

Oracle Banking APIs
Installer Pre-Requisite Setup Guide
Release 19.2.0.0.0

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ORACLE®

Installer Pre-Requisite Setup Guide

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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=accandid=info> or visit

<http://www.oracle.com/pls/topic/lookup?ctx=accandid=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
- Configuration / Installation of pre-requisite software's

1.5 Related Information Sources

For more information on Oracle Banking APIs Release 19.2.0.0.0, refer to the following documents:

- Oracle Banking APIs Licensing Guide

2. Introduction

This guide helps you to do the pre-requisite setup required before the execution of OBAPI 19.2.0.0.0 Installer.

More details about each task are explained in detail in following sections.

2.1 Software List

Software Name	Version	Mandatory Software
Operating System	ORACLE LINUX 7.x	Y
Oracle Database	19.3.0.0.0	Y
Oracle Java Development Kit	1.8.0_231	Y
Oracle Weblogic Infrastructure	12.2.1.3.0	Y
Oracle HTTP Server	12.2.1.3.0	Y
Oracle Identity and Access Management Suite (IAM)	12.2.1.3.0	N*
LDAP (OUD)	12.2.1.3.0	N*
Oracle Business Intelligence Publisher	12.2.1.4.0	N**
Oracle Digital Assistant (ODA)	9.1.5	N***
Python	2.7.5/3.8.0	Y****
Python Package: cx_Oracle	7.3.0	Y*****
Python Package: urwid	1.3.1/2.1.0(for 3.8)	Y

Software Name	Version	Mandatory Software
Oracle Client	18.3.0.0.0	Y
Oracle Outside In	8.5.4	Required for MS Excel file uploads
<p>* Required if OBAPI Native Authentication is not used and OAM is managing Authentication</p> <p>** Required if Integration with Oracle Business Intelligence Publisher is needed.</p> <p>*** Required if OBAPI Chat bot Banking Features are used.</p> <p>**** For python 3 installation refer section 2.3 Pre-requisite software installation and OS configuration for OBAPI Installer – Python 3.8.0</p> <p>***** In case of python 3 cx_Oracle needs to be re-installed</p>		

2.2 Pre-requisite software installation and OS configuration for OBAPI Installer

Below steps assume Python 2.7.5 is installed and available on server. You can verify the Python version by executing the command as shown below:

```
[devops@ ~]$ python -V
Python 2.7.5
[devops@ ~]$
```

Note: Below steps require root login on server where OBAPI software pre-requisite are performed (i.e. Server which host Oracle Weblogic)

cx_Oracle (Software Installation)

Step 1:

Install the **oracle-release-el7** and **oraclelinux-developer-release-el7** release packages to set up yum repository access for Oracle Instant Client and cx_Oracle

```
$yum -y install oracle-release-el7 oraclelinux-developer-release-el7
```

```
If /etc/yum.repos.d/public-yum-ol7.repo file exists and you have the base oraclelinux-release-<rel> package installed, you may still need to run the /usr/bin/ol_yum_configure.sh script.
$ /usr/bin/ol_yum_configure.sh
```

Step 2:

Install cx_Oracle

```
$ yum -y install python-cx_Oracle
```

```
[root@ ~]# yum -y install python-cx_Oracle
Loaded plugins: ovl, ulninfo
Resolving Dependencies
--> Running transaction check
--> Package python-cx_Oracle.x86_64 0:7.3-1.el7 will be installed
--> Processing Dependency: oracle-instantclient18.3-basic >= 18.3.0.0.0 for package: python-cx_Oracle-7.3-1.el7.x86_64

Running transaction
  Installing : libaio-0.3.109-13.el7.x86_64                                1/3
  Installing : oracle-instantclient18.3-Basic-18.3.0.0-2.x86_64         2/3
  Installing : python-cx_Oracle-7.3-1.el7.x86_64                       3/3
  Verifying  : libaio-0.3.109-13.el7.x86_64                            1/3
  Verifying  : oracle-instantclient18.3-Basic-18.3.0.0-2.x86_64       2/3
  Verifying  : python-cx_Oracle-7.3-1.el7.x86_64                       3/3

Installed:
  python-cx_Oracle.x86_64 0:7.3-1.el7

Dependency Installed:
  libaio.x86_64 0:0.3.109-13.el7                                oracle-instantclient18.3-basic.x86_64 0:18.3.0.0-2

Complete!
```

Urwid (Software Installation)

Step 1: Download Urwid from Urwid (or urwid.org) website.

Note: Support version for Urwid is 1.3.1 (urwid-1.3.1.tar.gz)

Step 2: Extract the tar file as shown below

```
[root@ ~ setup]# tar -zxvf urwid-1.3.1.tar.gz
urwid-1.3.1/urwid/tests/test_container.py
urwid-1.3.1/urwid/tests/test_util.py
urwid-1.3.1/urwid/tests/test_vterm.py
urwid-1.3.1/urwid/tests/test_graphics.py
urwid-1.3.1/urwid/tests/test_listbox.py
urwid-1.3.1/urwid/tests/test_widget.py
urwid-1.3.1/urwid/tests/__init__.py
urwid-1.3.1/urwid/tests/test_doctests.py
```

Step 3: Browse into the extracted directory and run below command

```
# python setup.py build_py
```

```
[root@ ~ urwid-1.3.1]# python setup.py build_py
running build_py
creating build
creating build/lib.linux-x86_64-2.7
creating build/lib.linux-x86_64-2.7/urwid
copying urwid/lcd_display.py -> build/lib.linux-x86_64-2.7/urwid
copying urwid/canvas.py -> build/lib.linux-x86_64-2.7/urwid
copying urwid/escape.py -> build/lib.linux-x86_64-2.7/urwid
copying urwid/signals.py -> build/lib.linux-x86_64-2.7/urwid
copying urwid/main_loop.py -> build/lib.linux-x86_64-2.7/urwid
copying urwid/command_map.py -> build/lib.linux-x86_64-2.7/urwid
copying urwid/old_str_util.py -> build/lib.linux-x86_64-2.7/urwid
```

Note: Ensure Python 2.7.5 version should be available in PATH variable. Above execution should be done using Python 2.7.5.

Step 4: Execute below command to perform Urwid installation

```
# python setup.py install
```

```

[root@ urwid-1.3.1]# python setup.py install
running install
running bdist_egg
running egg_info
writing urwid.egg-info/PKG-INFO
writing top-level names to urwid.egg-info/top_level.txt
writing dependency_links to urwid.egg-info/dependency_links.txt
reading manifest file 'urwid.egg-info/SOURCES.txt'
reading manifest template 'MANIFEST.in'
warning: no files found matching 'CHANGELOG'
writing manifest file 'urwid.egg-info/SOURCES.txt'
installing library code to build/bdist.linux-x86_64/egg
running install_lib
running build_py
running build_ext

```

Note: Ensure Python 2.7.5 version should be available in PATH variable. Above execution should be done using Python 2.7.5.

2.3 Pre-requisite software installation and OS configuration for OBAPI Installer – Python 3.8.0

Step 1: Execute below commands to install the dependencies

```

yum -y groupinstall development
yum -y install zlib-devel
yum install openssl-devel -y
yum install zlib-devel bzip2-devel openssl-devel ncurses-devel sqlite-devel
yum install zlib-devel bzip2-devel openssl-devel ncurses-devel sqlite-devel -y
yum install python38-pip -y
yum install libreadline-gplv2-dev libncursesw5-dev libssl-dev libsqlite3-dev tk-dev
libgdbm-dev libc6-dev libbz2-dev -y
yum install -y libffi-devel
yum install python36u-devel -y
yum install python38u-devel -y
yum install yum-utils -y
yum install epel-release -y
yum install python3.8-pip -y
yum install python3-pip -y

```

Note: In case wget is not installed , perform following step to install wget

```

yum install wget
#Download the python.tar.xz of the required version
wget https://www.python.org/ftp/python/3.8.0/Python-3.8.0.tar.xz
#Untar the Python tar file
tar xJf Python-3.8.0.tar.xz

```


#Navigate to the Python-<version> directory and run the below commands

```
cd Python-3.8.0
./configure
make
make install
```

Step 2: To install the Python3 compatible libraries to Python2.7 , configuration of pip needs to be done

```
cd /root
mkdir .pip
vi ~/.pip/pip.conf
[global]
trusted-host = pypi.python.org
                pypi.org
                files.pythonhosted.org
```

Step3: Give permission to pip.conf file and a soft link needs to be created.

Note: pip version 20.1.1

```
ln -s ~/.pip/pip.conf /etc/pip.conf
ls -lrt ~/.pip/pip.conf
chmod 777 /root/.pip/pip.conf
ls -lrt ~/.pip/pip.conf
pip3 list
pip3 install --upgrade pip
```

Step4: Once above steps are executed successfully install the following required modules.

```
pip3 install cx-Oracle==7.3.0
pip3 install urwid==2.1.0
```

limits.conf (OS Configuration)

Ensure the nofile resource limit is set 10240 or higher for the user which would execute the OBAPI Installer.

[Home](#)

3. Installing and Configuring Weblogic Infrastructure 12c

This chapter describes the steps for installing the Weblogic Infrastructure version 12.2.1.3.0:

- Section 3.1, "Installing Stand-alone Weblogic"

3.1 Installing Stand-alone Weblogic Infrastructure

Oracle WebLogic Server is a scalable, enterprise-ready Java Platform, Enterprise Edition (Java EE) application server. The WebLogic Server infrastructure supports the deployment of many types of distributed applications

This chapter describes the installation tasks which contains the following sections:

- Section 3.1.1, "Pre-requisite - Installing Java 1.8"
- Section 3.1.2, "Installing Weblogic Infrastructure"
- Section 3.1.3, "Verifying the Installation"

3.1.1 Pre-requisite - Installing Java 1.8

- Obtain the Java tarball pack from the Oracle Java Downloads. Download `jdk-8u231-linux-x64.tar.gz` file to a directory.
- Change the directory in which you want to install,

```
cd <Directory_Path>
```

- Unpack the tarball and install Java using the following command:

```
tar zxvf <Path>/jdk-8u231-linux-x64.tar.gz
```

Note: You must enter the absolute path of the folder where the TAR file is located.

- Now, set the path and environment variable for Java as:

```
export JAVA_HOME=<Java_Install_Path>/jdk1.8.0_231
```

```
export PATH=$JAVA_HOME/bin:$PATH
```

3.1.2 Installing Weblogic

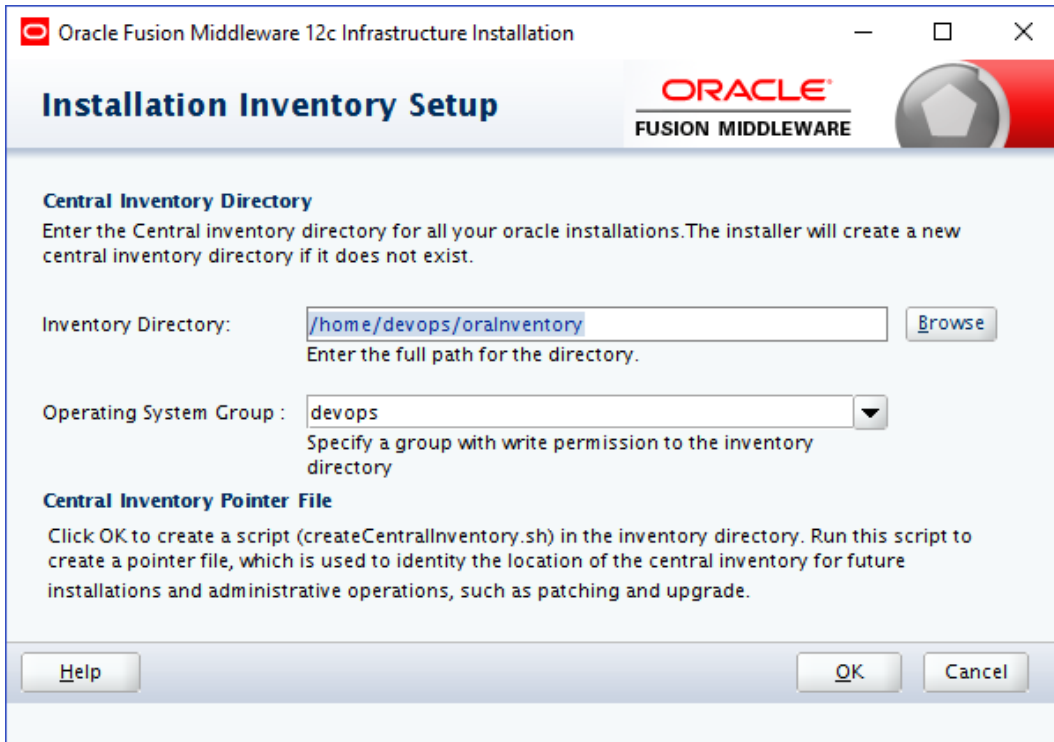
- Obtain Weblogic Infrastructure 12.2.1.3.0 zip from the Oracle Fusion Middleware Downloads. Extract the downloaded zip to get `fmw_12.2.1.3.0_infrastructure.jar` file to a directory.
- Now to start the installer, go to the directory where you have extracted the jar file.
- Start the installer from the same directory using the below command:

```
java -jar <Path>/fmw_12.2.1.3.0_infrastructure.jar
```

Note: You must enter the absolute path of the folder where the JAR file is located.

If you are installing on a UNIX system, and if this is the first time any Oracle product is being installed on your system with the Oracle Universal Installer, you are asked to provide the location of an inventory directory. This is where the installer sets up subdirectories and maintains inventory data for each Oracle product that is installed on this system.

Installation Inventory Setup Screen



The screenshot shows a window titled "Oracle Fusion Middleware 12c Infrastructure Installation" with the "Installation Inventory Setup" dialog box. The dialog has the Oracle logo and "FUSION MIDDLEWARE" text. It contains the following sections:

- Central Inventory Directory**: A text box with the path `/home/devops/orainventory` and a "Browse" button. Below it, the text reads: "Enter the full path for the directory."
- Operating System Group**: A dropdown menu with "devops" selected. Below it, the text reads: "Specify a group with write permission to the inventory directory"
- Central Inventory Pointer File**: A section with the text: "Click OK to create a script (createCentralInventory.sh) in the inventory directory. Run this script to create a pointer file, which is used to identify the location of the central inventory for future installations and administrative operations, such as patching and upgrade."

At the bottom of the dialog are three buttons: "Help", "OK", and "Cancel".

Specify the Oracle inventory directory and group permissions for that directory. The group must have write permissions to the Oracle inventory directory.

Click OK to continue.

Welcome Screen



The Welcome screen is displayed each time you start the installer.

Click Next to continue.

