# Oracle Banking APIs

**Installer Pre-Requisite Setup Guide**
**Release 19.2.0.0.0**

**Part No. F26907-01**

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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 |

* Required if OBAPI Native Authentication is not used and OAM is managing Authentication

** Required if Integration with Oracle Business Intelligence Publisher is needed.

*** Required if OBAPI Chat bot Banking Features are used.

**** For python 3 installation refer section **2.3 Pre-requisite software installation and OS configuration for OBAPI Installer – Python 3.8.0**

***** In case of python 3 cx_Oracle needs to be re-installed

## 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:


**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

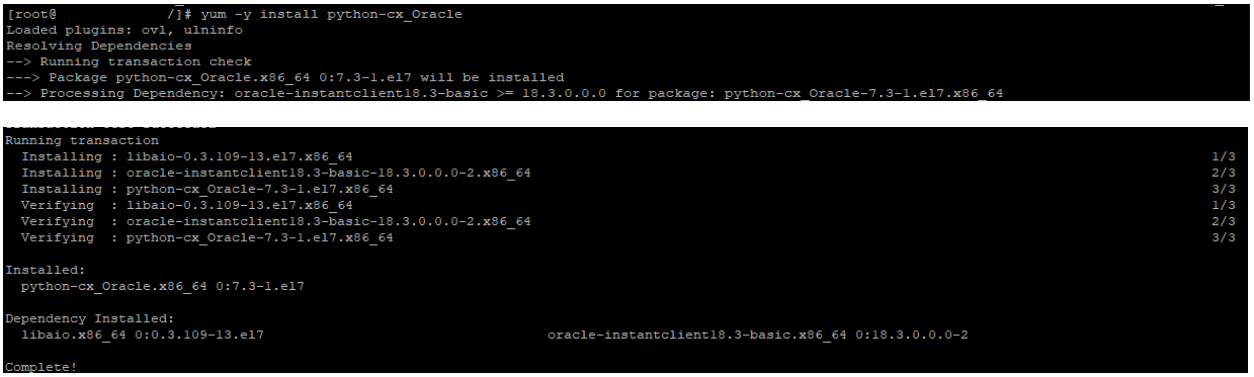
$yum –y install oracle-release-el7 oraclelinux-developer-release-el7

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

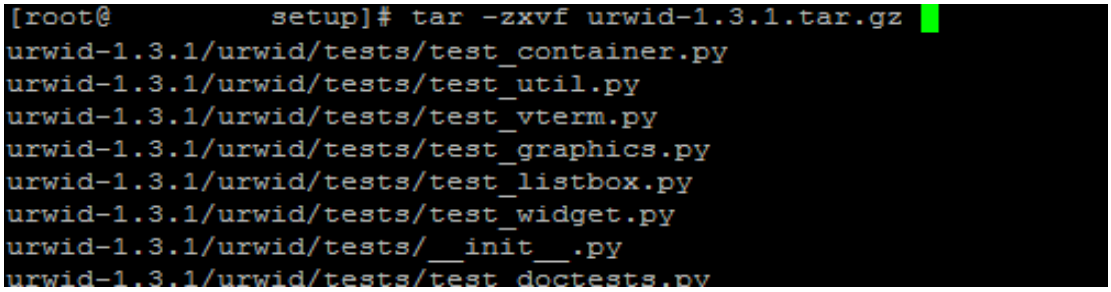



## Urwid (Software Installation)

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

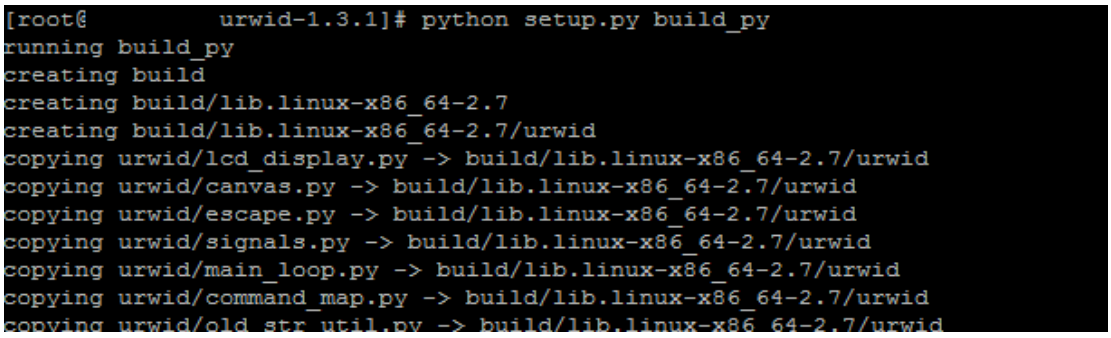
**Note:** Support version for Urwid is 1.3.1 (urwid-1.3.1.tar.gz)

Step 2: Extract the tar file as shown below




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

# python setup.py build_py




**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.

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# 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

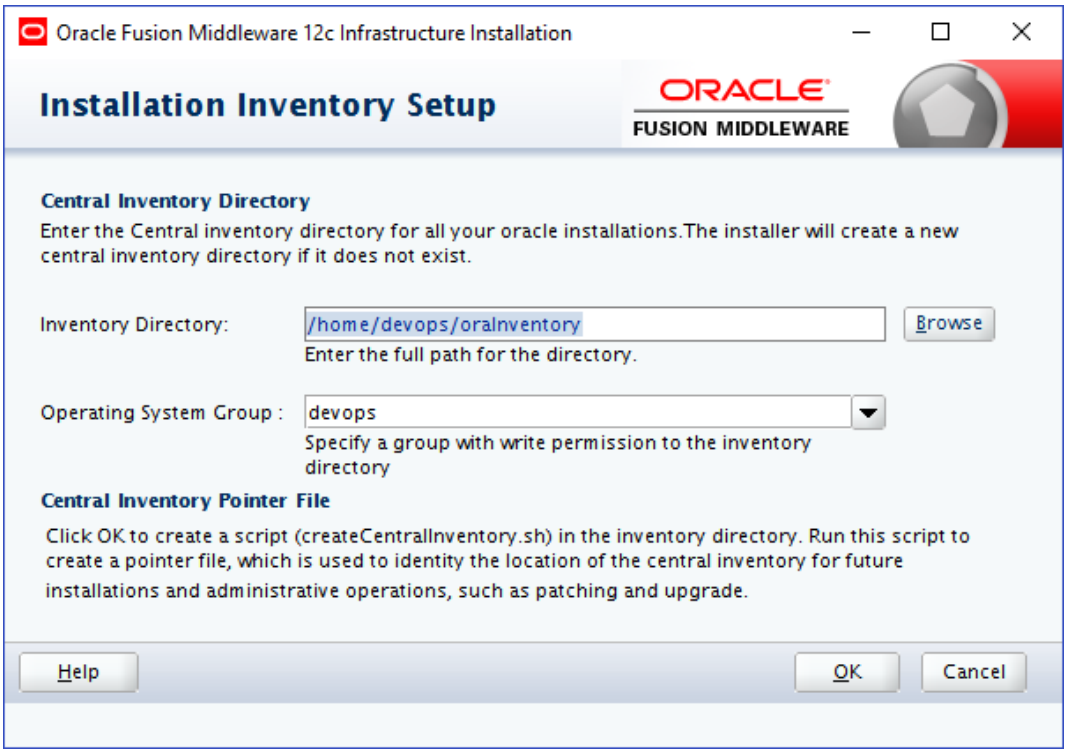
- Obtain Weblogic Infrastructure 12.2.1.3.0 zip from the Oracle Fusion Middleware Downloads. Extract the downloaded zip to get ***fmw_12.2.1.3.0_infrastructure.jar*** file to a directory.
- Now to start the installer, go to the directory where you have extracted the jar file.
- Start the installer from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




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

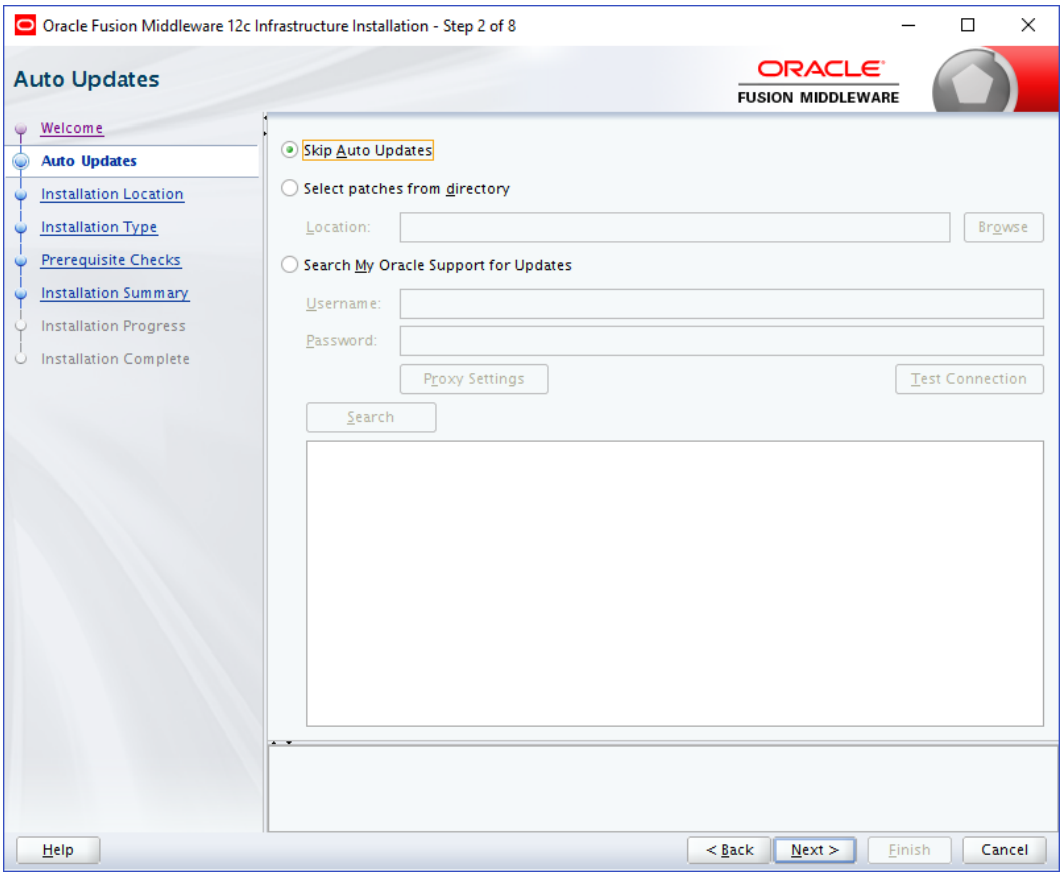
Click OK to continue.

### Welcome Screen


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

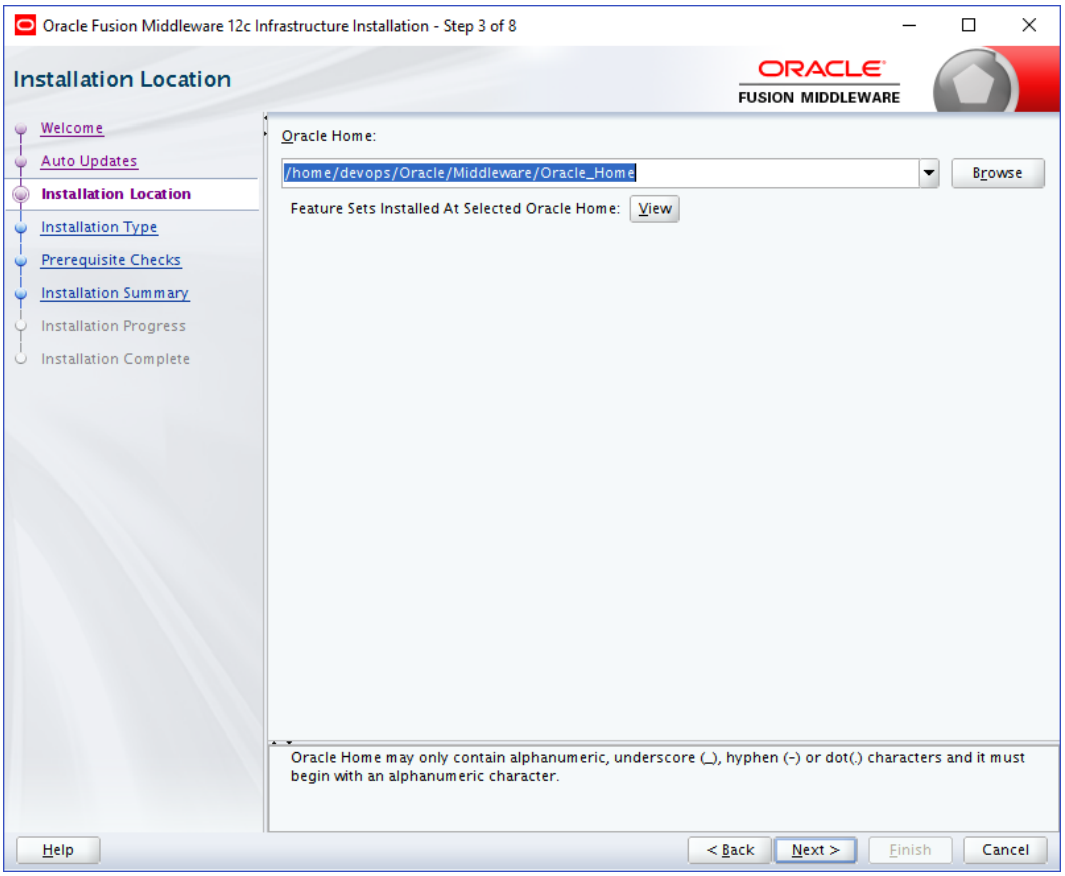
Click Next to continue.

