

Oracle Banking APIs

IDCS-OBAPI Setup Guide
Release 18.3.0.0.0

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Table of Contents

1. Preface	4
1.1 Intended Audience	4
1.2 Documentation Accessibility	4
1.3 Access to OFSS Support	4
1.4 Structure.....	4
1.5 Related Information Sources.....	4
2. Pre-requisite step:	5
2.1 To create groups and user in IDCS	5
2.2 Install OpenSSL	12
2.3 OAM installation not required.....	12
3. Apply Oracle OPSS SCIM Identity Store OPatch on Weblogic server	13
4. Extending Weblogic Domain to load 'Oracle OPSS SCIM Identity Store' template	16
5. Change JPS configurations	18
6. Create an OBAPIS Client Application in IDCS Console	19
7. Configure OPSS IDCS Identity Store Service	28
8. Adding IDCS as an Identity Provider in Weblogic Security Realms	33
9. Application Server Changes	39
9.1 Add below argument to Managed server:.....	39
9.2 Managed Server Start Configurations.....	40
10. Change in Weblogic Deployments	41
10.1 Creating a Connection in Connector ear.....	41
11. Create Client Applications for Internal OBAPIS Apps in IDCS Console	45
12. Database Scripts (to be executed after day0 scripts)	50
13. Apply Webgate Patch on OHS using OPatch	52
14. cloud.config	54
15. cloud.policy	55
16. CWallet configuration	58
17. Enabling webgate in httpd.conf	61
18. Change in mod_wl_ohs.conf	62
19. UI Changes	63
19.1 constants.js:	63
19.2 idcs-config.json:	63

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 OFSS 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 18.3.0.0.0, refer to the following documents:

- User Manual Oracle Banking APIs Installation Guide

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 shows the Oracle Identity Cloud Service (IDCS) Admin Console dashboard. The top navigation bar includes the ZigBank logo and 'Identity Cloud Service' text. The main header area displays 'Welcome admin@oracle.com' and a list of actions: '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 the header, there is a 'Filter by Date Range' dropdown set to 'Last 30 Days'. The dashboard features 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' (219 Total), and 'All Reports' (5 Total). The 'Groups' card has an 'Add a group.' button.

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

The screenshot shows a dialog box titled "Add Group" with a close button (X) in the top right corner. The main content area is titled "Step 1: Groups Details". It contains the following elements:

- A required field labeled "* Name" with the text "administrator" entered.
- A "Description" field with the text "Administrator" entered.
- A checkbox labeled "User can request access" which is currently unchecked.

At the bottom right of the dialog, there are two buttons: "Next" (disabled) and "Finish" (active).

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 dialog box titled "Add Group" with a close button (X) in the top right corner. Inside the dialog, the main content area is 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 dialog, 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 window titled "Add Group" with a close button (x) in the top right corner. Inside the window, the main content area is titled "Step 1: Groups Details". Below the title, there are three input fields: a text box for "Name" containing "corporateuser", a text box for "Description" containing "Corporate 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".

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.

Filter by Date Range: Last 30 Days

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.

Add User

Step 1: Add User Details

The user name will be used to log in, and the email address will be flagged as the primary email address for the user.

* First Name

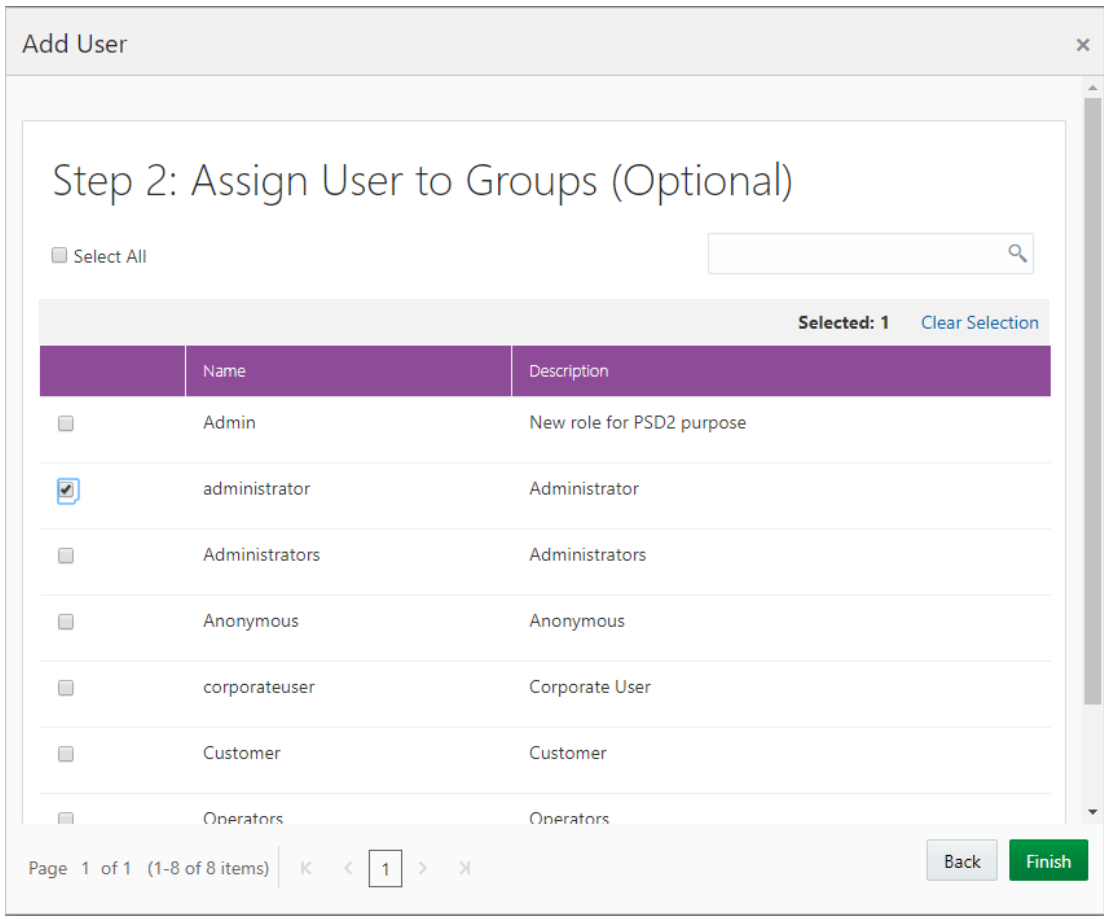
* Last Name

* User Name

* Email

Use the email address as the user name

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



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.

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
```

```
@obdxwls/scratch/obdx/wls/Setup/27644158
Bugs fixed:
25559137, 25232931, 24811916

Patch 26051289 : applied on Fri May 04 10:55:03 UTC 2018
Unique Patch ID: 21455037
Patch description: "One-off"
Created on 31 Jul 2017, 22:11:57 hrs UTC
Bugs fixed:
26051289

-----

OPatch succeeded.
[devops@obdxwls Oracle_Home]$ cd /scratch/obdx/wls/Setup/27644158/
[devops@obdxwls 27644158]$ ls -la
total 32
drwxr-xr-x 4 54322 54322 4096 Oct 12 08:01 .
drwxr-xr-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
drwxr-xr-x 3 54322 54322 4096 Oct 12 08:01 etc
drwxr-xr-x 6 54322 54322 4096 Oct 12 08:01 files
[devops@obdxwls 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/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]
```

5. Press 'y'

```
@obdxwls/scratch/obdx/wls/Setup/27644158
-----

OPatch succeeded.
[devops@obdxwls Oracle_Home]$ cd /scratch/obdx/wls/Setup/27644158/
[devops@obdxwls 27644158]$ ls -la
total 32
drwxr-xr-x 4 54322 54322 4096 Oct 12 08:01 .
drwxr-xr-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
drwxr-xr-x 3 54322 54322 4096 Oct 12 08:01 etc
drwxr-xr-x 6 54322 54322 4096 Oct 12 08:01 files
[devops@obdxwls 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/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]
```

6. Press 'y'

```
@ebdxwls/scratch/obdxwls/Setup/27644158
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_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@obdxwls 27644158]$
```

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]

```
@obdxwls~/Oracle/Middleware/Oracle_Home/oracle_common/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@obdxwls 27644158]$ cd /home/devops/Oracle/Middleware/Oracle_Home/oracle_common/common/bin/
[devops@obdxwls bin]$ ./wlst.sh

Initializing WebLogic Scripting Tool (WLS) ...
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()
```



