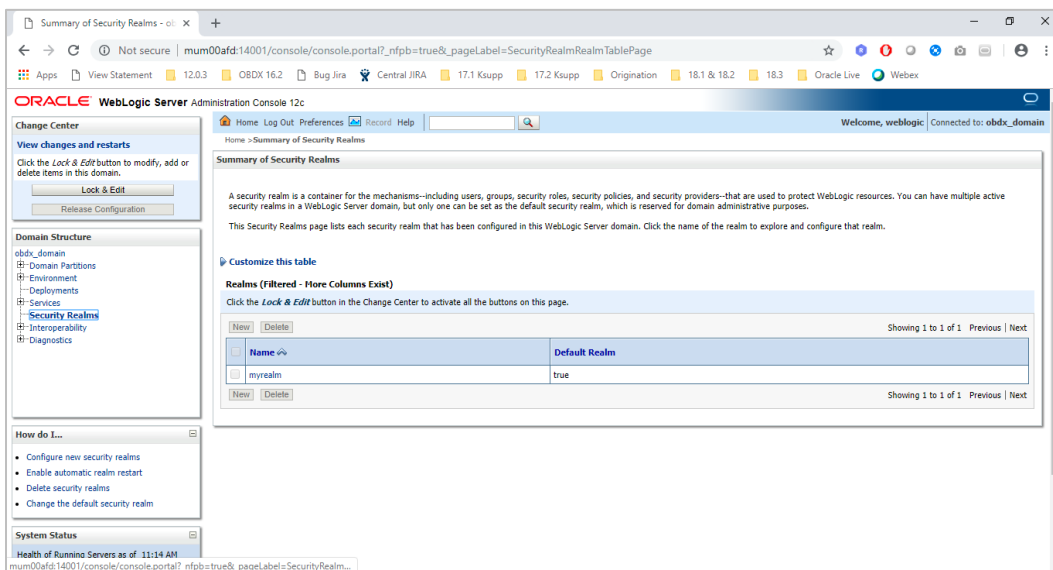
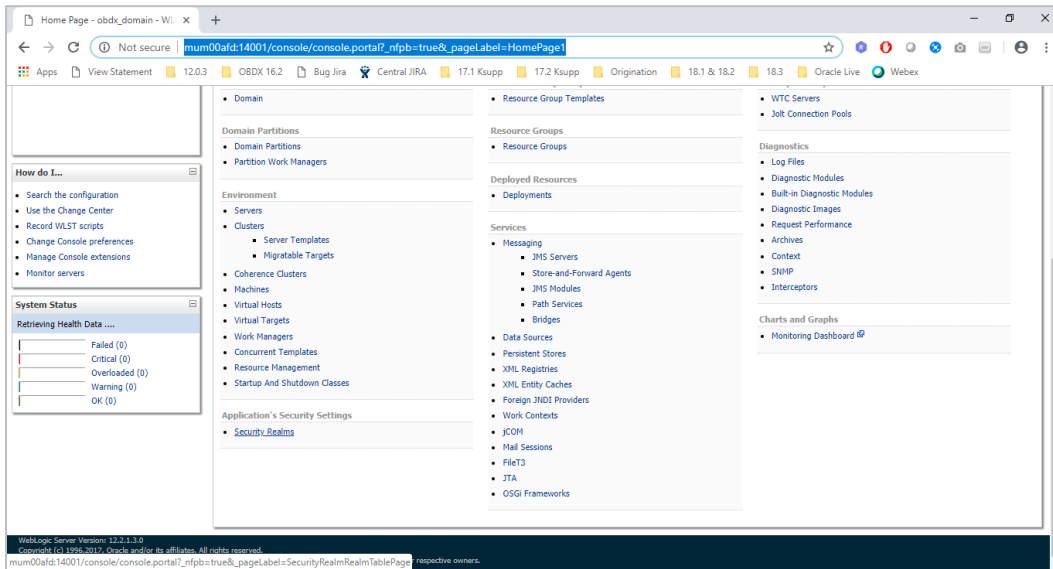


The screenshot shows the Oracle Enterprise Manager interface for managing certificates. A yellow banner at the top indicates 'Trusted Certificate imported successfully'. Below this, the page title is 'Manage Certificates: system/trust'. A table lists the following certificates:

Alias	Subject Name	Certificate Type	Serial Number	Certificate SHA1 Fingerprint	Expiration Date
democa	CN=CertGenCA,OU=FOR TESTING ONLY,O=MyOrganization,L=MyTown,ST=MyState,C=US	Trusted Certificate	0x643a8066409...	ca 61 71 5b 64 6b 2 63 c6 fb 83 b1 71 10 99 d3 54 6a ...	December 2, 2032
olddemoca	CN=CertGenCAB,OU=FOR TESTING ONLY,O=MyOrganization,L=MyTown,ST=MyState,C=US	Trusted Certificate	0xf5c82b9fe903...	f8 5d 49 a4 12 54 78 c7 ba 42 a7 14 3e 6 1e a0 d4 ...	October 25, 2022
idcsca	CN="identity.c9dev0.oc9gdev.com,OU=Oracle BMD SALT-LAKE-CITY,O=Oracle Corporation,L=Re...	Trusted Certificate	0x9db0b3369e5...	61 81 8e 35 4a d8 25 e2 c bf f2 c4 ff 91 26 bb ad 8e 3...	March 8, 2019

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8. Adding IDCS as an Identity Provider in Weblogic Security Realms



Adding IDCS as an Identity Provider in Weblogic Security Realms

The screenshot shows the Oracle WebLogic Server Administration Console. The main content area is titled 'Settings for myrealm' and includes a navigation menu with 'Providers' selected. Under 'Providers', the 'Authentication' tab is active. A table titled 'Authentication Providers' is displayed, showing the following data:

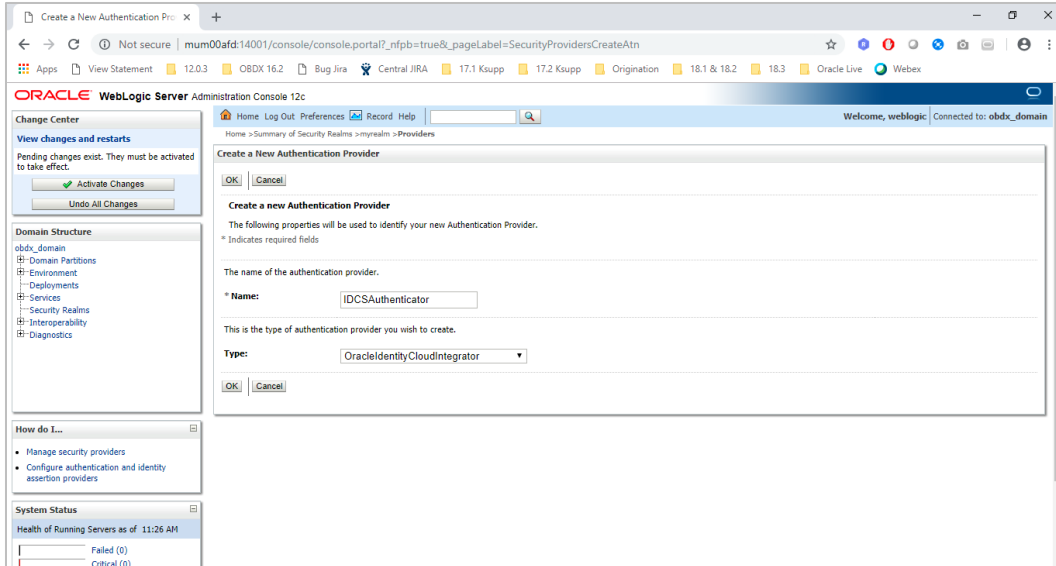
Name	Description	Version
<input checked="" type="checkbox"/> DBAuthenticator	OBDX - DB Authenticator	18.2.0.2.0,344
<input checked="" type="checkbox"/> SQLAuth	Provider that performs DBMS authentication	1.0
<input type="checkbox"/> OBDXJWT	OBDX Identity Assertion Provider (JWT and OAuth)	18.2.0.2.0,344
<input type="checkbox"/> DefaultAuthenticator	WebLogic Authentication Provider	1.0
<input type="checkbox"/> DefaultIdentityAsserter	WebLogic Identity Assertion provider	1.0

The screenshot shows the 'Delete Authentication Providers' confirmation dialog in the Oracle WebLogic Server Administration Console. The dialog asks for confirmation to delete the following items:

- DBAuthenticator
- SQLAuth

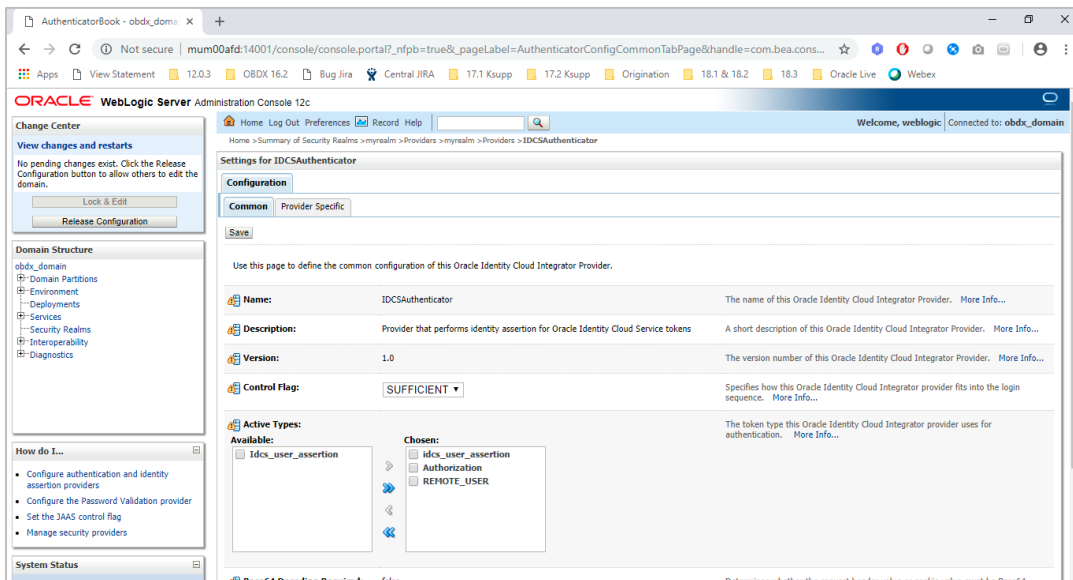
Buttons for 'Yes' and 'No' are visible at the bottom of the dialog.