### Auto Updates Screen




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



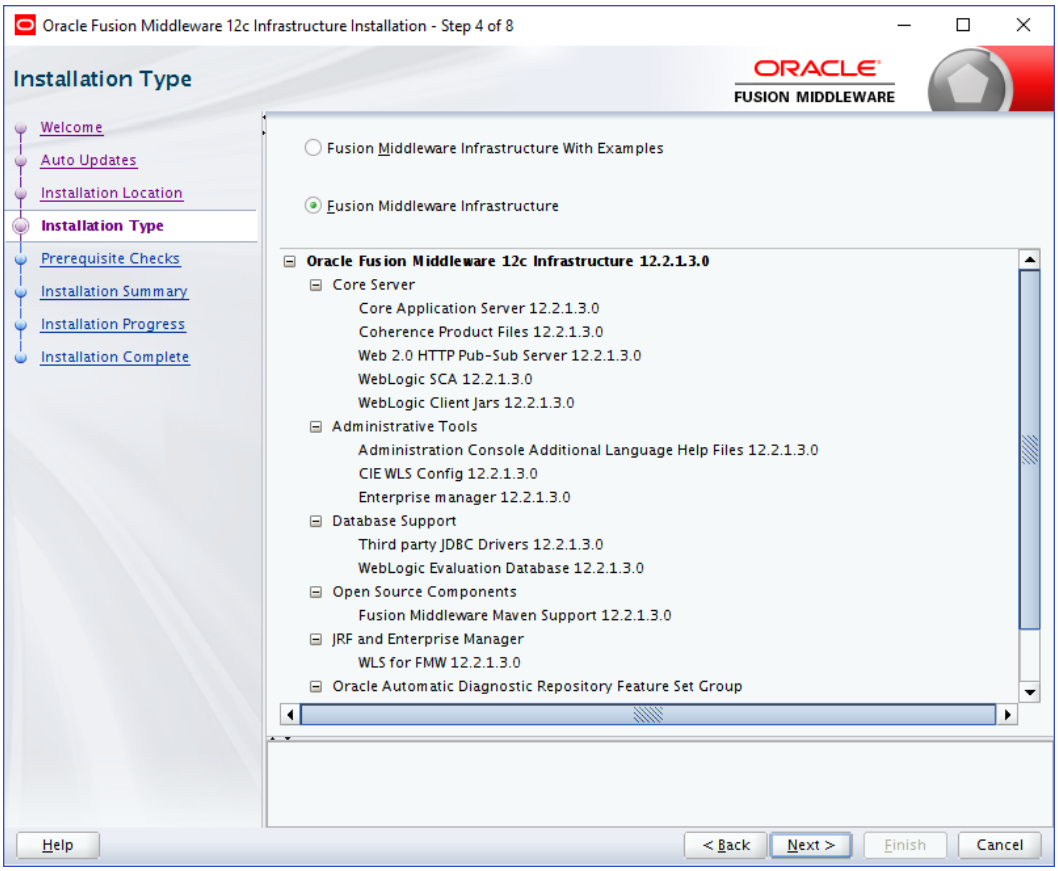

Specify the following installation locations:

- 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

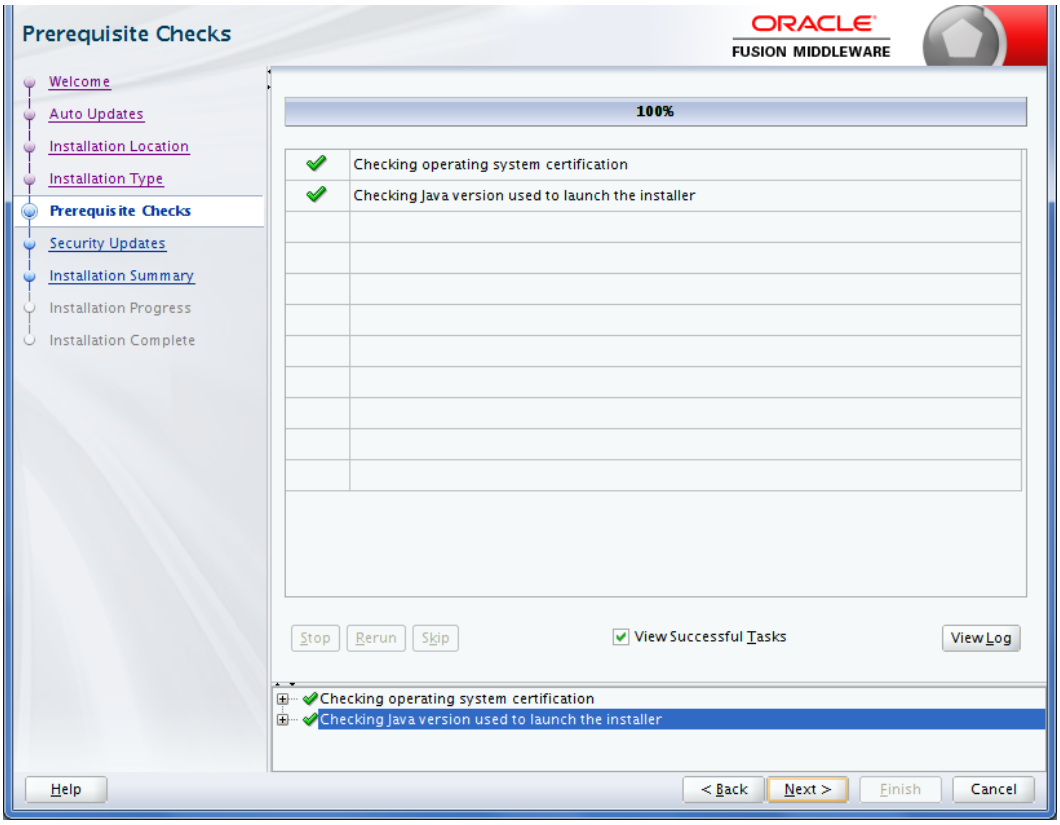



Following are the installation types:

- Fusion Middleware Infrastructure with Examples
- Fusion Middleware Infrastructure

Select Fusion Middleware Infrastructure and Click Next to continue.

### Prerequisite Checks Screen

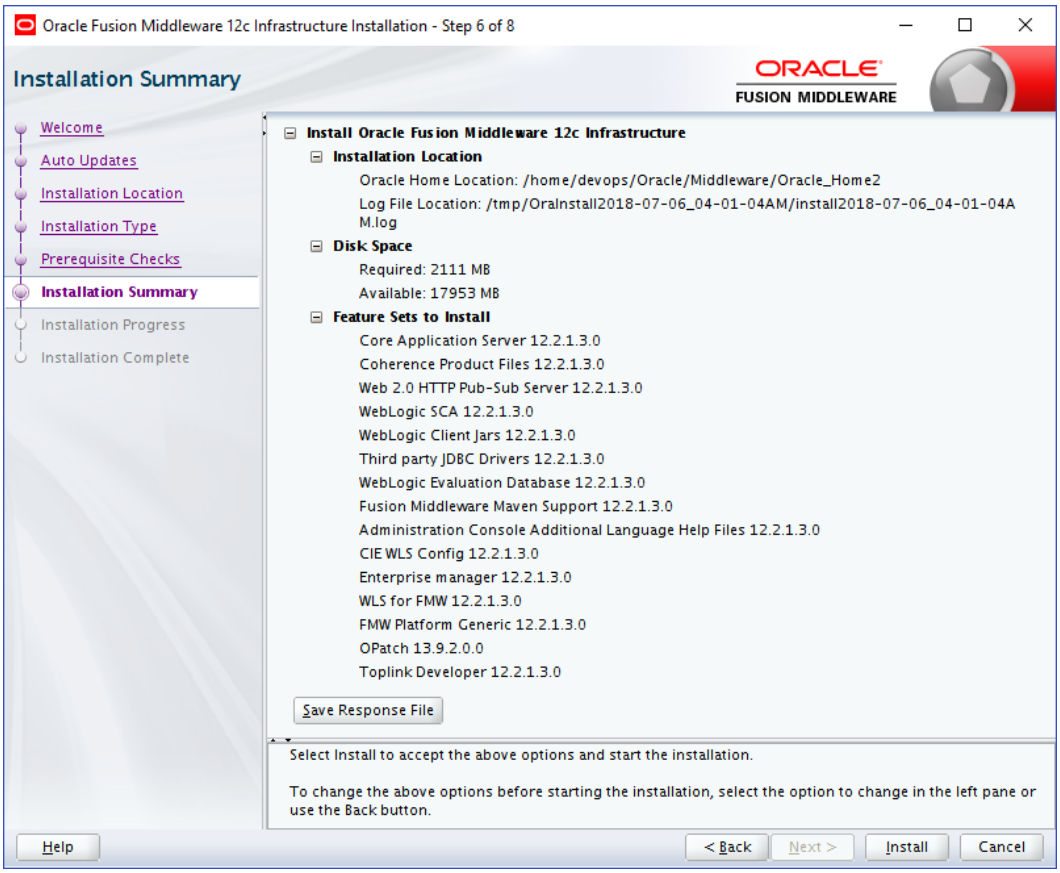



This screen shows whether the system requirements are met in order to install the software.

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.

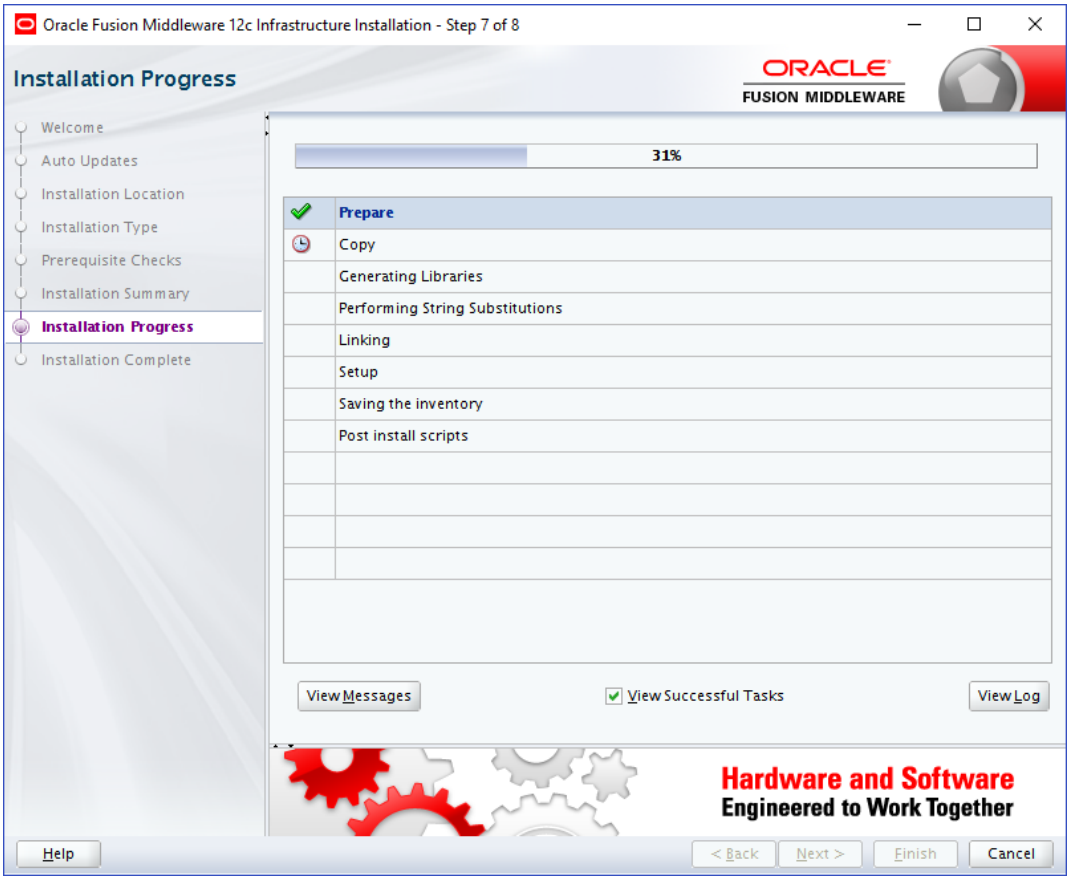
If you want to make any changes to the configuration before starting the installation, use the navigation pane, and select the topic you want to edit.