```

@obdxwls~/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@obdxwls 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>
  
```

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:

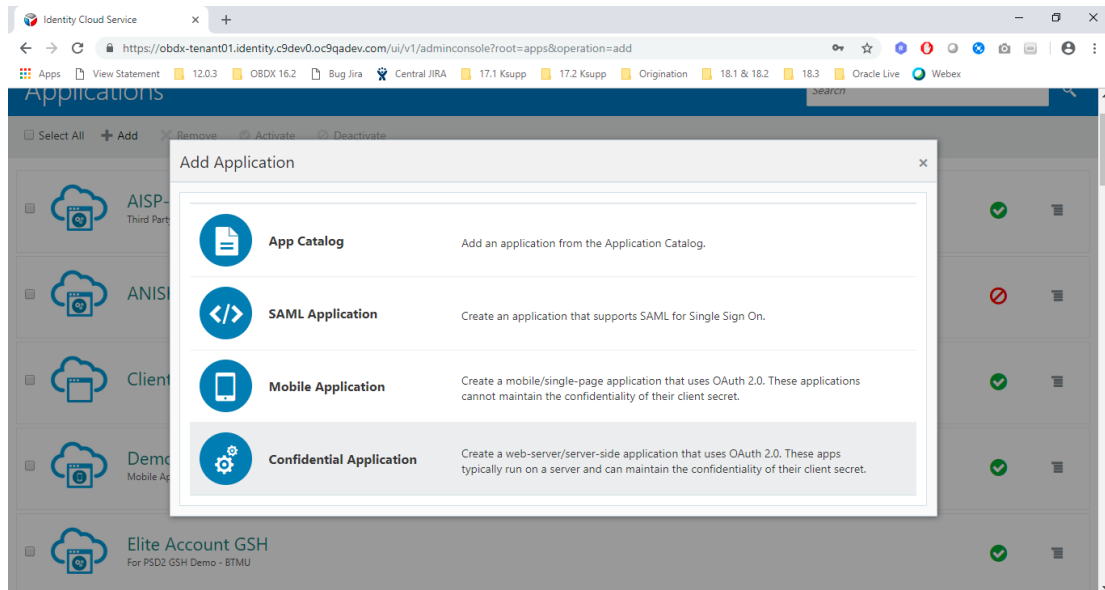
- Change `<serviceInstanceRef ref="idstore.custom"/>` to `<serviceInstanceRef ref="idstore.scim"/>`

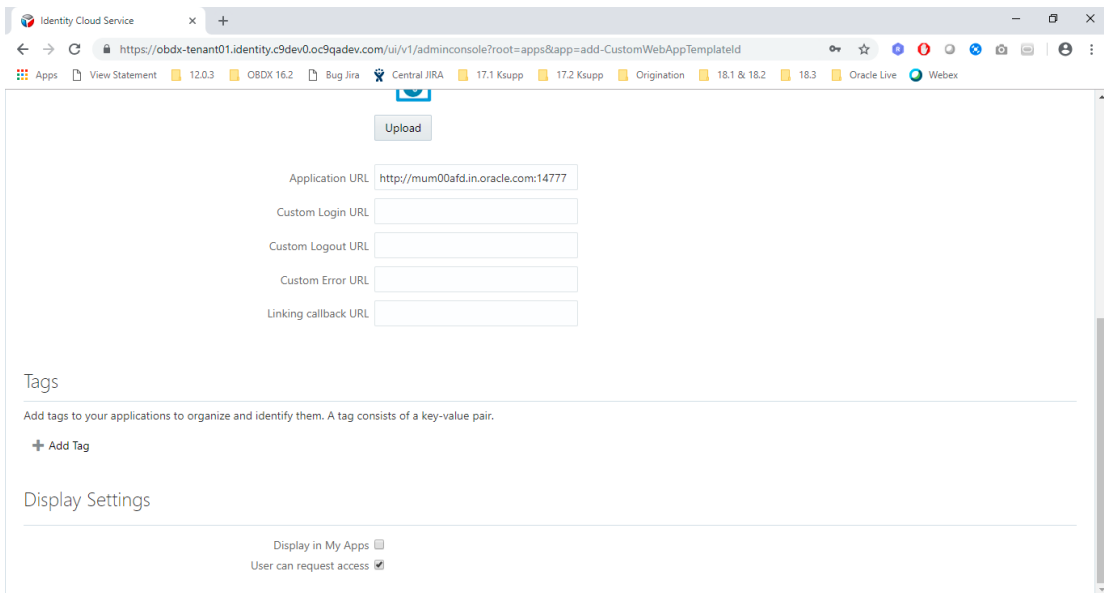
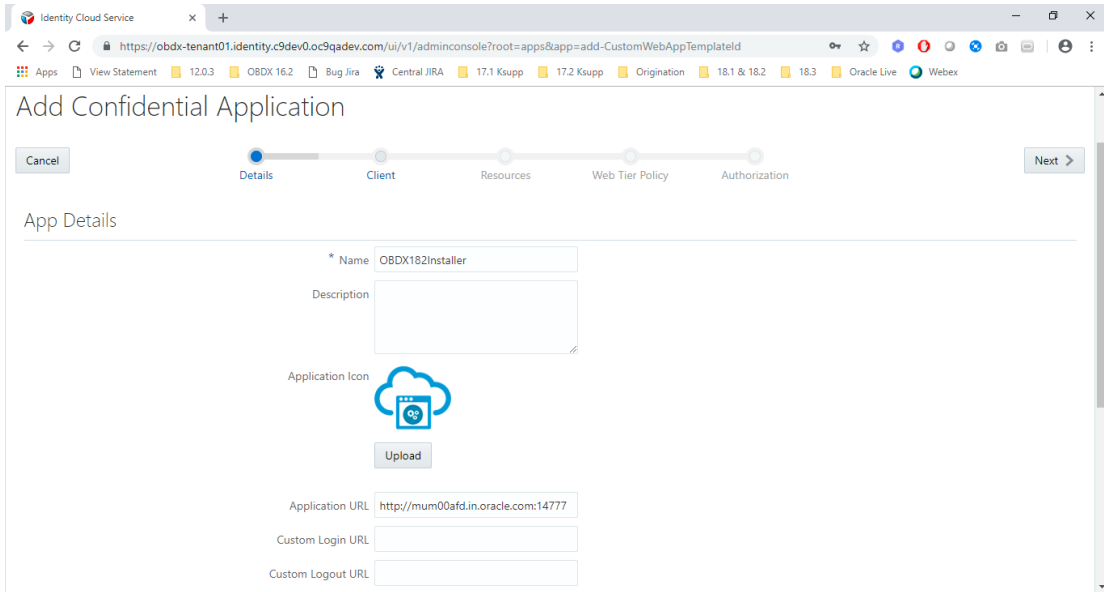
6. Create an OBAPI Client Application in IDCS Console

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

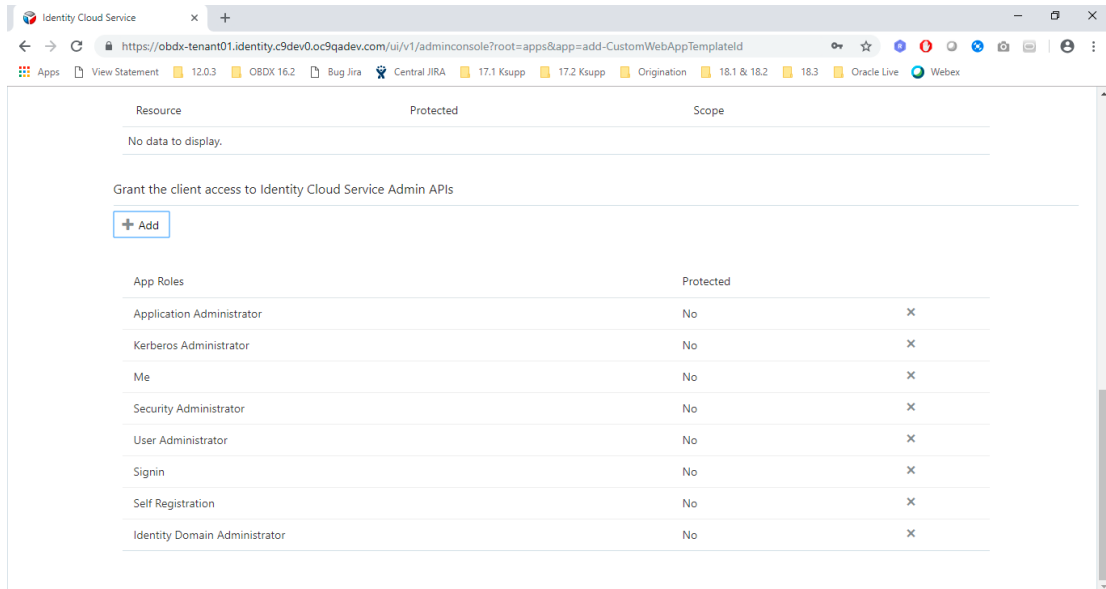
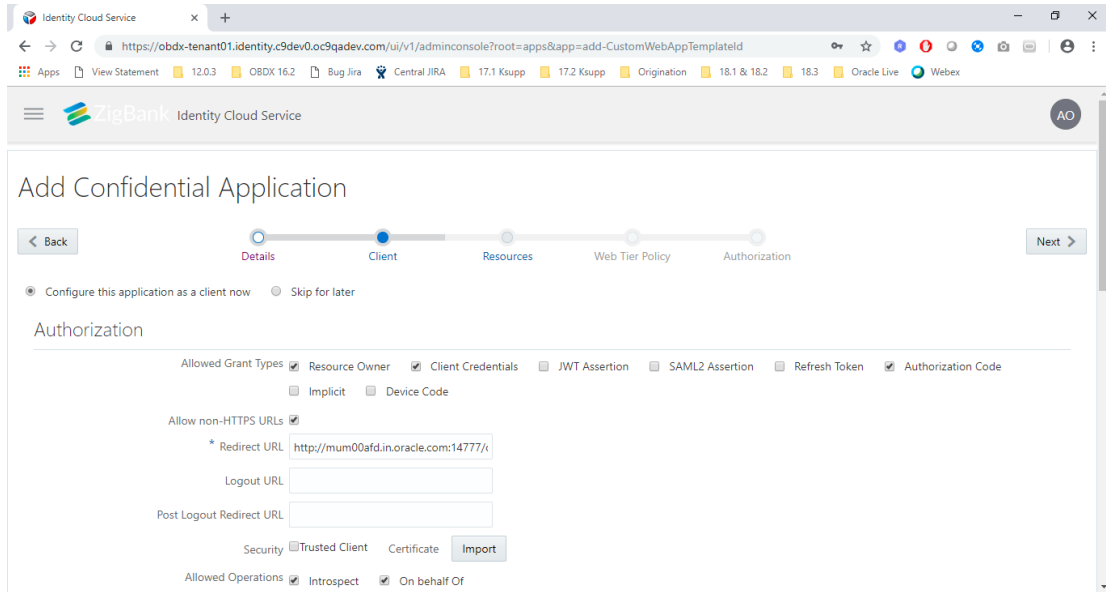
OBAPI Client application details in IDCS:

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>