Auto Updates Screen

Oracle Fusion Middleware 12c Infrastructure Installation - Step 2 of 8

Auto Updates

ORACLE
FUSION MIDDLEWARE

Welcome

Auto Updates

Installation Location

Installation Type

Prerequisite Checks

Installation Summary

Installation Progress

Installation Complete

Skip Auto Updates

Select patches from directory

Location: Browse

Search My Oracle Support for Updates

Username:

Password:

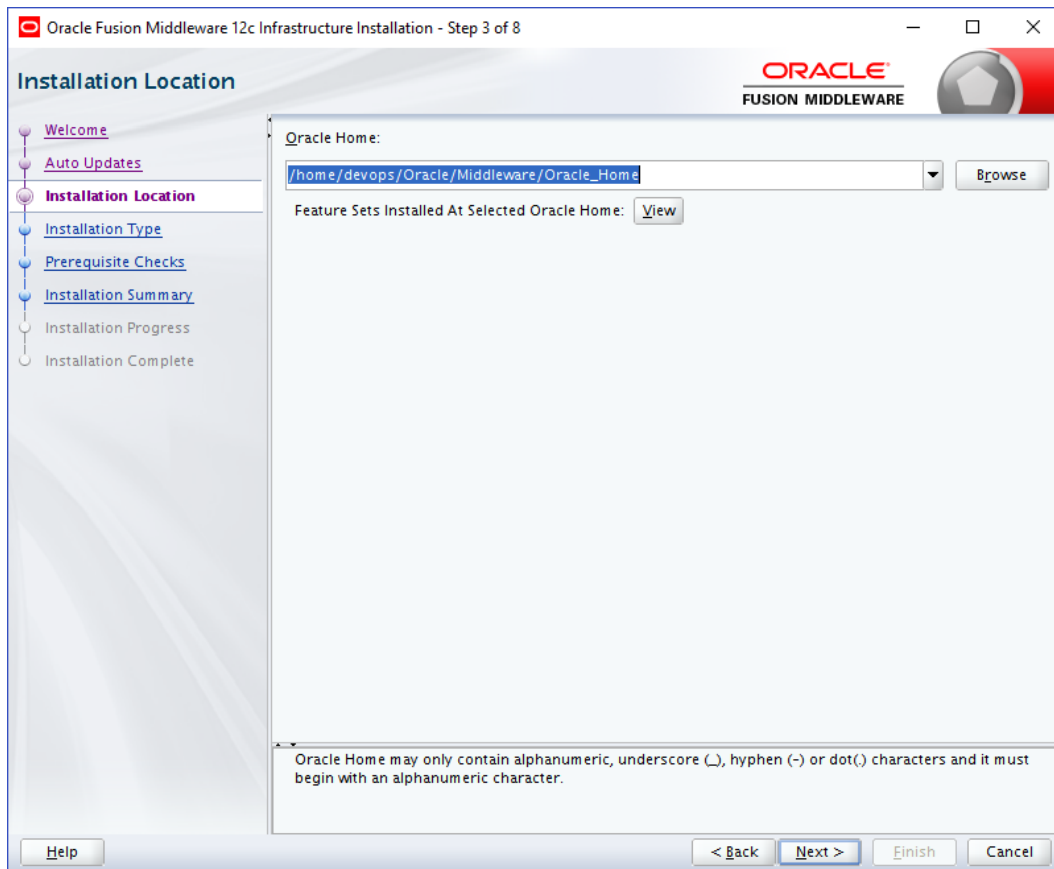
Proxy Settings Test Connection

Search

Help < Back Next > Finish Cancel

Select “Skip Auto Updates” option and click Next to continue. (Kindly follow recommended practices regarding updates depending on the setup requirements or usage.)

Specify Installation Location Screen



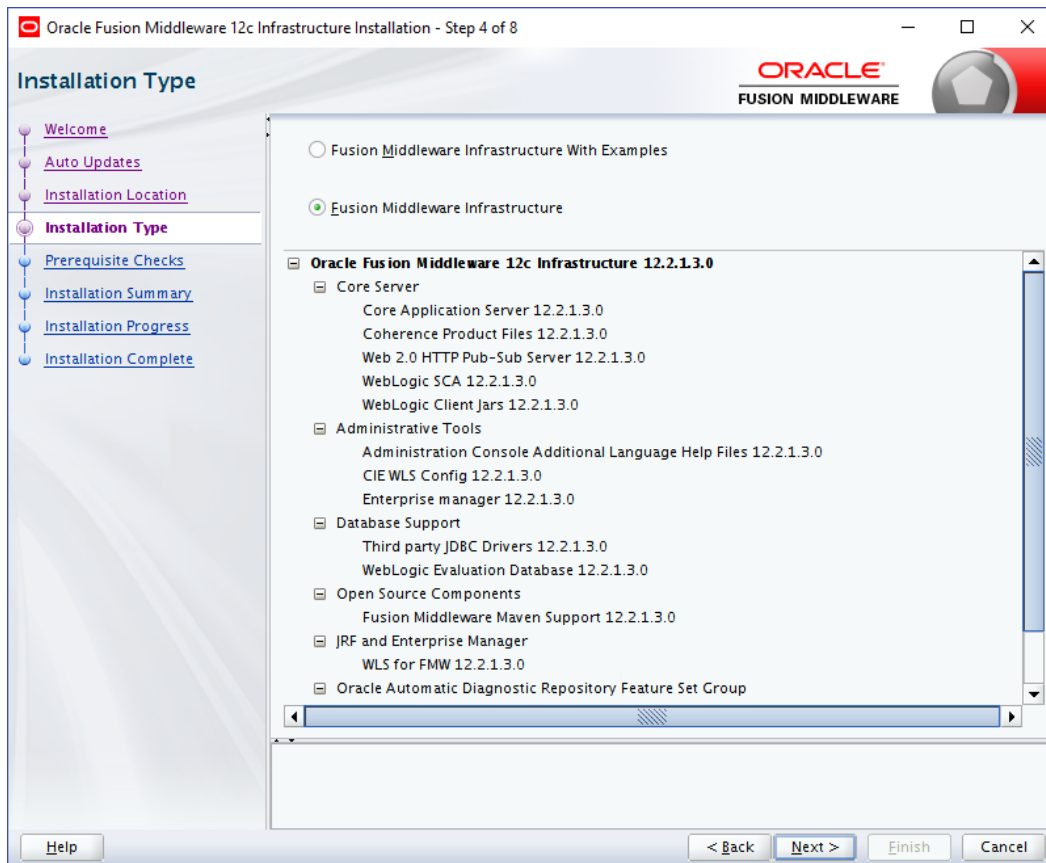
Specify the following installation locations:

- Oracle Middleware Home

This is the absolute path to the directory where the WebLogic Server will be installed.

Click Next to continue.

Specify Installation Type Screen

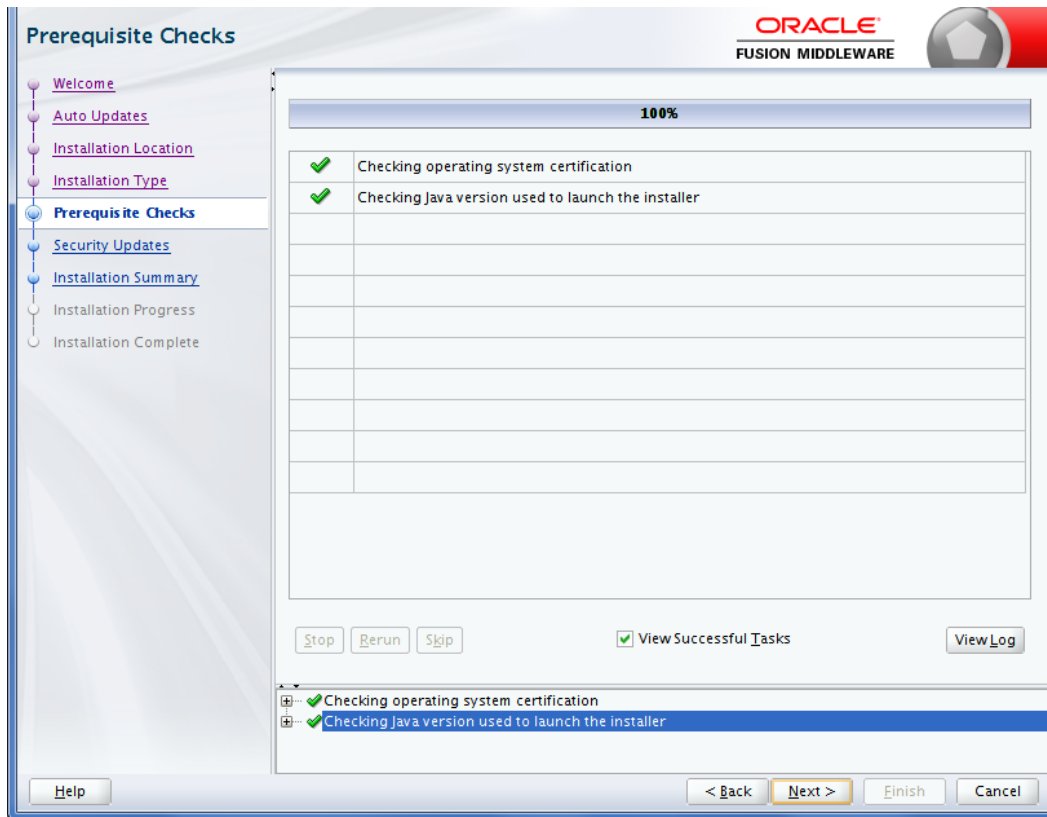


Following are the installation types:

- Fusion Middleware Infrastructure with Examples
- Fusion Middleware Infrastructure

Select Fusion Middleware Infrastructure and Click Next to continue.

Prerequisite Checks Screen

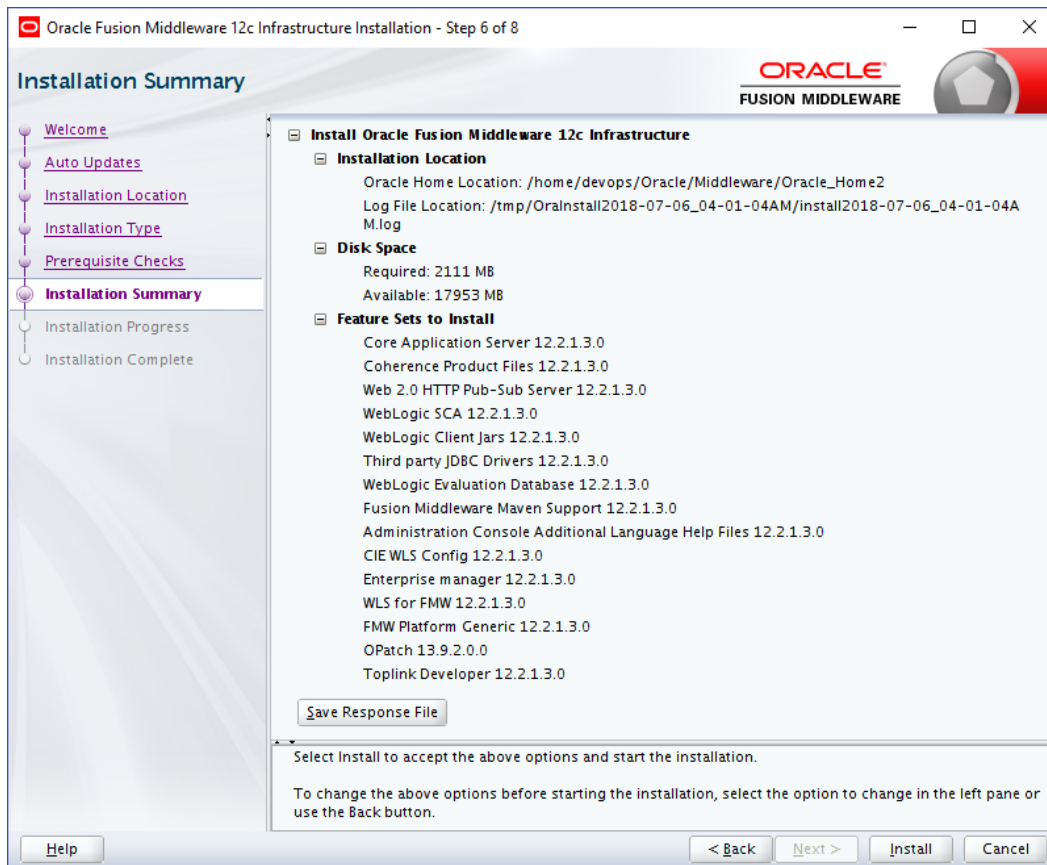


This screen shows whether the system requirements are met in order to install the software.

If there is a problem, a short error message appears in the bottom portion of the screen. Fix the error, and click Retry to try again.

Click Next to continue.

Installation Summary Screen



Review the information on this screen. The operations summarized on this page will be performed when you click Install.

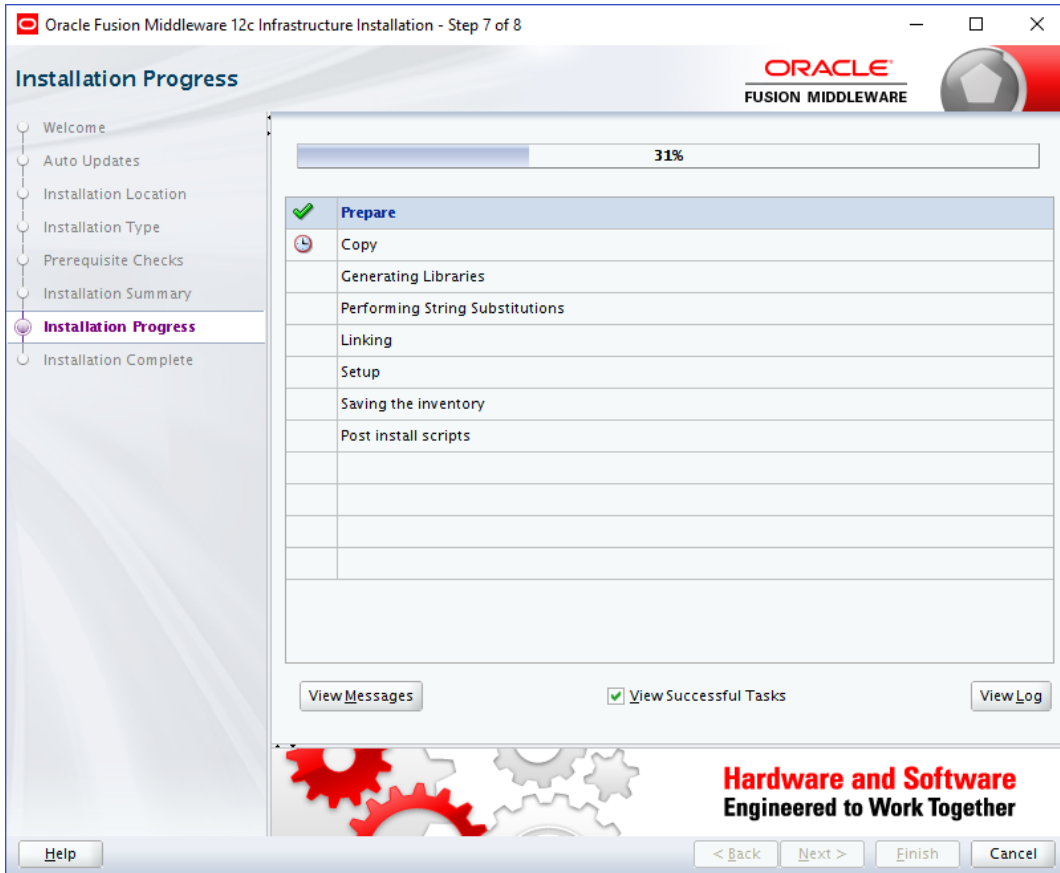
If you want to make any changes to the configuration before starting the installation, use the navigation pane, and select the topic you want to edit.