5. Delete *DBAuthenticator* and *SQLAuth* from the list of Authenticator Providers.
6. Create a New Provider.
 - Name : *IDCSAuthenticator*
 - Type : *OracleIdentityCloudIntegrator*



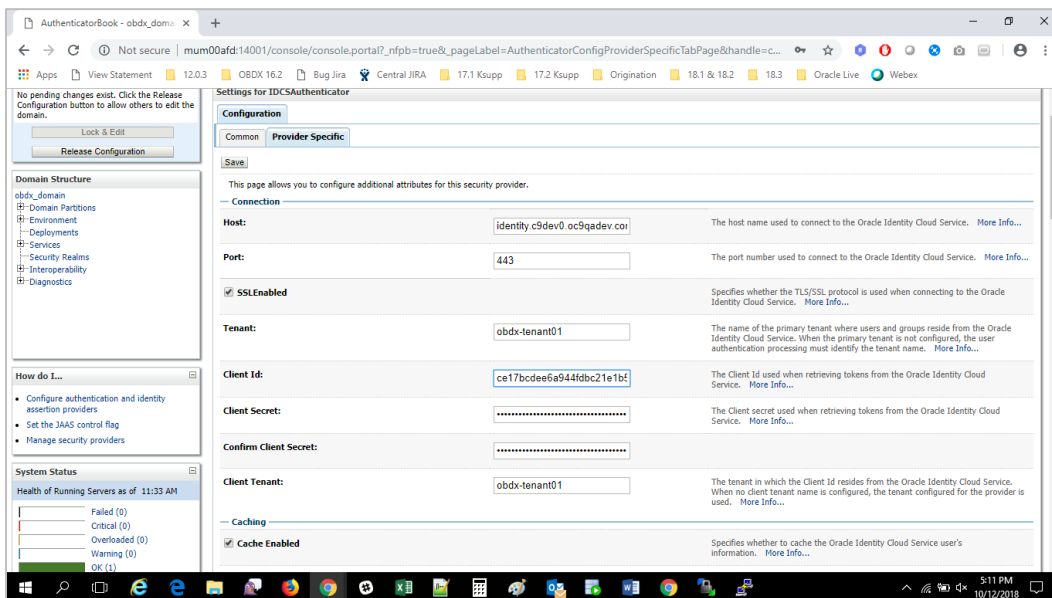
7. IDCSAuthenticator > Configurations > Common

- Control Flag: SUFFICIENT
- Active Types:
 - i. Available: Idcs_user_assertion
 - ii. Chosen: idcs_user_assertion, Authorization, IDCS_REMOTE_USER, REMOTE_USER



8. IDCSAuthenticator > Configurations > Provider Specific

- Port: 443
- Tenant Names: [<tenant name>](#)
- SSLEnabled: *True*
- Client IDResource Attribute: *client_id*
- Client Id: [<client ID of OBAPI client in IDCS>](#)
- Client Tenant: [<tenant name>](#)
- Tenant: [<tenant name>](#)
- Host: [<base-url>](#)
- Client Secret: [<client secret of OBAPI client in IDCS>](#)



Adding IDCS as an Identity Provider in Weblogic Security Realms

The screenshot shows the configuration page for an IDCS Authenticator in the Oracle WebLogic Administration Console. The 'General' tab is selected, and the following settings are visible:

- Connect Timeout:** 300 (The maximum time to wait, in seconds, for the connection to the Oracle Identity Cloud Service to be established. [More Info...](#))
- Response Read Timeout:** 60 (The maximum time to wait, in seconds, for a response from the Oracle Identity Cloud Service. [More Info...](#))
- User Authentication Assertion Attribute:** (Used for User Authentication and Assertion. The default value results in the use of the attribute configured by the Oracle Identity Cloud Service. [More Info...](#))
- User Name Resource Attribute:** userName (SCIM User resource type attribute that specifies the name of the user. [More Info...](#))
- User ID Resource Attribute:** id (SCIM User resource type attribute that specifies the ID (GUID) of the user. [More Info...](#))
- Client ID Resource Attribute:** client_id (Used for Client ID App Assertion. The default value results in the use of the attribute configured by the Oracle Identity Cloud Service. [More Info...](#))
- Tenant Header Names:** X-USER-IDENTITY-SERVICE-GUID, X-USER-IDENTITY-DOMAIN-NAME, X-RESOURCE-IDENTITY-SERVICE-GUID, X-RESOURCE-IDENTITY-DOMAIN-NAME (The names of HTTP headers sent on requests to the Oracle Identity Cloud Service that are used to determine the tenancy during authentication. [More Info...](#))
- Application Name Filter Header Name:** X-RESOURCE-SERVICE-IN (The name of the HTTP header used to determine the application name applied when filtering the authentication and assertion requests to the Oracle Identity Cloud Service. When no value is supplied or can be determined, requests are not filtered by an application. [More Info...](#))
- Token Validation Level:** NORMAL (The level of validation performed on Oracle Identity Cloud Service tokens passed to the Identity Server. Valid values are FULL, INTERMEDIATE, and NONE. [More Info...](#))

9. Reorder IDCSAuthenticator to the top of all providers.

The screenshot shows the 'Reorder Authentication Providers' dialog box in the Oracle WebLogic Administration Console. The dialog is titled 'Reorder Authentication Providers' and contains the following information:

- Reorder Authentication Providers:** You can reorder your Authentication Providers using the list below. By reordering Authentication Providers, you can alter the authentication sequence. Select authenticator(s) in the list and use arrows to move them up and down in the list.
- Available:** A list of authentication providers with 'IDCSAuthenticator' selected. Other providers include 'OBDCIWT', 'DefaultAuthenticator', and 'DefaultIdentityAsserter'.
- Buttons:** 'OK' and 'Cancel' buttons are present at the bottom of the dialog.

The background shows the 'Change Center' and 'Domain Structure' panels on the left side of the console.

Adding IDCS as an Identity Provider in Weblogic Security Realms

The screenshot displays the Oracle WebLogic Server Administration Console interface. The main content area is titled "Settings for myrealm" and is under the "Providers" tab. A message at the top states: "All changes have been activated. However 1 item must be restarted for the changes to take effect." Below this, there are tabs for "Authentication", "Password Validation", "Authorization", "Adjudication", "Role Mapping", "Auditing", "Credential Mapping", and "Certification Path".

The "Authentication Providers" section includes a table with the following data:

Name	Description	Version
IDCSAuthenticator	Provider that performs identity assertion for Oracle Identity Cloud Service tokens	1.0
OBDXJWT	OBOX Identity Assertion Provider (JWT and OAuth)	18.2.0.2.0,344
DefaultAuthenticator	WebLogic Authentication Provider	1.0
DefaultIdentityAsserter	WebLogic Identity Assertion provider	1.0

On the left side of the console, there is a "Change Center" section with a "Lock & Edit" button and a "Release Configuration" button. Below that is a "Domain Structure" tree showing the hierarchy: obdx_domain > Environment > Security Realms > myrealm. At the bottom left, there is a "How do I..." section with links to various configuration tasks.

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9. Application Server Changes

9.1 Add below argument to Managed server:

Dweblogic.security.SSL.hostnameVerifier=weblogic.security.utils.SSLWLSWildcardHostnameVerifier

The screenshot displays the 'Settings for OBDX_MS1 - obdx' page in the Oracle WebLogic Administration Console. The 'Arguments' field is highlighted with a blue box, containing the following command:

```
-Dweblogic.security.SSL.hostnameVerifier=weblogic.security.utils.SSLWLSWildcardHostnameVerifier
```

Other visible configuration fields include:

- Java Vendor:** (Empty text box)
- BEA Home:** (Empty text box)
- Root Directory:** (Empty text box)
- Class Path:** /scratch/obdx/wls/config
- Security Policy File:** (Empty text box)
- User Name:** (Empty text box)
- Password:** (Empty text box)

The left sidebar shows the 'System Status' section with a 'Health of Running Servers as of 11:46 AM' table:

Health	Count
Failed	0
Critical	0
Overloaded	0
Warning	0
OK	1

9.2 Managed Server Start Configurations

1. Go to Home > Summary of Clusters > obapi_cluster > Configuration Tab > General Tab >
2. Expand **Advanced** Section.
3. Set the Value of **WebLogic Plug-In Enabled** to **yes**.