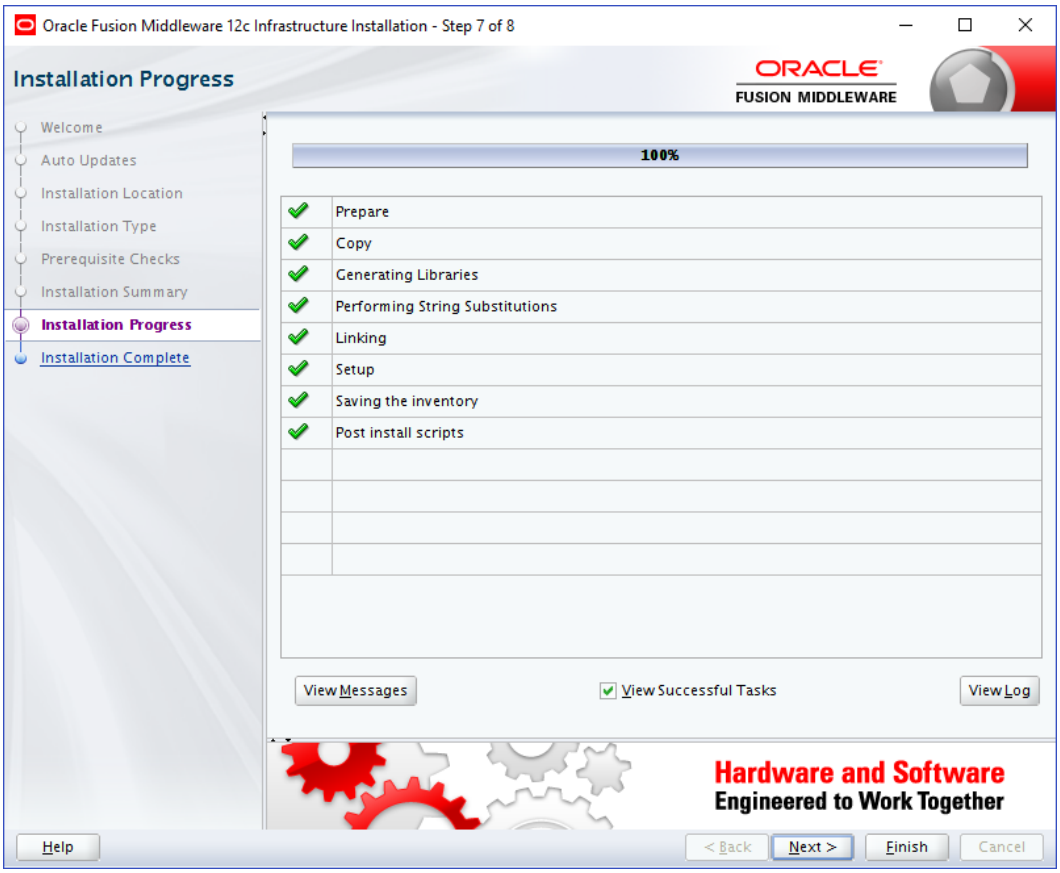
If you want to save this configuration to a text file (called a response file), click Save. You will be prompted for the location of name of the file you want to create (for example, silent_install.rsp). This file can be used later if you choose to perform the same installation from the command line.

Click Install.

Then screen shows the progress of the installation.

### Installation Progress Screen

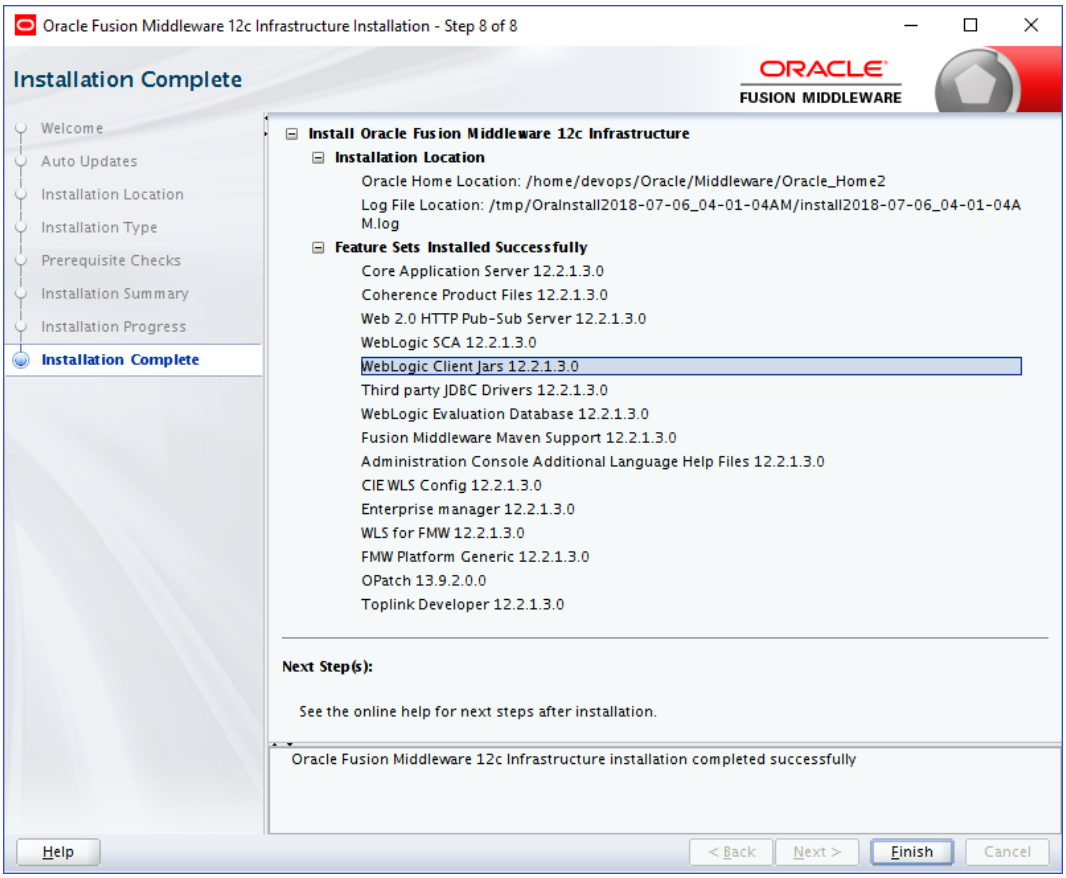





This screen shows the progress of the installation. Click Next.

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.

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# 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”

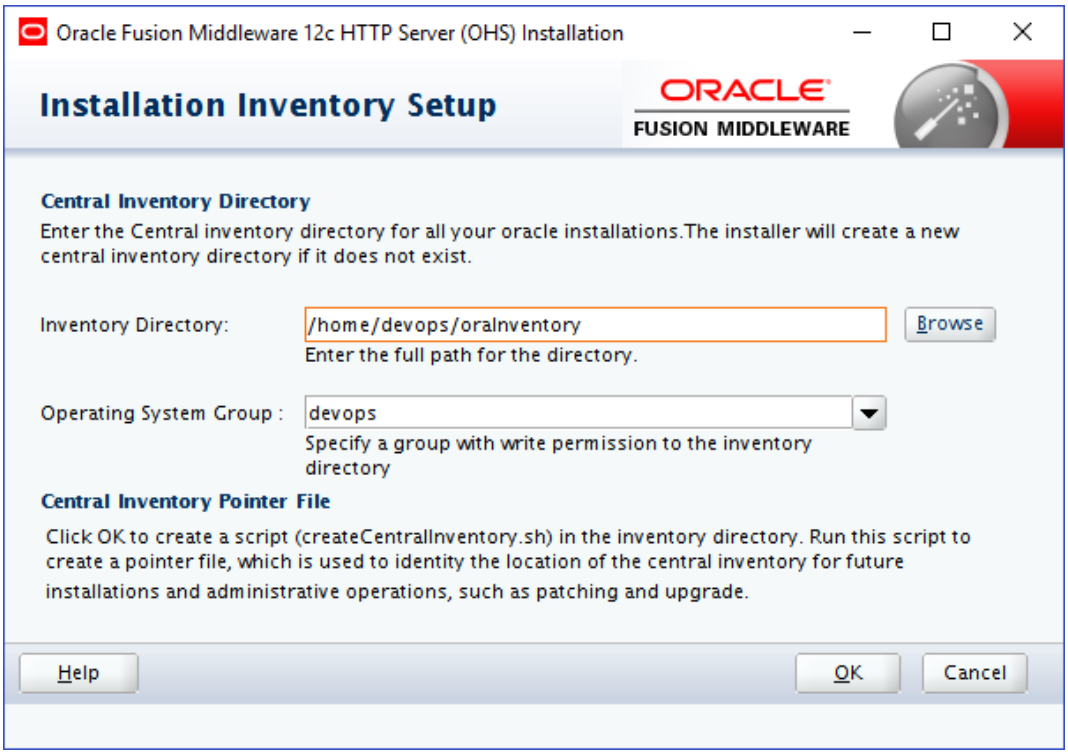
## 4.1 Installing and Configuring Oracle HTTP Server (OHS)

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,

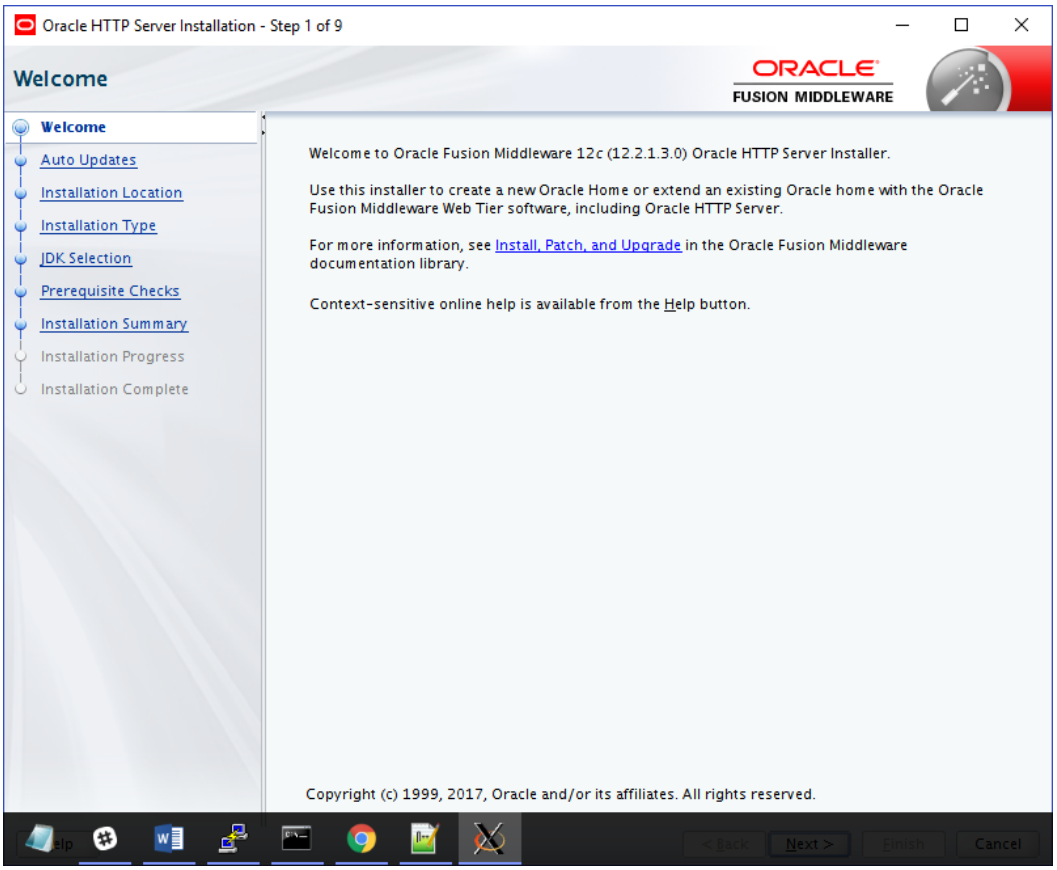
**Specify Inventory Directory Screen**




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.