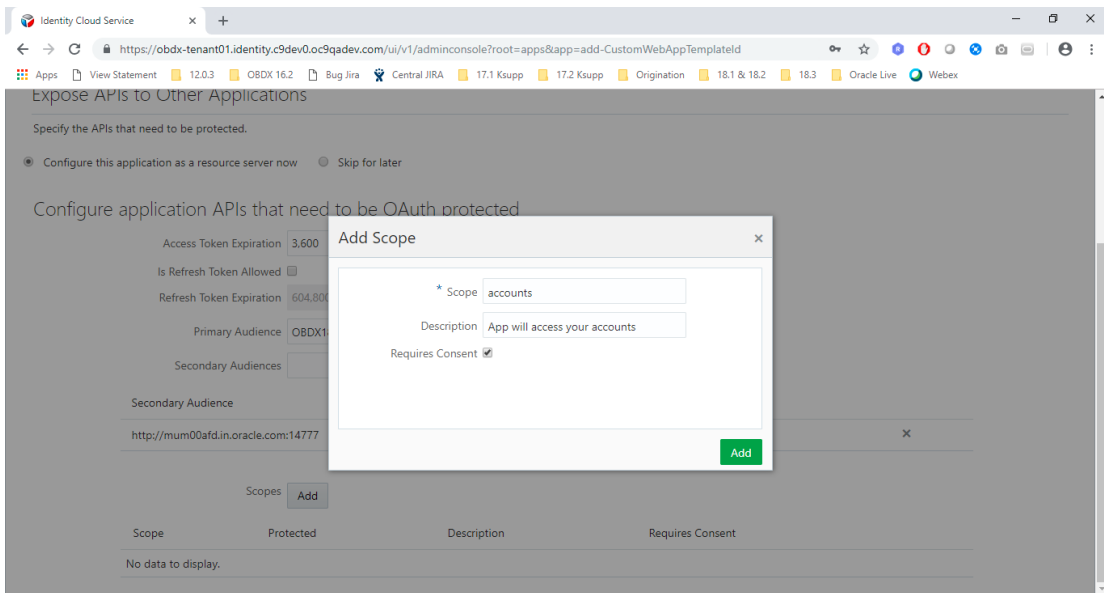
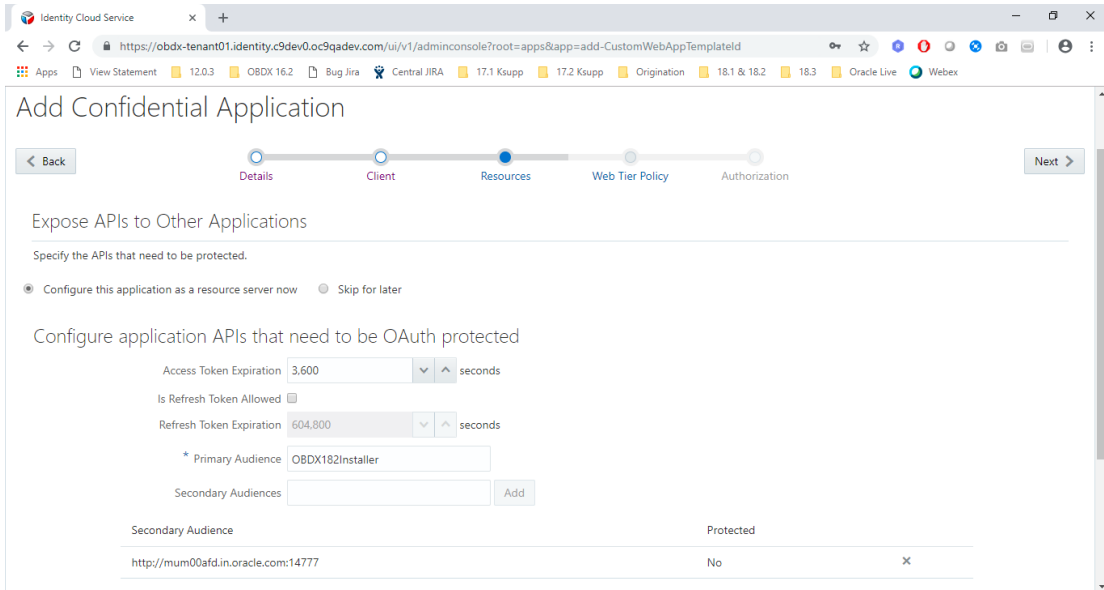


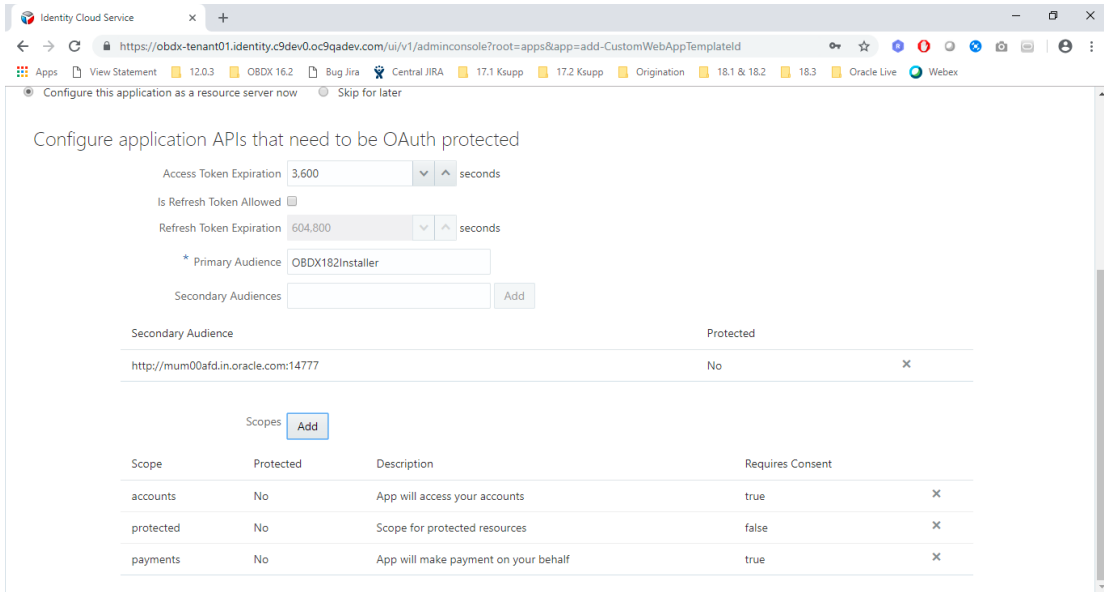


3. Click **Next**

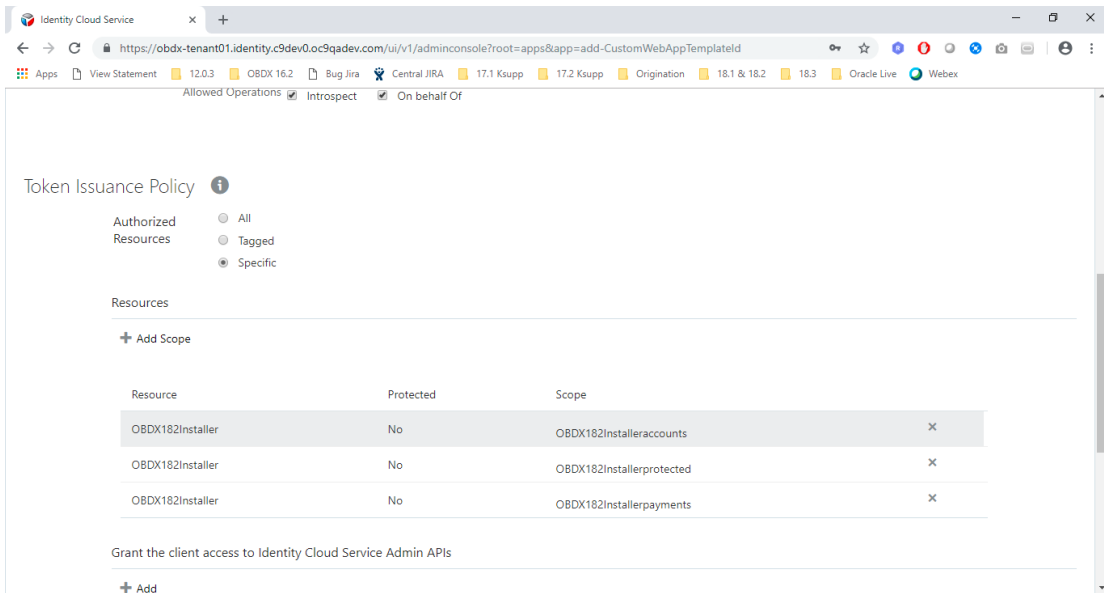


4. Click **Next**





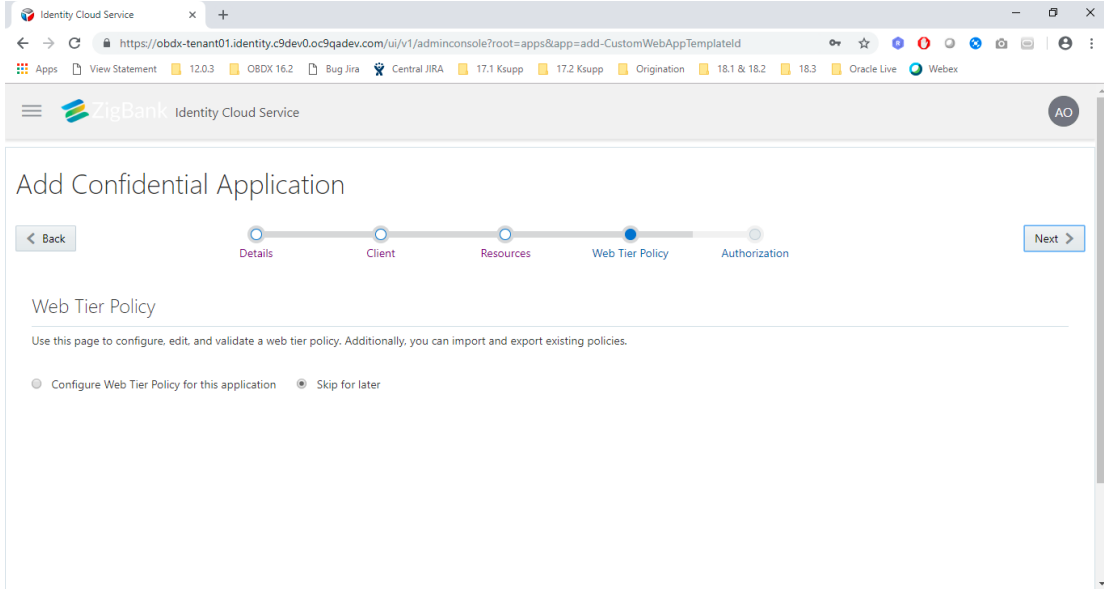
5. Go Back to **Client** tab and **Add Scope**



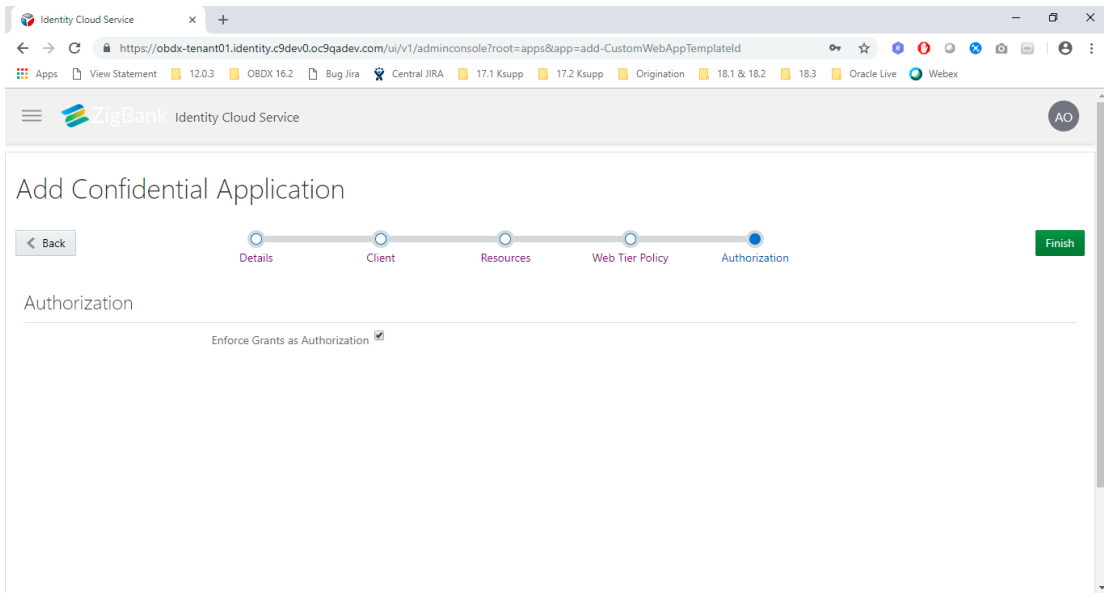
6. Note down the name of protected scope above.

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

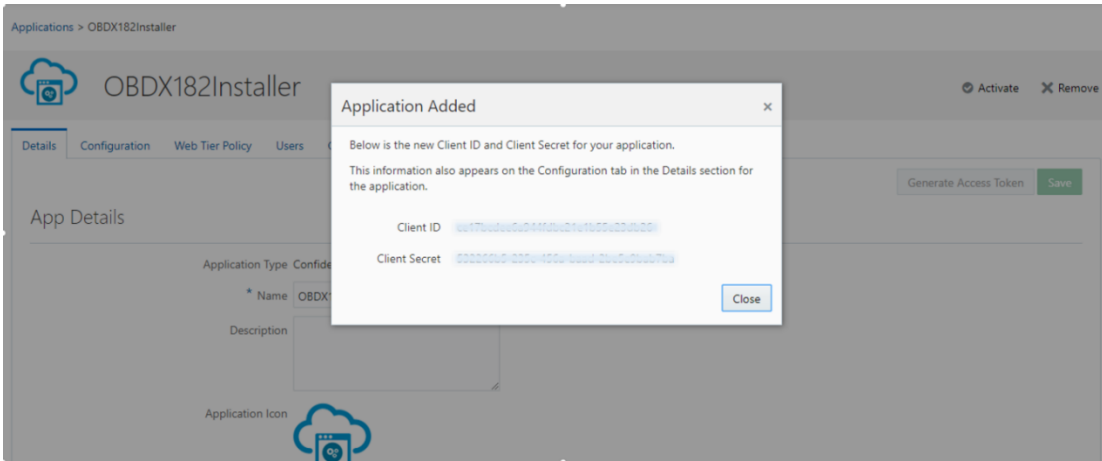
7. Next Go to **Web Tier Policy** tab



8. Click **Next**



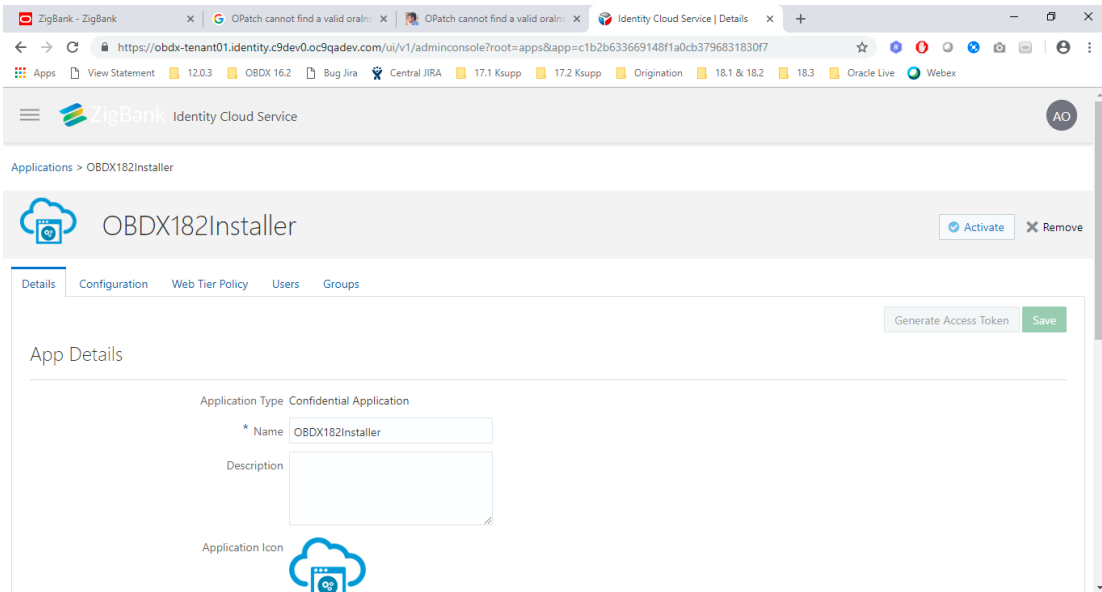
9. Click on **Finish**.



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