The screenshot displays the Oracle WebLogic Administration Console interface for configuring the 'obdx_cluster'. The breadcrumb navigation path is: Home > Summary of Servers > Summary of Deployments > com.oracle.digi.connector.rar > Roles > Summary of Servers > OBDX_MSI > Summary of Clusters > obdx_cluster. The 'Configuration' tab is active, and the 'General' sub-tab is selected. The 'Advanced' section is expanded, showing the 'WebLogic Plug-In Enabled' setting set to 'yes'. Other visible settings include 'Name' (obdx_cluster), 'Default Load Algorithm' (round-robin), 'Cluster Address', and 'Number of Servers in Cluster Address' (3). The 'System Status' panel on the left shows the health of running servers as of 2:58 PM, with 0 Failed, 0 Critical, and 0 Overloaded servers.

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10. Change in Weblogic Deployments

10.1 Creating a Connection in Connector ear

1. Start the managed server if it is down.
2. Summary of Deployments > com.ofss.digx.connector.rar > Security > Outbound Credential Mappings

Module Name	Status	Health	Type	Target	Environment	Port
adf.oracle.domain.webapp.apache.httpcore(1.0,12.2.1.3.0)	Active		Library	AdminServer, obdx_cluster	Global	100
adf.oracle.domain.webapp.apache.httpmime(1.0,12.2.1.3.0)	Active		Library	AdminServer, obdx_cluster	Global	100
adf.oracle.domain.webapp.apache.velocity(1.0,12.2.1.3.0)	Active		Library	AdminServer, obdx_cluster	Global	100
adf.oracle.domain.webapp.batik-bundle(1.0,12.2.1.3.0)	Active		Library	AdminServer, obdx_cluster	Global	100
adf.oracle.domain.webapp.guava(1.0,12.2.1.3.0)	Active		Library	AdminServer, obdx_cluster	Global	100
adf.oracle.domain.webapp.xml-api-ext(1.0,12.2.1.3.0)	Active		Library	AdminServer, obdx_cluster	Global	100
AuditMDEAR	New		Enterprise Application	obdx_cluster	Global	100
BatchResourceAdapter	New		Enterprise Application	obdx_cluster	Global	100
coherence-transaction-rar	Active	OK	Resource Adapter	AdminServer, obdx_cluster	Global	100
com.ofss.digx.app.connector	New		Enterprise Application	obdx_cluster	Global	100
Modules						
com.ofss.digx.connector.rar			Resource Adapter			
EBBs						
None to display						
Web Services						
None to display						
DMS Application (12.2.1.1.0)	Active	OK	Web Application	AdminServer, obdx_cluster	Global	5
em	Active	OK	Enterprise Application	AdminServer	Global	400
emagentsdkimplpriv_jar(12.4.12.1.0-4.0)	Active		Library	AdminServer	Global	100

Settings for com.ofss.digx.connector.rar

Overview | Configuration | **Security** | Control | Testing | Monitoring

Roles | Policies | **Outbound Credential Mappings** | Inbound Principal Mappings | Principals

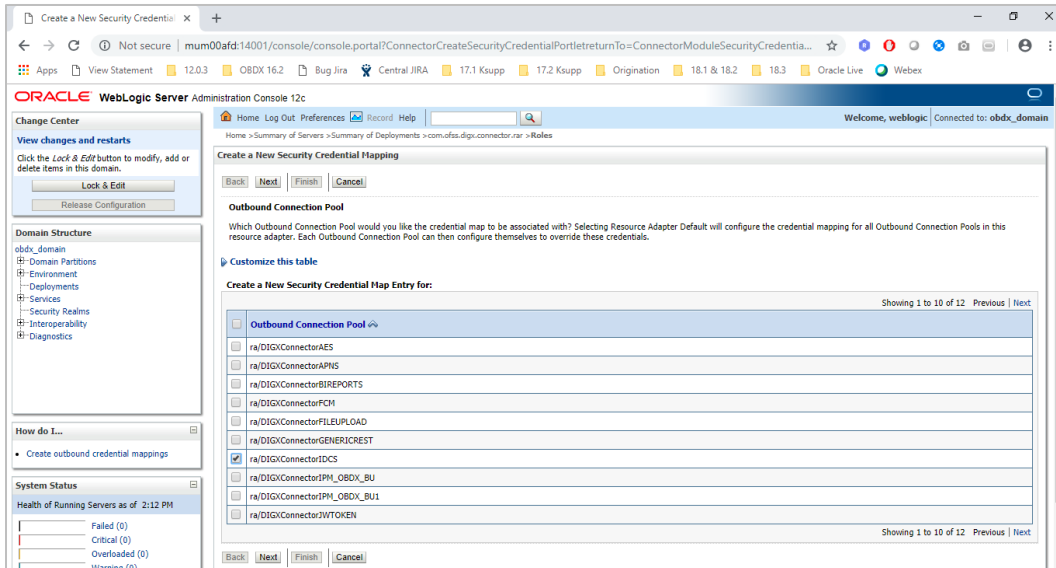
Outbound credential mappings let you map WebLogic Server usernames to usernames in the Enterprise Information System (EIS) to which you want to connect using a resource adapter. You can use default outbound credential mappings for all outbound connection pools in the resource adapter, or specify particular outbound credential mappings for individual connection pools. This page contains the table of outbound credential mappings for this resource adapter.