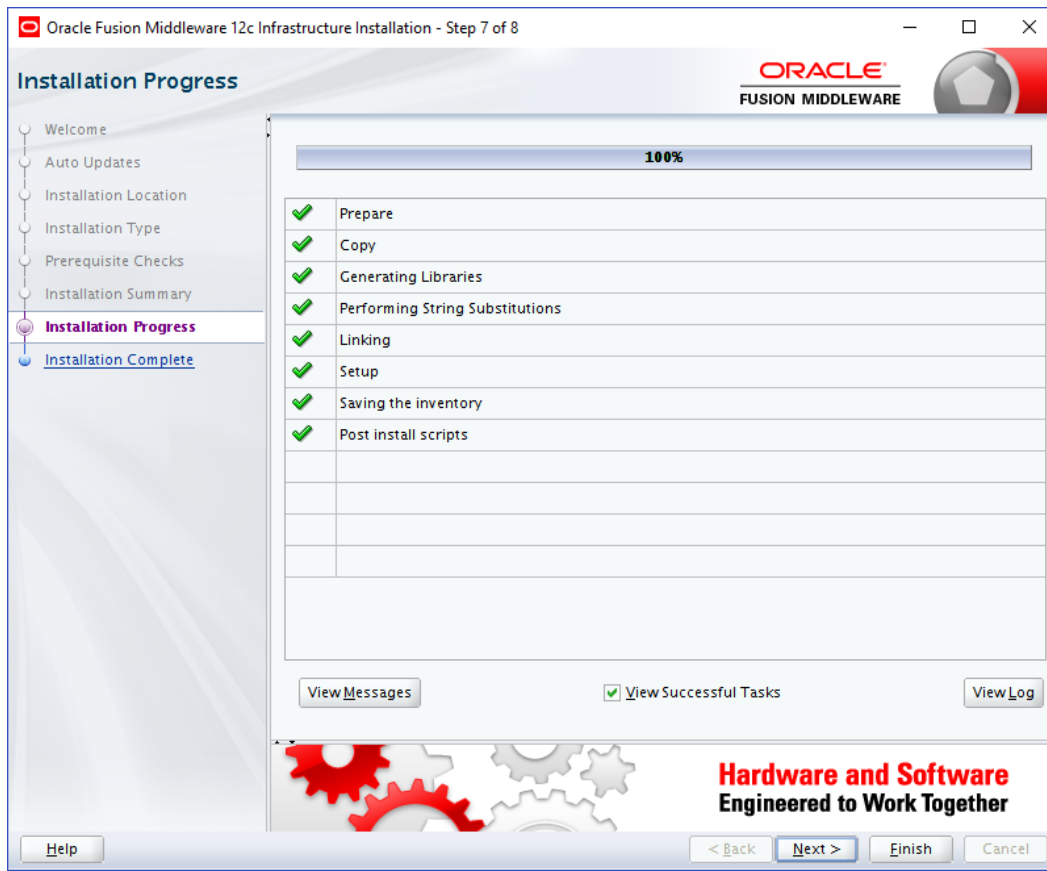
If you want to save this configuration to a text file (called a response file), click Save. You will be prompted for the location of name of the file you want to create (for example, silent_install.rsp). This file can be used later if you choose to perform the same installation from the command line.

Click Install.

Then screen shows the progress of the installation.

Installation Progress Screen

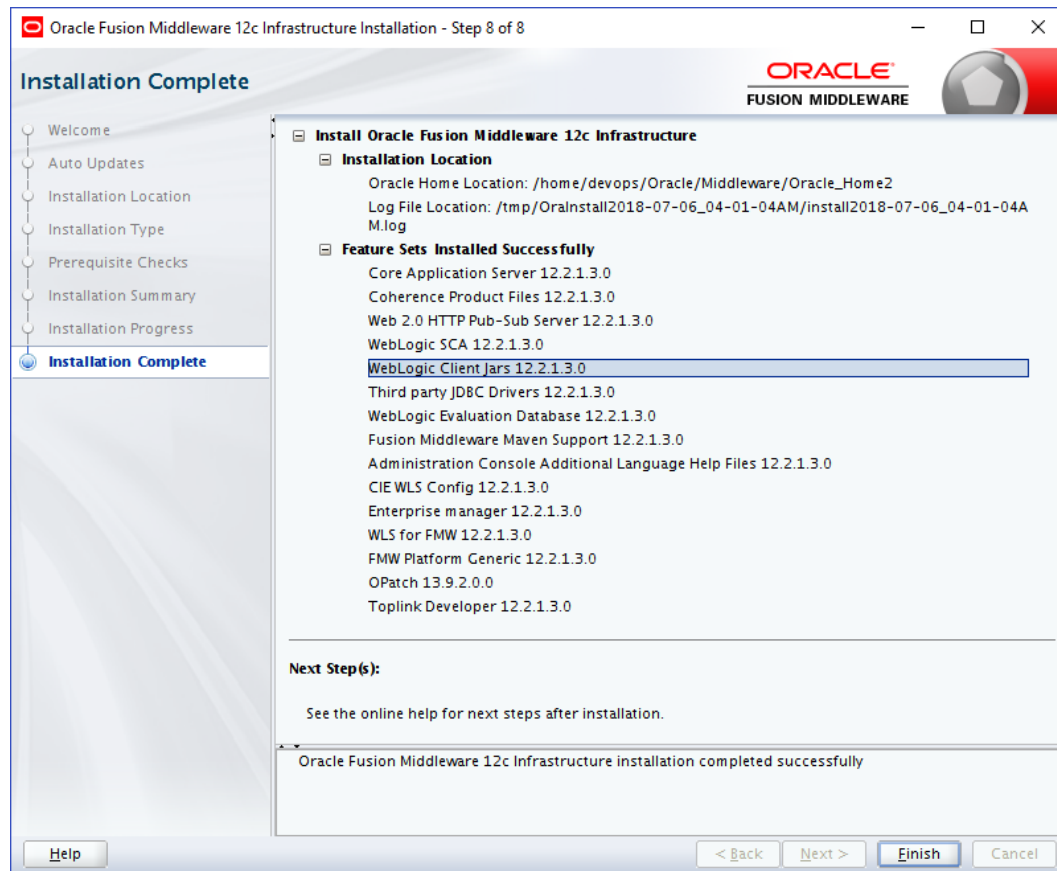




This screen shows the progress of the installation. Click Next.

If you want to quit before the installation is completed, click Cancel.

Installation Complete Screen



This screen summarizes the installation that was just completed.

At the end of the summary information, there is a section called Installation Location which states the Oracle Home Location & the Log File Location along with the list of features installed.

Click Finish

3.1.3 Verifying the Installation

You can perform the following tasks to verify that your installation was successful:

- Verifying the Installation Logs: Check for the presence of installation log files in logs directory. The location of the file is shown at the end of installation in the Installation Complete Screen.
- Verifying the Installation Directory: Check if Oracle Home directory is exists or not.

[Home](#)

4. Oracle HTTP Server Installation

Oracle Webtier is the Web server component for Oracle Fusion Middleware. The Oracle Web Tier installation gives you the option of installing Oracle HTTP Server and Oracle Web Cache. OPMN is installed, by default, and you do not have the option of deselecting this product.

Together, these products are responsible for managing incoming HTTP requests, caching web messages, and sending XML and HTML back to the client. Also, it provides a listener for Oracle WebLogic Server and the framework for hosting static pages, dynamic pages, and applications over the Web. Oracle Web Tier contains the following components:

- **Oracle HTTP Server:**

Oracle HTTP Server (OHS) is an enterprise grade Web Server software - based on open source Apache HTTP Web Server - designed to deliver the following benefits:

- Deliver HTTP Listener for Oracle WebLogic Server through built-in WebLogic Web Server Proxy Plug-In.
 - Deliver Web Server component for Fusion Middleware.
 - Serve static web content such as HTML, JavaScript, Images etc, and dynamic web content built with CGI/FastCGI based applications.
- **Oracle Web Cache:** Oracle Web Cache is a content-aware server accelerator, or reverse proxy, for the Web tier that improves the performance, scalability, and availability of Web sites that run on Oracle HTTP Server. Oracle Web Cache is the primary caching mechanism provided with Oracle Fusion Middleware. Caching improves the performance, scalability, and availability of websites that run on Oracle WebLogic Server by storing frequently accessed URLs in memory.

There are different Methods to install Webtier. An Oracle Web Tier solution can be built in one of the following ways:

- **In stand-alone mode:** Oracle Web Tier is configured without a domain, and administered from the command line. See Section 1.3.1 for an overview of the installation procedure.
- **Using Oracle Enterprise Manager Fusion Middleware Control:** In order to use the Oracle Enterprise Manager Fusion Middleware Control, WebLogic Server domain needs to be configured using both the Enterprise Manager and the Java Required Files (JRF) domain templates.

Here, we install Oracle Web Tier in stand-alone mode and following are the sections lists the steps for it:

- Section 4.1, "Installing and Configuring Oracle HTTP Server (Webtier)"
- Section 4.2, "Verifying the Installation"

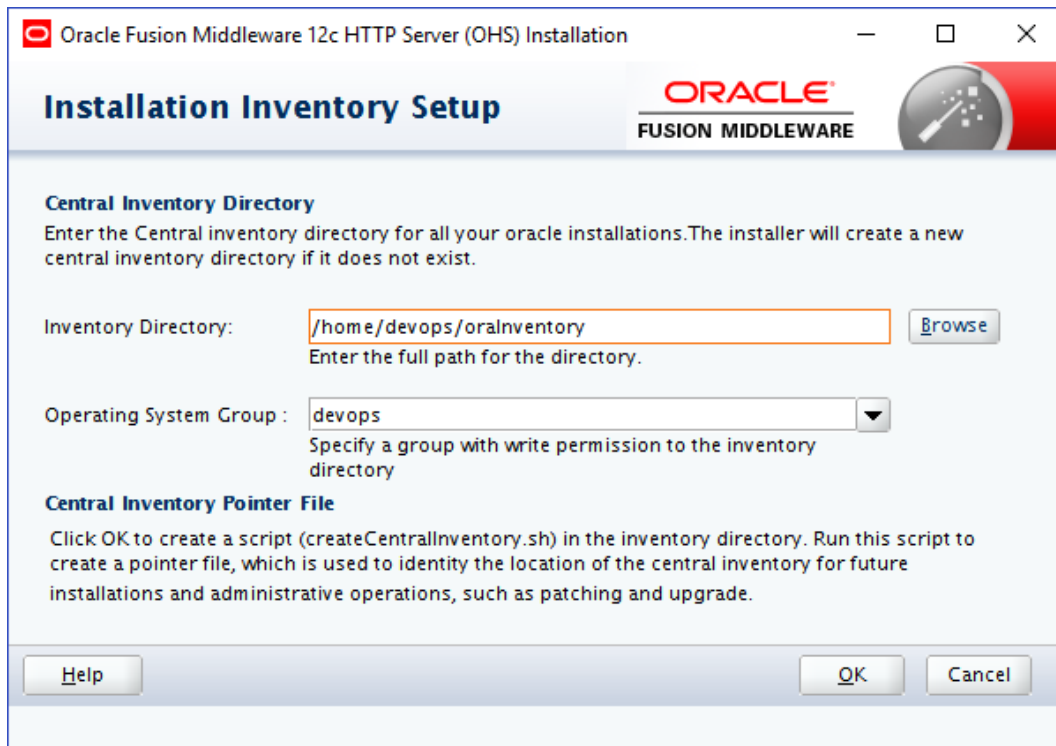
4.1 Installing and Configuring Oracle HTTP Server (OHS)

Obtain Oracle Web Tier from the Oracle Fusion Middleware Downloads. Download webtier.zip file to a directory, and unpack the downloaded archive that contains the installer.

To start the installer, go to the directory where you unpacked the archive file. Now, start the installer using the below command:

./fmw_12.2.1.3.0_ohs_linux64.bin Now, follow the instructions as shown below to install Webtier,

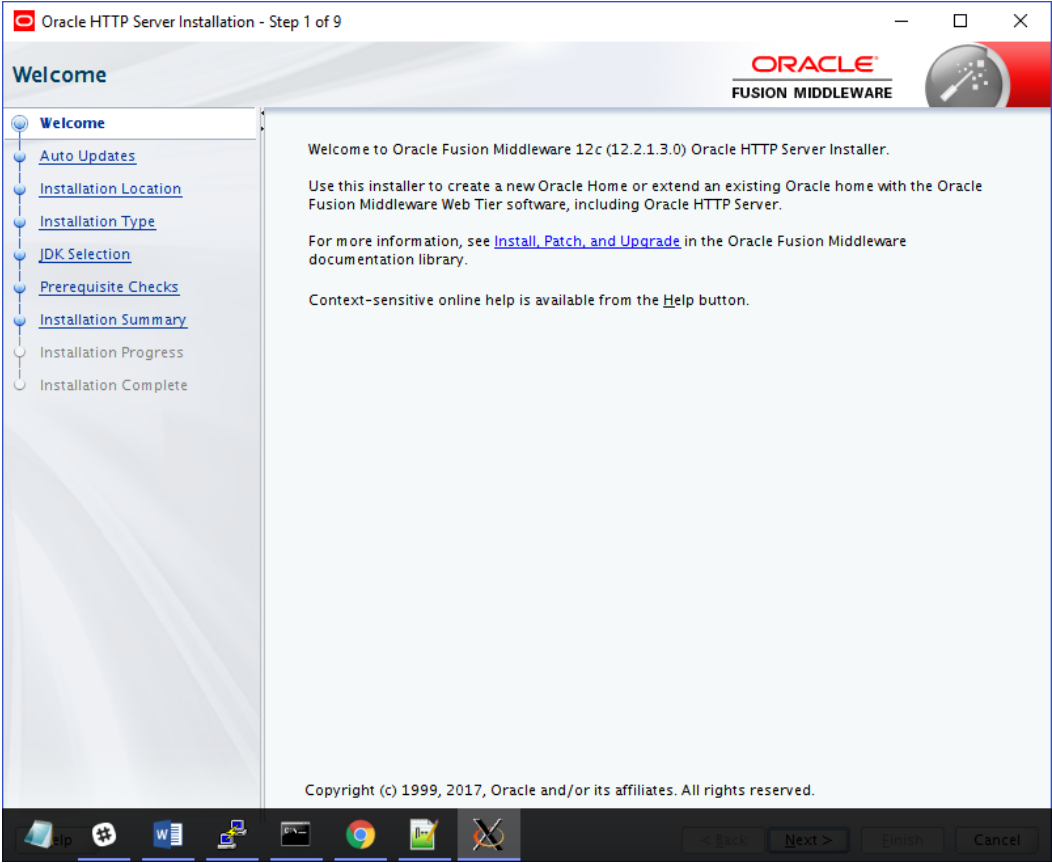
Specify Inventory Directory Screen



This screen appears for UNIX systems only; if this is your first Oracle installation on this host, you must specify the location of the inventory directory. This inventory directory is used by the installer to keep track of all Oracle products installed on the computer. The default inventory location is `USER_HOME/orainventory`.