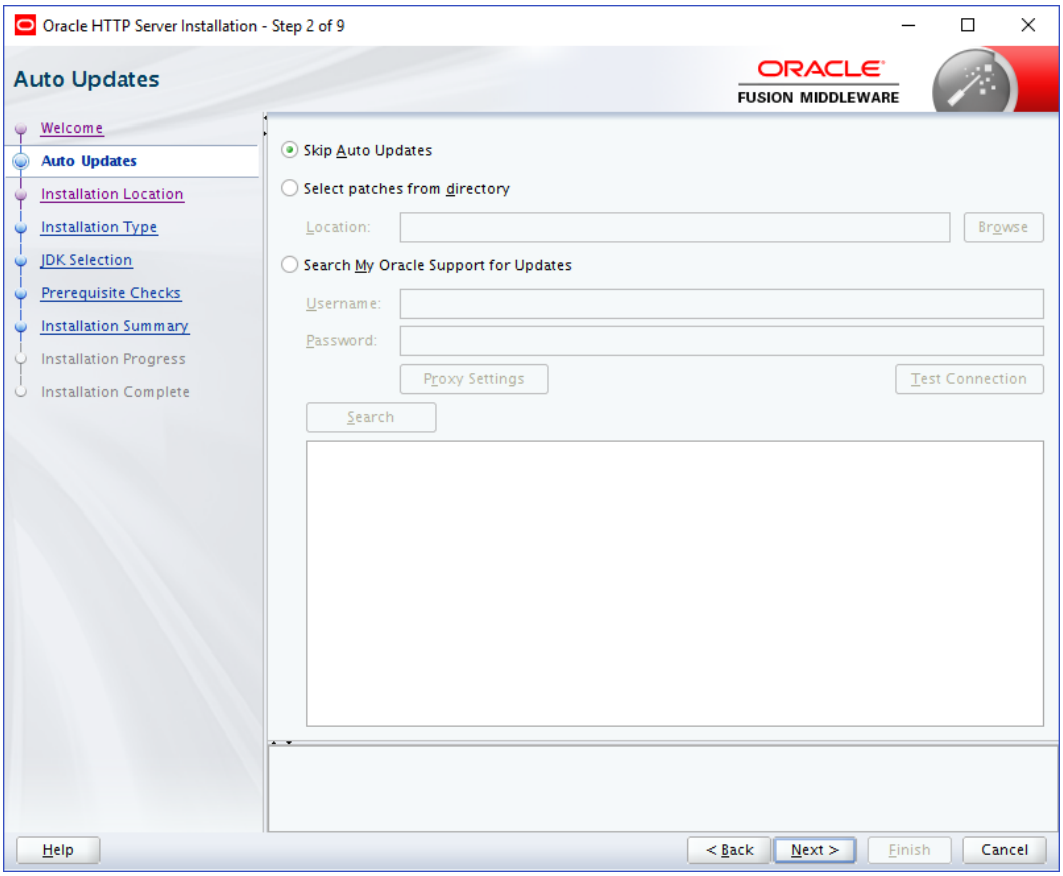
### Welcome Screen




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

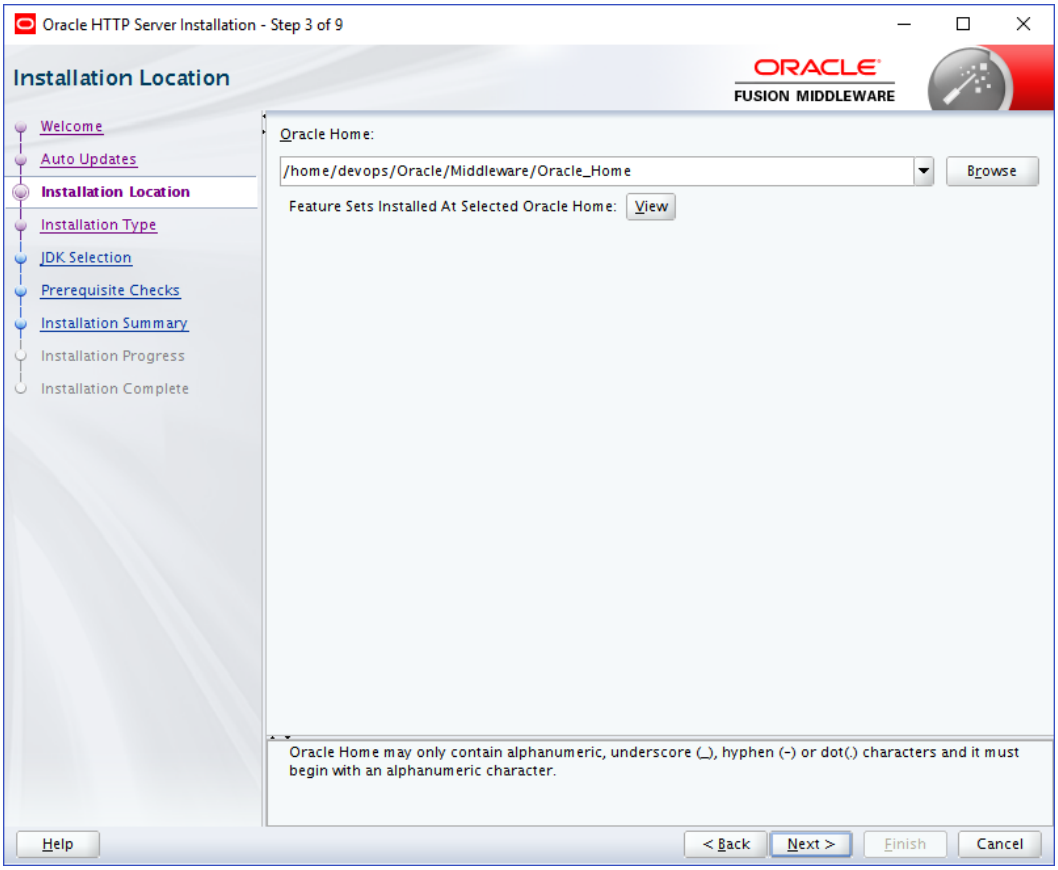
Click Next to continue.

### 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.)

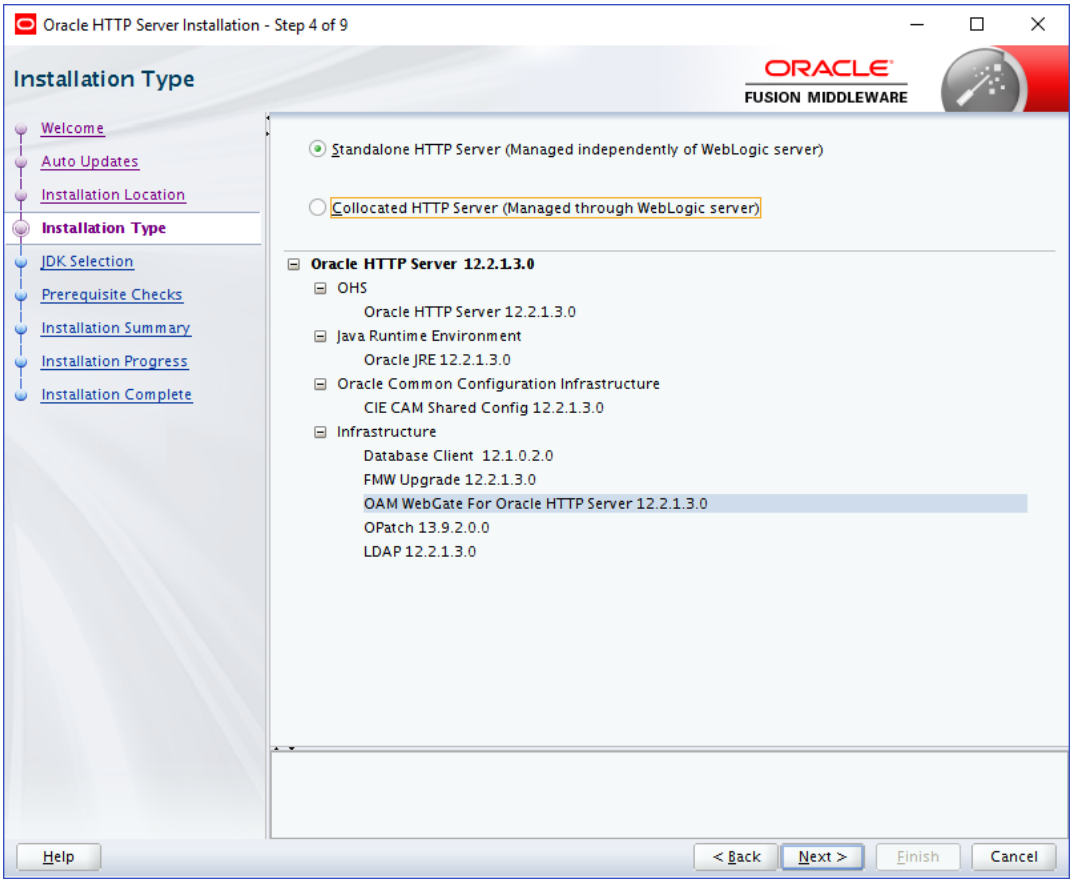
### Select Installation Location




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

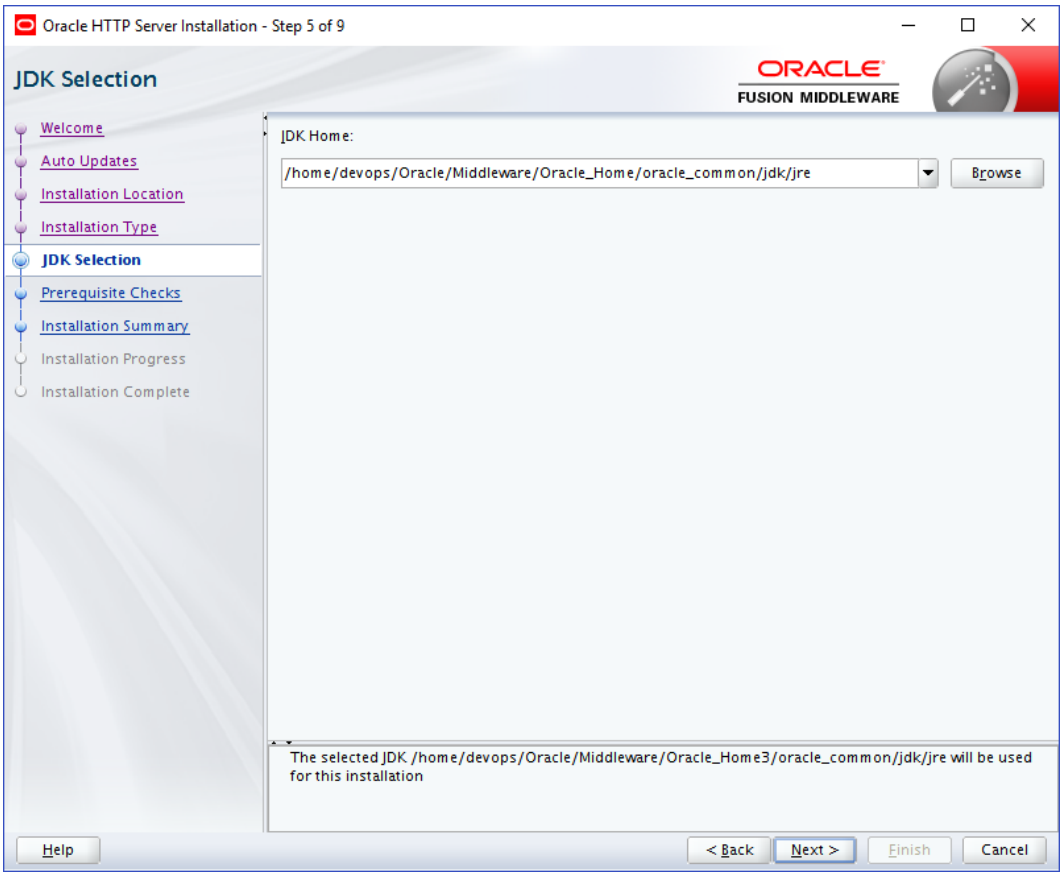



The following are the Installation Types available.