Customize this table

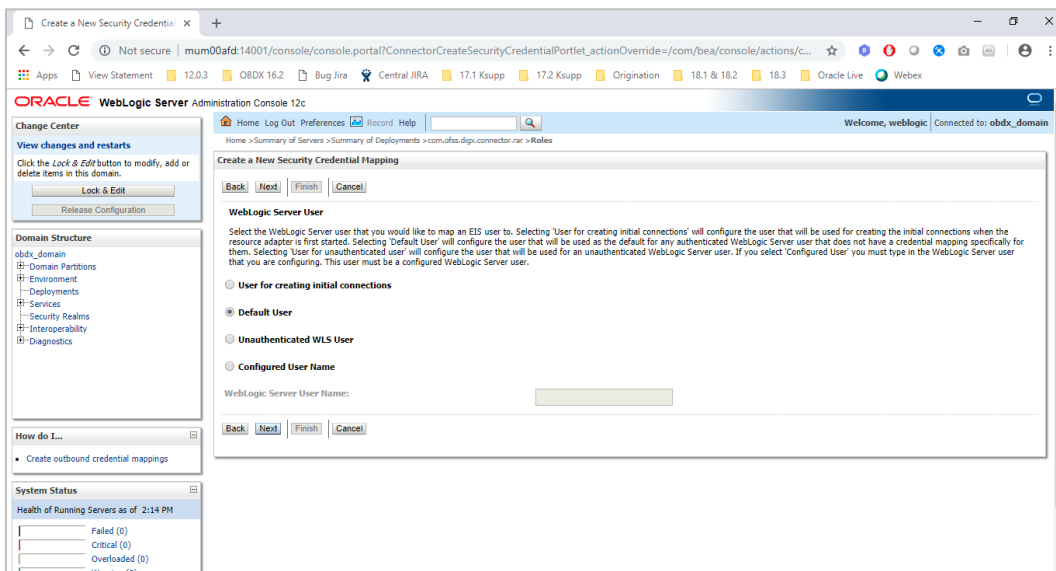
Outbound Credential Mappings

WLS User	EIS User	Outbound Connection Pool
Default	AES_KEY	ra/DIGXConnectorAES

3. Click New



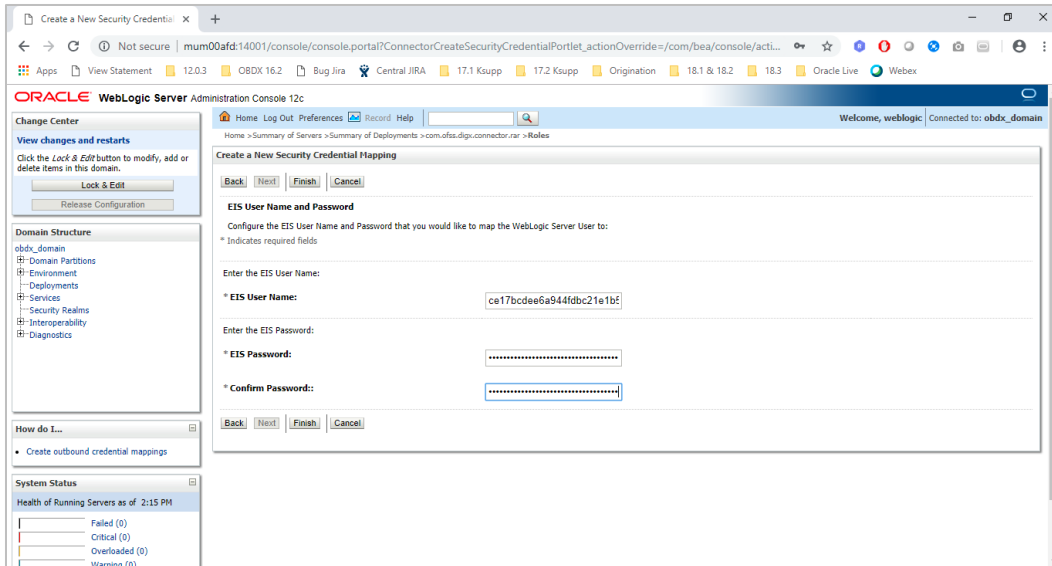
4. Click Next



5. Click Next

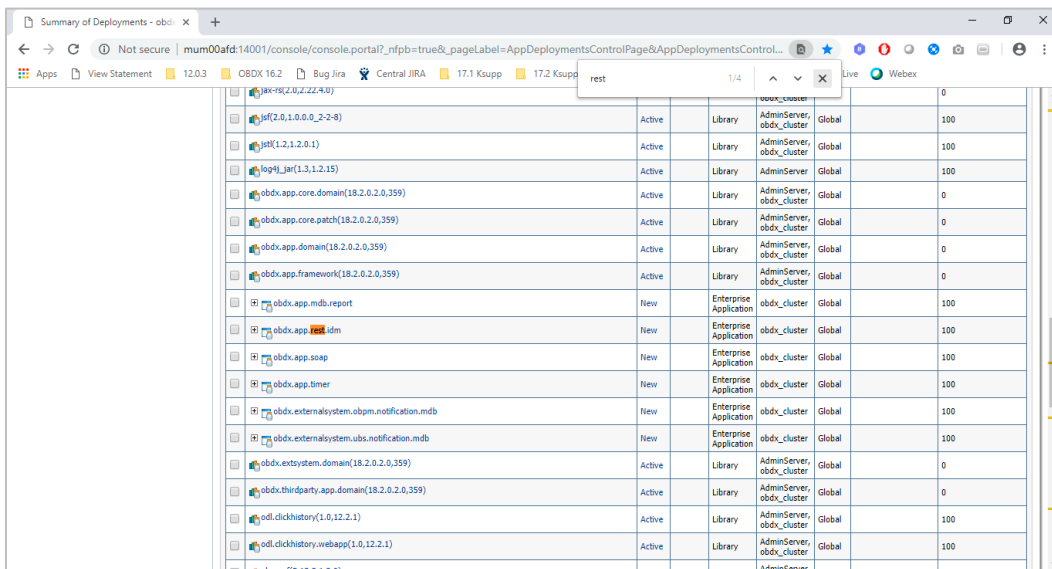
6. Create a new Security Credential Mapping –

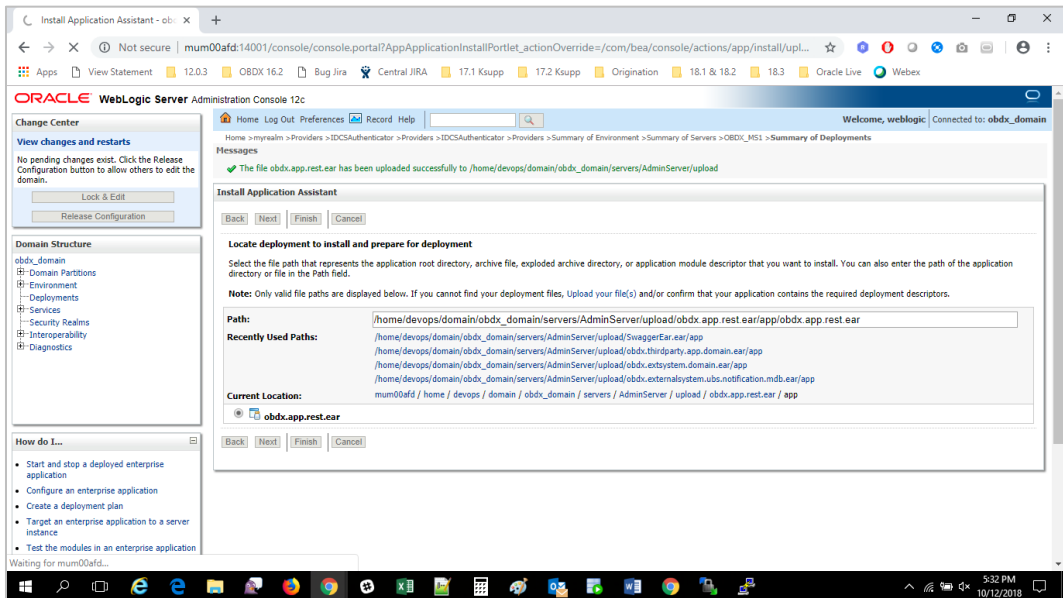
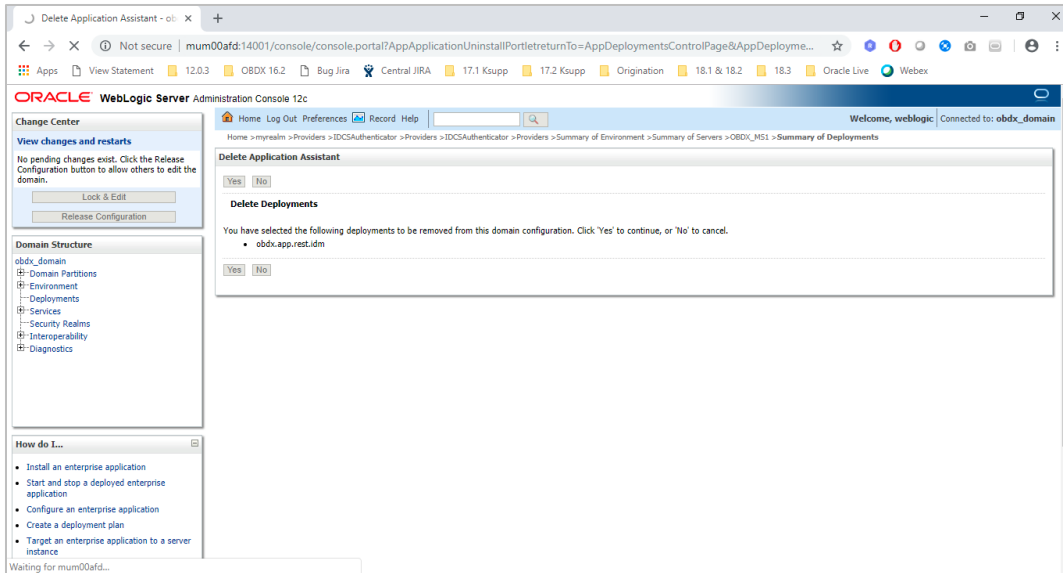
- Outbound Connection Pool: **ra/DIGXConnectorIDCS**
- WebLogic Server User: **Default**
- EIS User Name: [<client id of OBAPI client in IDCS>](#)
- EIS Password: [<client secret of OBAPI client in IDCS>](#)



7. Click **Finish**

- a. Delete **obapi.app.rest.idm.ear** and install deployment **obapi.app.rest.ear** from <Installer_Path>\OBAPI_Patch_Installer\installables\app\components\obapi\deploy\obapi.app.rest.ear in **Installer.zip**.





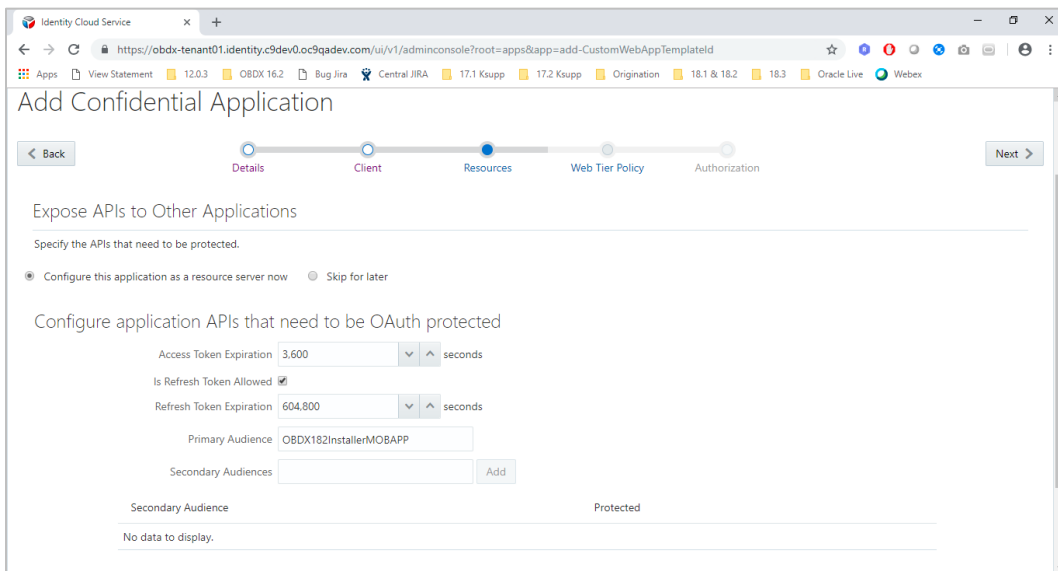
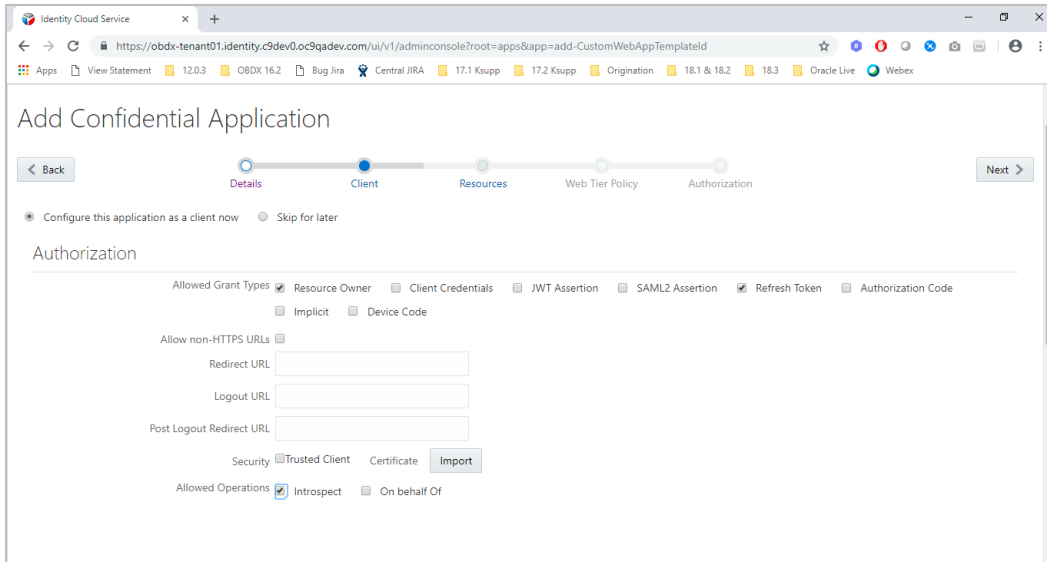
[Home](#)