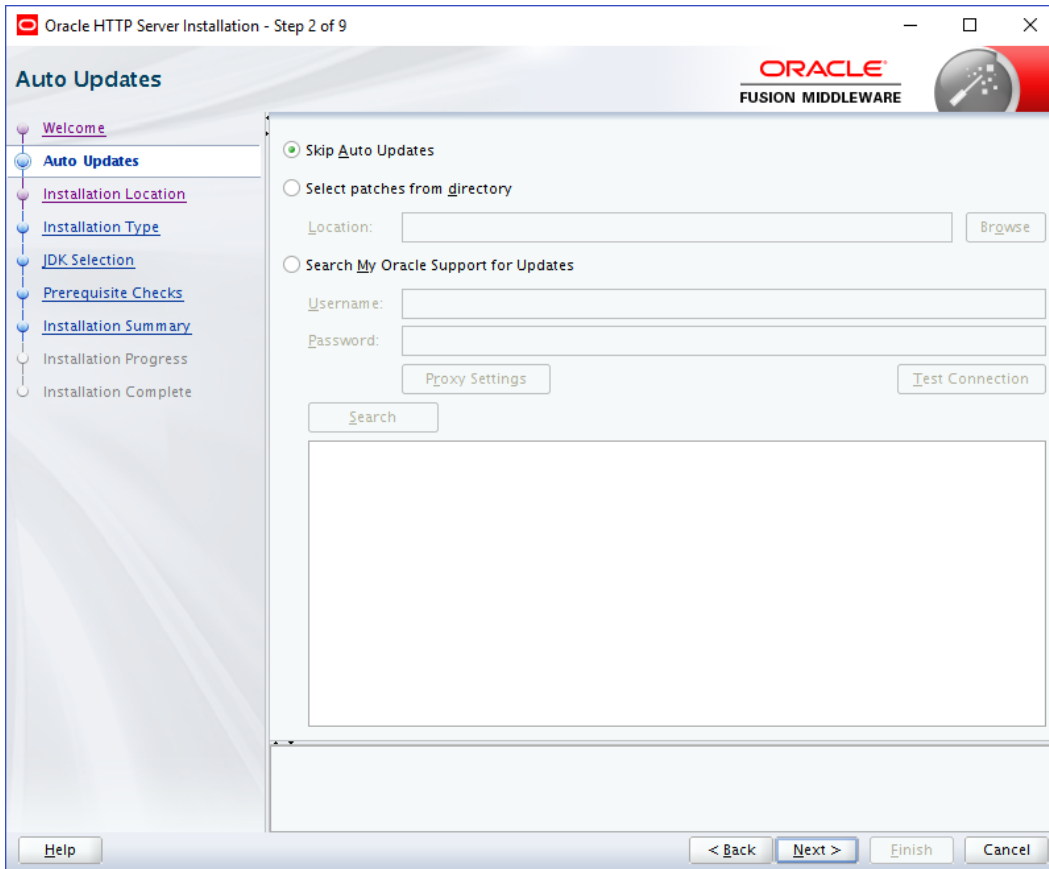
In the Operating System Group name field, select the group whose members you want to grant access to the inventory directory; all members of this group will be able to install products on this system. Click Ok to continue.

Welcome Screen



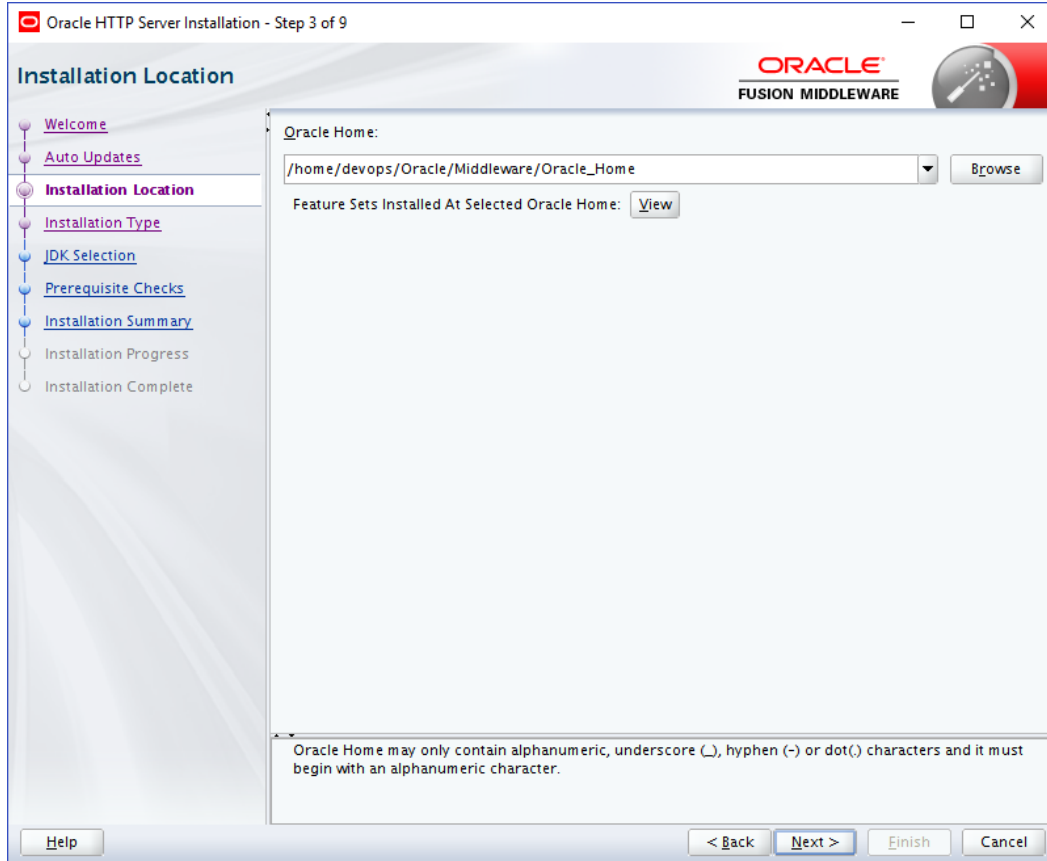
The Welcome screen is displayed each time you start the installer.
Click Next to continue.

Install Software Updates Screen



Select “Skip Software Updates” and Click Next to continue. (Kindly follow recommended practices regarding updates depending on the setup requirements or usage.)

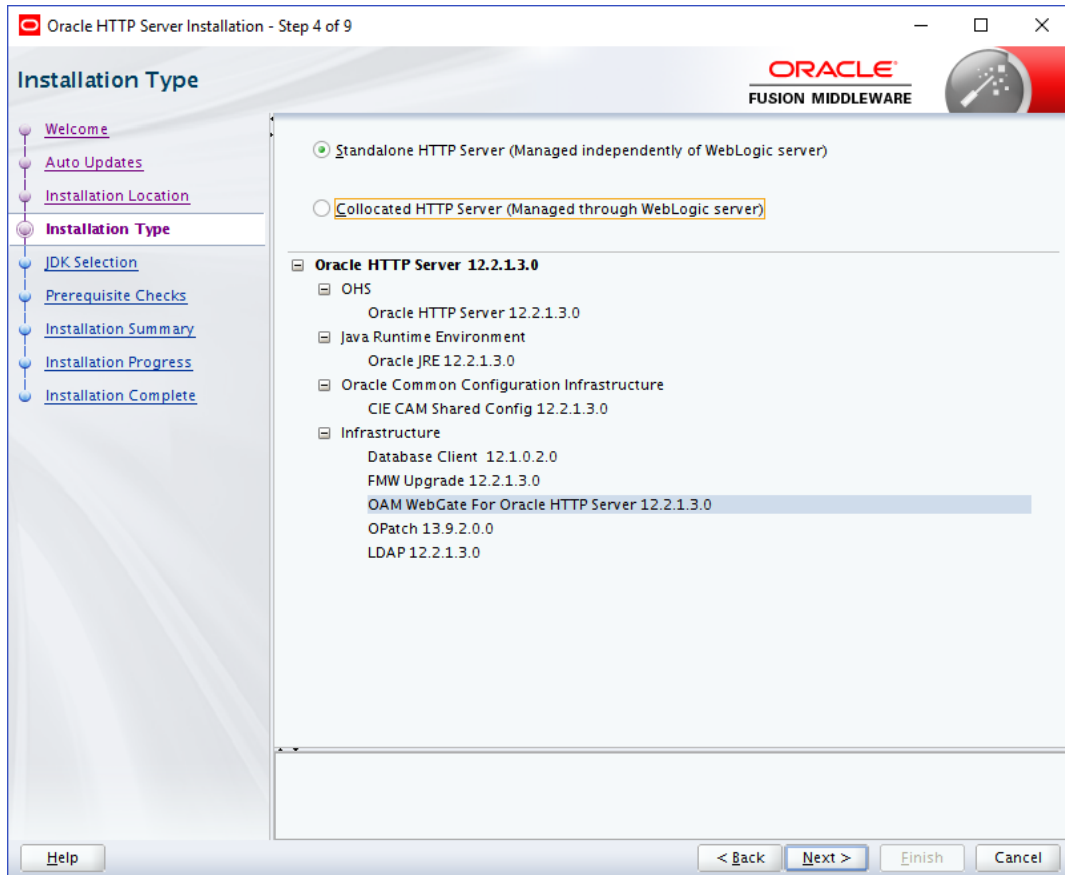
Select Installation Location



Specify the following installation locations:

- Oracle Middleware Home: The absolute path to the directory where Oracle HTTP Server will be installed.

Select Installation Type Screen

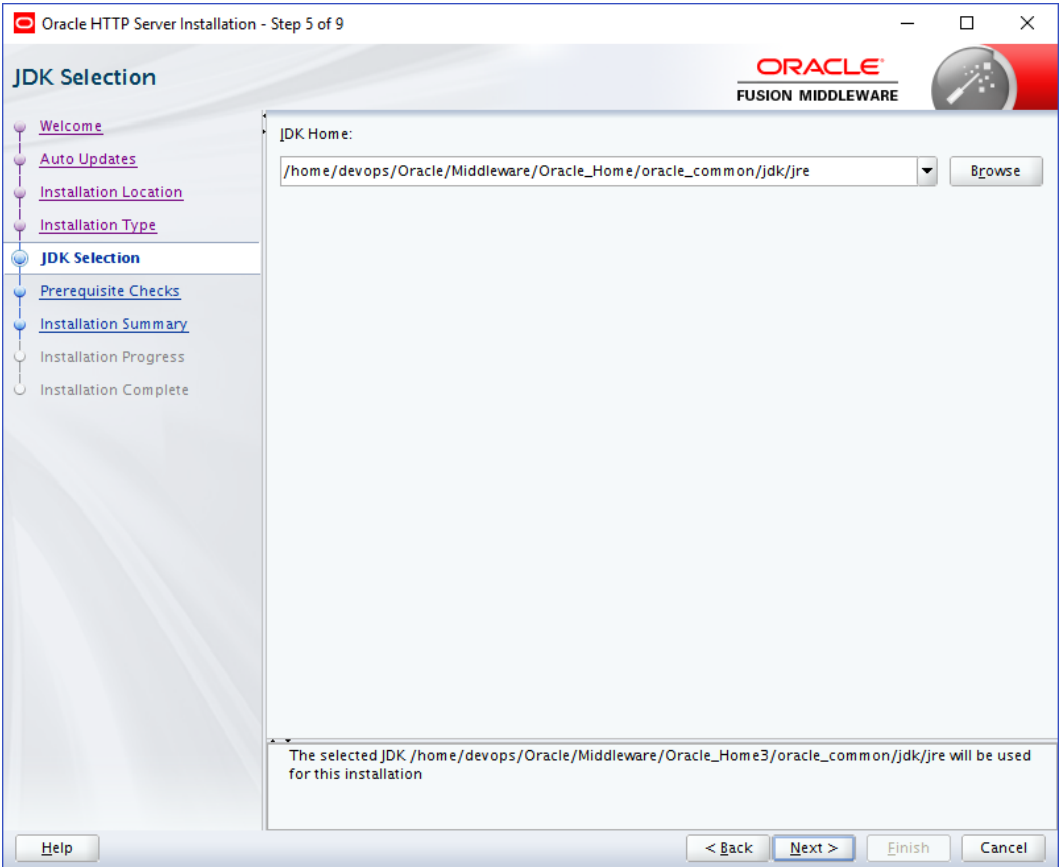


The following are the Installation Types available.

- Standalone HTTP Server (Managed Independently of Weblogic Server)
- Collocated HTTP Server (Managed through Weblogic server)

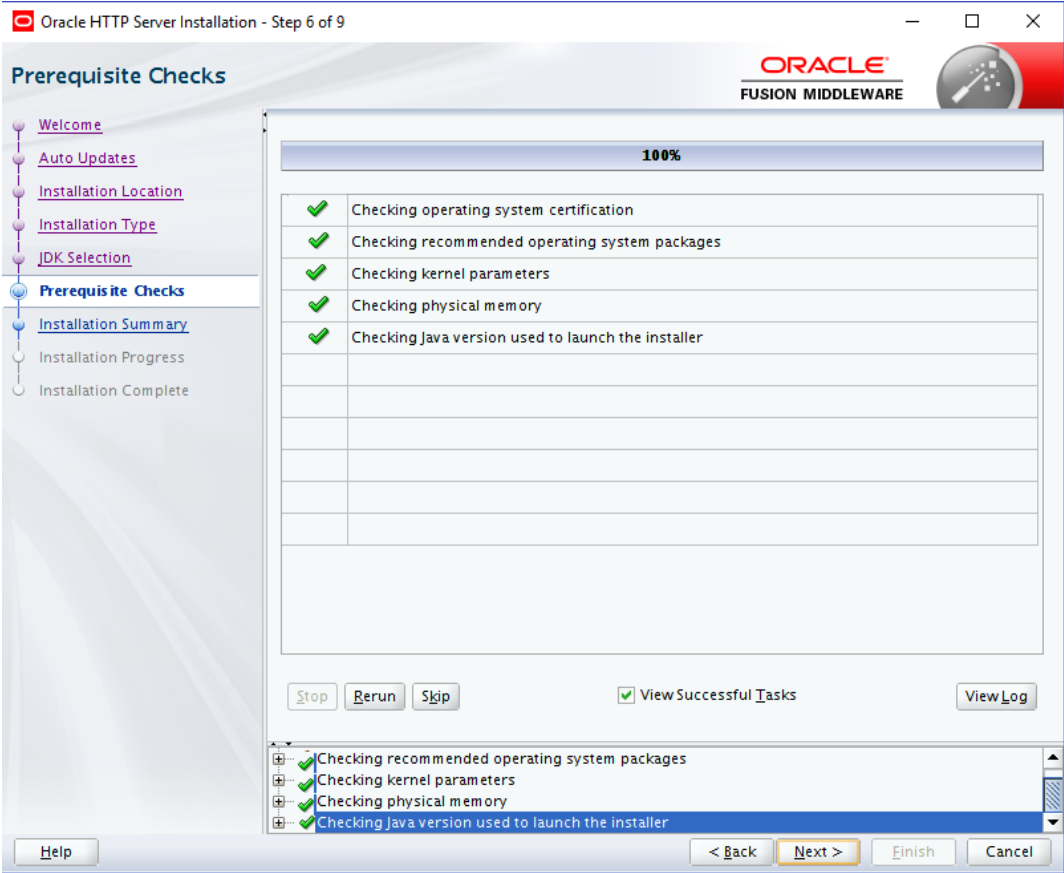
Choose installation type as per requirement. Select Standalone HTTP Server (Managed Independently of Weblogic Server). Click Next to continue.