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

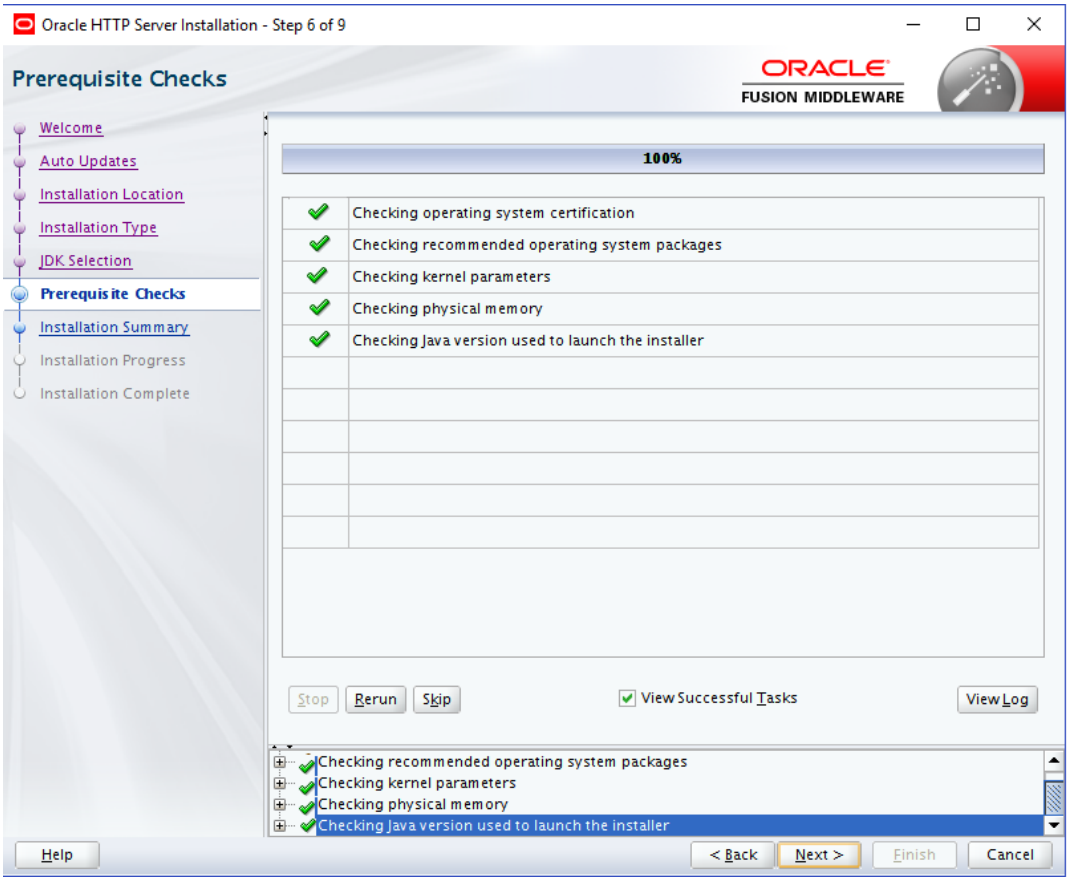
Choose installation type as per requirement. Select Standalone HTTP Server (Managed Independently of Weblogic Server). Click Next to continue.

### Select JDK home




Click **Next** to continue

### Prerequisite Checks Screen

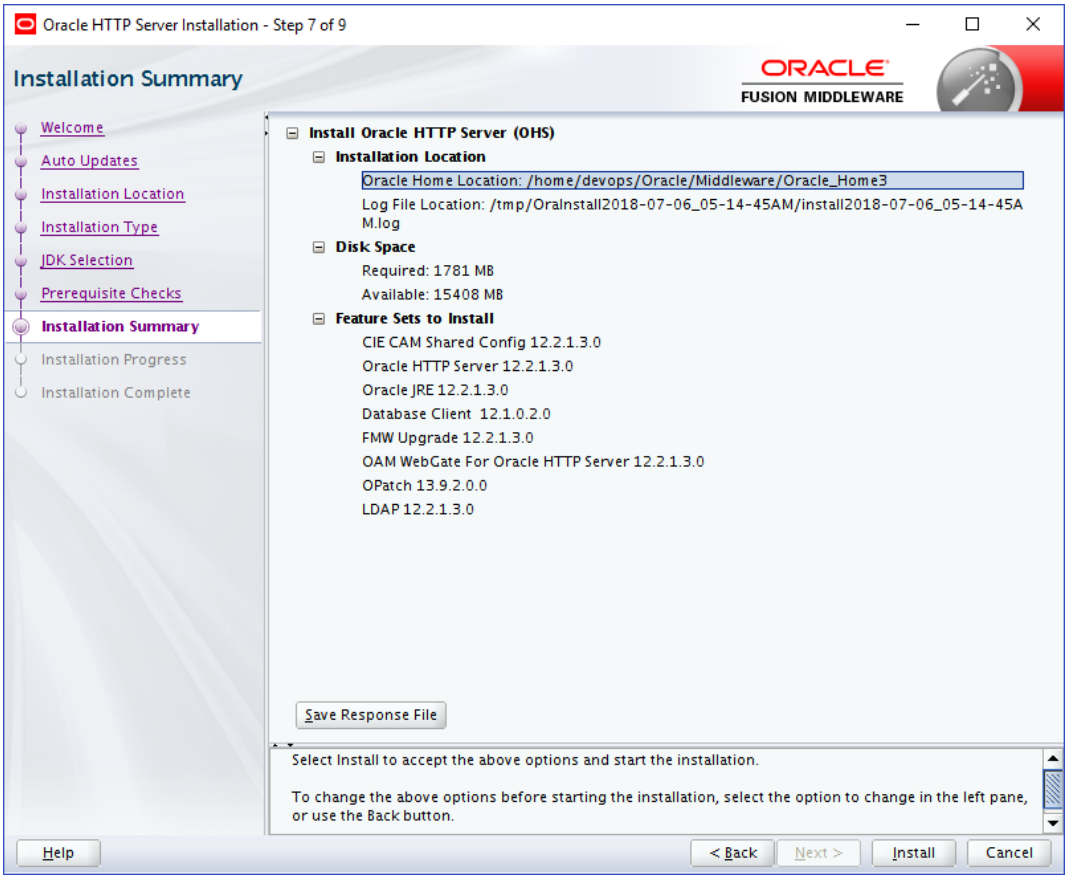



This screen shows whether the system requirements are met in order to install the software.

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



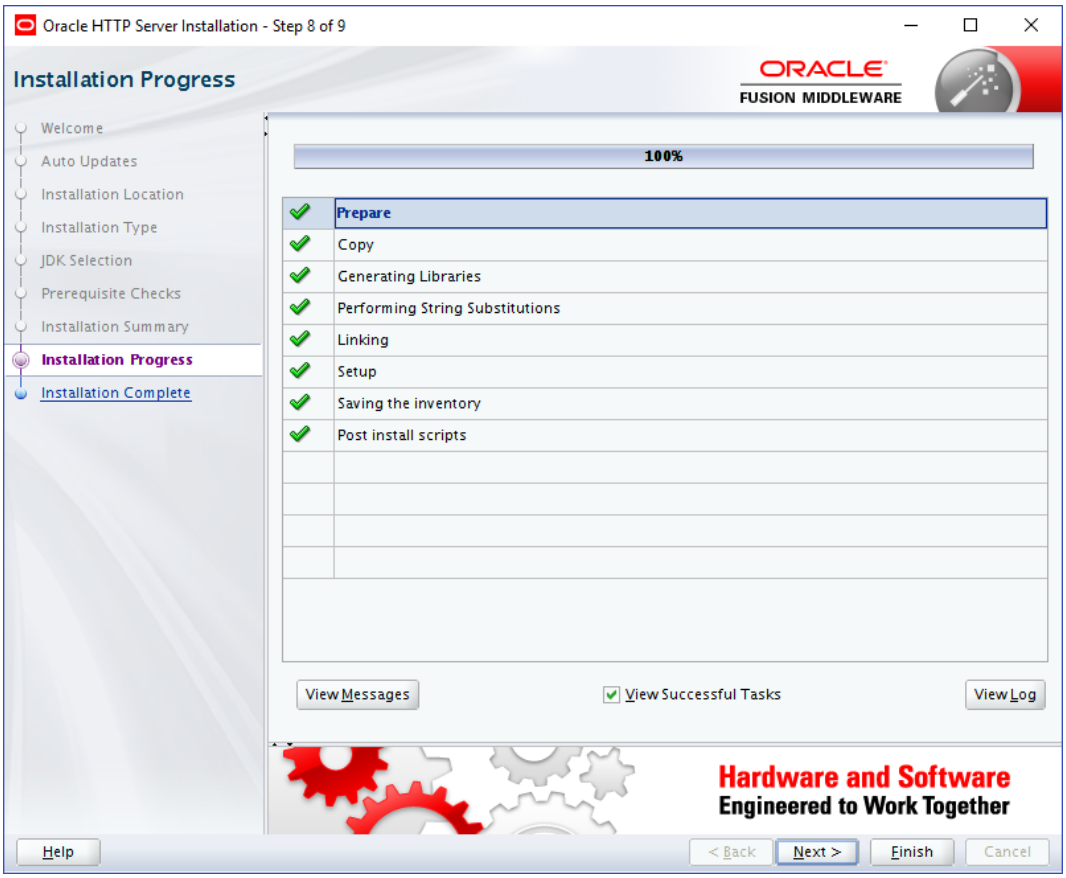

Review the information on this screen. The operations summarized on this page will be performed when you click Install.

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

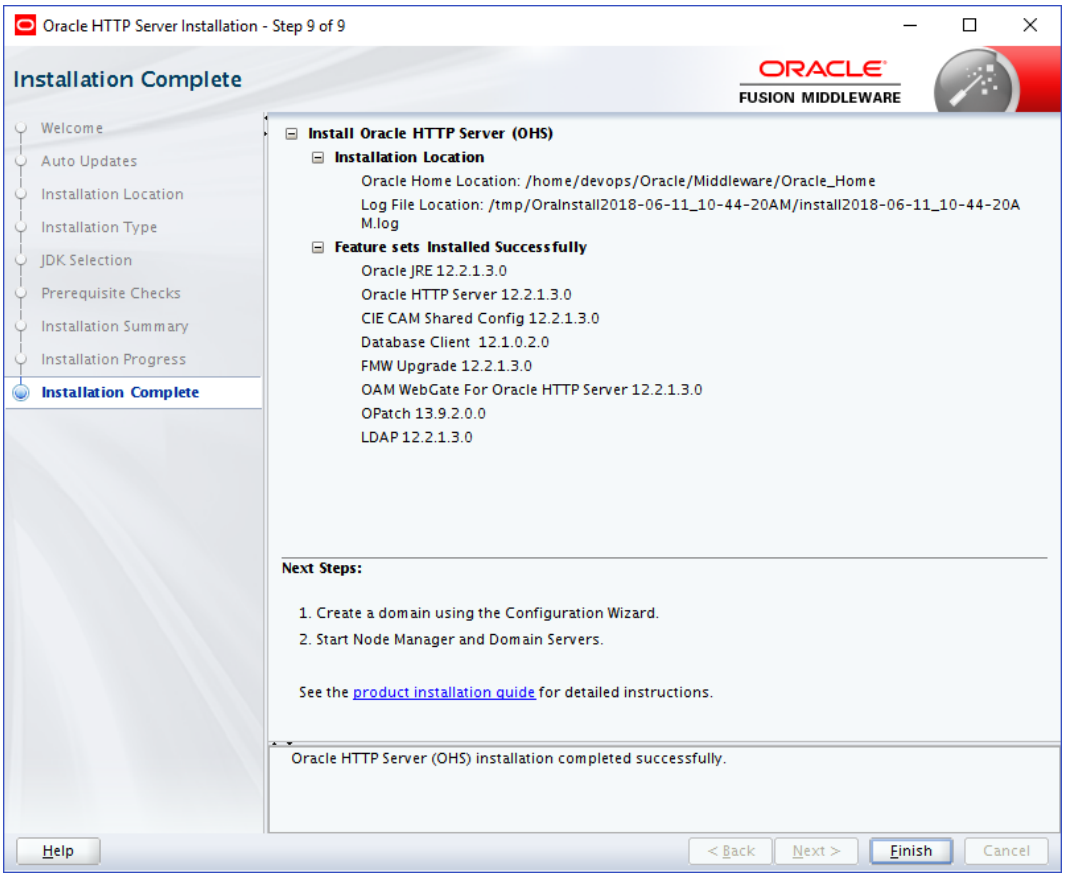



This screen shows the progress of the installation.

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.