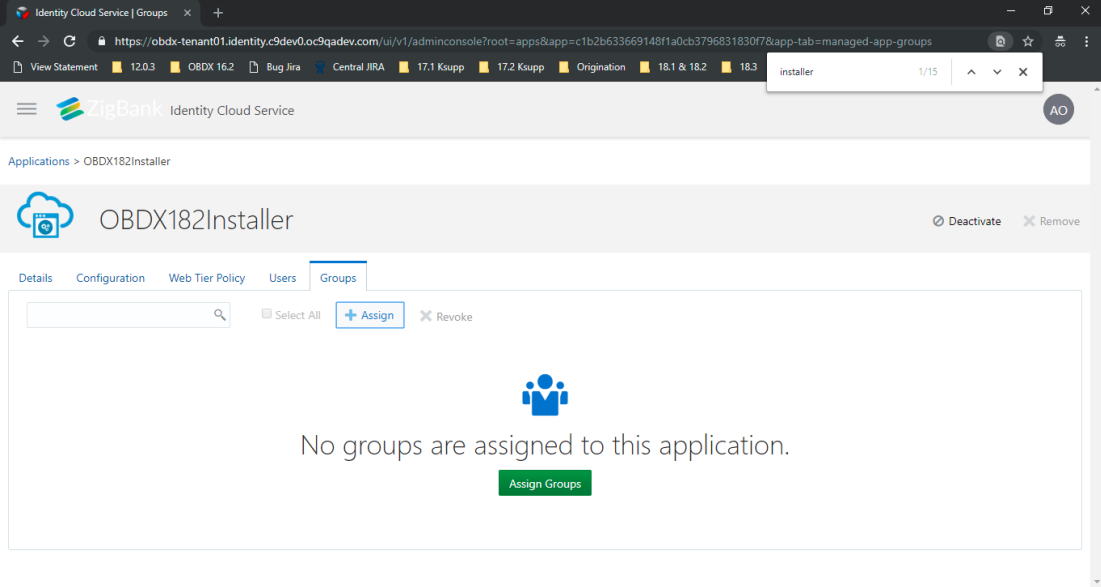
Glossary of parameters:

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

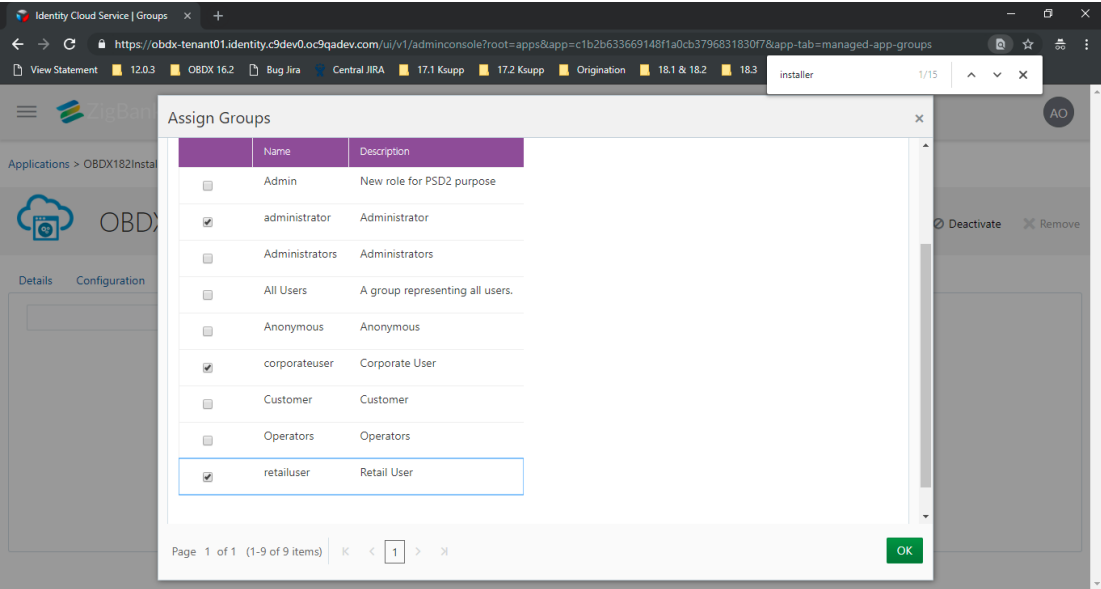


11. Click on **Activate** button.

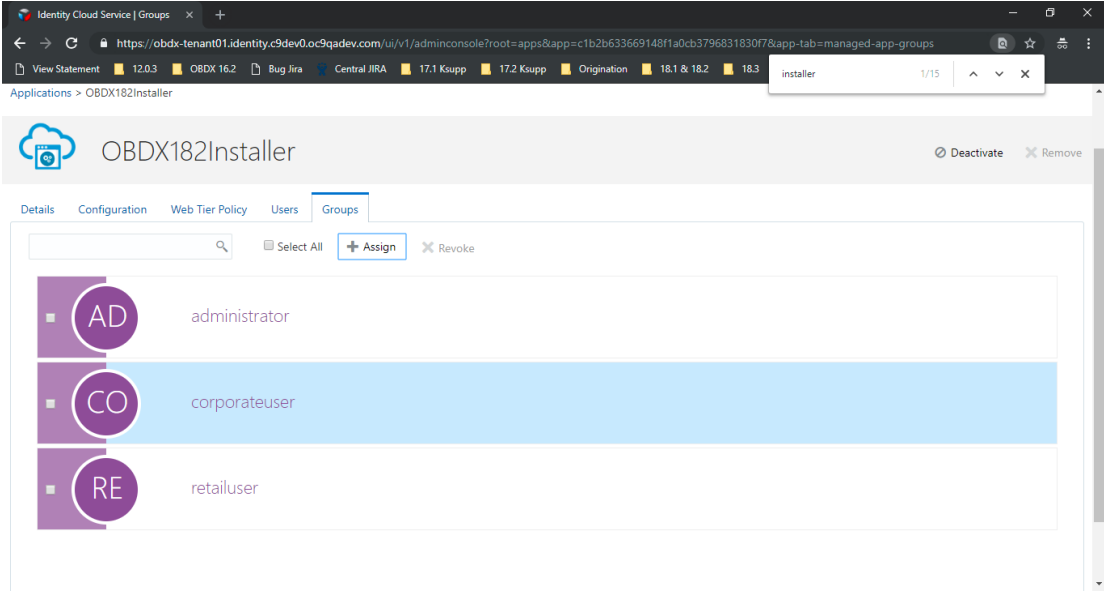
12. Search for created application and go to **Groups** tab.



13. Click on **Assign**.



14. Click **Add**.



15. Above groups are added.

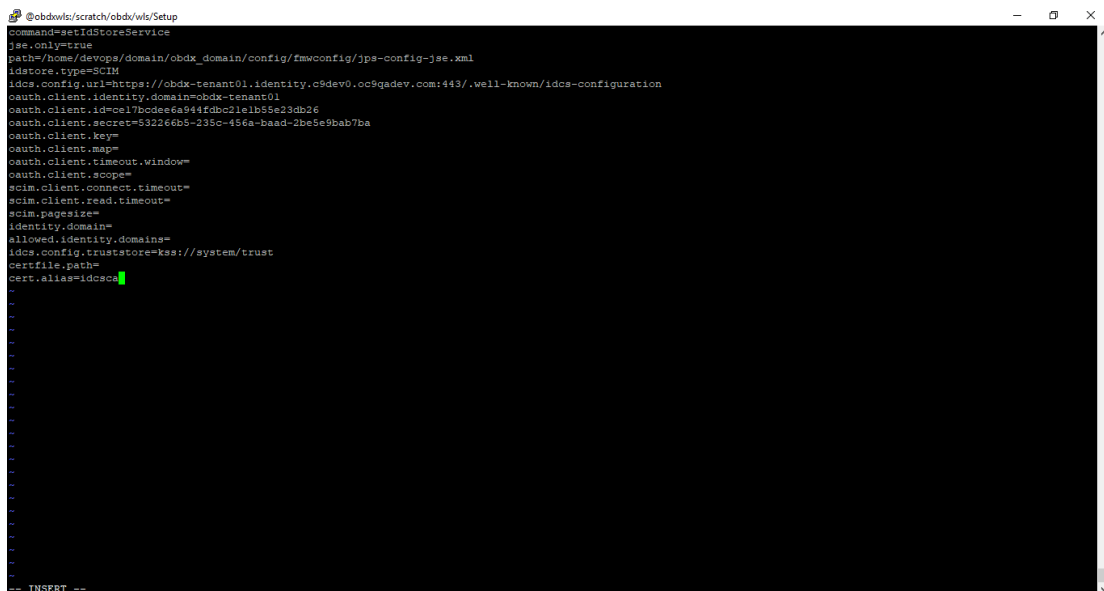
7. Configure OPSS IDCS Identity Store Service

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

Prepare a command property file named `opss_idcs_cmd.props`

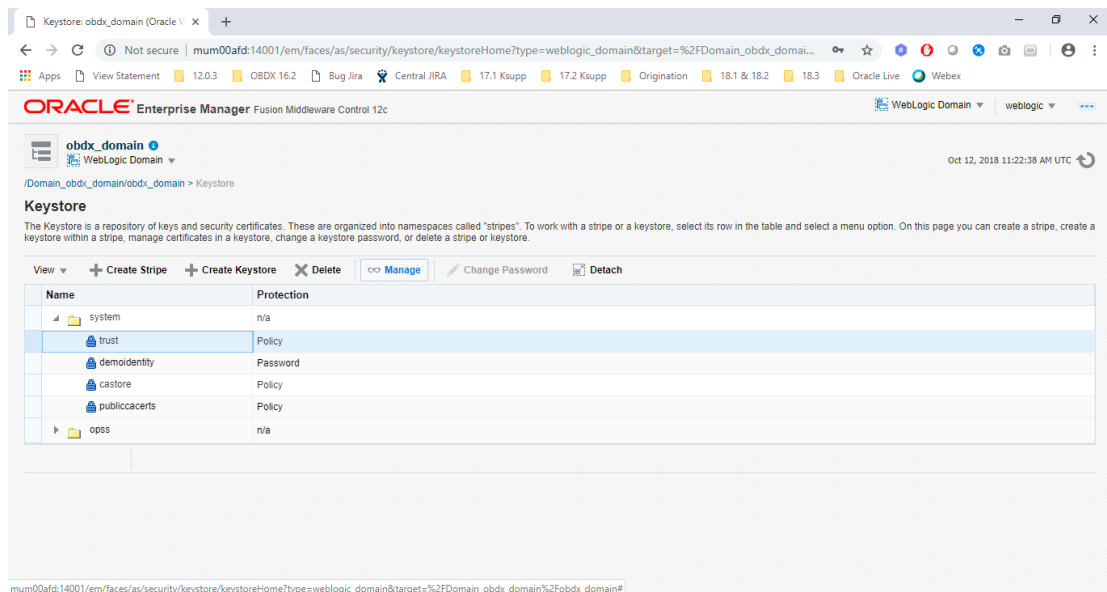
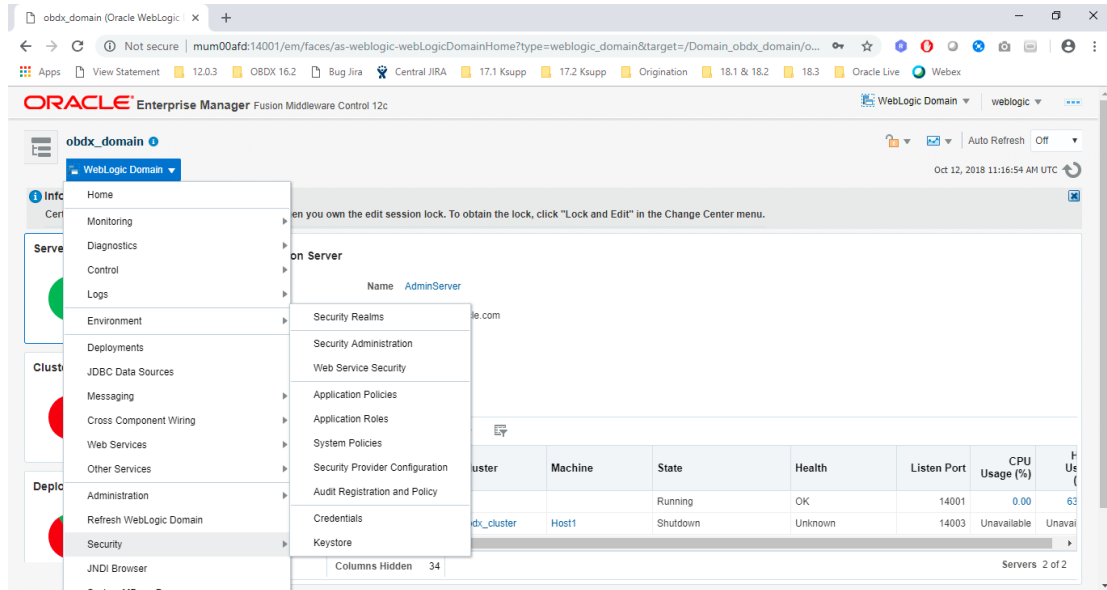
`opss_idcs_cmd.props`:

```
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
```



```
@obdxwls/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=ce17bcdee6a94fdbc21eb5e23db26
oauth.client.secret=532266b5-235c-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=kss://system/trust
certfile.path=
cert.alias=idcsca
-- INSERT --
```


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



The screenshot shows the 'Manage Certificates: system/trust' page in Oracle Enterprise Manager. The page title is 'Manage Certificates: system/trust'. Below the title, there is a brief instruction: 'To generate a new key pair (public and private key) and wrap the public key into a certificate signed by the Demo CA, click "Generate Keypair". To generate a Certificate Signing Request (CSR), select a certificate from table and click "Generate CSR". After you create a CSR, send it to your CA who will verify your identity and return the signed certificate. To import the CA signed certificate or trusted cert, click Import. You can only import the CA-signed certificate into the same keystore from which the CSR was generated.'

Below the instructions, there is a toolbar with buttons: 'View', '+ Generate Keypair', 'Generate CSR', 'Import', 'Export', 'Delete', 'Change Password', and 'Detach'. Below the toolbar is a table with the following data:

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 f0 99 d3 54 6a ...	December 2, 2032
olddemoca	CN=CertGenCAB,OU=FOR TESTING ONLY,O=MyOrganization,L=MyTown,ST=MyState,C=US	Trusted Certificate	0xf5c82bdf603...	f8 5d 49 a4 12 54 78 c7 ba 42 a7 14 3e 6 f5 1e a0 d4 ...	October 25, 2022

The screenshot shows the 'Import Certificate' dialog box overlaid on the 'Manage Certificates' page. The dialog box has the following fields and options:

- Certificate Type:** Trusted Certificate (dropdown menu)
- Alias:** idcsca (text input field)
- Certificate Source:** Paste Certificate or Certificate Chain (radio button selected)
- Paste Certificate String here:** A large text area for pasting the certificate string.
- Select a file that contains the Certificate or Certificate Chain:** A radio button selected.
- File Name:** idcsca.cer (text input field)
- Choose File:** A button next to the file name field.
- Buttons:** OK and Cancel.

Information
Trusted Certificate imported successfully.

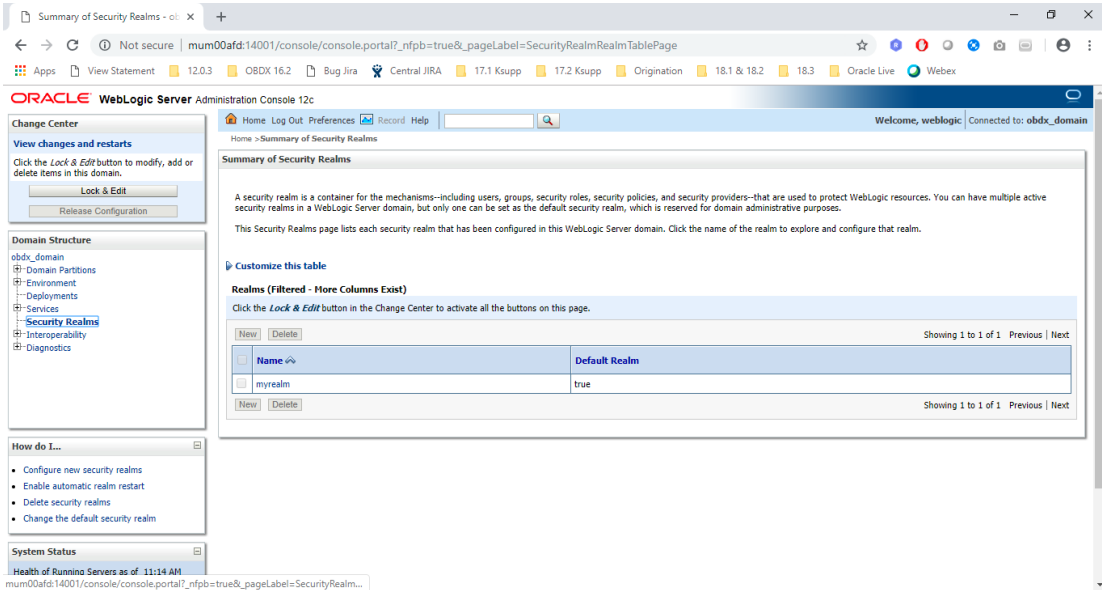
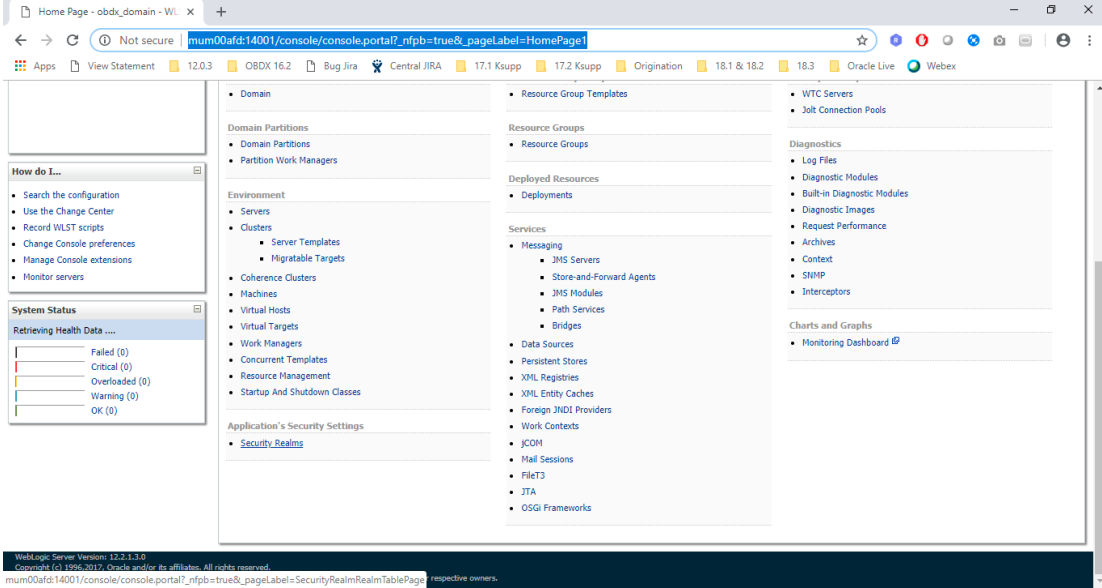
/Domain_obdx_domain/obdx_domain > Keystore > Manage Certificates

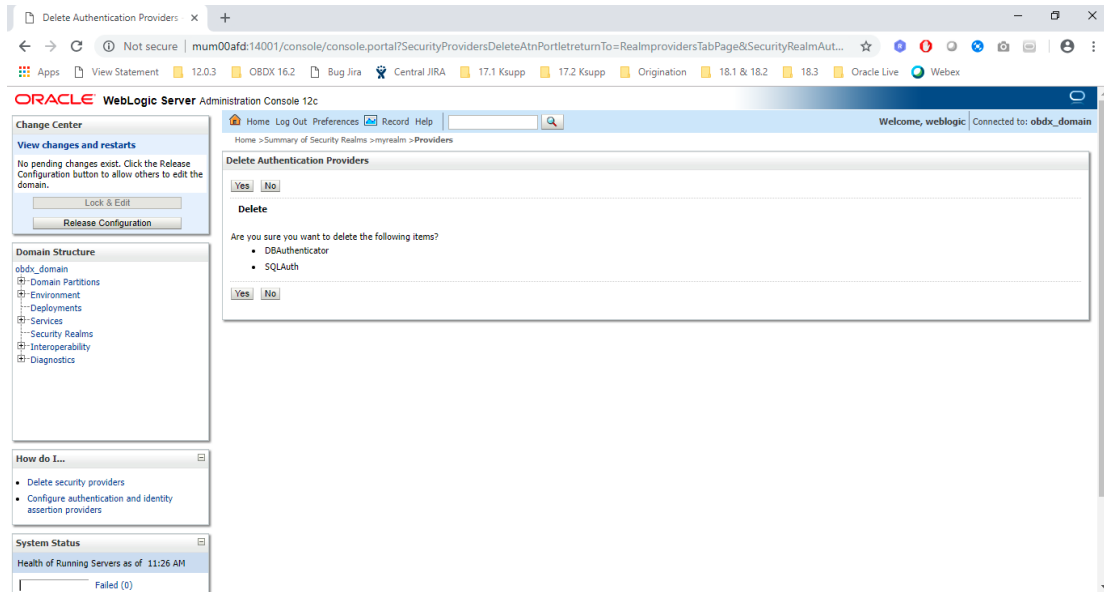
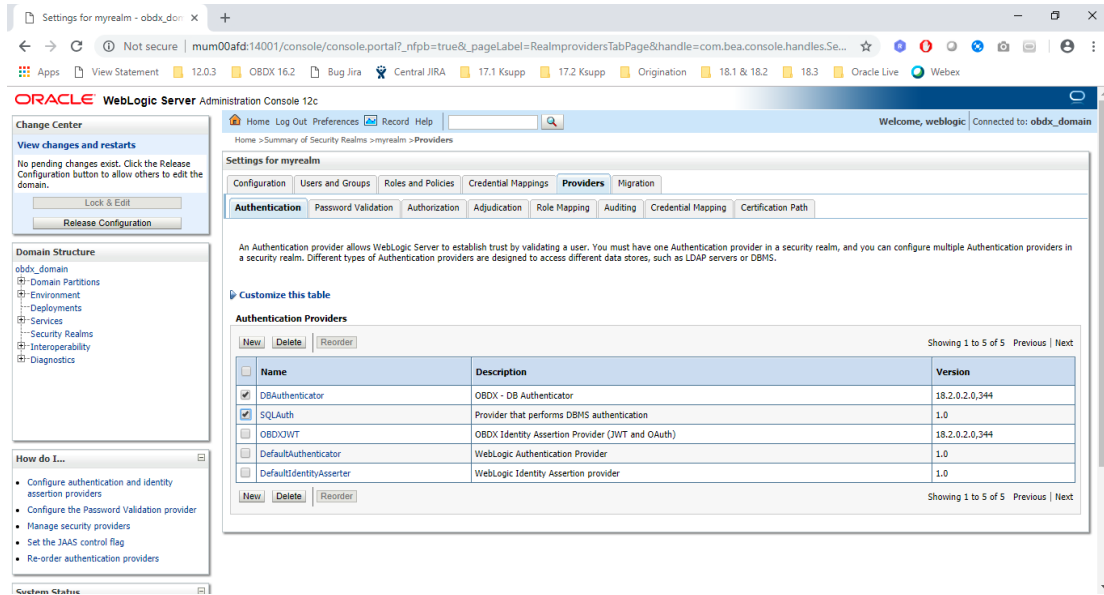
Manage Certificates: system/trust

To generate a new key pair (public and private key) and wrap the public key into a certificate signed by the Demo CA, click "Generate Keypair". To generate a Certificate Signing Request (CSR), select a certificate from table and click "Generate CSR". After you create a CSR, send it to your CA who will verify your identity and return the signed certificate. To import the CA signed certificate or trusted cert, click Import. You can only import the CA-signed certificate into the same keystore from which the CSR was generated.

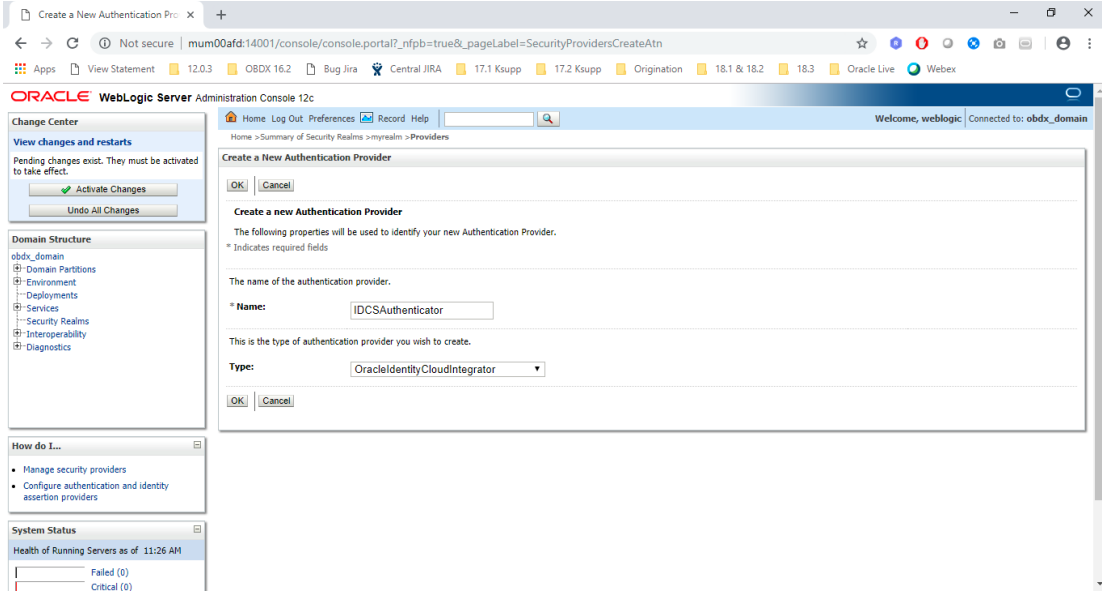
Alias	Subject Name	Certificate Type	Serial Number	Certificate SHA1 Fingerprint	Expiration Date
democa	CN=CertGenCA,OU=FOR TESTING ONLY,O=MyOrganization,L=MyTown,ST=MyState,C=US	Trusted Certificate	0x643a8066409...	ca 61 71 5b 64 6b 2 63 c6 fb 83 b1 71 f0 99 d3 54 6a ...	December 2, 2032
olddemoca	CN=CertGenCAB,OU=FOR TESTING ONLY,O=MyOrganization,L=MyTown,ST=MyState,C=US	Trusted Certificate	0xf5c82b0fed03...	f8 5d 49 a4 12 54 78 c7 b8 42 a7 14 3e 6 f5 1e a0 d4 ...	October 25, 2022
idcsca	CN=idcsca,OU=Oracle BMD SALT-LAKE-CITY,O=Oracle Corporation,L=Re...	Trusted Certificate	0x9db0b3389e5...	61 81 8e 35 4a d8 25 62 c bf f2 c4 ff 91 26 bb ad 8e 3...	March 8, 2019

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



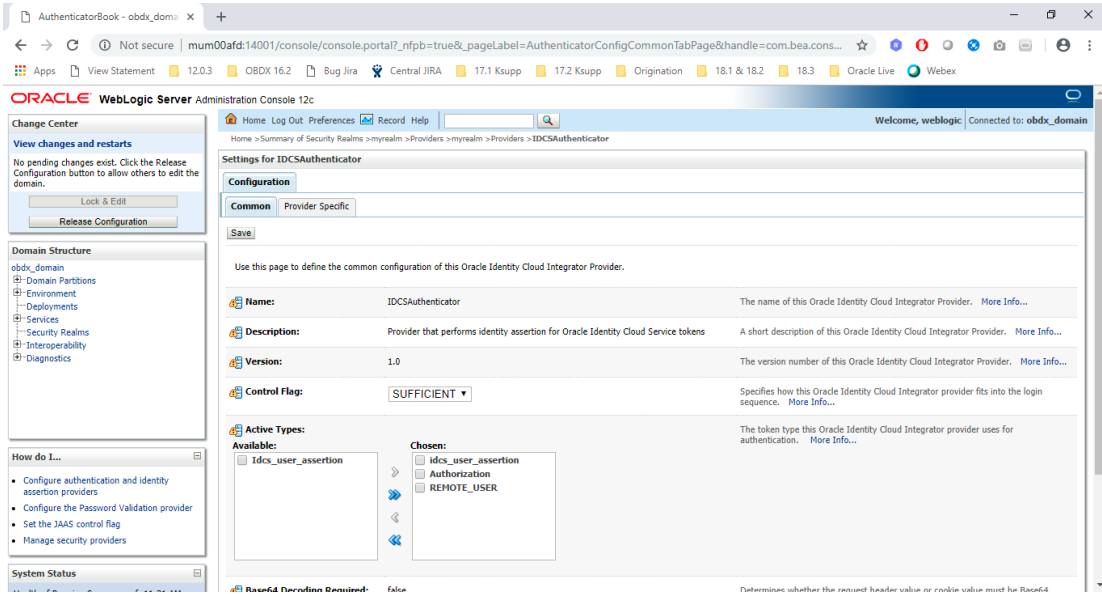


1. Delete *DBAuthenticator* and *SQLAuth* from the list of Authenticator Providers.
2. Create a New Provider.
 - Name : *IDCSAuthenticator*
 - Type : *OracleIdentityCloudIntegrator*



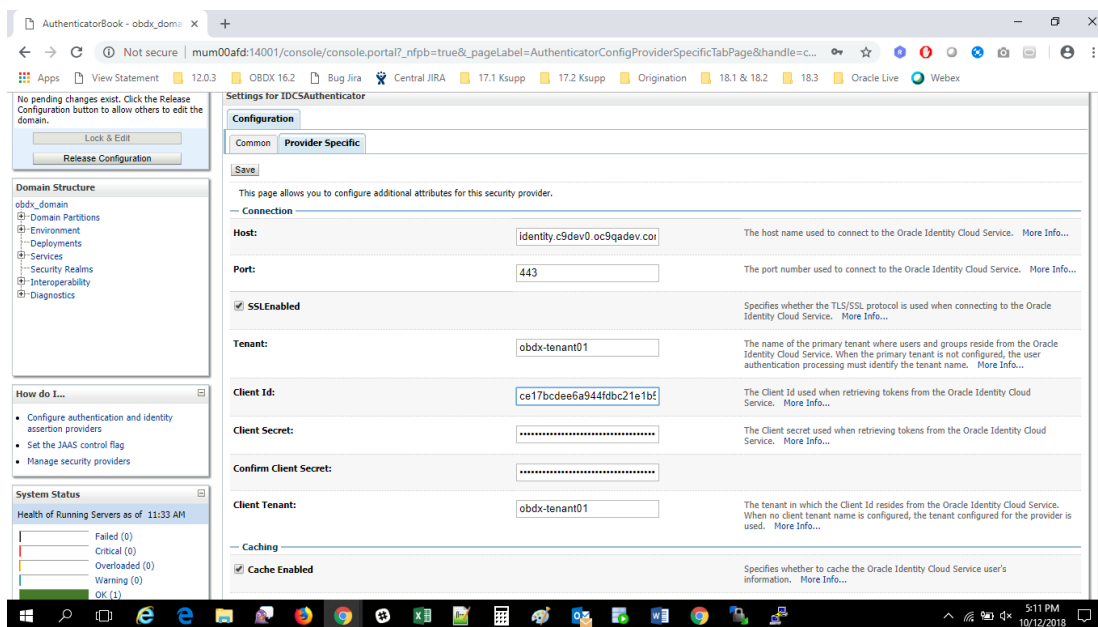
3. IDCSAuthenticator > Configurations > Common

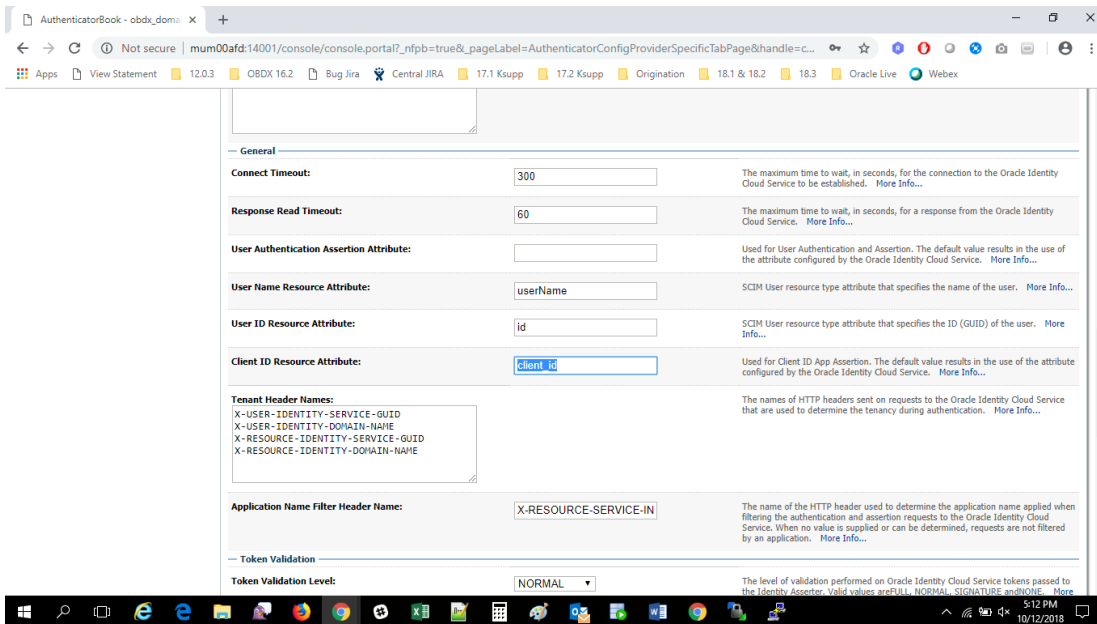
- Control Flag: SUFFICIENT
- Active Types:
 - i. Available: Idcs_user_assertion
 - ii. Chosen: idcs_user_assertion, Authorization, IDCS_REMOTE_USER, REMOTE_USER



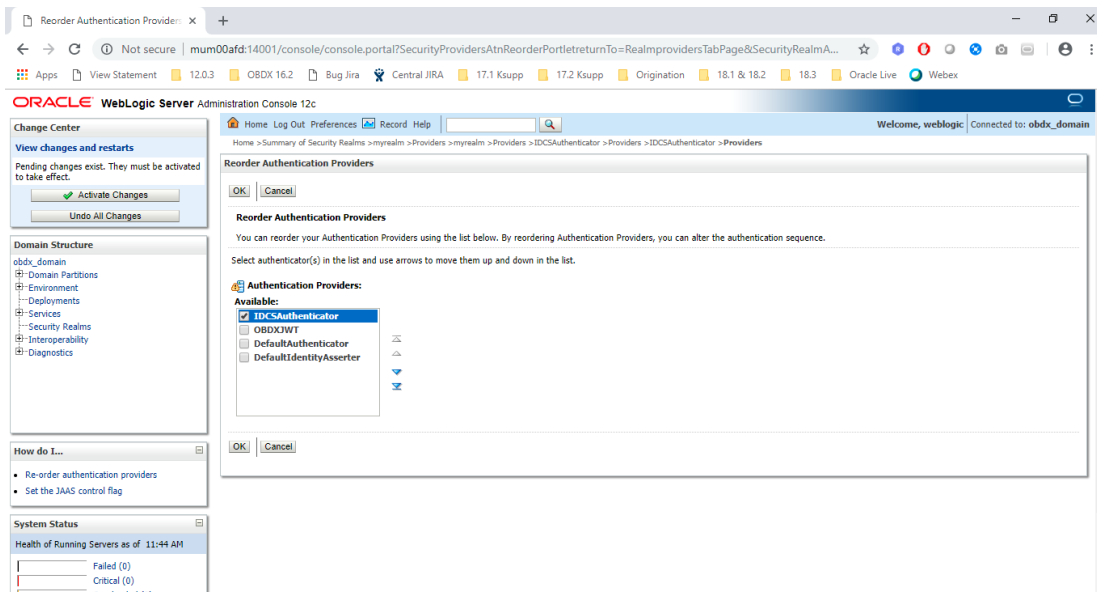
4. IDCSAuthenticator > Configurations > Provider Specific

- 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>](#)





5. Reorder IDCSAuthenticator to the top of all providers.



The screenshot shows 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 items 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" section contains the following text: "An Authentication provider allows WebLogic Server to establish trust by validating a user. You must have one Authentication provider in a security realm, and you can configure multiple Authentication providers in a security realm. Different types of Authentication providers are designed to access different data stores, such as LDAP servers or DBMS."

Under "Customize this table", there is a section for "Authentication Providers" with a "Lock & Edit" button. Below this is a table listing the configured providers:

Name	Description	Version
IDCSAuthenticator	Provider that performs identity assertion for Oracle Identity Cloud Service tokens	1.0
OBDOXJWT	OBDOX 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

At the bottom of the table, there are "New", "Delete", and "Reorder" buttons, and a status indicator "Showing 1 to 4 of 4 Previous | Next".

On the left side of the console, there is a "Change Center" section with "View changes and restarts" and "Lock & Edit" buttons. Below that is the "Domain Structure" tree showing the hierarchy: obdx_domain > Domain Partitions > Environment > Deployments > Services > Security Realms > Interoperability > Diagnostics. At the bottom left, there is a "How do I..." section with links to configuration guides and a "System Status" section.

9. Application Server Changes

9.1 Add below argument to Managed server:

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

The screenshot shows the Oracle WebLogic Administration Console interface. On the left, there is a navigation pane with sections for 'Security Realms', 'Interoperability', 'Diagnostics', 'How do I...', and 'System Status'. The 'System Status' section shows the health of running servers as of 11:46 AM, with a table indicating 0 Failed, 0 Critical, 0 Overloaded, 0 Warning, and 1 OK servers.

The main content area displays configuration fields for a managed server. The 'Arguments' field is highlighted with a blue box and contains the following command:

```
-Dfcst.jvm.id=1 -Xms2560m -Xmx2560m -XX:NewSize=640m -XX:MaxNewSize=640m -Dcom.sun.xml.internal.ws.transport.http.client.HttpTransportPipe.dump=true -Dcom.sun.xml.ws.transport.http.HttpAdapter.dump=true -Dcom.sun.xml.ws.transport.http.client.HttpTransportPipe.dump=true -Dcom.sun.xml.ws.transport.http.HttpAdapter.dump=true -Dcom.sun.xml.ws.transport.http.HttpAdapter.dump.threshold=999999 -Xdebug -Xnoagent -XrunId=transport-rt_socket_server,address=14343,suspend=n -Dweblogic.security.SSL.hostnameVerifier=weblogic.security.util.SSLWLSWildcardHostnameVerifier
```

Other configuration fields visible include Java Vendor, BEA Home, Root Directory, Class Path (set to /scratch/obdx/wls/config), Security Policy File, User Name, and Password.

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 shows the Oracle WebLogic Administration Console interface. The browser address bar indicates the URL: `mum00afd:14001/console/console.portal?_nfpb=true&_pageLabel=CoreClusterClusterConfigGeneralPage&CoreClusterClusterCo...`. The page title is "Settings for obdx_cluster".

The left sidebar contains several panels:

- View changes and restarts:** Shows "No pending changes exist. Click the Release Configuration button to allow others to edit the domain." with "Lock & Edit" and "Release Configuration" buttons.
- Domain Structure:** A tree view showing the hierarchy: `obdx_domain` > `Domain Partitions` > `Environment` > `Servers` > `Clusters` > `obdx_cluster`.
- How do I...:** A list of links: "Configure clusters", "Assign server instances to clusters", "Configure server migration in a cluster", "Configure cross-cluster replication".
- System Status:** Shows "Health of Running Servers as of 2:58 PM" with a bar chart for "Failed (0)", "Critical (0)", and "Overloaded (0)".

The main content area is titled "Settings for obdx_cluster" and has tabs for "Configuration", "Monitoring", "Control", "Deployments", "Services", and "Notes". The "Configuration" tab is active, and the "General" sub-tab is selected. A "Save" button is visible at the top left of the configuration area.

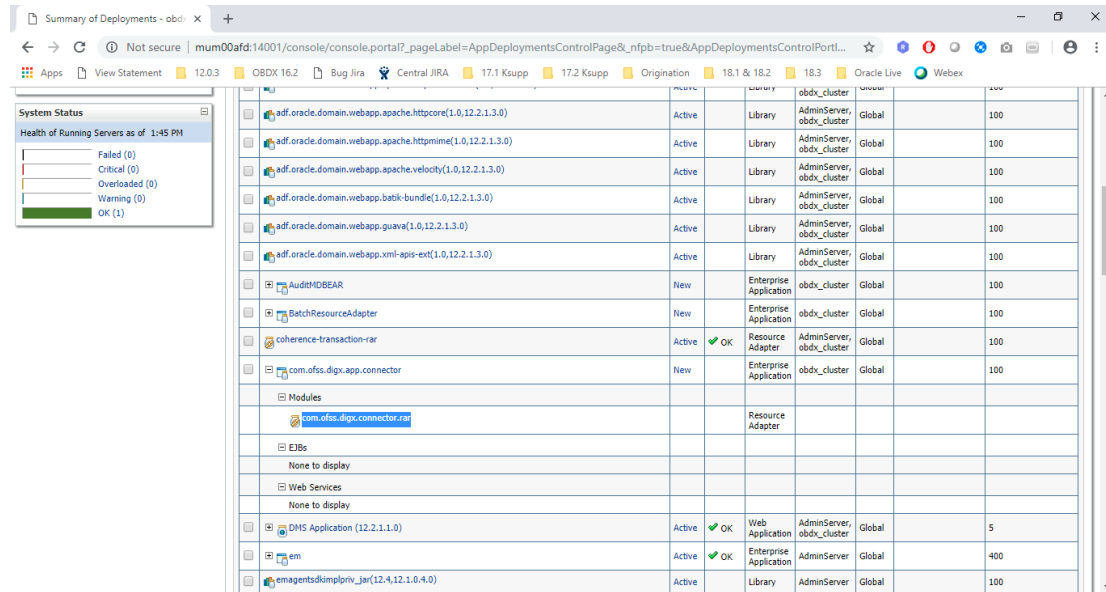
The configuration details include:

- Name:** `obdx_cluster`. Description: "The name of this configuration. WebLogic Server uses an MBean to implement and persist the configuration. [More Info...](#)"
- Default Load Algorithm:** `round-robin`. Description: "Defines the algorithm to be used for load-balancing between replicated services if none is specified for a particular service. The round-robin algorithm cycles through a list of WebLogic Server instances in order. Weight-based load balancing improves on the round-robin algorithm by taking into account a pre-assigned weight for each server. For random load balancing, requests are routed to servers at random. [More Info...](#)"
- Cluster Address:** (empty text field). Description: "The address that forms a portion of the URL a client uses to connect to this cluster, and that is used for generating EJB handles and entity EJB fallback addresses. (This address may be either a DNS host name that maps to multiple IP addresses or a comma-separated list of single address host names or IP addresses.) [More Info...](#)"
- Number of Servers In Cluster Address:** `3`. Description: "Number of servers to be listed from this cluster when generating a cluster address automatically. This setting has no effect if Cluster Address is explicitly set. [More Info...](#)"
- Enable Transaction Affinity:** . Description: "If enabled, a server's transaction requests go to servers in the cluster that are already participating in the global transaction. [More Info...](#)"