Select JDK home



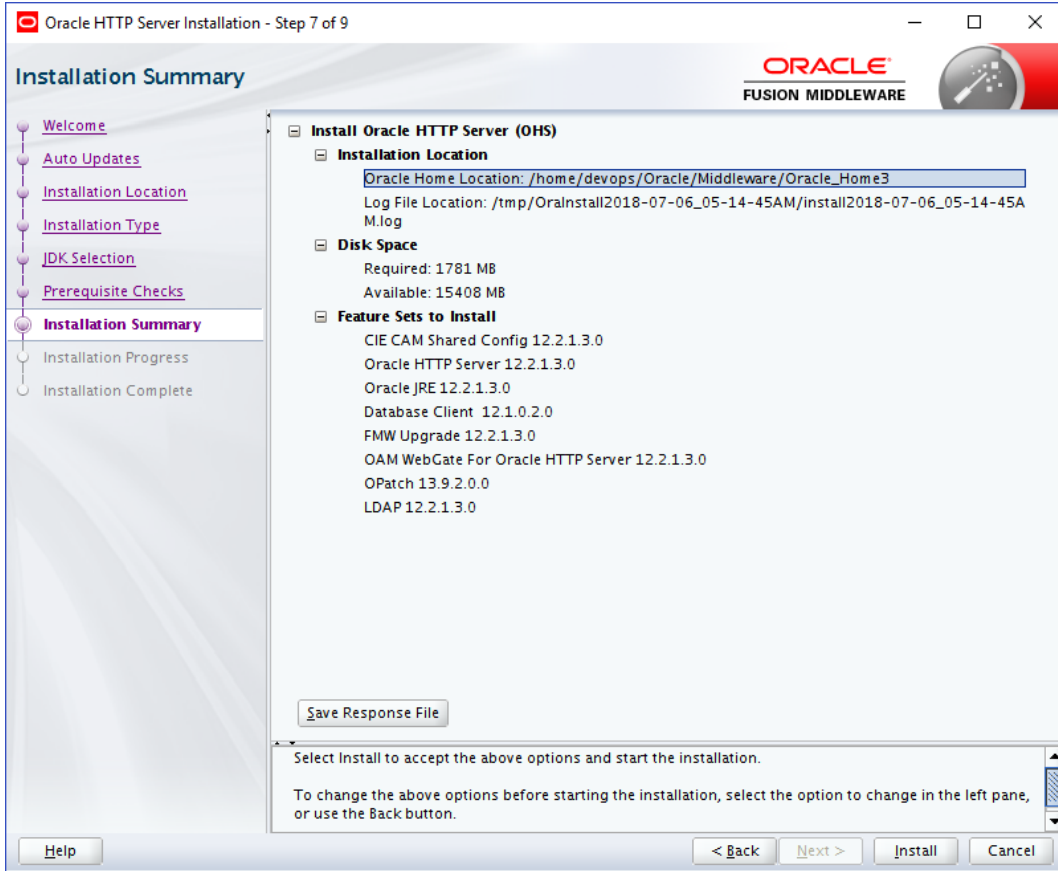
Click **Next** to continue

Prerequisite Checks Screen



This screen shows whether the system requirements are met in order to install the software. If there is a problem, a short error message appears in the bottom portion of the screen. Fix the error, and click Retry to try again. Click **Next** to continue.

Installation Summary



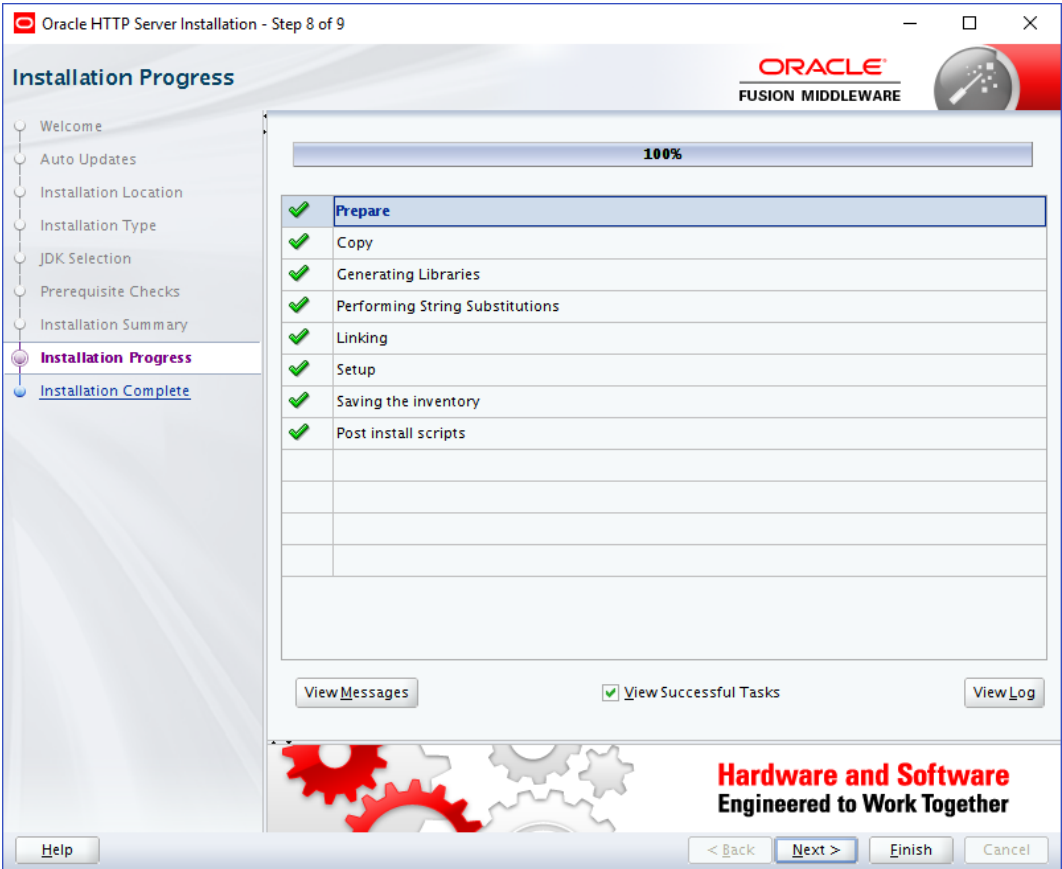
Review the information on this screen. The operations summarized on this page will be performed when you click Install.

If you want to make any changes to the configuration before starting the installation, use the navigation pane, and select the topic you want to edit.

If you want to save this configuration to a text file (called a response file), click Save. You will be prompted for the location of name of the file you want to create (for example, silent_install.rsp). This file can be used later if you choose to perform the same installation from the command line.

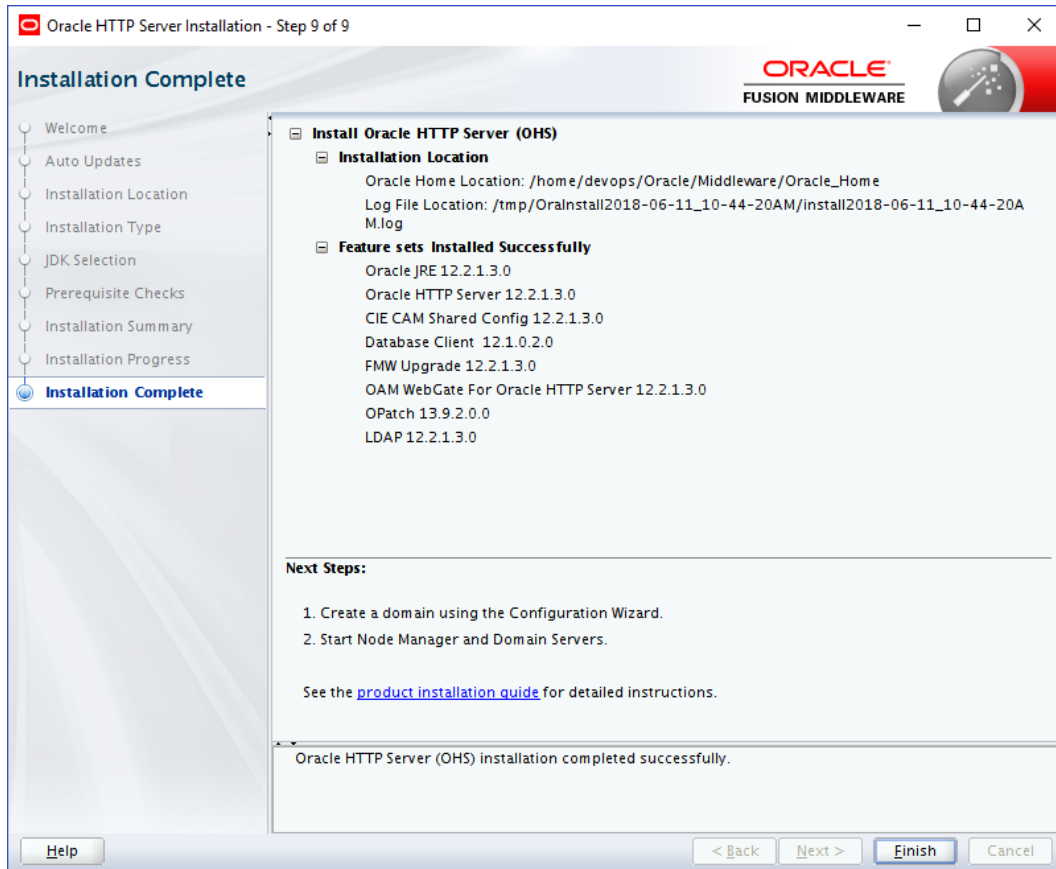
Click **Install**.

Installation Progress Screen



This screen shows the progress of the installation.
If you want to quit before the installation is completed, click Cancel.
Click **Next**.

Installation Complete Screen



This screen summarizes the installation that was just completed.

Click **Finish** to dismiss the screen.

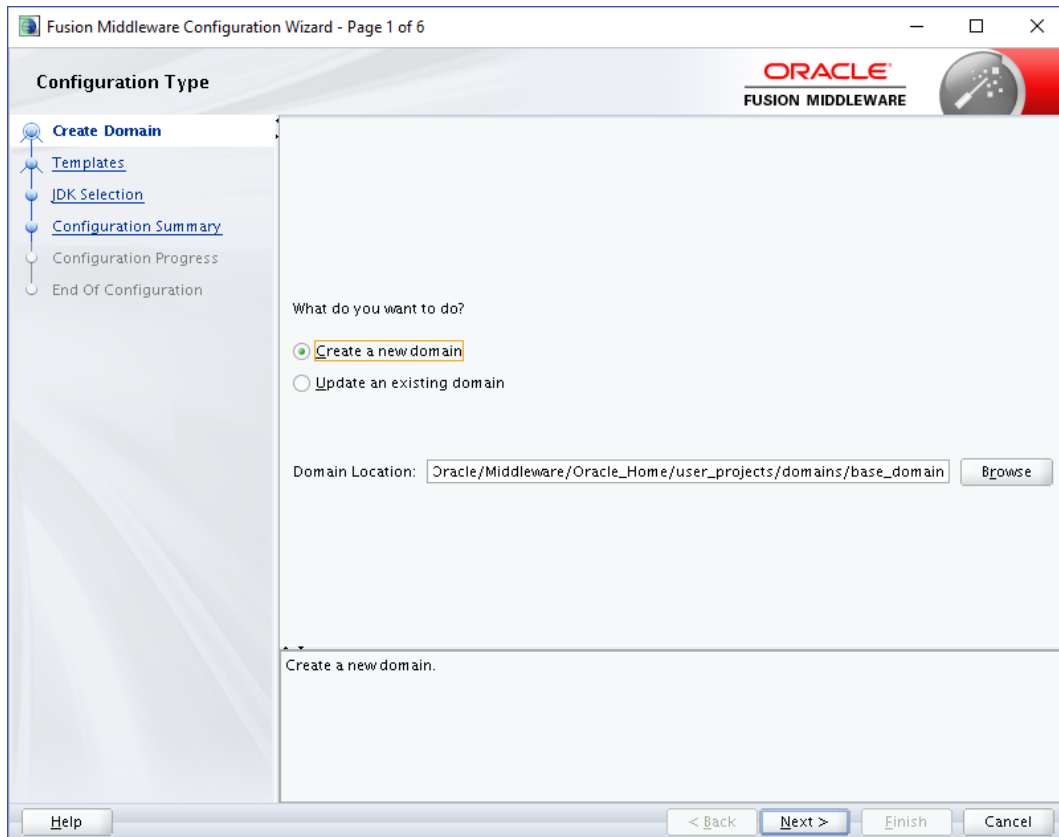
Configure the HTTP server

Follow below steps to configure domain for HTTP server

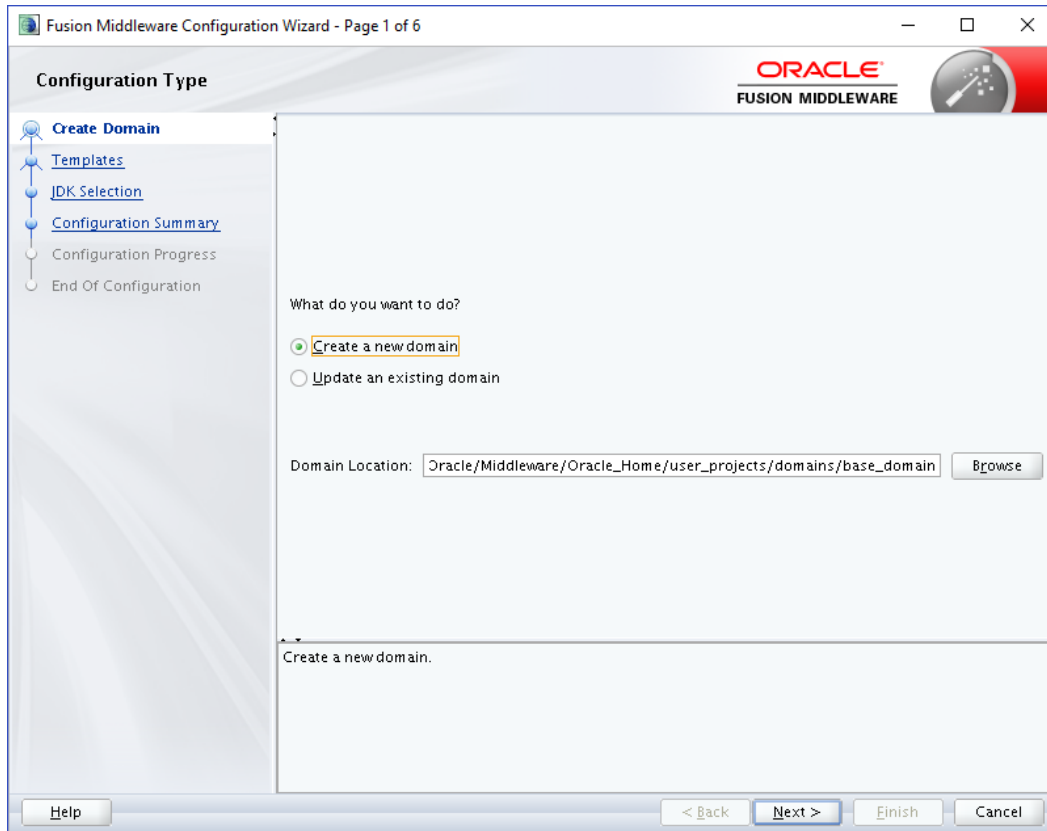
1. Browse <Middleware_Home>/oracle_common/common/bin directory
2. Execute below command

```
./config.sh
```