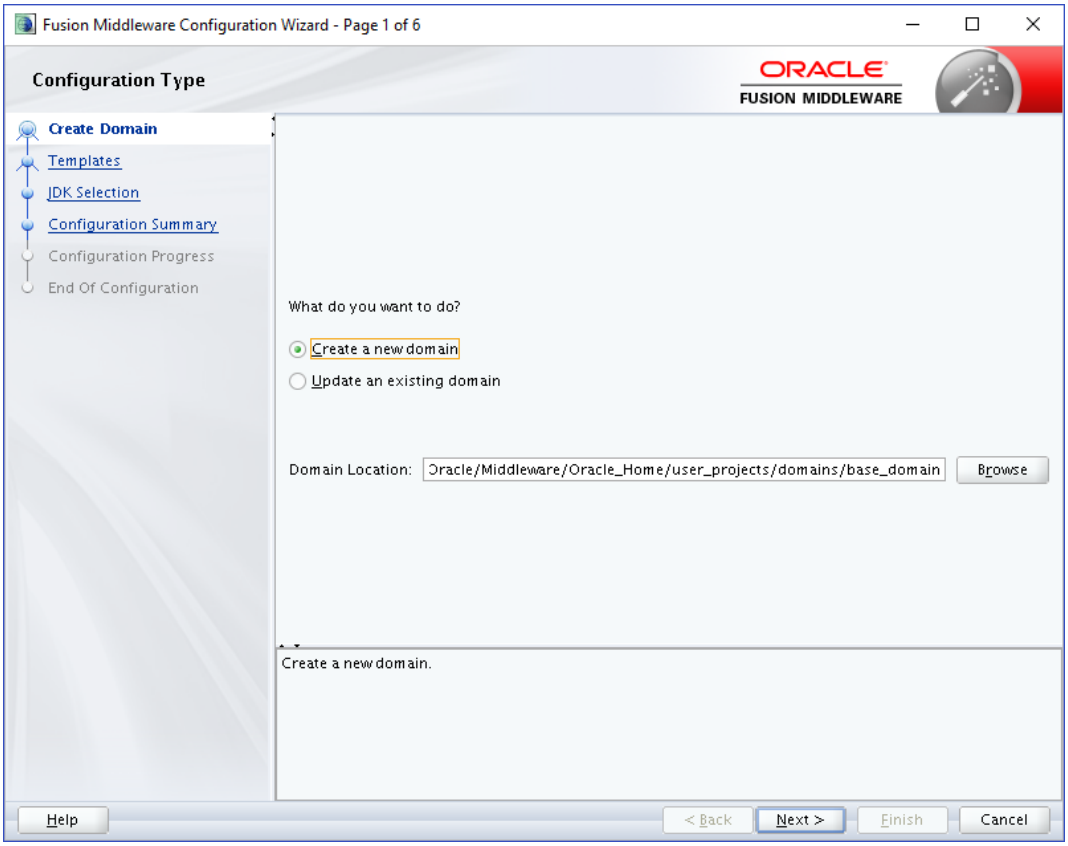
Configure the HTTP server

Follow below steps to configure domain for HTTP server

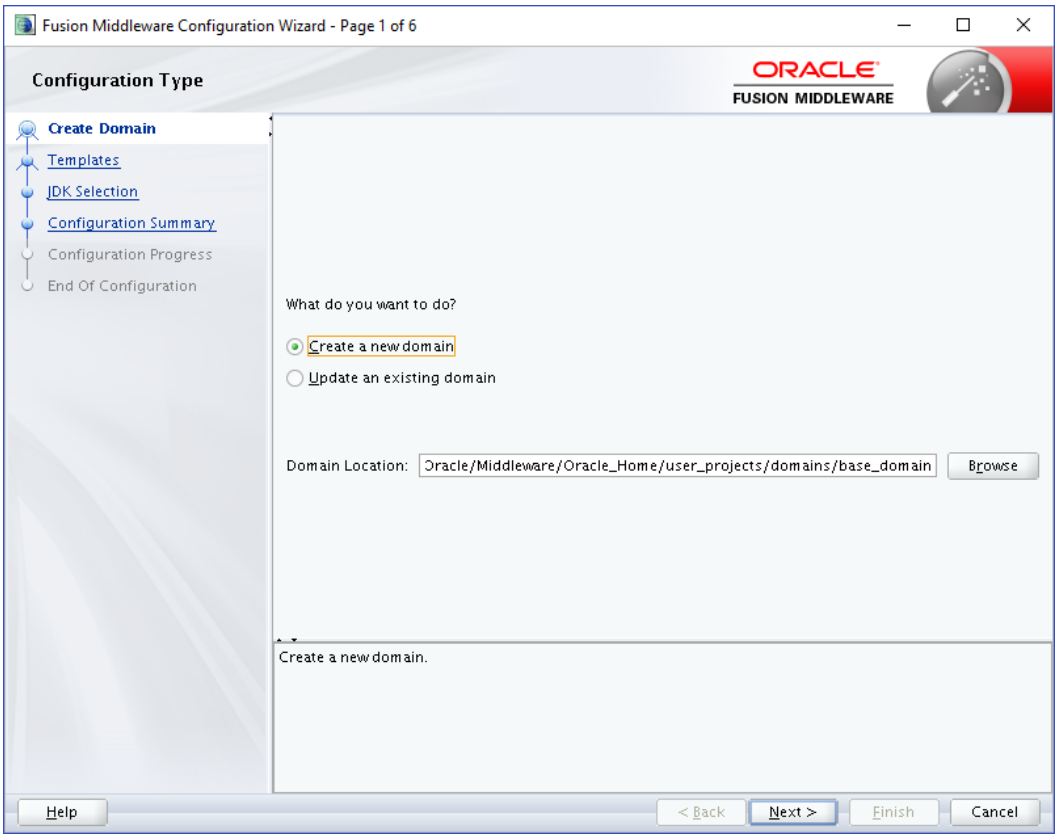
1. Browse <Middleware_Home>/oracle_common/common/bin directory
2. Execute below command

   ./config.sh

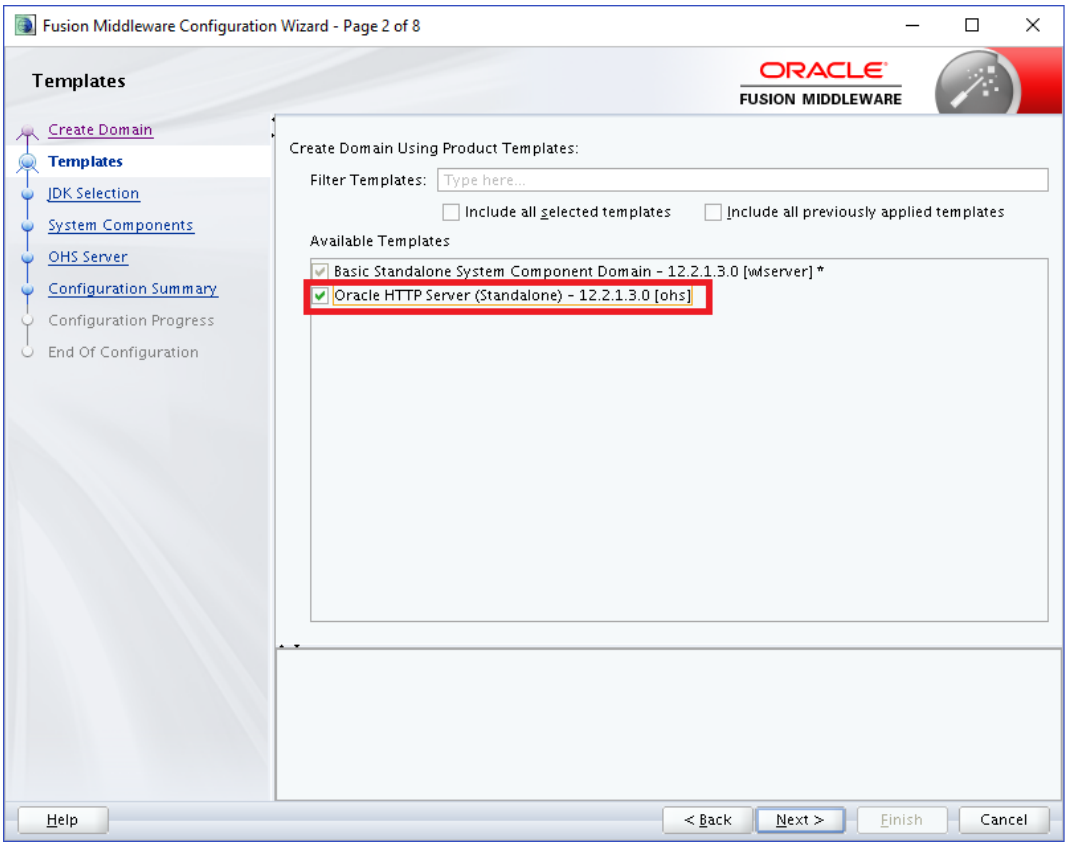
   Below screen will be displayed



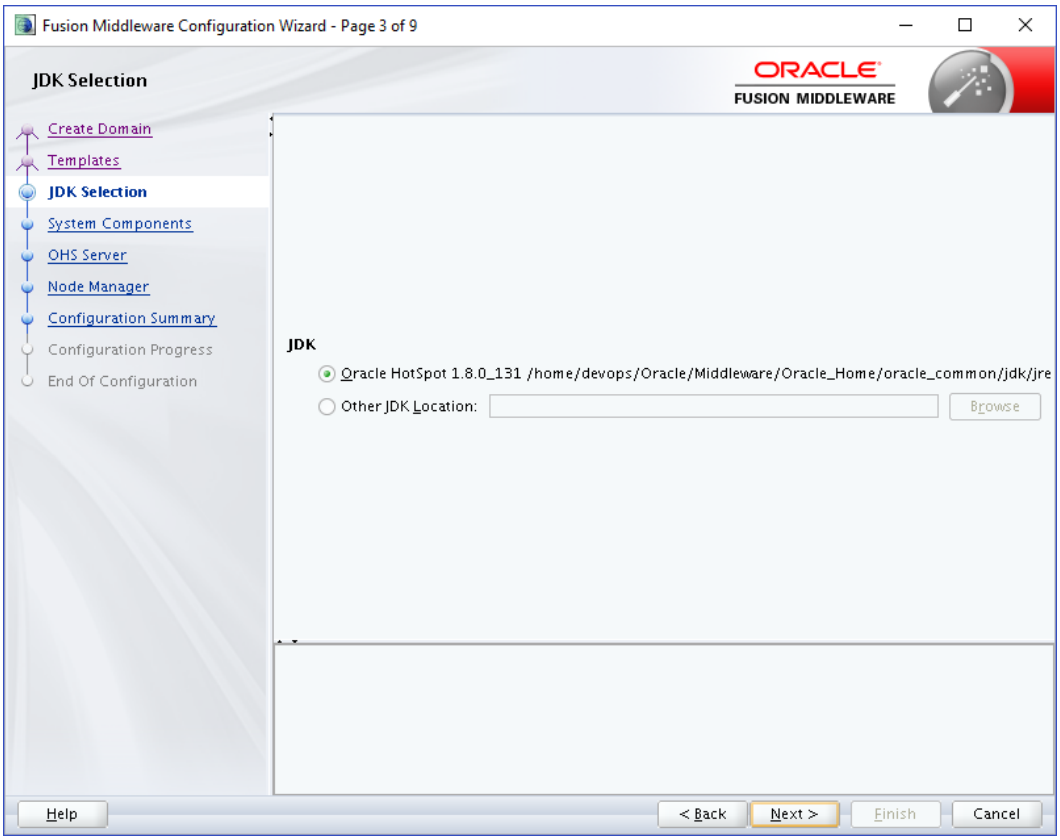

3. Select “Create a new domain” option and select Domain location. Click Next




4. Select Oracle HTTP Server option and click Next


Fusion Middleware Configuration Wizard - Page 2 of 8
Templates
ORACLE
FUSION MIDDLEWARE
Create Domain
Templates
JDK Selection
System Components
OHS Server
Configuration Summary
Configuration Progress
End Of Configuration
Create Domain Using Product Templates:
Filter Templates:
Type here...
Include all selected templates
Include all previously applied templates
Available Templates
Basic Standalone System Component Domain - 12.2.1.3.0 [wlserver] *
Oracle HTTP Server (Standalone) - 12.2.1.3.0 [ohs]
Help
< Back
Next >
Finish
Cancel