- Enable Concurrent Single Activation:** . Description: "Specifies whether to allow the concurrent activation, deactivation, or restart of two or more singleton services. [More Info...](#)"
- Advanced Section:** Expanded, showing **WebLogic Plug-In Enabled:** `yes`. Description: "Specifies if this cluster will receive requests from a proxy plug-in or HttpClusterServlet. [More Info...](#)"

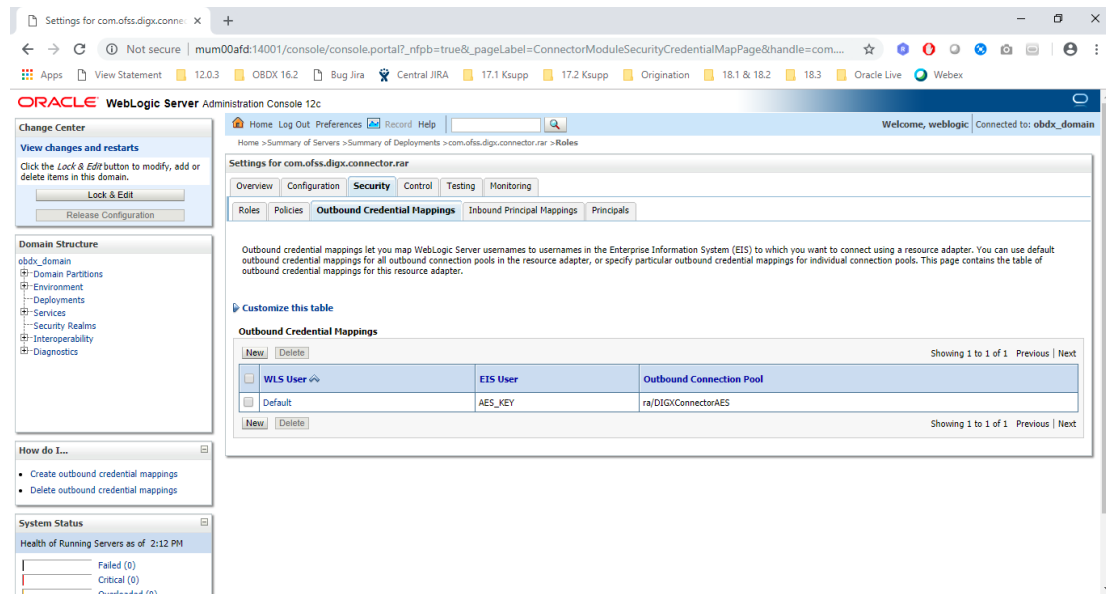
10. Change in Weblogic Deployments

10.1 Creating a Connection in Connector ear

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



Name	Status	Type	AdminServer	Global	Instances
adf.oracle.domain.webapp.apache.httptcore(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-apis-ext(1.0,12.2.1.3.0)	Active	Library	AdminServer, obdx_cluster	Global	100
AuditMDBEAR	New	Enterprise Application	obdx_cluster	Global	100
BatchResourceAdapter	New	Enterprise Application	obdx_cluster	Global	100
coherence-transaction-rar	Active	Resource Adapter	AdminServer, obdx_cluster	Global	100
com.offss.digx.app.connector	New	Enterprise Application	obdx_cluster	Global	100
Modules					
com.offss.digx.connector.rar		Resource Adapter			
EJBs					
None to display					
Web Services					
None to display					
DMS Application (12.2.1.1.0)	Active	Web Application	AdminServer, obdx_cluster	Global	5
em	Active	Enterprise Application	AdminServer	Global	400
emagentsimplpriv_jar(12.4.12.1.0.4.0)	Active	Library	AdminServer	Global	100



Settings for com.offss.digx.connector.rar

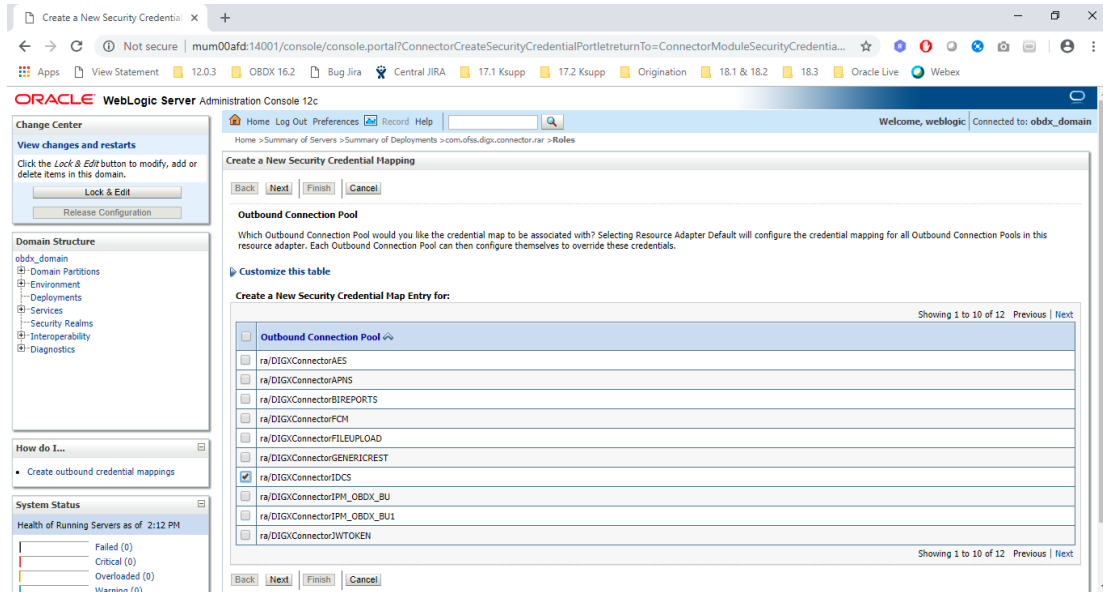
Roles Policies **Outbound Credential Mappings** Inbound Principal Mappings Principals

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.

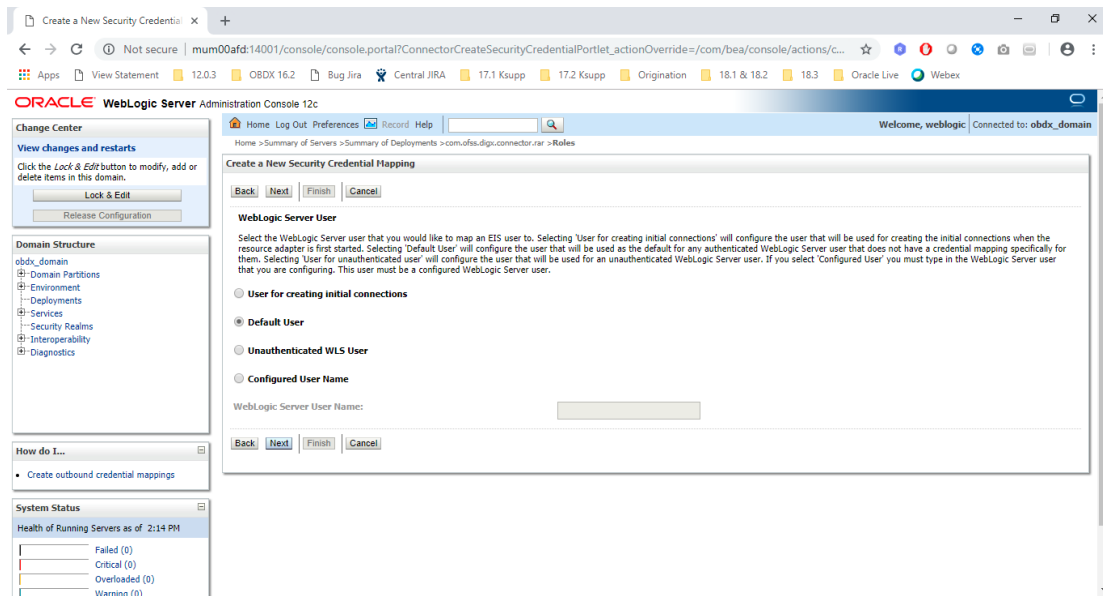
Customize this table

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

3. Click New



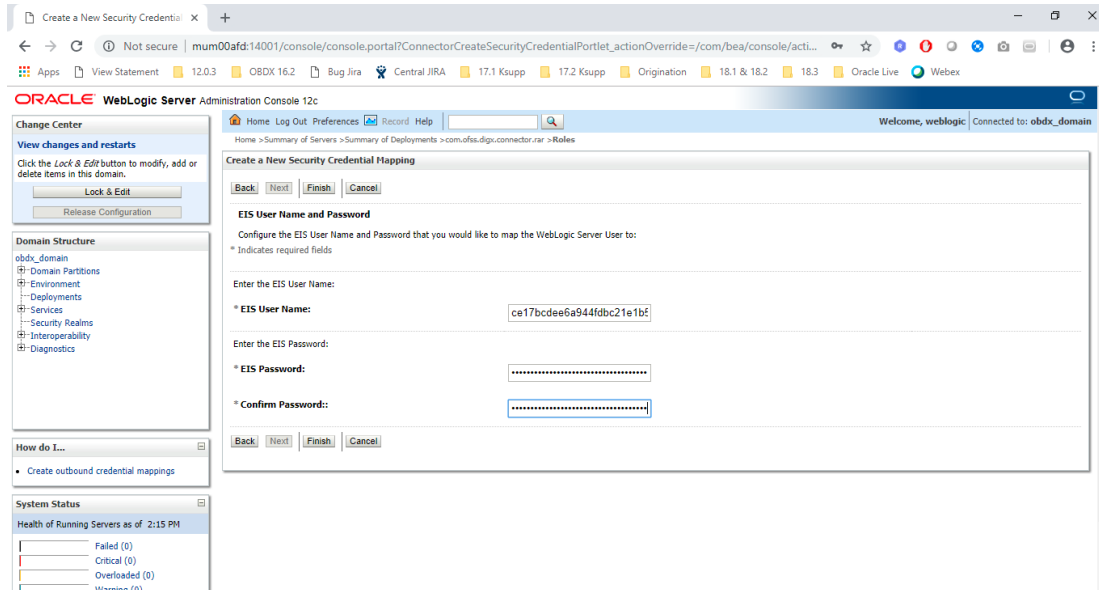
4. Click Next



5. Click Next

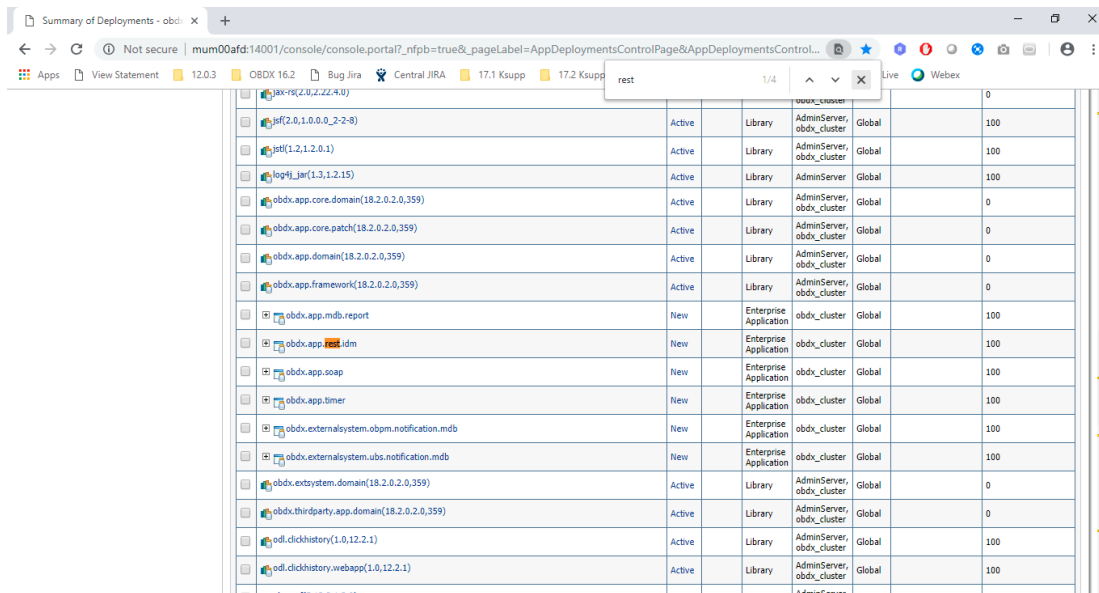
6. Create a new Security Credential Mapping –

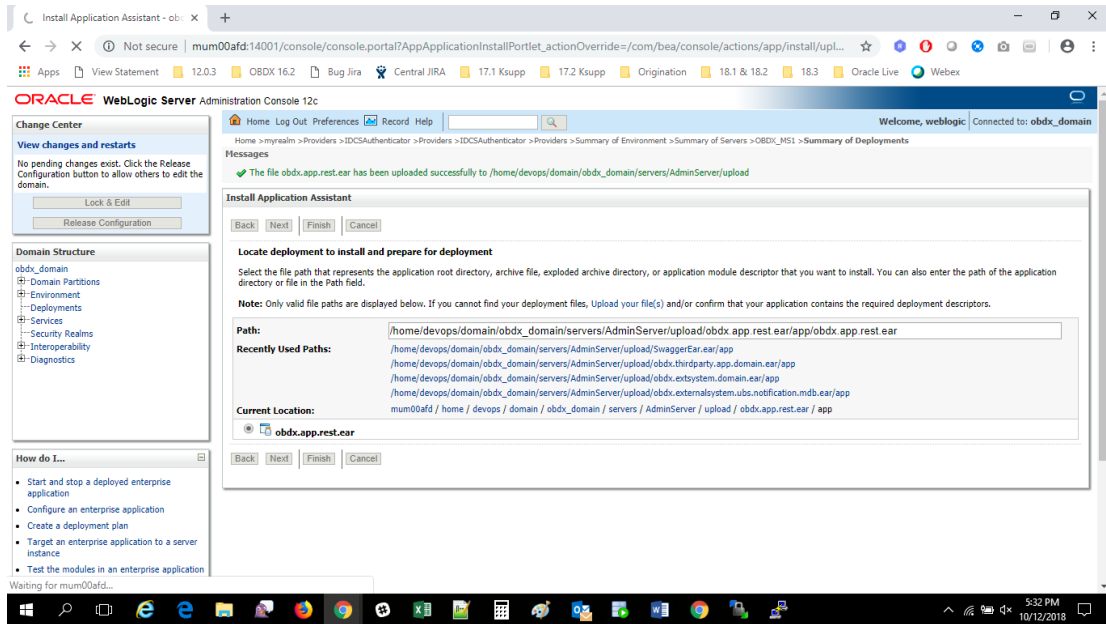
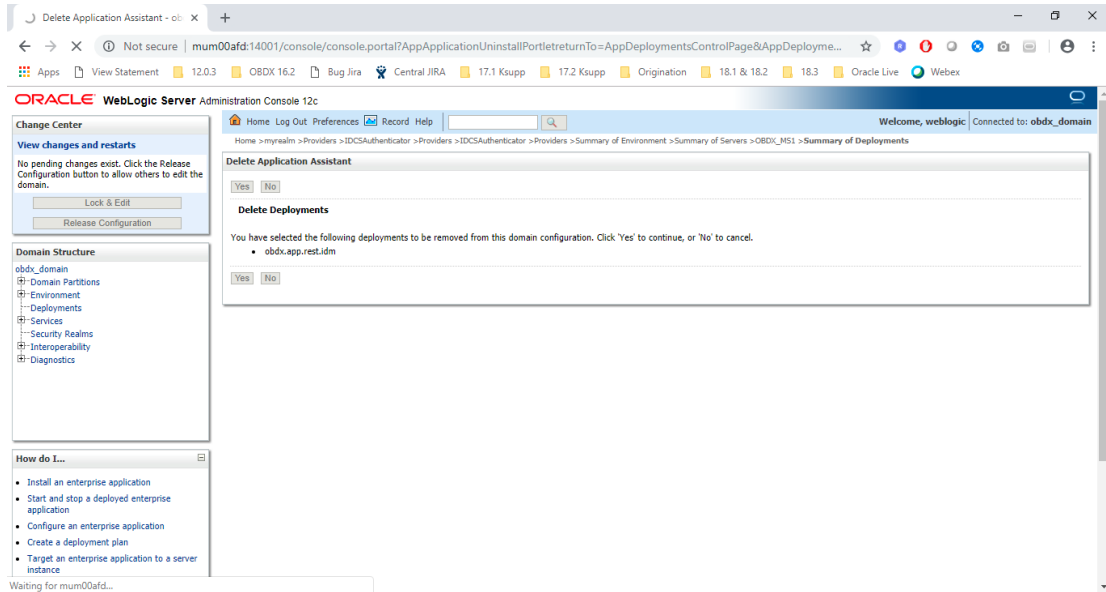
- Outbound Connection Pool: **ra/DIGXConnectorIDCS**
- WebLogic Server User: **Default**
- EIS User Name: <client id of OBAPI client in IDCS>
- EIS Password: <client secret of OBAPI client in IDCS>



7. Click Finish

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

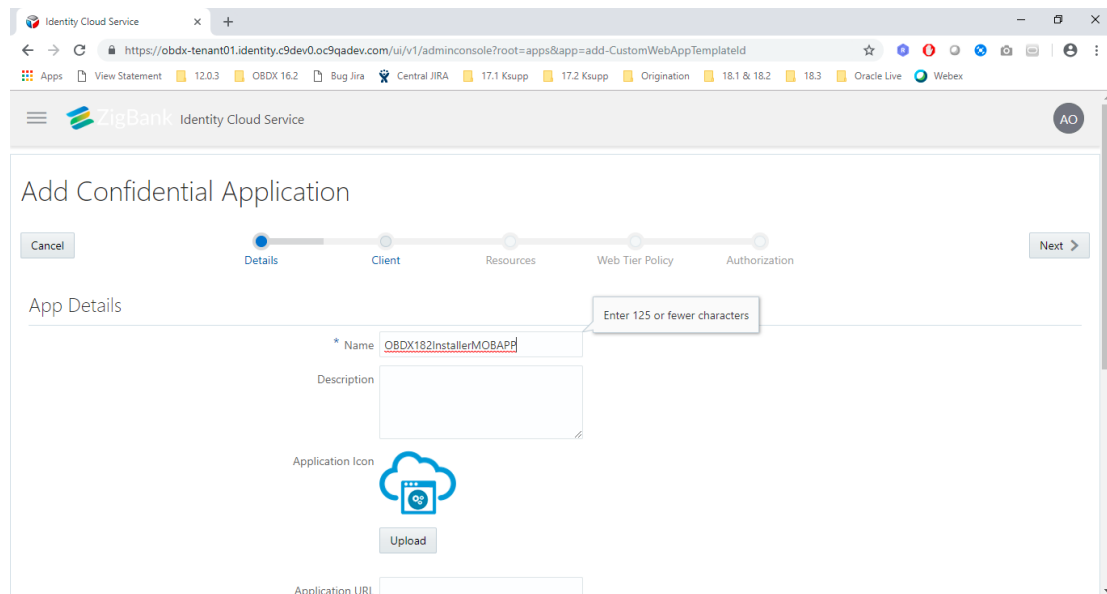




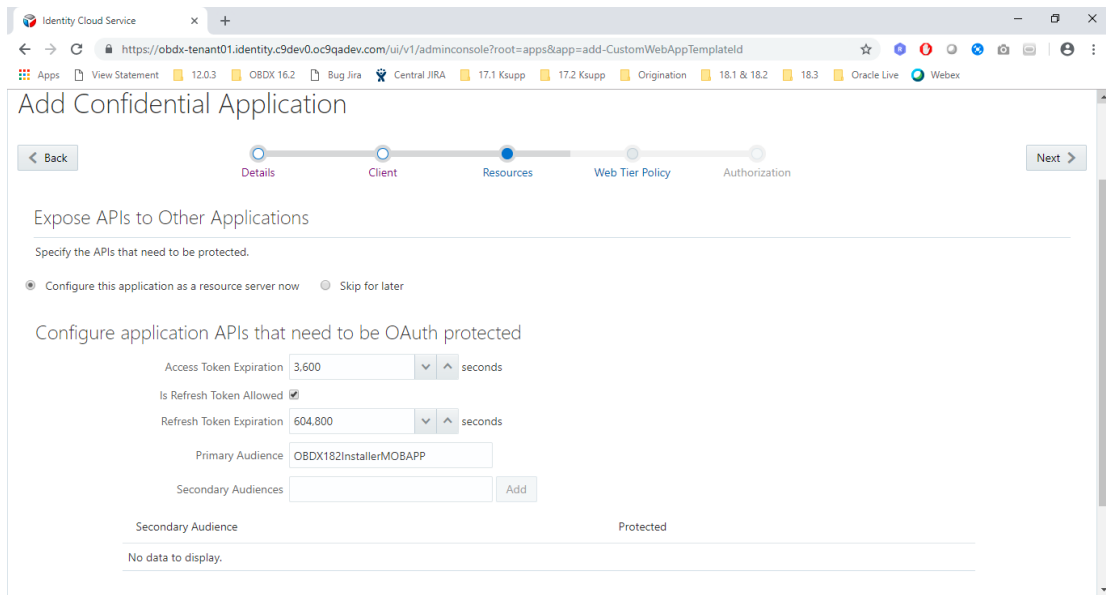
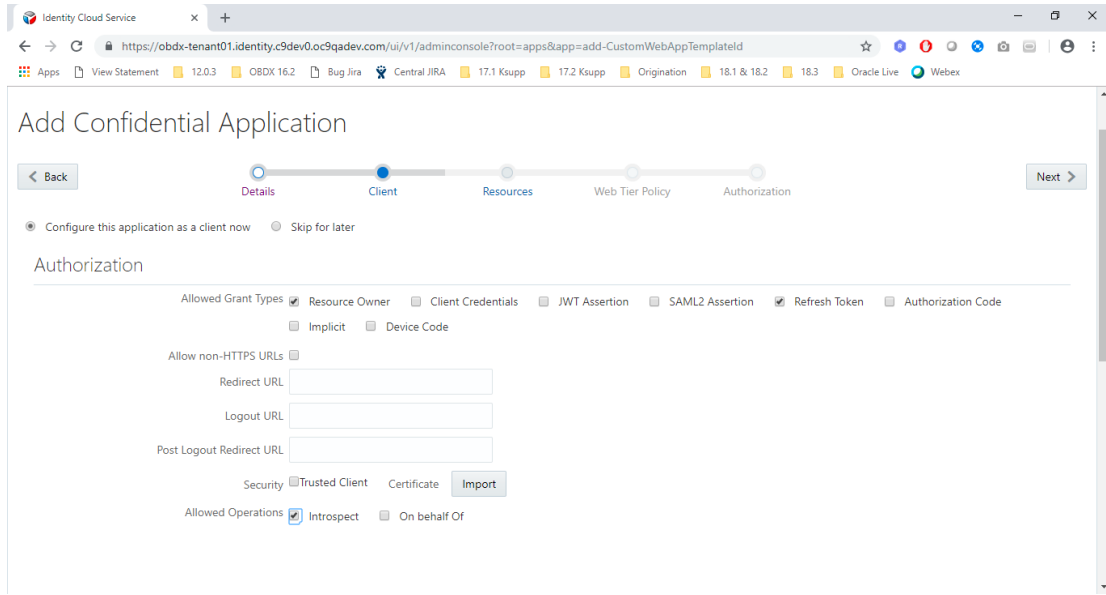
11. Create Client Applications for Internal OBAPI Apps in IDCS Console

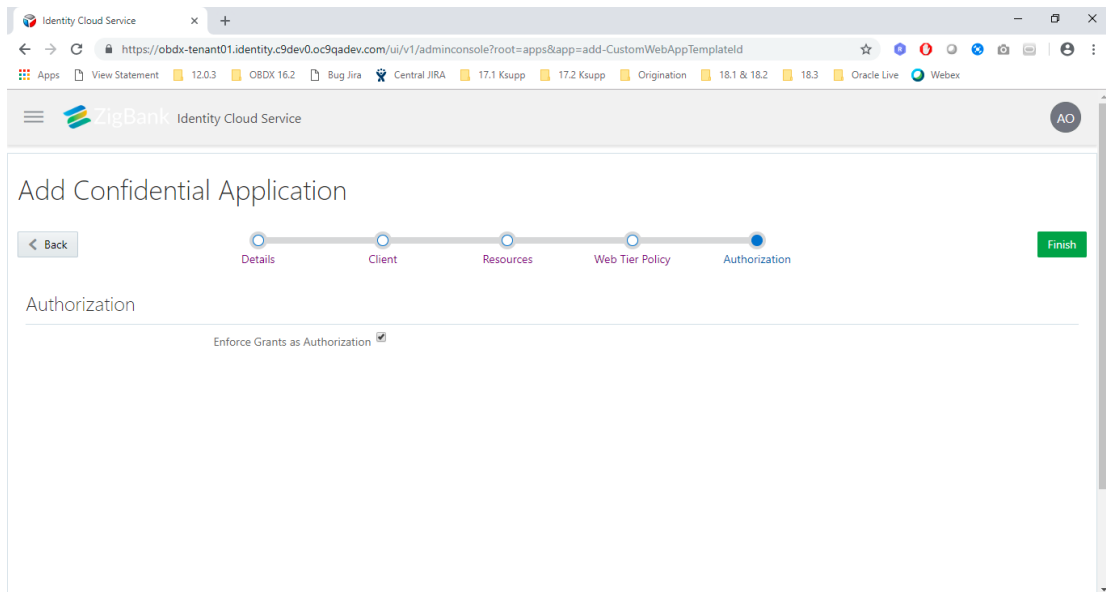
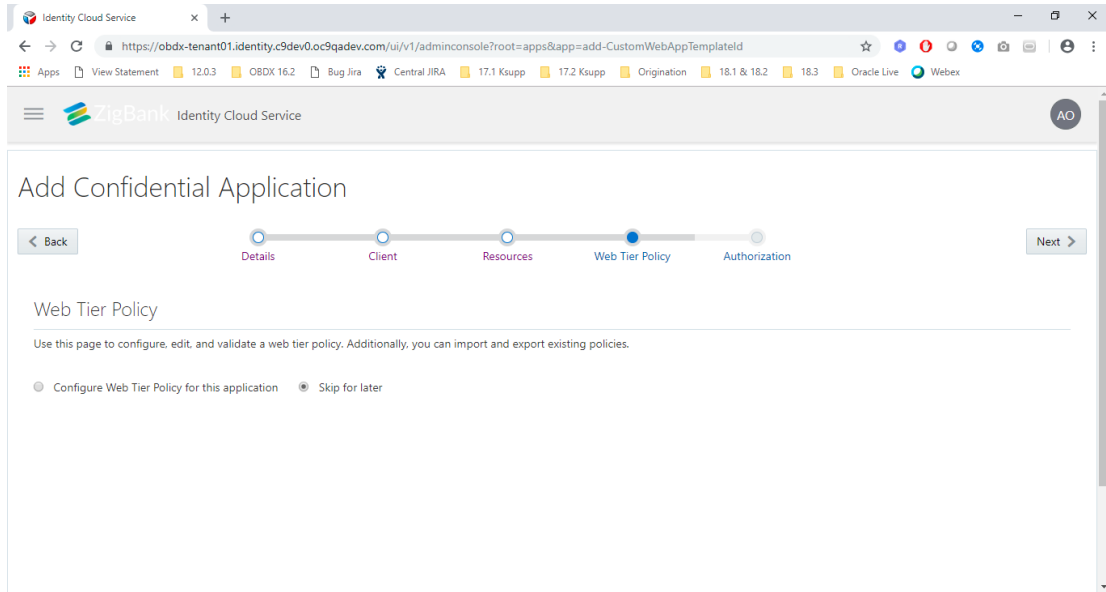
Client applications need to be created for below Internal applications.

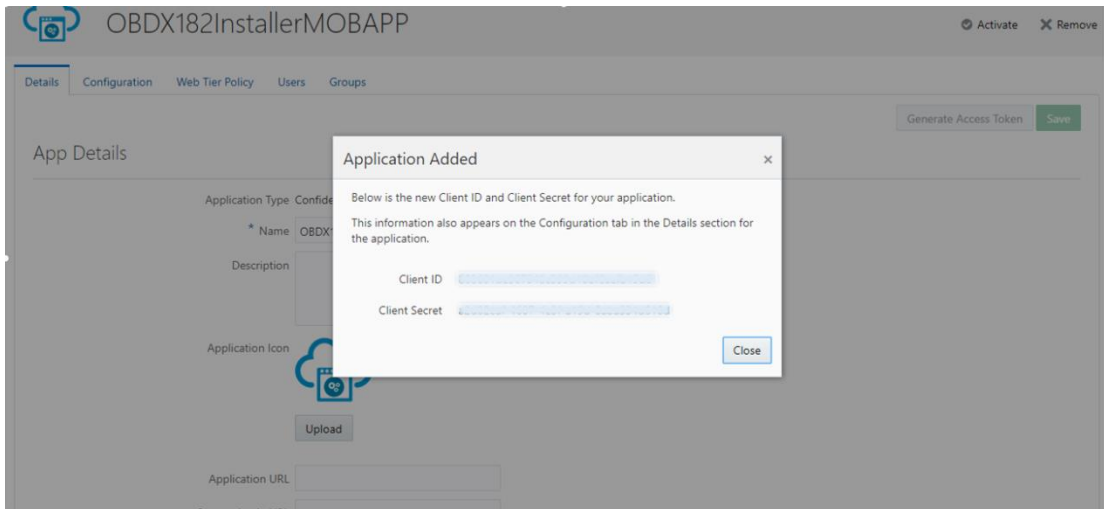
- Mobile App
- Siri Chatbot
- Snapshot
- Wearable



The screenshot displays the 'Add Confidential Application' wizard in the 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 'Name' field is populated with '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 shows a default icon of a cloud with a gear and a plus sign, and an 'Upload' button. The 'Application URL' field is empty.

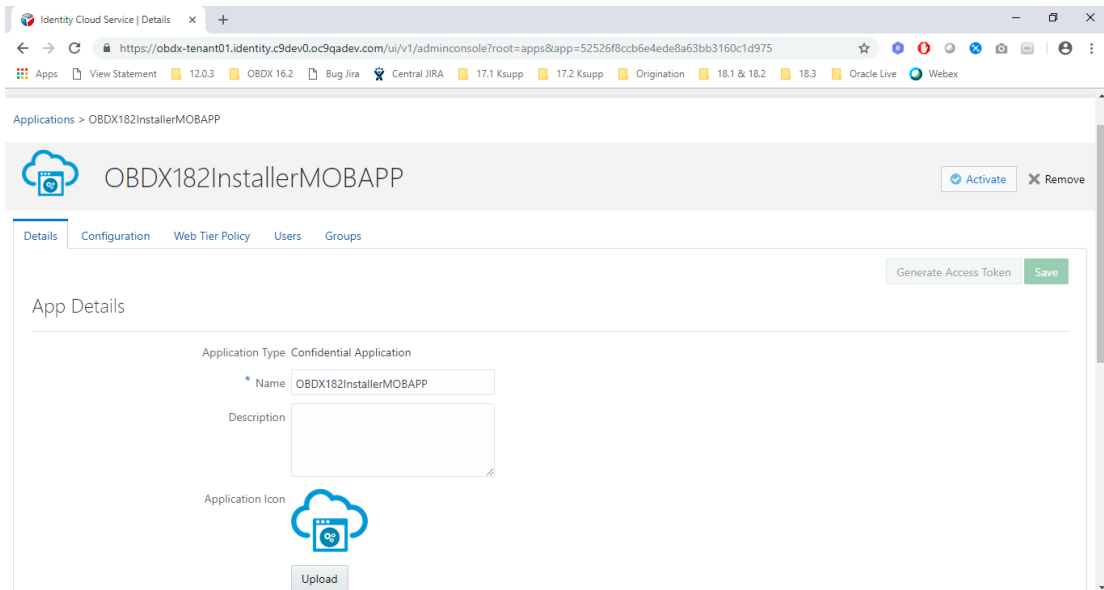






Glossary of parameters:

<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



1. Click **Activate** button.

Similarly, do the same for the rest.

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','OBDX', '<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','OBDX', '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,CREATED_BY,CREATION_DATE,LAST_UPDATED_BY,LAST_UPDATED_DATE,OBJECT_STATUS,OBJECT_VERSION_NUMBER,MODULE,DETERMINANT_VALUE,TYPE,UI_DEFINITION) values ('IDCS_CONNECTION_SCHEME','OBDX', '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';
```