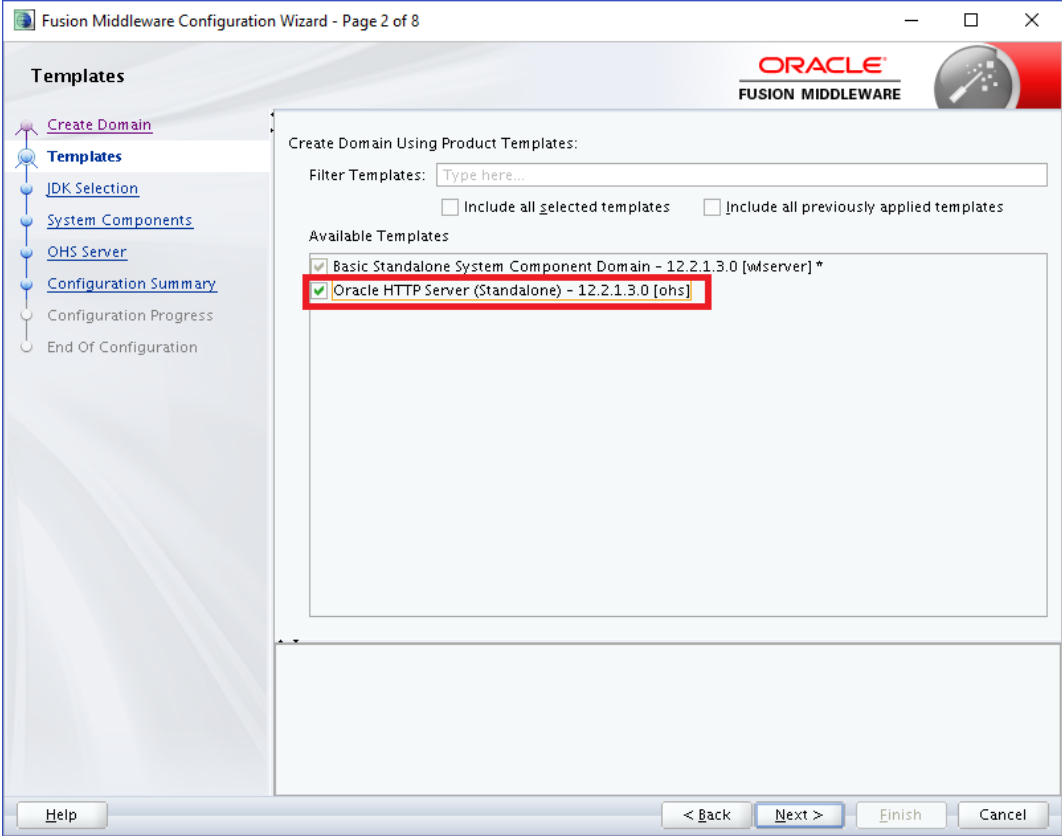
Below screen will be displayed



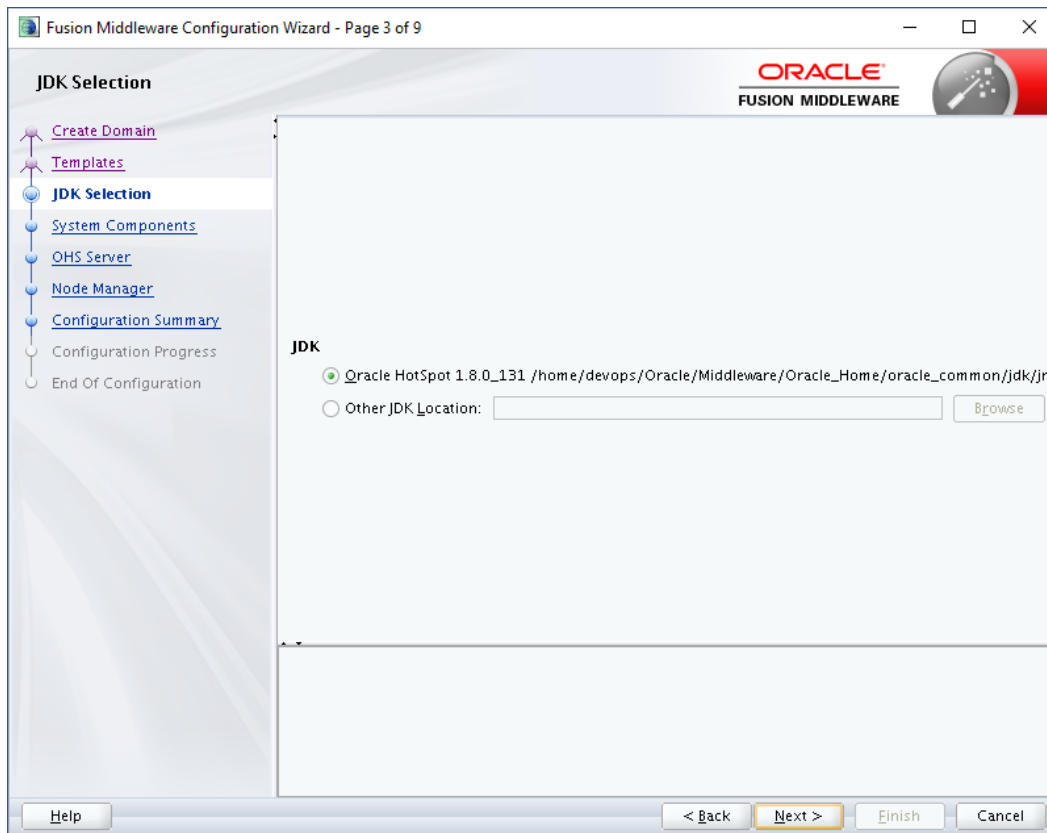
3. Select "Create a new domain" option and select Domain location. Click Next



4. Select Oracle HTTP Server option and click Next



5. Click Next



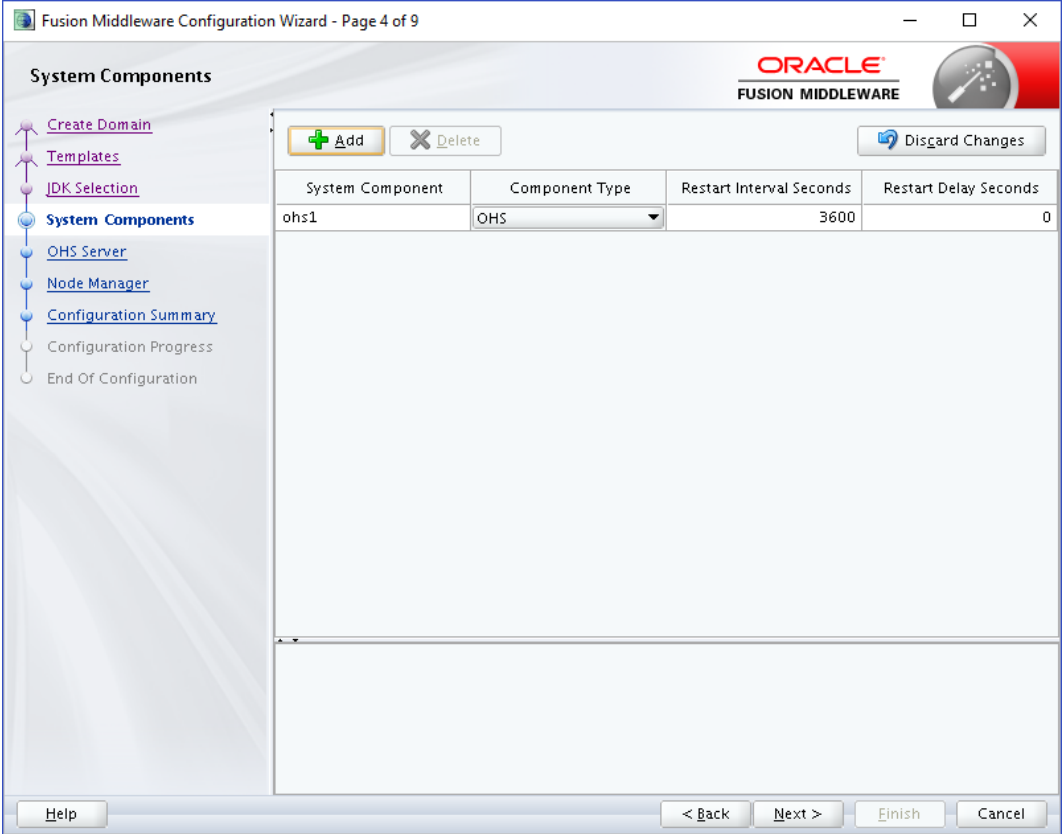
6. Enter below details and click Next

System Component: Set the Instance name

Component Type: Should be OHS

Restart Interval Seconds: Set as per requirement. Defaults to 3600

Restart Delay Seconds: Set as per requirement. Defaults to 0



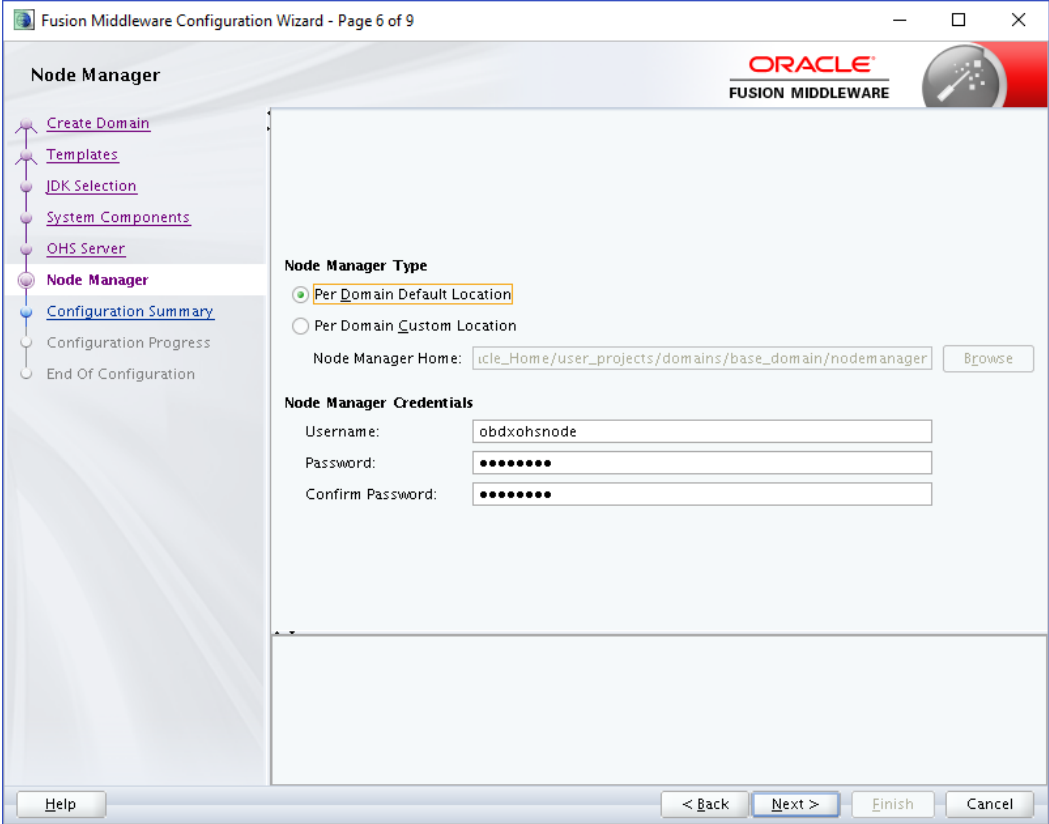
7. Configure Admin Host; Port; Listen Address and click Next

The screenshot shows the 'OHS Server' configuration page in the Fusion Middleware Configuration Wizard. The left sidebar contains a navigation tree with the following items: Create Domain, Templates, JDK Selection, System Components, OHS Server (selected), Node Manager, Configuration Summary, Configuration Progress, and End Of Configuration. The main area contains the following configuration fields:

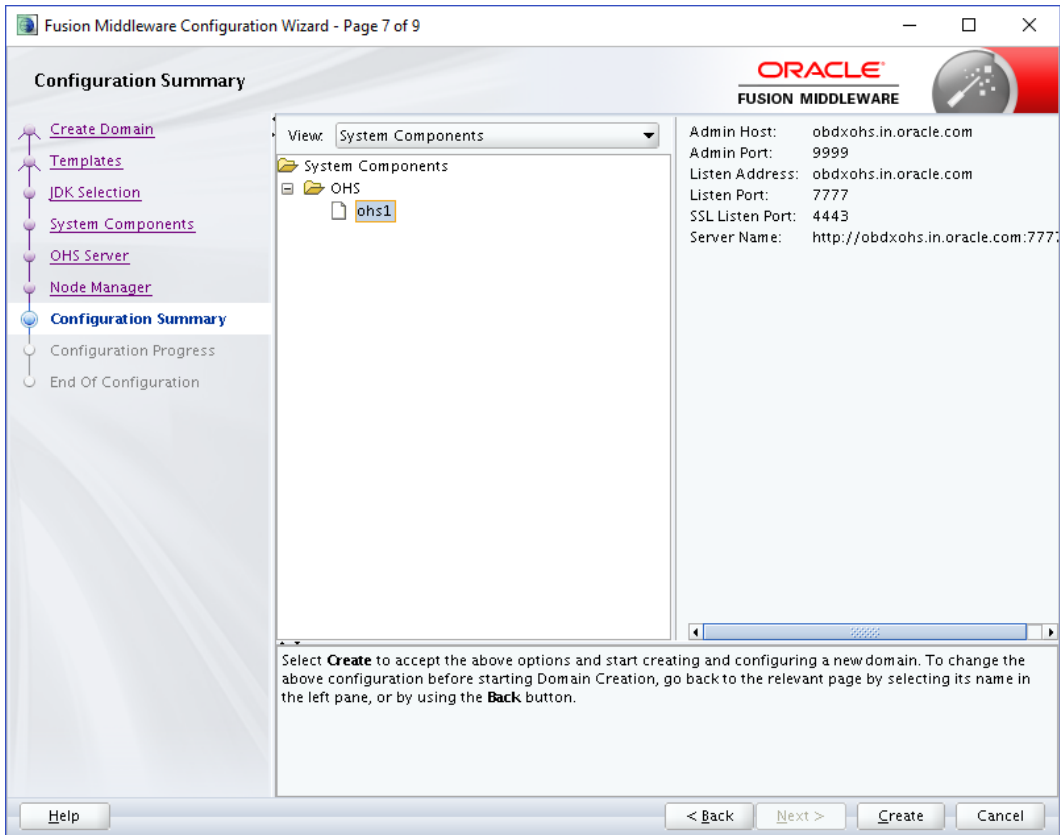
Field	Value
System Component	ohs1
Admin Host	obdxohs.in.oracle.com
Admin Port	9999
Listen Address	obdxohs.in.oracle.com
Listen Port	7777
SSL Listen Port	4443
Server Name	http://obdxohs.in.oracle.com:7777

At the bottom of the window, there are four buttons: Help, < Back, Next > (highlighted), Finish, and Cancel.