5. Click Next



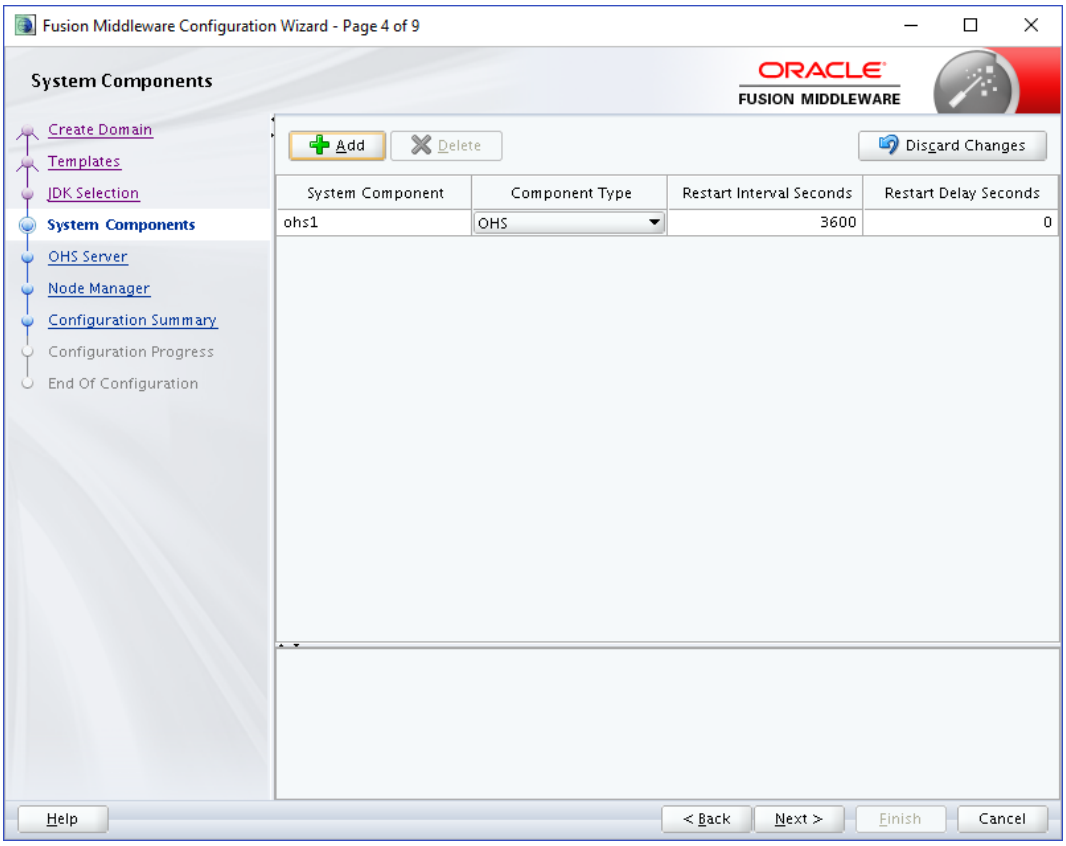

6. Enter below details and click Next

System Component: Set the Instance name

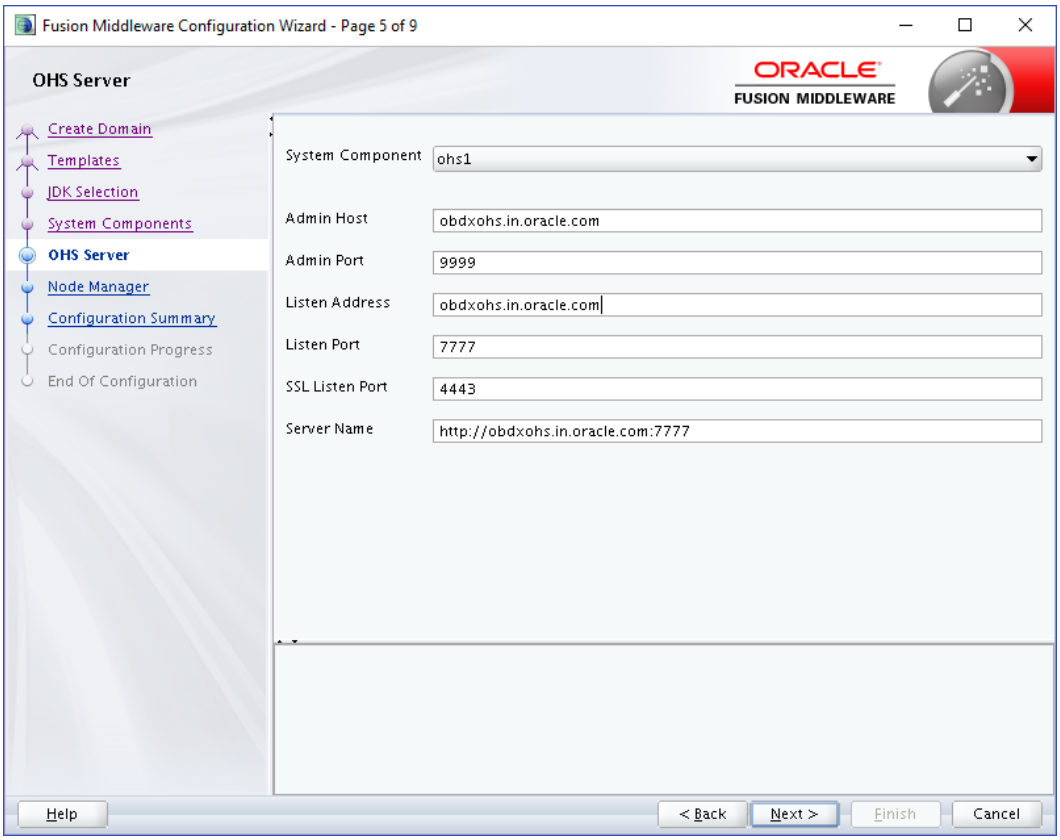
Component Type: Should be OHS

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

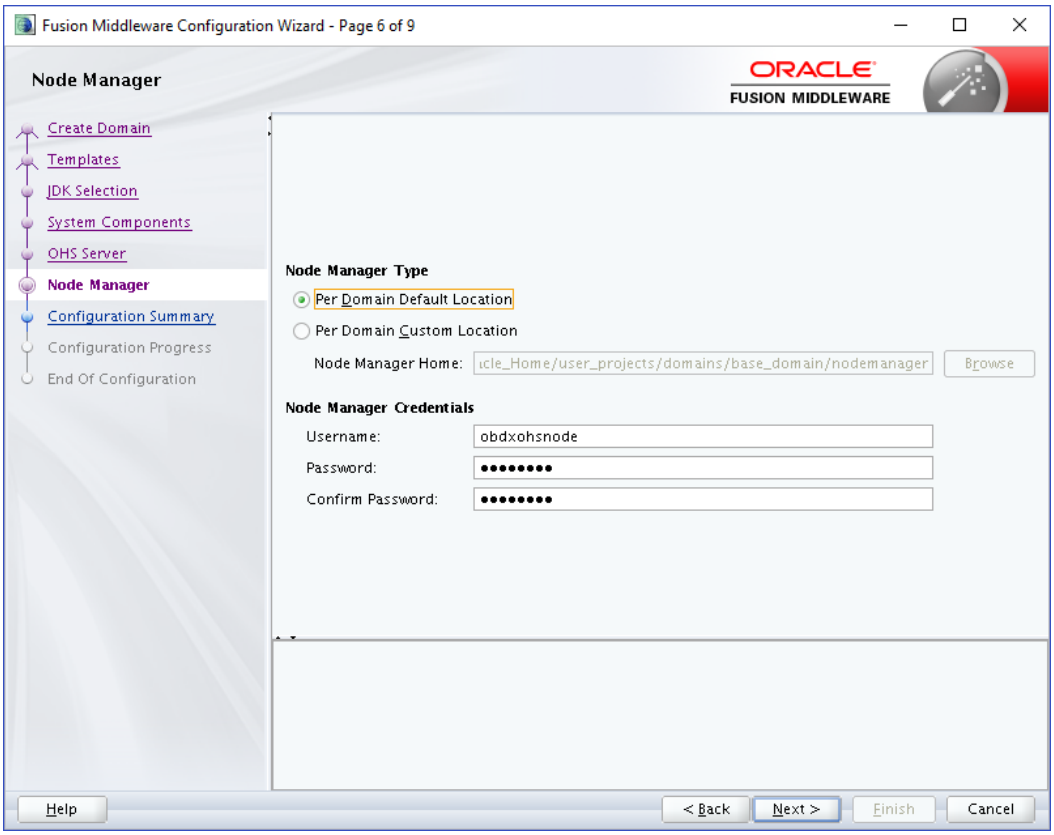
Restart Delay Seconds: Set as per requirement. Defaults to 0