11. Create Client Applications for Internal OBAPI Apps in IDCS Console

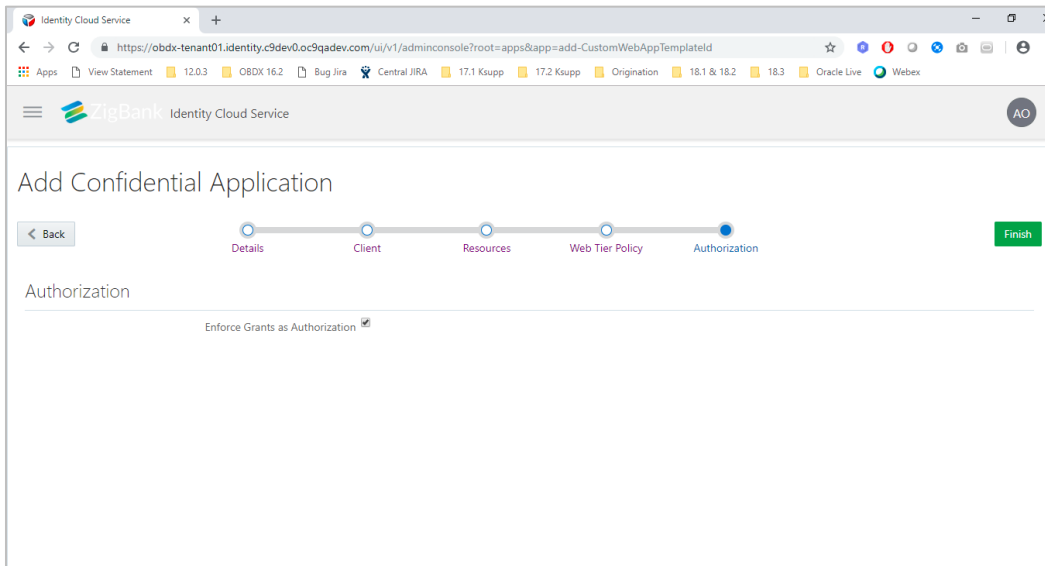
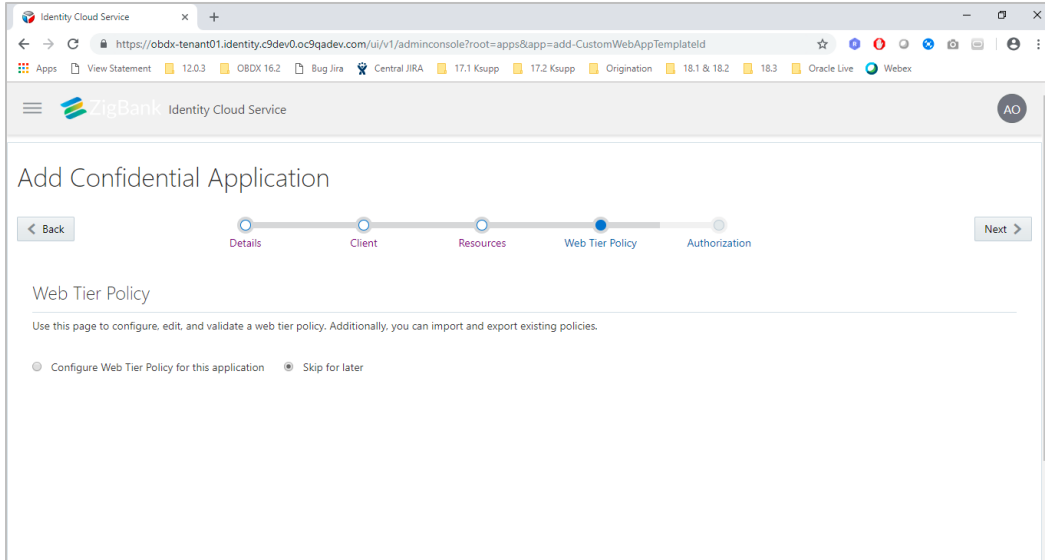
Client applications need to be created for below Internal applications.

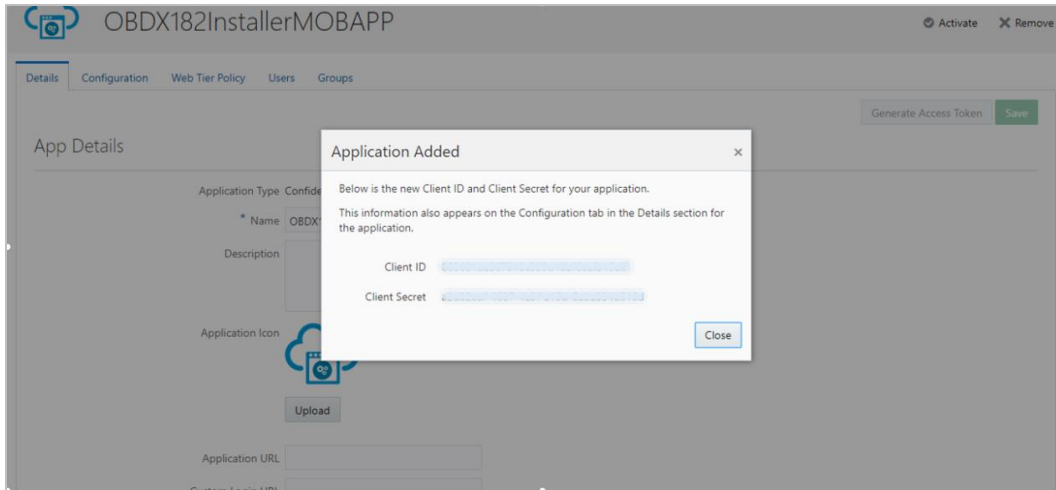
- Mobile App
- Siri Chatbot
- Snapshot
- Wearable

The screenshot displays the 'Add Confidential Application' wizard in the Oracle Identity Cloud Service console. The wizard is currently on the 'Details' step, with a progress bar showing the sequence: Details, Client, Resources, Web Tier Policy, and Authorization. The 'App Name' field contains the text 'OBDX182InstallerMOBAPP' and has a tooltip that reads 'Enter 125 or fewer characters'. Below the name field is a 'Description' text area. The 'Application Icon' section features a default icon of a blue cloud with a gear and a checkmark, and an 'Upload' button. At the bottom, there is an 'Application URL' text field.



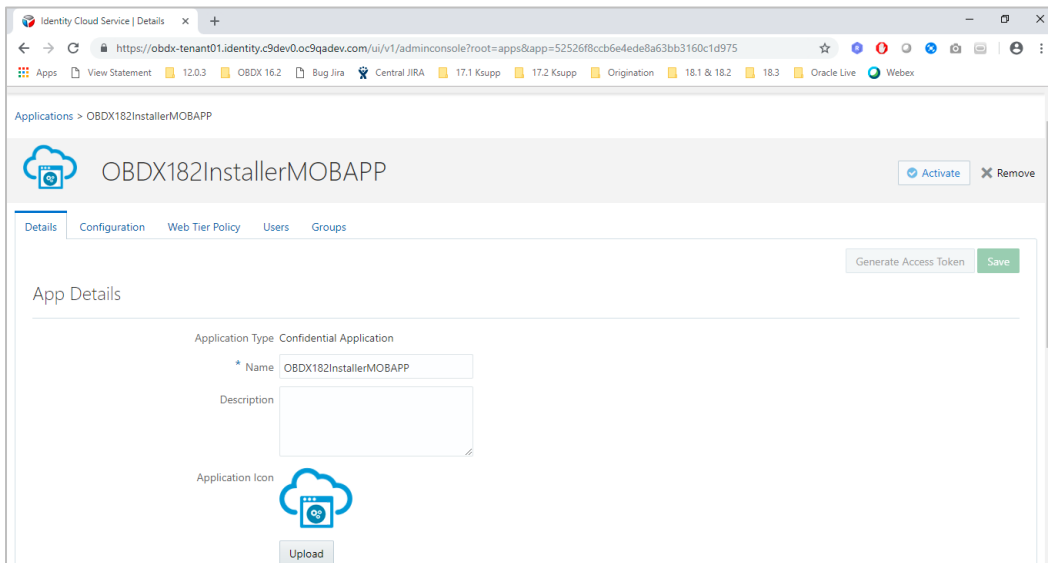
Create Client Applications for Internal OBAPI Apps in IDCS Console





Glossary of parameters:

<client_id_of_SNAPSHOT_client>	Client Id of Snapshot app created in IDCS
<client_id_of_MobileApp_client>	Client Id of Mobile app created in IDCS created above
<client_id_of_SIRICHATBOT_client>	Client Id of Siri chatbot app created in IDCS
<client_id_of_WEARABLE_client>	Client Id of Wearable app created in IDCS



8. Click **Activate** button.

Similarly, do the same for the rest.