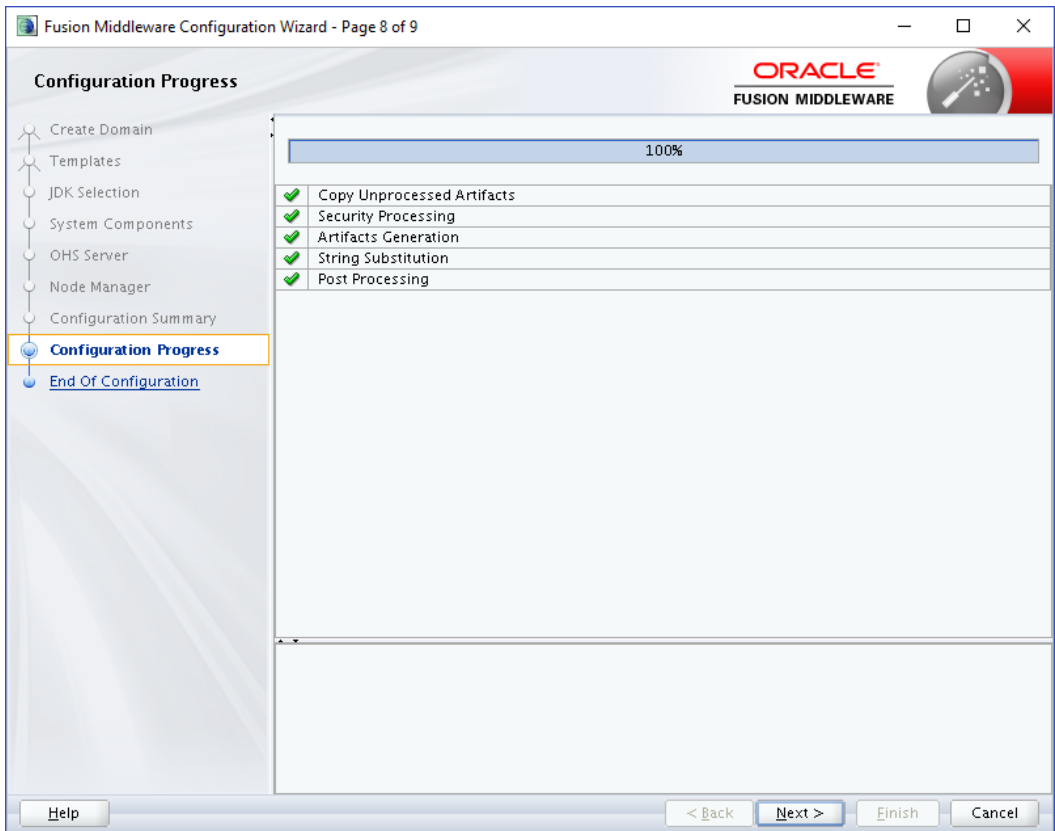
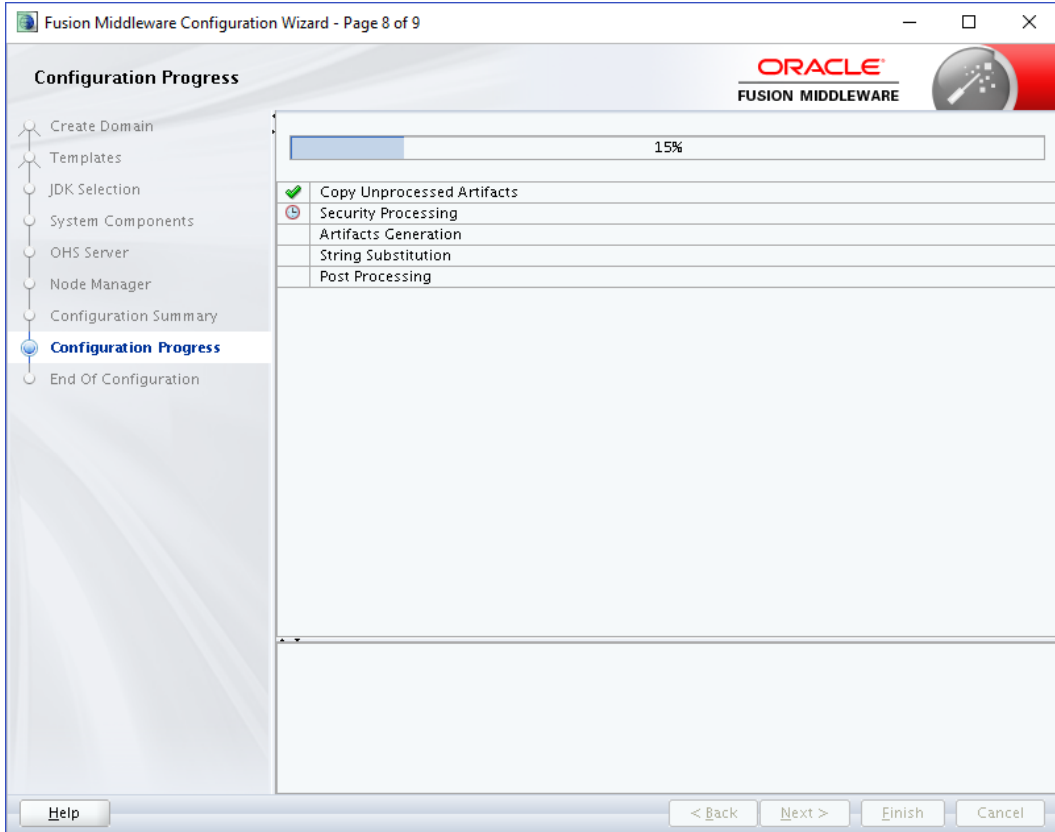
8. Select appropriate Node Manager Type; and enter Node Manager Credentials. Click Next.

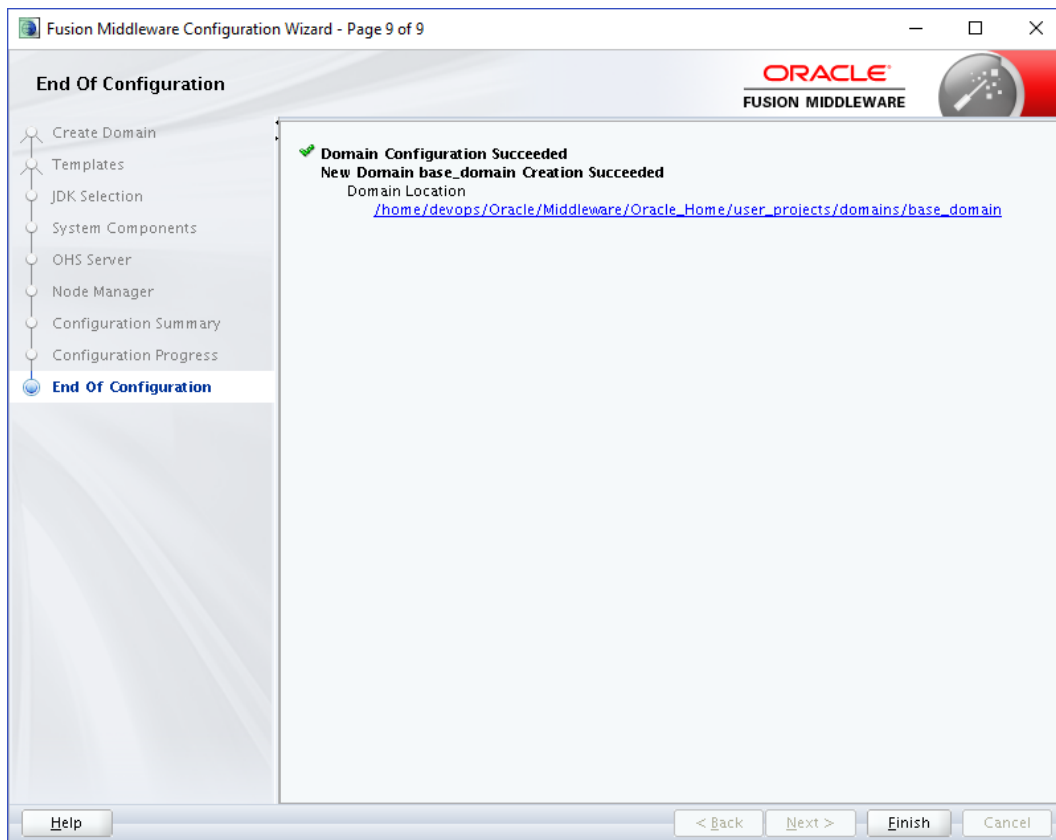


9. Review summary and click Create



10. Below installation progress can be seen





4.2 Verifying the Installation

You can perform following tasks to verify that your installation was successful:

- **Verifying the Installation Logs:** Verify the installation logs using the Log file location available in installation complete screen (or <User home dir>/oraInventory/logs).
- **Verifying the OPMN Status:** Run the below commands from the <Domain_directory>/bin directory on UNIX, in your instance home location. For example:
- **Start NodeManager**

```
cd
/home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/bin
./startNodeManager.sh
```

- **Start component**
./startComponent.sh ohs1

Use the listen port number to point your browser to the HTTP server to test installation. Use the format:

http://<HTTPSERVERHOSTNAME>:<HTTPSERVERLISTENPORT>

The screenshot shows the Oracle HTTP Server 12c website. At the top, it says "ORACLE Oracle HTTP Server 12c". Below this, a paragraph states: "Oracle HTTP Server 12c is based on the proven, open source Apache HTTP Server technology and provides the framework for hosting static, dynamic web pages and for front-ending Oracle Middleware Applications."

The central part of the page features a diagram illustrating the architecture. It shows a central "Oracle HTTP Server" box with arrows pointing to various components: "Local Content", "Audit Control", "Identity Management", "Authentication/Authorization", "Load Balancing", and "Oracle Middleware Applications". On the left side, there are icons for "Process Management and HA", "Certificate management", "Automation", and "Test to Production". At the bottom left, there is a box for "PaaS Lifecycle Tools". At the bottom right, there is a box for "Enterprise Manager" with the text "Manage, monitor, diagnose".

Below the diagram, there are two columns of text under the heading "Features".

Content Serving / Reverse Proxy
 Cloud Deployment / Virtual Server Support
 Thousands of sites / application servers served from a single web server instance. Each virtual server can have its own configuration files, IP addresses, port, document root, proxy, mod_rewrite, and more.
 Protection From Common Threats
 Built-in ModSecurity module provides the ability to intercept and protect applications from common attacks including SQL/Command injection, Cross Site Scripting, cross-site-scripting and other vulnerabilities.
 FastCGI Support
 Efficient way to serve dynamic content web pages within OHS by using scripting languages such as PHP or Python, without incurring a significant performance penalty.
 Integrated Reverse Proxy

Administration / Monitoring
 Server Administration
 Leverages Oracle's OHS administration interfaces to provide a simple, consistent and distributed administration model for administering Oracle HTTP Server: Oracle HTTP Server and the rest of the Fusion Middleware Stack.
 For more information, please refer to [Understanding the OHS Administration Model](#) section.
 Monitoring
 Integration with Oracle Enterprise Manager allows customers to monitor HTTP traffic by using the Oracle Enterprise Management console.
 Subnet Migration Tool
 Integrated migration tools make it easy to migrate existing Oracle HTTP Server 11g deployments to Oracle HTTP Server 12c.

[Home](#)

5. Oracle HTTP Server Webgate Installation and Configuration

A WebGate is a web-server plug-in for Oracle Access Manager (OAM) that intercepts HTTP requests and forwards them to the Access Server for authentication and authorization.

Installing a WebGate for Oracle Access Manager involves the following steps:

- Section 5.1, "Configuring Oracle Webgate"
- Section 5.2, "Post-Installation Steps for Oracle HTTP Server WebGate"
- Section 5.3, "Verifying the Installation and Configuration of Oracle HTTP Server WebGate"
- Section 5.4, "Registering the New Oracle HTTP Server 12c WebGate"

5.1 Configuring Oracle Webgate

You must complete the following steps after installing Oracle HTTP Server for Oracle Access Manager:

- Go to the `Oracle_Home/webgate/ohs/tools/deployWebGate` directory by running the following command:

```
cd
/home/devops/Oracle/Middleware/Oracle_Home/webgate/ohs/tools/deployWebGate
```

- Run the following command to copy the required bits of agent from the `Oracle_Home` directory to the `OHS_Master_Config_Directory` location:

```
./deployWebGateInstance.sh -w OHS_Master_Config_Directory -
oh Oracle_Home For .e.g:
```

```
./deployWebGateInstance.sh -w
/home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/bas
e_domain/config/fmwconfig/components/OHS/ohs1 -oh
/home/devops/Oracle/Middleware/Oracle_Home
```

```
[devops@      deployWebGate]$ ./deployWebGateInstance.sh -w /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/
fmwconfig/components/OHS/ohs1 -oh /home/devops/Oracle/Middleware/Oracle_Home
Copying files from WebGate Oracle Home to WebGate Instancedir
```

In this command:

Oracle_Home is the directory in which you have installed Oracle HTTP Server WebGate.
Example: `/home/devops/Oracle/Middleware/Oracle_Home`

OHS_Master_Config_Directory is the location of the directory where the main Oracle HTTP Server configuration files are kept. Example:

`/home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/ohs1` Run the following command to ensure that the `LD_LIBRARY_PATH` variable contains `Oracle_Home_for_Oracle_HTTP_Server/lib`:

```
export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:Oracle_Home/lib From your present
working directory, move to directory:
```

```
cd Oracle_Home/webgate/ohs/tools/setup/InstallTools
```

```
cd
```

```
/home/devops/Oracle/Middleware/Oracle_Home/webgate/ohs/tools/setup/InstallTools/ On the command line, run the following command to copy the apache_webgate.template file from the Oracle_Home directory to the main Oracle HTTP Server configuration directory (re-named to webgate.conf) and update the httpd.conf file to add one line to include the name of webgate.conf:
./EditHttpConf -w OHS_Master_Config_Directory [-oh Oracle_Home] [-o output_file]
```

For e.g.:

```
./EditHttpConf -w /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/ohs1 -oh /home/devops/Oracle/Middleware/Oracle_Home
```

```
[devops@ Oracle_Home/InstallTools]$ ./EditHttpConf -w /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/ohs1 -oh /home/devops/Oracle/Middleware/Oracle_Home
The web server configuration file was successfully updated
/home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/ohs1/httpd.conf has been backed up as /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/ohs1/httpd.conf.ORIG
```

In this command:

Oracle_Home is the directory in which you have installed Oracle HTTP Server WebGate for Oracle Access Manager. Example: */home/devops/Oracle/Middleware/Oracle_Home*

OHS_Master_Config_Directory is the location of the directory where the main Oracle HTTP Server configuration files are kept. Example: */home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/ohs1*

output_file is the name of the WebGate configuration file generated by the tool. A default *webgate.conf* file is generated if you do not specify this option. Example: *webgate.conf*

Note: The *-oh Oracle_Home* and *-o output_file* parameters are optional.

5.2 Verifying the configuration of Oracle HTTP Server 12c WebGate

After installing Oracle HTTP Server 12c WebGate for Oracle Access Manager and completing the configuration steps, you can examine the *installDATE-TIME_STAMP.out* log file to verify the installation. The default location of the log are as follows: The default location of the log is : *Oracle_Home/oraInst.loc*

5.3 Registering the New Oracle HTTP Server 12c WebGate

Before you can use the new Oracle HTTP Server 12c WebGate agent for Oracle Access Manager, you must register the new WebGate agent with Oracle Access Manager by using the Oracle Access Manager Administration Console.

Refer to the Section 8.1 “Creating WebGate Agent on OAM Console” under Oracle Access Management Configuration chapter.

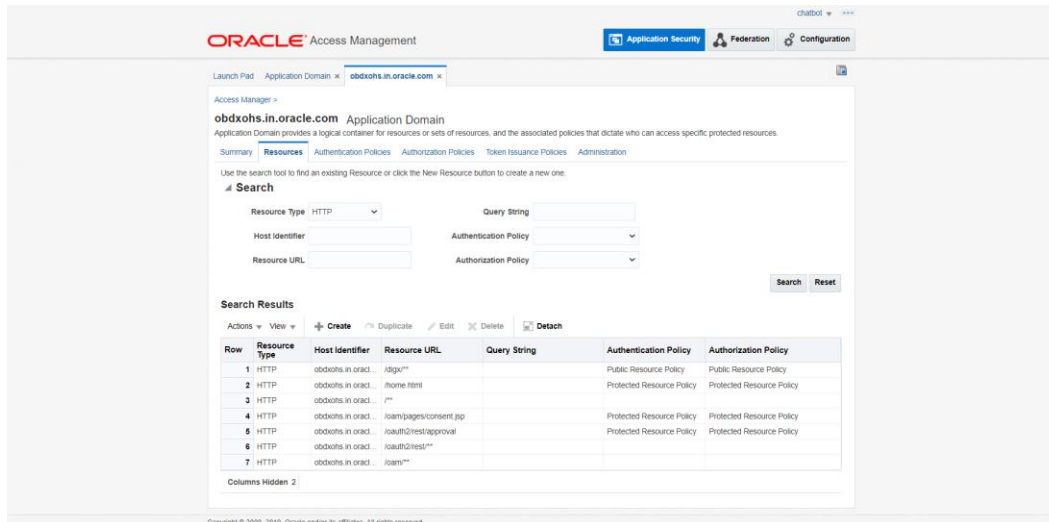
[Home](#)

6. Oracle Business Intelligence Publisher Installation

To install Oracle Business Intelligence Installation refer
<https://docs.oracle.com/middleware/bi12214/lcm/BIEIG/toc.htm> .