13. Apply Webgate Patch on OHS using OPatch

1. Download the patch from the below link.

https://support.oracle.com/epmos/faces/PatchDetail?_afdf.ctrl-state=hyoym65na_9&patch_name=28243743&releaseId=600000000073630&patchId=28243743&languageId=0&platformId=226&_afdfLoop=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_FR_2
P                mmm00chl:5000/obdx182susnav/vls      "/home/devops/common..."      182_Patch_UBS_OHS_FR_2
12f509650f89     mmm00chl:5000/obdx182susnav/vls      "/home/devops/common..."      31 hours ago              Up 31 hours (healthy)      7777/tcp, 8888/tcp, 0.0.0.0:14777->12777/tp
001->14001/tcp, 0.0.0.0:14003->14003/tcp, 12777/tcp, 0.0.0.0:14343->14343/tcp      182_Patch_UBS_OHS_FR_2
6157feefffa     mmm00chl:5000/obdx182susnav/db        "/home/devops/common..."      31 hours ago              Up 31 hours (unhealthy)   12001/tcp, 12003/tcp, 12343/tcp, 0.0.0.0:14
182_Patch_UBS_WLS_FR_2
182_Patch_UBS_DB_FR_2
0.0.0.0:1421->1521/tcp
31 hours ago              Up 31 hours (healthy)
[obdxdevops@mum00afd ~]$ docker exec -itu devops 182_Patch_UBS_OHS_FR_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) 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/opatch/opatch2018-10-12_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/opatch/lsinv/lsinventory2018-10-12_14-24-34PM.txt

-----
Local Machine Information:
Hostname: obdxohs.in.oracle.com
ARU platform id: 226
ARU platform description: Linux_BMD64

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

```

@obdxohs/scratch/obdx/ohs/Setup/28243743
[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
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@obdxohs 28243743]$

```

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":"",
      "httpsCr1File":""
    }
  }
}
```

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":"<allowed_scope_name_of_protected_in_OBAPI_Client
        App> 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"  
      }  
    ]  
  }  
]  
}  
}
```

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.

```
@obdxhs~/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/insevs@obdxhs common_s
cripts] cd tsj] cd /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/web
[devops@obdxhs config]$
[devops@obdxhs config]$
[devops@obdxhs config]$
[devops@obdxhs config]$ pwd
/home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config
[devops@obdxhs config]$ ls -ltr
total 20
drwxr-xr-x 2 devops devops 4096 Jun 12 15:30 simple
-rw-r--r-- 1 devops devops 15028 Jun 12 15:30 oblog_config_wg.xml
[devops@obdxhs config]$ cp /scratch/obdx/o
ohs/
oreInst.loc
[devops@obdxhs config]$ cp /scratch/obdx/ohs/Setup/
28243743/ cloud.config cloud.policy
[devops@obdxhs config]$ cp /scratch/obdx/ohs/Setup/cloud.*
[devops@obdxhs config]$ ls -ltr
total 28
drwxr-xr-x 2 devops devops 4096 Jun 12 15:30 simple
-rw-r--r-- 1 devops devops 15028 Jun 12 15:30 oblog_config_wg.xml
-rw-r--r-- 1 devops devops 2295 Oct 12 14:38 cloud.policy
-rw-r--r-- 1 devops devops 425 Oct 12 14:38 cloud.config
[devops@obdxhs config]$ vi cloud.policy
[devops@obdxhs config]$ vi cloud.config
[devops@obdxhs config]$ cd /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config
[devops@obdxhs config]$ mkdir cwg_wallet
[devops@obdxhs config]$ cd /home/devops/Oracle/Middleware/Oracle_Home/oracle_common/bin/
[devops@obdxhs 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@obdxhs 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/fmw
```

```
config/components/OHS/instances/ohs1/webgate/config/cwg_wallet -createUserCredential CWG
id_secret_key <client-id> <client-secret>
```

```
@obdshs:~/Oracle/Middleware/Oracle_Home/oracle_common/bin
crptsj@ obdshs ~$ cd /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/web
[devops@obdshs config]$
[devops@obdshs config]$
[devops@obdshs config]$ pwd
/home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config
[devops@obdshs config]$ ls -lrt
total 20
drwxr-xr-x 2 devops devops 4096 Jun 12 15:30 simple
-rw-r--r-- 1 devops devops 15028 Jun 12 15:30 oblog_config_wg.xml
[devops@obdshs config]$ cp /scratch/obdx/o
ohs/
oraInst.loc
[devops@obdshs config]$ cp /scratch/obdx/ohs/Setup/
28243743/ cloud.config cloud.policy
[devops@obdshs config]$ cp /scratch/obdx/ohs/Setup/cloud.*
[devops@obdshs config]$ ls -lrt
total 28
drwxr-xr-x 2 devops devops 4096 Jun 12 15:30 simple
-rw-r--r-- 1 devops devops 15028 Jun 12 15:30 oblog_config_wg.xml
-rw-r--r-- 1 devops devops 2285 Oct 12 14:38 cloud.policy
-rw-r--r-- 1 devops devops 425 Oct 12 14:38 cloud.config
[devops@obdshs config]$ vi cloud.policy
[devops@obdshs config]$ vi cloud.config
[devops@obdshs config]$ cd /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/config
[devops@obdshs config]$ mkdir cwg_wallet
[devops@obdshs config]$ cd /home/devops/Oracle/Middleware/Oracle_Home/oracle_common/bin/
[devops@obdshs 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@obdshs bin]$ export JAVA_HOME=/home/devops/Oracle/Middleware/Oracle_Home/oracle_common/jdk/jre
[devops@obdshs 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 ce17b0de6e94fd2c21eb55e23d26 532266b5-235c-456a-baad-2ba5e9bab7ba
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@obdshs 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/fmw
config/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/fmw
config/components/OHS/instances/ohs1/webgate/config/cwg_wallet

```

@obdxkhs/home/devops/Oracle/Middleware/Oracle_Home/oracle_common/bin
openssl098e.x86_64 0:0.9.8e-29.el7.2.3

Dependency Installed:
keyutils-libs-devel.x86_64 0:1.5.8-3.el7      krb5-devel.x86_64 0:1.15.1-19.el7
libcom_err-devel.x86_64 0:1.42.9-12.el7_5    libkadm5.x86_64 0:1.15.1-19.el7
libselinux-devel.x86_64 0:2.5-12.0.1.el7     libsepol-devel.x86_64 0:2.5-8.1.el7
libverto-devel.x86_64 0:0.2.5-4.el7         pcre-devel.x86_64 0:8.32-17.el7
zlib-devel.x86_64 0:1.2.7-17.el7

Dependency Updated:
krb5-libs.x86_64 0:1.15.1-19.el7      libcom_err.x86_64 0:1.42.9-12.el7_5
libselinux.x86_64 0:2.5-12.0.1.el7    libselinux-utils.x86_64 0:2.5-12.0.1.el7

[root@obdxkhs devops]# openssl enc -aes-128-cbc -k "god bless you" -P -md sha256
ealt59E548065F81C156f openssl enc -aes-128-cbc -k "god bless you" -P -md sha256
key=6111D6C63AD4A55FABFE06EE0C9E1658
iv =97AFCDCC9DAC3D391FE36EB2B08E4DF
[root@obdxkhs devops]# ./mkstore -url /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/c/config/cwg_wallet -createUserCredential CWG enc_key enc 6111D6C63AD4A55FABFE06EE0C9E1658
bash: ./mkstore: No such file or directory
[root@obdxkhs devops]# cd /home/devops/Oracle/Middleware/Oracle_Home/oracle_common/bin/
[root@obdxkhs bin]# ./mkstore -url /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/c/config/cwg_wallet -createUserCredential CWG enc_key enc 6111D6C63AD4A55FABFE06EE0C9E1658
ERROR: No Java
/home/devops/Oracle/Middleware/Oracle_Home/oracle_common/jdk or $JAVA_HOME should point to valid Java runtime
[root@obdxkhs bin]# export JAVA_HOME=/home/devops/Oracle/Middleware/Oracle_Home/oracle_common/jdk/jre
[root@obdxkhs bin]# ./mkstore -url /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/instances/ohs1/webgate/c/config/cwg_wallet -createUserCredential CWG enc_key enc 6111D6C63AD4A55FABFE06EE0C9E1658
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:
[root@obdxkhs 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
Copyright (c) 2004, 2017, Oracle and/or its affiliates. All rights reserved.

Requested Certificates:
User Certificates:
Oracle Secret Store entries:
CWG##enc_key
CWG##id_secret_key
Trusted Certificates:
[root@obdxkhs bin]#

```

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"

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 obdxwls.in.oracle.com
    WebLogicPort 12003
    Debug ON
    WLLogFile /scratch/obdx/ohs/logs/weblogic.log
    MatchExpression /digx/*
</IfModule>

<Location /digx>
    WLSRequest On
    WLProxySSL ON
    WLProxySSLPassThrough ON
</Location>
```

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.