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12. Database Scripts (to be executed after day0 scripts)

Replace below parameters in database scripts with appropriate values as per glossary.

<tenant-base-url>

<client_id_of_SNAPSHOT_client>

<client_id_of_MobileApp_client>

<client_id_of_SIRICHATBOT_client>

<client_id_of_WEARABLE_client>

```
Insert into DIGX_FW_CONFIG_ALL_B
(PROP_ID,CATEGORY_ID,PROP_VALUE,FACTORY_SHIPPED_FLAG,PROP_COMMENTS,SUMMARY_TEXT,CREATED_BY,CREATION_DATE,LAST_UPDATED_BY,LAST_UPDATED_DATE,OBJECT_STATUS,OBJECT_VERSION_NUMBER,EDITABLE,CATEGORY_DESCRIPTION) values ('POLICY_STORE_UTIL','SecurityConstants','IGF','N',null,'Security Constant','ofssuser',sysdate,'ofssuser',sysdate,'Y',1,'N',null);
```

```
update DIGX_FW_CONFIG_ALL_B set prop_value =
'ipm1.0,ORACLEBI12.2.1.2,GENERIC1.0,IDCS18.2.4',SUMMARY_TEXT = 'Entry to set IPM,ORCALE BI and IDCS at enterprise level' where category_id = 'extxfaceadapterconfig' and prop_id='01';
```

```
Insert into DIGX_FW_CONFIG_VAR_B
(PROP_ID,ENV_ID,PROP_VALUE,FACTORY_SHIPPED_FLAG,PROP_COMMENTS,CREATED_BY,CREATION_DATE,LAST_UPDATED_BY,LAST_UPDATED_DATE,OBJECT_STATUS,OBJECT_VERSION_NUMBER,MODULE,DETERMINANT_VALUE,TYPE,UI_DEFINITION) values ('HOST_IP_IDCS','OBAPI','<tenant-base-url>','Y','set host IP for IDCS REST calls','ofssuser',sysdate,'ofssuser',sysdate,null,null,'OTHERMODULE','OBDX_BU','TXT','{"title": "IDCS Host IP","validator":"","required":false}');
```

```
Insert into DIGX_FW_CONFIG_VAR_B
(PROP_ID,ENV_ID,PROP_VALUE,FACTORY_SHIPPED_FLAG,PROP_COMMENTS,CREATED_BY,CREATION_DATE,LAST_UPDATED_BY,LAST_UPDATED_DATE,OBJECT_STATUS,OBJECT_VERSION_NUMBER,MODULE,DETERMINANT_VALUE,TYPE,UI_DEFINITION) values ('HOST_PORT_IDCS','OBAPI','443','Y','set host Port for IDCS REST calls','ofssuser',sysdate,'ofssuser',sysdate,null,null,'OTHERMODULE','OBDX_BU','TXT','{"title": "IDCS Host Port","validator":"PORT","required":false}');
```

```
Insert into DIGX_FW_CONFIG_VAR_B
(PROP_ID,ENV_ID,PROP_VALUE,FACTORY_SHIPPED_FLAG,PROP_COMMENTS,CREATE
D_BY,CREATION_DATE,LAST_UPDATED_BY,LAST_UPDATED_DATE,OBJECT_STATUS,O
BJECT_VERSION_NUMBER,MODULE,DETERMINANT_VALUE,TYPE,UI_DEFINITION)
values ('IDCS_CONNECTION_SCHEME','OBAPI','https','Y','set host connection scheme for
IDCS REST calls
','ofssuser',sysdate,'ofssuser',sysdate,null,null,'OTHERMODULE','OBDX_BU','TXT','{"title":
"IDCS Connection Scheme","validator":"","required":false}');
```

```
delete from DIGX_UM_PWD_POLICY_ROLE_MAP where PASSWORDPOLICYID in
('0000001','9999999');
```

```
delete from DIGX_UM_PWD_POLICY where PASSWORDPOLICYID in ('0000001','9999999');
```

```
Update DIGX_FW_ACCESSPOINT set CLIENT_ID = '<client id of SNAPSHOT client>' where
ID = 'APSNAPSHOT';
```

```
Update DIGX_FW_ACCESSPOINT set CLIENT_ID = '<client id of MobileApp client>' where ID
= 'APMOBAPP';
```

```
Update DIGX_FW_ACCESSPOINT set CLIENT_ID = '<client id of SIRICHATBOT client>'
where ID = 'APSIRICHATBOT';
```

```
Update DIGX_FW_ACCESSPOINT set CLIENT_ID = '<client id of WEARABLE client>' where
ID = 'APWEARABLE';
```

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13. Apply Webgate Patch on OHS using OPatch

1. Download the patch from the below link.

https://support.oracle.com/epmos/faces/PatchDetail?_adf.ctrl-state=hyoym65na_9&patch_name=28243743&releaseId=600000000073630&patchId=28243743&languageId=0&platformId=226&_afLoop=441568515075199

2. Run below commands on webgate installation.

```
[devops@obapiohs ~]$ export ORACLE_HOME=<oracle-home-path>
```

Eg. export ORACLE_HOME=/home/devops/Oracle/Middleware/Oracle_Home/

```
[devops@obapiohs ~]$ export PATH=$PATH:<oracle-home-path>/OPatch/
```

Eg. export PATH=\$PATH:/home/devops/Oracle/Middleware/Oracle_Home/OPatch/

```
[devops@obapiohs ~]$ opatch lsinventory -jre <jre-path>
```

Eg. opatch lsinventory -jre

/home/devops/Oracle/Middleware/Oracle_Home/oracle_common/jdk/jre/

```
[devops@obapiohs ~]$ cd <local-patch-path>
```

Eg. cd /scratch/obapi/ohs/p28243743_122130_Linux-x86-64/28243743/

```
[devops@obapiohs 28243743]$ opatch apply
```

```

@obdxohs/scratch/obdx/ohs/Setup/28243743
b38011db270e      mmm00chl:5000/obdx182susnav/ohs      "/home/devops/common..."      182_Patch_OBP_DB_PR_2
P                                                         Up 31 hours (healthy)      7777/tcp, 8888/tcp, 0.0.0.0:14777->12777/tcp
12f509f50f88      mmm00chl:5000/obdx182susnav/wls      "/home/devops/common..."      182_Patch_UBS_OHS_PR_2
                                                         Up 31 hours (unhealthy)    12001/tcp, 12003/tcp, 12343/tcp, 0.0.0.0:14
001->14001/tcp, 0.0.0.0:14003->14009/tcp, 12777/tcp, 0.0.0.0:14343->14343/tcp      182_Patch_UBS_WLS_PR_2
6157f6efffae      mmm00chl:5000/obdx182susnav/db      "/home/devops/common..."      31 hours ago      Up 31 hours (healthy)      0.0.0.0:1421->1521/tcp
                                                         Up 31 hours (healthy)      182_Patch_UBS_DB_PR_2

[obdxdevops@mm00chl ~]$ docker exec -it devops 182_Patch_UBS_OHS_PR_2 /bin/bash
[devops@obdxohs ~]$ cd /home/devops/Oracle/Middleware/Oracle_Home/
Oracle_Home/ohs Oracle_Home]$ export ORACLE_HOME=/home/devops/Oracle/Middleware/
[devops@obdxohs Oracle_Home]$ export PATH=$PATH:/home/devops/Oracle/Middleware/Oracle_Home/OPatch/
[devops@obdxohs Oracle_Home]$ cd /home/devops/Oracle/Middleware/Oracle_Home/oracle_common/jdk/jre/
[devops@obdxohs jre]$ opatch lsinventory -jre /home/devops/Oracle/Middleware/Oracle_Home/oracle_common/jdk/jre/
Oracle Interim Patch Installer version 13.9.2.0.0
Copyright (c) 2018, Oracle Corporation. All rights reserved.

Oracle Home      : /home/devops/Oracle/Middleware/Oracle_Home
Central Inventory : /home/devops/oraInventory
from             : /home/devops/Oracle/Middleware/Oracle_Home//oraInst.loc
OPatch version   : 13.9.2.0.0
OUI version      : 13.9.2.0.0
Log file location : /home/devops/Oracle/Middleware/Oracle_Home/cfgtoollogs/patch/patch2018-10-12_14-24-34PM_1.log

OPatch detects the Middleware Home as "/home/devops/Oracle/Middleware/Oracle_Home"

lsinventory Output file location : /home/devops/Oracle/Middleware/Oracle_Home/cfgtoollogs/patch/lsinv/lsinventory2018-10-12_14-24-34PM.txt
-----
Local Machine Information:
Hostname: obdxohs.in.oracle.com
ARU platform id: 226
ARU platform description: Linux_AMD64

There are no Interim patches installed in this Oracle Home.
-----
OPatch succeeded.
[devops@obdxohs jre]$ cd /scratch/obdx/ohs/Setup/28243743/
[devops@obdxohs 28243743]$