7. OAM Configurations for OBAPI Mobile Apps

Resources to be protected in OAM



In httpd.conf of OHS of OBAPI and OHS ensure OPTION request return 200, using below block

```
<IfModule mod_rewrite.c>
  RewriteEngine On
  RewriteCond %{REQUEST_METHOD} OPTIONS
  RewriteRule ^(.*)$ $1 [R=200,L]
</IfModule>
```

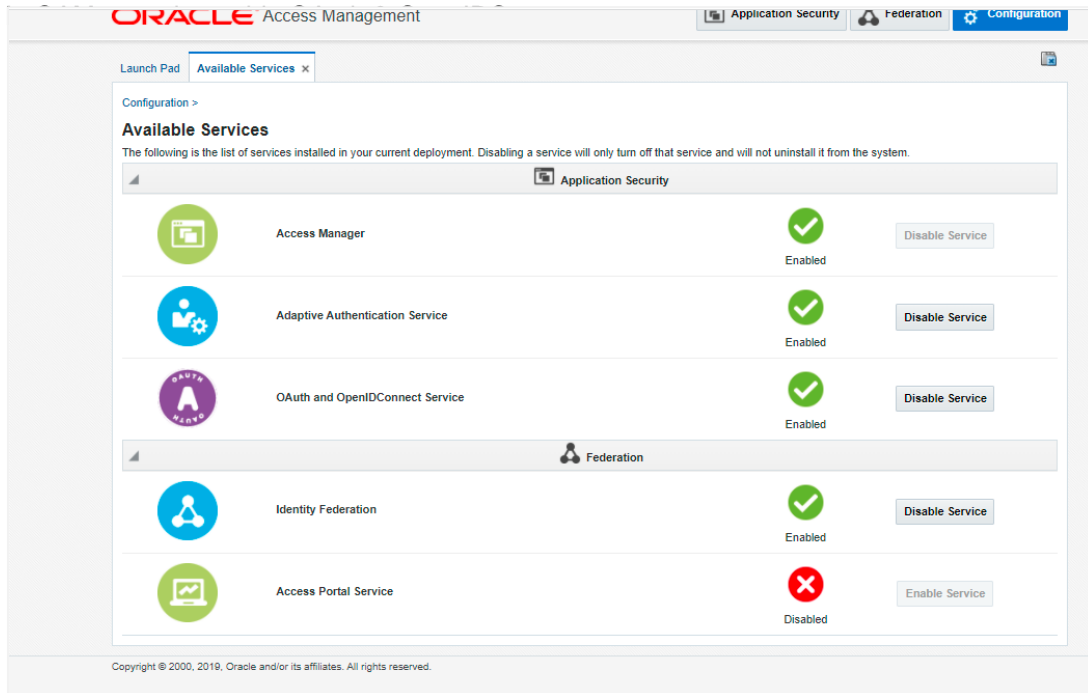
In OBAPI UI which is deployed on OHS make sure the authenticator type is set to "OAMAuthenticator" in file → framework/js/configurations/config.js

Ensure PKCE is enabled in OAM by applying the patch given in below link at - Proof Key for Code Exchange (PKCE) Support in OAM

<https://docs.oracle.com/en/middleware/idm/access-manager/12.2.1.4/aiaag/configuring-oauth-services-12c.html#GUID-D48FC8CC-653B-44AF-9E09-9182C7973D63>

Ensure mod_wl_ohs.conf changes are completed as given in below link

<https://docs.oracle.com/en/middleware/idm/access-manager/12.2.1.4/aiaag/configuring-oauth-services-12c.html#GUID-9403C910-556B-486D-BC36-1F997FA1858C>



OBAPI Mobile application user OAuth for API Based login. Clients are defined in OAM and the same are mapped to access points in OBAPI.

To define OAuth Clients in OAM, invoke below REST APIs as OAM does not provide a screen to define the OAuth client.

OAM Admin console credentials are required to invoke these APIs.

Domain Creation:

http://<OAM Host>:<OAM

Port>/oam/services/rest/ssa/api/v1/oauthpolicyadmin/oauthidentitydomain

Headers – Authorization: Basic <Base64 of UID:PWD>, Content-Type: application/json, Method : POST

Configure identityProvider & refreshTokenExpiry as required

1. Mobile App Login

```
{
  "name": "OBAPIMobileAppDomain",
  "identityProvider": "OUD12",
  "tokenSettings": [{
    "tokenType": "ACCESS_TOKEN",
    "tokenExpiry": 600,
    "lifeCycleEnabled": true,
    "refreshTokenEnabled": true,
    "refreshTokenExpiry": 864000,
    "refreshTokenLifeCycleEnabled": true
  }]
}
```



```

    }, {
      "tokenType": "AUTHZ_CODE",
      "tokenExpiry": 600,
      "lifeCycleEnabled": true,
      "refreshTokenEnabled": true,
      "refreshTokenExpiry": 864000,
      "refreshTokenLifeCycleEnabled": true
    }
  ],
  "customAttrs": "{\"usePKCE\": \"ALL_CLIENTS_TYPES\"}
}

```

2. Siri

```

{
  "name": "OBAPISiriDomain",
  "identityProvider": "OUD12",
  "tokenSettings": [{
    "tokenType": "ACCESS_TOKEN",
    "tokenExpiry": 600,
    "lifeCycleEnabled": true,
    "refreshTokenEnabled": true,
    "refreshTokenExpiry": 864000,
    "refreshTokenLifeCycleEnabled": true
  }, {
    "tokenType": "AUTHZ_CODE",
    "tokenExpiry": 600,
    "lifeCycleEnabled": true,
    "refreshTokenEnabled": true,
    "refreshTokenExpiry": 864000,
    "refreshTokenLifeCycleEnabled": true
  }
],
  "customAttrs": "{\"usePKCE\": \"ALL_CLIENTS_TYPES\"}
}

```

3. Wearables

```

{
  "name": "OBAPIWearDomain",
  "identityProvider": "OUD12",
  "tokenSettings": [{
    "tokenType": "ACCESS_TOKEN",
    "tokenExpiry": 600,

```

```

        "lifeCycleEnabled": true,
        "refreshTokenEnabled": true,
        "refreshTokenExpiry": 864000,
        "refreshTokenLifeCycleEnabled": true
    }, {
        "tokenType": "AUTHZ_CODE",
        "tokenExpiry": 600,
        "lifeCycleEnabled": true,
        "refreshTokenEnabled": true,
        "refreshTokenExpiry": 864000,
        "refreshTokenLifeCycleEnabled": true
    }
    ],
    "customAttrs": "{\"usePKCE\": \"ALL_CLIENTS_TYPES\"}
}

```

4. Mobile Snapshot

```

{
    "name": "OBAPISnapshotDomain",
    "identityProvider": "OUD12",
    "tokenSettings": [{
        "tokenType": "ACCESS_TOKEN",
        "tokenExpiry": 600,
        "lifeCycleEnabled": true,
        "refreshTokenEnabled": true,
        "refreshTokenExpiry": 864000,
        "refreshTokenLifeCycleEnabled": true
    }, {
        "tokenType": "AUTHZ_CODE",
        "tokenExpiry": 600,
        "lifeCycleEnabled": true,
        "refreshTokenEnabled": true,
        "refreshTokenExpiry": 864000,
        "refreshTokenLifeCycleEnabled": true
    }
    ],
    "customAttrs": "{\"usePKCE\": \"ALL_CLIENTS_TYPES\"}
}

```

5. Soft Token App

```
{
  "name": "OBAPISofttokenDomain",
  "identityProvider": "OUD12",
  "tokenSettings": [{
    "tokenType": "ACCESS_TOKEN",
    "tokenExpiry": 600,
    "lifeCycleEnabled": true,
    "refreshTokenEnabled": true,
    "refreshTokenExpiry": 864000,
    "refreshTokenLifeCycleEnabled": true
  }, {
    "tokenType": "AUTHZ_CODE",
    "tokenExpiry": 600,
    "lifeCycleEnabled": true,
    "refreshTokenEnabled": true,
    "refreshTokenExpiry": 864000,
    "refreshTokenLifeCycleEnabled": true
  }]
  , "customAttrs": "{\"usePKCE\": \"ALL_CLIENTS_TYPES\"}
}
```

Resource Server:

http://<OAM Host>:<OAM Port>/oam/services/rest/ssa/api/v1/oauthpolicyadmin/application

Headers – Authorization: Basic <Base64 of UID:PWD>, Content-Type: application/json, Method : POST

1. Mobile App

```
{
  "name": "OBAPIMobileAppResServer",
  "description": "Resource Server for Mobile",
  "scopes": [{
    "scopeName": "OBAPILoginScope",
    "description": "OBAPILoginScope"
  },
  {
    "scopeName": "ValidateDeviceScope",
    "description": "ValidateDeviceScope"
  }
]
```

```

    ],
    "tokenAttributes": [],
    "idDomain": "OBAPIMobileAppDomain",
    "audienceClaim": {}
  }

```

2. Siri

```

{
  "name": "OBAPISiriResServer",
  "description": "Resource Servcer for Siri",
  "scopes": [{
    "scopeName": "ValidateDeviceScope",
    "description": "ValidateDeviceScope"
  }],
  "tokenAttributes": [],
  "idDomain": "OBAPISiriDomain",
  "audienceClaim": {}
}

```

3. Wearables

```

{
  "name": "OBAPIWearResServer",
  "description": "Resource Servcer for Wearables",
  "scopes": [{
    "scopeName": "ValidateDeviceScope",
    "description": "ValidateDeviceScope"
  }],
  "tokenAttributes": [],
  "idDomain": "OBAPIWearDomain",
  "audienceClaim": {}
}

```

4. Mobile Snapshot

```

{
  "name": "OBAPISnapshotResServer",
  "description": "Resource Servcer for Snapshot",
  "scopes": [{
    "scopeName": "ValidateDeviceScope",
    "description": "ValidateDeviceScope"
  }],
  "tokenAttributes": [],
  "idDomain": "OBAPISnapshotDomain",
}

```

```

    "audienceClaim": {}
  }

```

5. Soft Token

```

{
  "name": "OBAPISofttokenResServer",
  "description": "Resource Server for Softtoken",
  "scopes": [{
    "scopeName": "OBAPILoginScope",
    "description": "OBAPILoginScope"
  }],
  "tokenAttributes": [],
  "idDomain": "OBAPISofttokenDomain",
  "audienceClaim": {}
}

```

Clients :

http://<OAM Host>:<OAM Port>/oam/services/rest/ssa/api/v1/oauthpolicyadmin/client

Headers – Authorization: Basic <Base64 of UID:PWD>, Content-Type: application/json, Method : POST

1. Mobile App

User/Password Login

```

{
  "attributes": [],
  "secret": "welcome1",
  "id": "2d79e939e0424mobapp8e5fab436fb5581a",
  "scopes": ["OBAPIMobileAppResServer.OBAPILoginScope"],
  "clientType": "PUBLIC_CLIENT",
  "idDomain": "OBAPIMobileAppDomain",
  "description": "OBAPIMobileAppClienta",
  "name": "OBAPIMobileAppClienta",
  "grantTypes": ["REFRESH_TOKEN", "AUTHORIZATION_CODE"],
  "defaultScope": "OBAPIMobileAppResServer.OBAPILoginScope",
  "redirectURIs": [{
    "url": "zigbank://oauthredirect",
    "isHttps": true
  }],
  "usePKCE": "STRICT"
}

```

Biometric Login

```

{
  "attributes": [],
  "secret": "welcome1",

```

```

    "id": "2d79e939e0424mobapp8e5fab436fb5581A",
    "scopes": ["OBAPIMobileAppResServer.ValidateDeviceScope"],
    "clientType": "MOBILE_CLIENT",
    "idDomain": "OBAPIMobileAppDomain",
    "description": "OBAPIMobileAppClientA",
    "name": "OBAPIMobileAppClientA",
    "grantTypes": ["REFRESH_TOKEN", "AUTHORIZATION_CODE"],
    "defaultScope": "OBAPIMobileAppResServer.ValidateDeviceScope",
    "redirectURIs": [{
      "url": "zigbank://oauthredirect",
      "isHttps": true
    }]
    , "usePKCE": "STRICT"
  }

```

2. Siri

```

{
  "attributes": [],
  "secret": "welcome1",
  "id": "2d79e939e0424sirichat8e5ab43fb5591",
  "scopes": ["OBAPISiriResServer.ValidateDeviceScope"],
  "clientType": "MOBILE_CLIENT",
  "idDomain": "OBAPISiriDomain",
  "description": "OBAPISiriClient",
  "name": "OBAPISiriClient",
  "grantTypes": ["REFRESH_TOKEN", "AUTHORIZATION_CODE"],
  "defaultScope": "OBAPISiriResServer.ValidateDeviceScope",
  "redirectURIs": [{
    "url": "zigbank://oauthredirect",
    "isHttps": true
  }]
  , "usePKCE": "STRICT"
}

```

3. Wearables

```

{
  "attributes": [],
  "secret": "welcome1",
  "id": "2d79e939e0424wearable8e5ab43fb5591",
  "scopes": ["OBAPIWearResServer.ValidateDeviceScope"],
  "clientType": "MOBILE_CLIENT",
  "idDomain": "OBAPIWearDomain",
  "description": "OBAPIWearClient",
  "name": "OBAPIWearClient",

```

```

"grantTypes": ["REFRESH_TOKEN", "AUTHORIZATION_CODE"],
"defaultScope": "OBAPIWearResServer.ValidateDeviceScope",
"redirectURIs": [{
  "url": "zigbank://oauthredirect",
  "isHttps": true
}]
, "usePKCE": "STRICT"
}

```

4. Mobile Snapshot

```

{
  "attributes": [],
  "secret": "welcome1",
  "id": "2d79e939e0424snapshot8e5ab43fb5591",
  "scopes": ["OBAPISnapshotResServer.ValidateDeviceScope"],
  "clientType": "MOBILE_CLIENT",
  "idDomain": "OBAPISnapshotDomain",
  "description": "OBAPISnapshotClient",
  "name": "OBAPISnapshotClient",
  "grantTypes": ["REFRESH_TOKEN", "AUTHORIZATION_CODE"],
  "defaultScope": "OBAPISnapshotResServer.ValidateDeviceScope",
  "redirectURIs": [{
    "url": "zigbank://oauthredirect",
    "isHttps": true
  }]
  , "usePKCE": "STRICT"
}

```

5. Soft Token

```

{
  "attributes": [],
  "secret": "welcome1",
  "id": "2d79e939e0424sotapp8e5fab436fb5581",
  "scopes": ["OBAPISofttokenResServer.OBAPILoginScope"],
  "clientType": "PUBLIC_CLIENT",
  "idDomain": "OBAPISofttokenDomain",
  "description": "OBAPISofttokenDomain",
  "name": "OBAPISofttokenClient",
  "grantTypes": ["AUTHORIZATION_CODE"],
  "defaultScope": "OBAPISofttokenResServer.OBAPILoginScope",
  "redirectURIs": [{
    "url": "zigbank://oauthredirect",
    "isHttps": true
  }]
  , "usePKCE": "STRICT"
}

```

}

Update the client ids in DIGX_FW_ACCESSPOINT table or from admin screen under touch point maintenance

APMOBAPP	2d79e939e0424mobapp8e5fab436fb5581A
APSIRICHATBOT	2d79e939e0424sirichat8e5ab43fb5591
APWEARABLE	2d79e939e0424wearable8e5ab43fb5591
APSNAPSHOT	2d79e939e0424snapshot8e5ab43fb5591
APSOFTTOKEN	2d79e939e0424sotapp8e5fab436fb5581

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