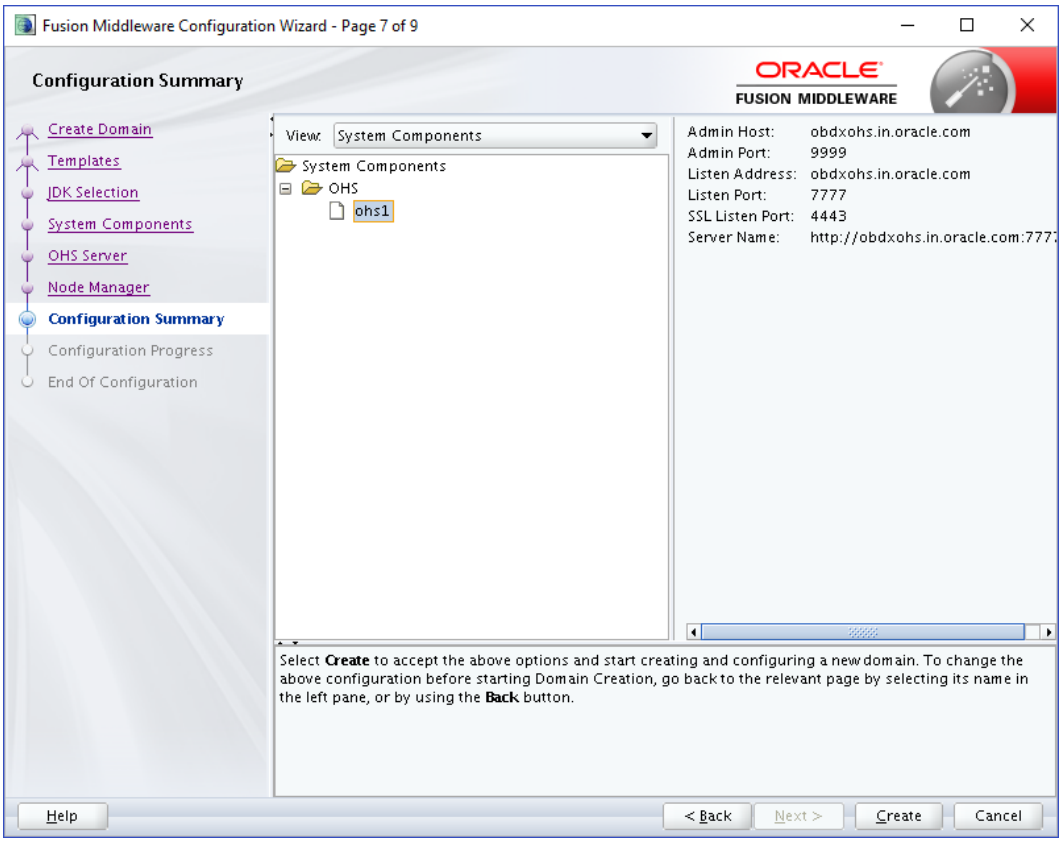

7. Configure Admin Host; Port; Listen Address and click Next



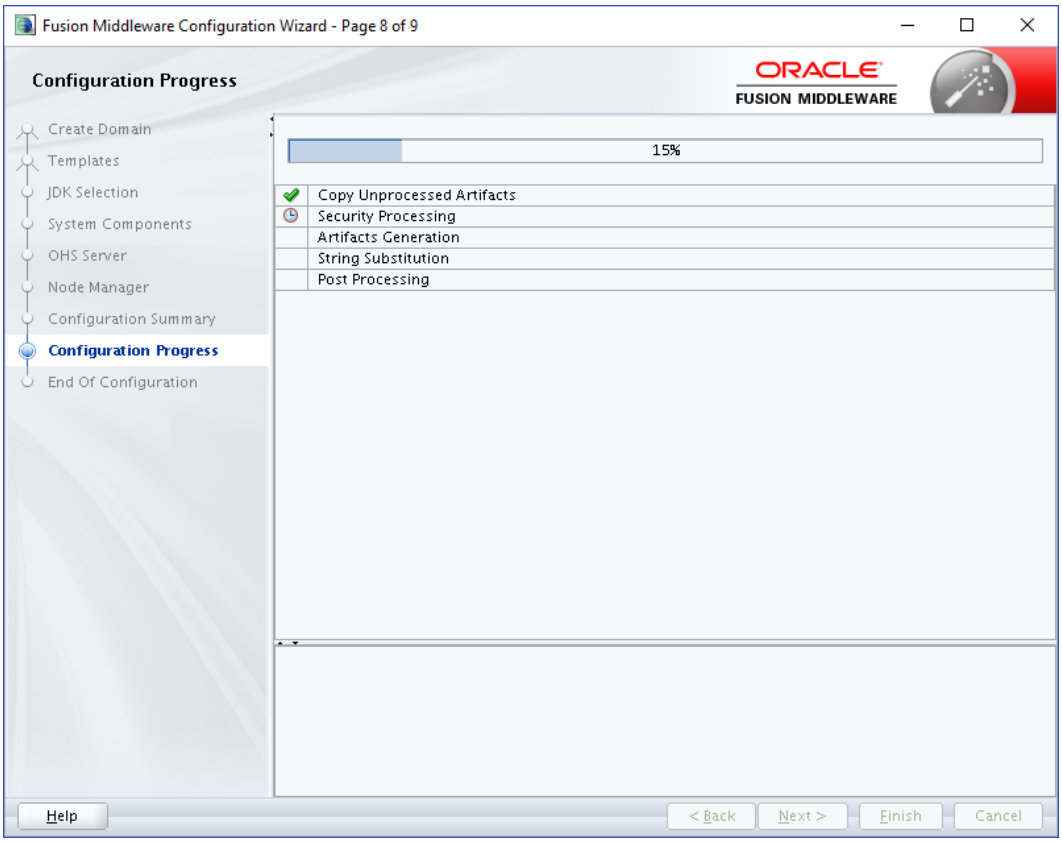

8. Select appropriate Node Manager Type; and enter Node Manager Credentials. Click Next.

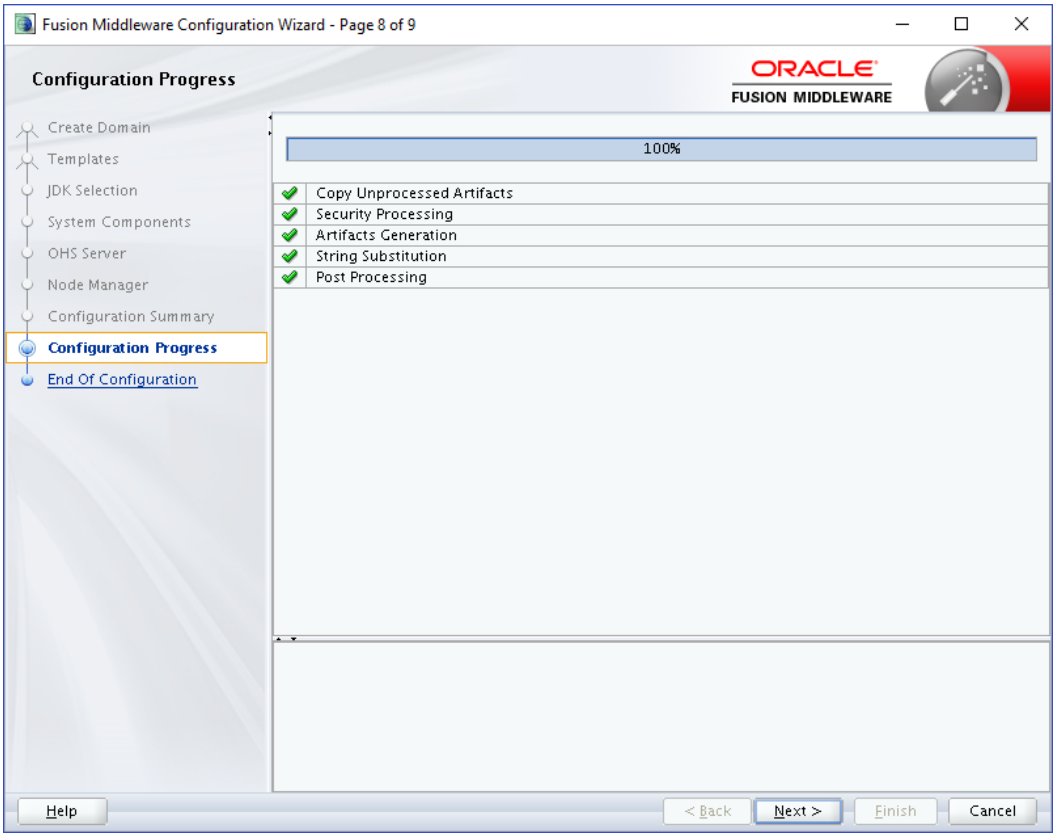


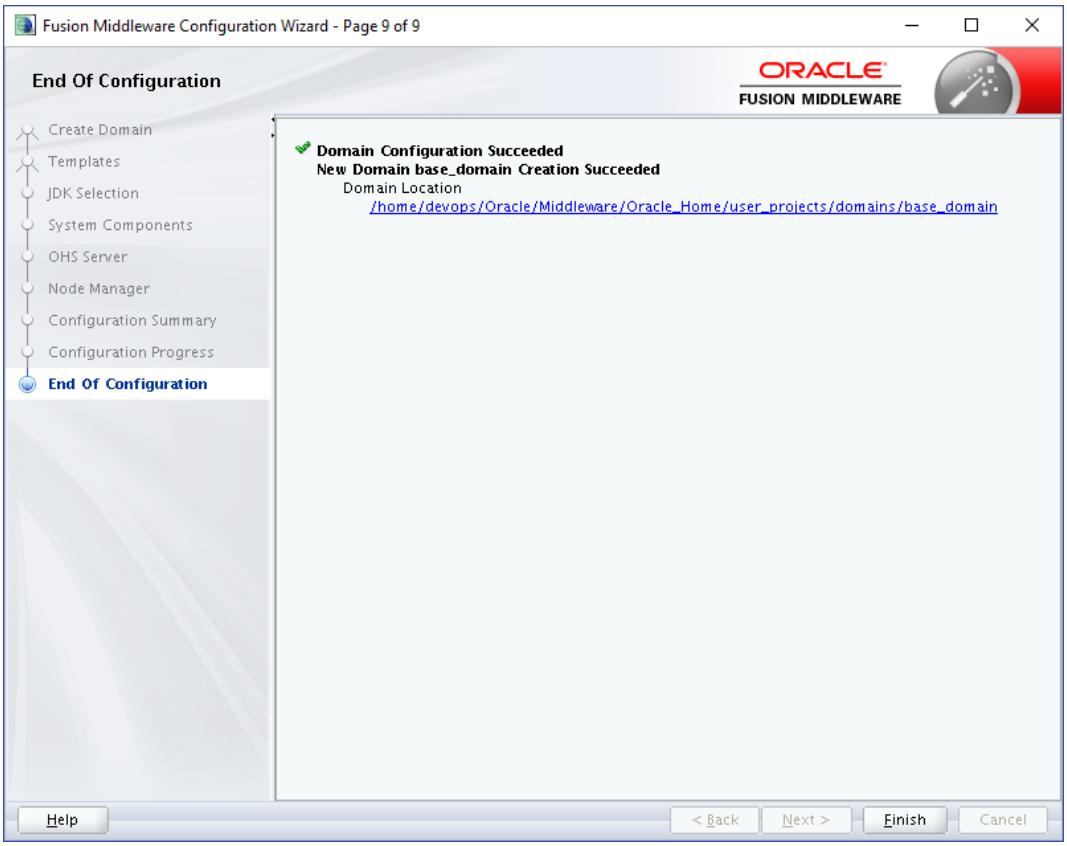

9. Review summary and click Create




10. Below installation progress can be seen


Fusion Middleware Configuration Wizard - Page 8 of 9
Configuration Progress
ORACLE
FUSION MIDDLEWARE
Create Domain
Templates
JDK Selection
System Components
OHS Server
Node Manager
Configuration Summary
Configuration Progress
End Of Configuration
15%
Copy Unprocessed Artifacts
Security Processing
Artifacts Generation
String Substitution
Post Processing
Help
< Back
Next >
Finish
Cancel


Fusion Middleware Configuration Wizard - Page 8 of 9
Configuration Progress
ORACLE
FUSION MIDDLEWARE
Create Domain
Templates
JDK Selection
System Components
OHS Server
Node Manager
Configuration Summary
Configuration Progress
End Of Configuration
100%
Copy Unprocessed Artifacts
Security Processing
Artifacts Generation
String Substitution
Post Processing
Help
< Back
Next >
Finish
Cancel




## 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**

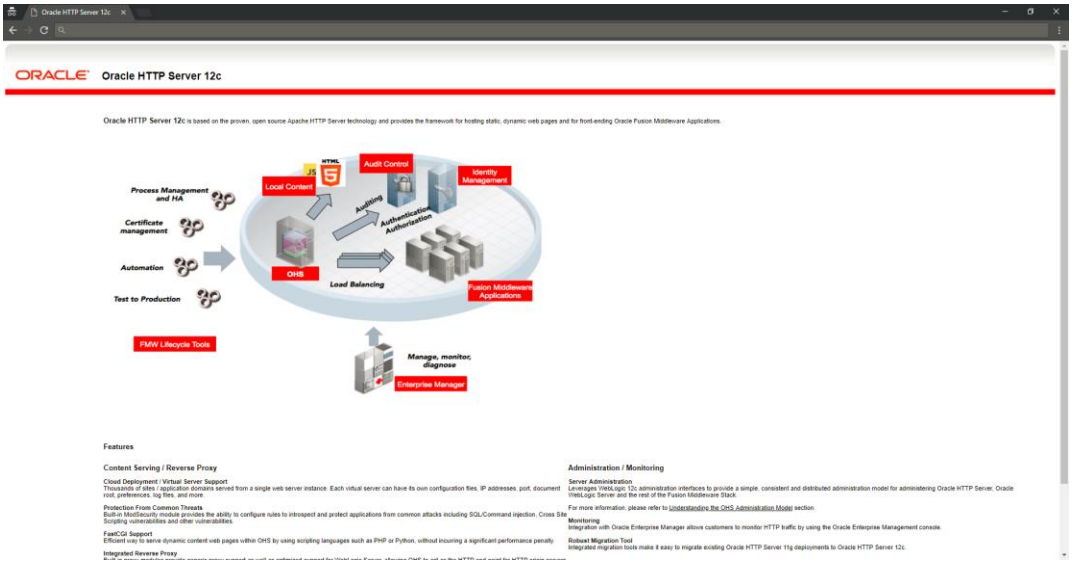
***./startNodeManager.sh***

- **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>***

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# 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/base_domain/config/fmwconfig/components/OHS/ohs1 -oh /home/devops/Oracle/Middleware/Oracle_Home***


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@        InstallTools]$ ./EditHttpConf -w /home/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/com
ponents/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 12*c* 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.

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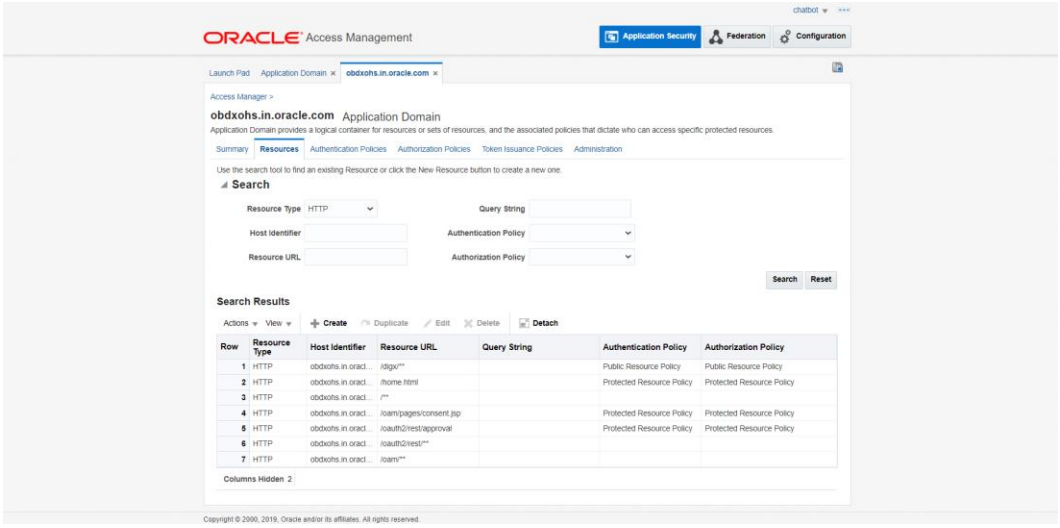
# 6. Oracle Business Intelligence Publisher Installation

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>
```

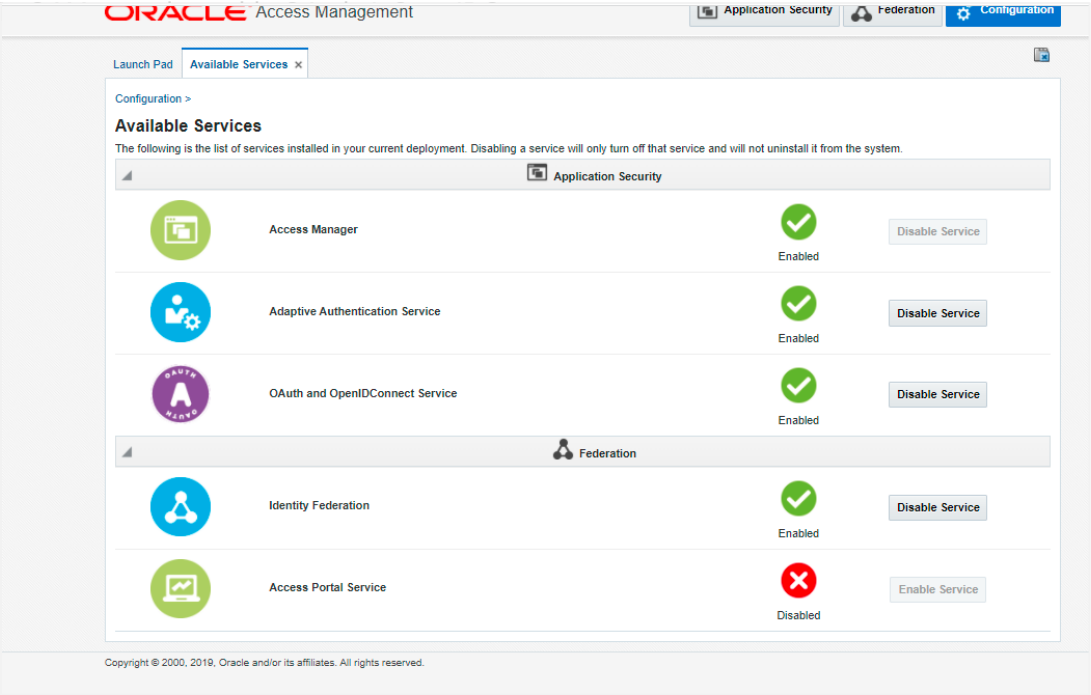
In OBAPI UI which is deployed on OHS make sure the authenticator type is set to "OAMAuthenticator" in file → framework/js/configurations/config.js

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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