```

```

@obdxohs/scratch/obdx/ohs/Setup/28243743
from             : /home/devops/Oracle/Middleware/Oracle_Home//oraInst.loc
OPatch version   : 13.9.2.0.0
OUI version      : 13.9.2.0.0
Log file location : /home/devops/Oracle/Middleware/Oracle_Home/cfgtoollogs/patch/patch2018-10-12_14-24-34PM_1.log

OPatch detects the Middleware Home as "/home/devops/Oracle/Middleware/Oracle_Home"

lsinventory Output file location : /home/devops/Oracle/Middleware/Oracle_Home/cfgtoollogs/patch/lsinv/lsinventory2018-10-12_14-24-34PM.txt
-----
Local Machine Information:
Hostname: obdxohs.in.oracle.com
ARU platform id: 226
ARU platform description: Linux_AMD64

There are no Interim patches installed in this Oracle Home.
-----
OPatch succeeded.
[devops@obdxohs jre]$ cd /scratch/obdx/ohs/Setup/28243743/
[devops@obdxohs 28243743]$ opatch apply
Oracle Interim Patch Installer version 13.9.2.0.0
Copyright (c) 2018, Oracle Corporation. All rights reserved.

Oracle Home      : /home/devops/Oracle/Middleware/Oracle_Home
Central Inventory : /home/devops/oraInventory
from             : /home/devops/Oracle/Middleware/Oracle_Home//oraInst.loc
OPatch version   : 13.9.2.0.0
OUI version      : 13.9.2.0.0
Log file location : /home/devops/Oracle/Middleware/Oracle_Home/cfgtoollogs/patch/patch2018-10-12_14-25-54PM_1.log

OPatch detects the Middleware Home as "/home/devops/Oracle/Middleware/Oracle_Home"

Verifying environment and performing prerequisite checks...
OPatch continues with these patches: 28243743

Do you want to proceed? [y/n]
y

```

3. Enter y

```
@ebdxkhs/scratch/obdx/ohs/Setup/28243743
[devops@ebdxkhs jre]$ cd /scratch/obdx/ohs/Setup/28243743/
[devops@ebdxkhs 28243743]$ opatch apply
Oracle Interim Patch Installer version 13.9.2.0.0
Copyright (c) 2016, Oracle Corporation. All rights reserved.

Oracle Home      : /home/devops/Oracle/Middleware/Oracle_Home
Central Inventory : /home/devops/orainventory
   from           : /home/devops/Oracle/Middleware/Oracle_Home/orainst.loc
OPatch version    : 13.9.2.0.0
OUI version       : 13.9.2.0.0
Log file location : /home/devops/Oracle/Middleware/Oracle_Home/cfgtoollogs/patch/patch2018-10-12_14-25-54PM_1.log

OPatch detects the Middleware Home as "/home/devops/Oracle/Middleware/Oracle_Home"
Verifying environment and performing prerequisite checks...
OPatch continues with these patches:  28243743

Do you want to proceed? [y/n]
y
User Responded with: Y
All checks passed.

Please shutdown Oracle instances running out of this ORACLE_HOME on the local system.
(Oracle Home = "/home/devops/Oracle/Middleware/Oracle_Home")

Is the local system ready for patching? [y/n]
y
User Responded with: Y
Backing up files...
Applying interim patch '28243743' to OH '/home/devops/Oracle/Middleware/Oracle_Home'
ApplySession: Optional component(s) [ oracle.oamclient.webgate.otd, 12.2.1.3.0 ] , [ oracle.oamclient.webgate.otd, 12.2.1.3.0 ] not present in the Oracle Home or a higher version is found.

Patching component oracle.oamclient.webgate.ohs, 12.2.1.3.0...
Patching component oracle.oamclient.webgate.ohs, 12.2.1.3.0...
Patch 28243743 successfully applied.
Log file location: /home/devops/Oracle/Middleware/Oracle_Home/cfgtoollogs/patch/patch2018-10-12_14-25-54PM_1.log

OPatch succeeded.
[devops@ebdxkhs 28243743]$
```

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14. cloud.config

1. Go to this location [<ohs-domain-path>/config/fmwconfig/components/OHS/instances/ohs1/webgate/config/](#)

Eg.

`/home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config/`

CREATE THE FOLLOWING FILE NAMED as cloud.config:

2. Replace below parameters in file:

`<webserver_host_name>`

`<webserver_port>`

```
{
  "cloudgateConfig":{
    "bootstrap":{
      "callbackPrefix": "<connection scheme>://<webserver host name>:<webserver port>/oauth/callback",
      "externalIdUrl": "https://<tenant-base-url>",
      "refresh_token": false
    },
    "rest":{
      "httpsVerifyHost": false,
      "httpsVerifyServer": false,
      "httpsCertAuthFile": "",
      "httpsCrlFile": ""
    }
  }
}
```

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15. cloud.policy

Go to this location [<ohs-domain-path>/config/fmwconfig/components/OHS/instances/ohs1/webgate/config/](#)

E.g..
`/home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config/`

CREATE THE FOLLOWING FILE NAMED as cloud.policy:

1. Replace below parameter.

`<allowed_scope_name_of_scope_protected_in_OBAPI_Client_App>`

```

{
  "cloudgatePolicy":{
    "webtierPolicy":[
      {
        "policyName":"default",
        "resourceFilters":[
          {
            "comment":"Test Application OAuth+Logout Filter",
            "type":"text",
            "filter":"/logout",
            "method":"oauth+logout"
          },
          {
            "comment":"Test Application Public Filter",
            "type":"regex",
            "filter":"/*.js",
            "method":"anonymous",
            "headers":[
              {
                "PolicyName":"$request.policy_name"
              },
              {
                "PolicyResourceMatched":"$request.policy_res"
              }
            ]
          }
        ]
      },
      {
        "comment":"Test Application OAuth Filter",
        "type":"regex",
        "filter":"/pages/*",
        "method":"oauth",
        "authorize":true,
        "scope":"<a href='\"#\"'>allowed scope name of protected in OBAPI Client App</a> openid",
        "idcsscope":"protected openid",
        "headers":[
          {
            "UserName":"$subject.user.name"
          },
          {
            "PrimaryEmail":"$subject.user.emails"
          },
          {
            "PolicyName":"$request.policy_name"
          },
          {
            "PolicyResourceMatched":"$request.policy_res"
          }
        ]
      },
      {
        "comment":"Test Application Public Filter",
        "type":"regex",
        "filter":"/**",
        "method":"anonymous",
        "headers": [
          {

```



```
    "PolicyName": "$request.policy_name",  
    {  
      "PolicyResourceMatched": "$request.policy_res"  
    }  
  ]  
}  
]  
}  
]  
}  
]  
}
```

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16. CWallet configuration

```
[devops@obapiohs ~]$ mkdir <ohs-domain-
path>/config/fmwconfig/components/OHS/instances/ohs1/webgate/config/cwg_wallet
```

Eg. mkdir

```
/home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmw
config/components/OHS/instances/ohs1/webgate/config/cwg_wallet
```

```
[devops@obapiohs ~]$ cd <oracle-home-path>/oracle_common/bin/
```

```
[devops@obapiohs bin]$ ./orapki wallet create -wallet <ohs-domain-
path>/config/fmwconfig/components/OHS/instances/ohs1/webgate/config/cwg_wallet -auto_login
```

Eg. ./orapki wallet create -wallet

```
/home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmw
config/components/OHS/instances/ohs1/webgate/config/cwg_wallet -auto_login
```

You will be asked to create wallet password here.

```
@obdxkhs-~/Oracle/Middleware/Oracle_Home/oracle_common/bin
gate/config/ohs_common_scripts] c:/home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/web
scripts] cd tsj] cd /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/web

[devops@obdxkhs config]$
[devops@obdxkhs config]$
[devops@obdxkhs config]$ pwd
/home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config
[devops@obdxkhs config]$ ls -ltr
total 20
drwxrwxr-x 2 devops devops 4096 Jun 12 16:30 simple
-rw-r----- 1 devops devops 15028 Jun 12 16:30 oblog_config_wg.xml
[devops@obdxkhs config]$ cp /scratch/obdx/o
ohs/ oraInst.loc
[devops@obdxkhs config]$ cp /scratch/obdx/ohs/Setup/
28243743/ cloud.config cloud.policy
[devops@obdxkhs config]$ cp /scratch/obdx/ohs/Setup/cloud.*
[devops@obdxkhs config]$ ls -ltr
total 28
drwxrwxr-x 2 devops devops 4096 Jun 12 16:30 simple
-rw-r----- 1 devops devops 13028 Jun 12 16:30 oblog_config_wg.xml
-rw-r----- 1 devops devops 2285 Oct 12 14:38 cloud.policy
-rw-rw-r-- 1 devops devops 425 Oct 12 14:38 cloud.config
[devops@obdxkhs config]$ vi cloud.policy
[devops@obdxkhs config]$ vi cloud.config
[devops@obdxkhs config]$ cd /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config
[devops@obdxkhs config]$ mkdir cwg_wallet
[devops@obdxkhs config]$ cd /home/devops/Oracle/Middleware/Oracle_Home/oracle_common/bin/
[devops@obdxkhs bin]$ ./orapki wallet create -wallet /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instan
ces/ohs1/webgate/config/cwg_wallet -auto_login
Oracle PKI Tool : Version 12.2.1.3.0
Copyright (c) 2004, 2017, Oracle and/or its affiliates. All rights reserved.
Enter password:
Enter password again:
Operation is successfully completed.
[devops@obdxkhs bin]$
```

```
[devops@obapiohs bin]$ export JAVA_HOME=<jre-path>
```

Eg. export JAVA_HOME=/home/devops/Oracle/Middleware/Oracle_Home/oracle_common/jdk/jre

```
[devops@obapiohs bin]$ ./mkstore -wrl <ohs-domain-
path>/config/fmwconfig/components/OHS/instances/ohs1/webgate/config/cwg_wallet -
createUserCredential CWG id_secret_key <client-id> <client-secret>
```

Eg. `./mkstore -wrl /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config/cwg_wallet -createUserCredential CWG id_secret_key <client-id> <client-secret>`

```
@obdkohs:~/Oracle/Middleware/Oracle_Home/oracle_common/bin
[devops@obdkohs bin]$ cd ts1$ cd /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/web
[devops@obdkohs config]$
[devops@obdkohs config]$
[devops@obdkohs config]$ pwd
/home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config
[devops@obdkohs config]$ ls -lrt
total 20
drwxrwx-k 2 devops devops 4096 Jun 12 15:30 simple
-rw-r----- 1 devops devops 15028 Jun 12 15:30 oblog_config_wg.xml
[devops@obdkohs config]$ cp /scratch/obdx/o
ohs/
[devops@obdkohs config]$ cp /scratch/obdx/ohs/Setup/
28243743/ cloud.config cloud.policy
[devops@obdkohs config]$ cp /scratch/obdx/ohs/Setup/cloud.*
[devops@obdkohs config]$ ls -lrt
total 28
drwxrwx-k 2 devops devops 4096 Jun 12 15:30 simple
-rw-r----- 1 devops devops 15028 Jun 12 15:30 oblog_config_wg.xml
-rw-r----- 1 devops devops 2285 Oct 12 14:38 cloud.policy
-rw-r----- 1 devops devops 425 Oct 12 14:38 cloud.config
[devops@obdkohs config]$ vi cloud.policy
[devops@obdkohs config]$ vi cloud.config
[devops@obdkohs config]$ cd /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config
[devops@obdkohs config]$ mkdir cwg_wallet
[devops@obdkohs config]$ cd /home/devops/Oracle/Middleware/Oracle_Home/oracle_common/bin/
[devops@obdkohs bin]$ ./orapki wallet create -wallet /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instan
ces/ohs1/webgate/config/cwg_wallet -auto_login
Oracle PKI Tool : Version 12.2.1.3.0
Copyright (c) 2004, 2017, Oracle and/or its affiliates. All rights reserved.
Enter password:
Enter password again:
Operation is successfully completed.
[devops@obdkohs bin]$ export ORA_HOME=/home/devops/Oracle/Middleware/Oracle_Home/oracle_common/jdk/jre
[devops@obdkohs bin]$ ./mkstore -wrl /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate
/config/cwg_wallet -createUserCredential CWG id_secret_key ce17b0dee6a944fdbc21e1b59e23db26 532266b5-235c-456a-baad-2be5e9bab7ba
Oracle Secret Store Tool : Version 12.2.1.3.0
Copyright (c) 2004, 2017, Oracle and/or its affiliates. All rights reserved.
Enter wallet password:
[devops@obdkohs bin]$
```

<passphrase> is the password phrase used for encryption. Enter a passphrase in below command and execute it.

```
[root@obapiohs devops]# openssl enc -aes-128-cbc -k "<passphrase>" -P -md sha256
salt=4EBB2F22640F225F
key=701593B3EDE07C37FD09ECB532F7E0E5
iv =E5D3D73CED2C624900F952C05BC73A6E
```

```
[devops@obapiohs bin]$ ./mkstore -wrl <ohs-domain-
path>/config/fmwconfig/components/OHS/instances/ohs1/webgate/config/cwg_wallet -
createUserCredential CWG enc_key enc <key>
```

Eg. `./mkstore -wrl /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config/cwg_wallet -createUserCredential CWG enc_key enc <key>`

Please enter the wallet password given above.

[devops@obapiohs bin]\$./orapki wallet display -wallet <ohs-domain-path>/config/fmwconfig/components/OHS/instances/ohs1/webgate/config/cwg_wallet

Eg. **./orapki wallet display -wallet /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config/cwg_wallet**

```

@obdkohs/home/devops/Oracle/Middleware/Oracle_Home/oracle_common/bin
opmasi0994.x86_64 0:0.9.4e-29.e17_2.3

Dependency Installed:
keyutils-libs-devel.x86_64 0:1.5.8-3.e17 krb5-devel.x86_64 0:1.15.1-19.e17
libcom_err-devel.x86_64 0:1.42.9-12.e17_5 libnsmms.x86_64 0:1:15.1-19.e17
libselinux-devel.x86_64 0:2.5-12.0.1.e17 libsepol-devel.x86_64 0:2.5-8.1.e17
libverto-devel.x86_64 0:0.2.5-4.e17 pcre-devel.x86_64 0:8.32-17.e17
zlib-devel.x86_64 0:1.2.7-17.e17

Dependency Updated:
krb5-libs.x86_64 0:1.15.1-19.e17 libcom_err.x86_64 0:1.42.9-12.e17_5
libselinux.x86_64 0:2.5-12.0.1.e17 libselinux-utils.x86_64 0:2.5-12.0.1.e17

[root@obdkohs devops]# openssl enc -aes-128-cbc -k "god bless you" -P -md sha256
salt=59E548065F81C156# openssl enc -aes-128-cbc -k "god bless you" -P -md sha256
key=6111D6C63AD4A55FABFE06E20C9E1658
iv =97AFDC09DAD3D391FE36EB2BC0B4DF
[root@obdkohs devops]# ./mkstore -url /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config/cwg_wallet -createUserCredential CWG enc_key enc 6111D6C63AD4A55FABFE06E20C9E1658
bash: ./mkstore: No such file or directory
[root@obdkohs devops]# cd /home/devops/Oracle/Middleware/Oracle_Home/oracle_common/bin/
[root@obdkohs bin]# ./mkstore -url /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config/cwg_wallet -createUserCredential CWG enc_key enc 6111D6C63AD4A55FABFE06E20C9E1658
ERROR: No Java
/home/devops/Oracle/Middleware/Oracle_Home/oracle_common/jdk or $JAVA_HOME should point to valid Java runtime
[root@obdkohs bin]# export JAVA_HOME=/home/devops/Oracle/Middleware/Oracle_Home/oracle_common/jdk/jpe
[root@obdkohs bin]# ./mkstore -url /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config/cwg_wallet -createUserCredential CWG enc_key enc 6111D6C63AD4A55FABFE06E20C9E1658
Oracle Secret Store Tool : Version 12.2.1.3.0
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Enter wallet password:
[root@obdkohs bin]# ./orapki wallet display -wallet /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config/cwg_wallet
Oracle PKI Tool : Version 12.2.1.3.0
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Requested Certificates:
User Certificates:
Oracle Secret Store entries:
CWO#34#enc_key
CWO#34#id_secret_key
Trusted Certificates:
[root@obdkohs bin]#
    
```

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17. Enabling webgate in httpd.conf

Go to [<ohs-domain-path>/config/fmwconfig/components/OHS/instances/ohs1/](#)

Eg.

`/home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/`

UNCOMMENT THE FOLLOWING:

```
include "webgate.conf"
```

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18. Change in mod_wl_ohs.conf

Go to [<ohs-domain-path>/config/fmwconfig/components/OHS/instances/ohs1/](#)

ADD THE FOLLOWING:

<IfModule weblogic_module>

WebLogicHost obapiwls.in.oracle.com

WebLogicPort 12003

Debug ON

WLLogFile /scratch/obapi/ohs/logs/weblogic.log

MatchExpression /digx/*

</IfModule>

<Location /digx>

WLSRequest On

WLProxySSL ON

WLProxySSLPassThrough ON

</Location>

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19. UI Changes

19.1 constants.js:

In UI deployments, go to channel\framework\js\constants\constants.js file, keep the value of 'authenticator' as below.

authenticator: "IDCSAuthenticator"

19.2 idcs-config.json:

In UI deployments, go to channel\json\index\login\idcs-config.json file, put the appropriate values of OBAPI Client Application in IDCS.

- [<name of obapi client app in idcs>](#) is the client application name. Eg. "OBAPIClient"
- [<client id of obapi client app in idcs>](#) is client id of client application. Eg. "00fa15d18cd147398ca4b53f957a4e3f"
- [<client secret of obapi client app in idcs>](#) is the client secret of client application.

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