

Oracle® Banking APIs

Installer Pre-Requisite Setup Guide



Patchset Release 22.2.5.0.0
G25669-01
October 2024

ORACLE®

Copyright © 2006, 2022, Oracle and/or its affiliates.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software, software documentation, data (as defined in the Federal Acquisition Regulation), or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software," "commercial computer software documentation," or "limited rights data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle®, Java, MySQL, and NetSuite are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Contents

Preface

Purpose	v
Audience	v
Documentation Accessibility	v
Critical Patches	v
Diversity and Inclusion	vi
Conventions	vi
Related Resources	vi
Screenshot Disclaimer	vi
Acronyms and Abbreviations	vi

1 Introduction

1.1 Software List	1-1
1.2 Pre-requisite Software Installation and OS Configuration for OBAPI Installer	1-1
1.3 Python 3.8.0 installation on Linux Operating System	1-5

2 Oracle HTTP Server Installation

2.1 Installing and Configuring Oracle HTTP Server (OHS)	2-2
2.2 Verifying Installation	2-21

3 Installing and Configuring Weblogic Server 14c

3.1 Installing Stand-alone Weblogic Server	3-1
3.1.1 Pre-requisite - Installing Java 11	3-1
3.1.2 Installing Weblogic	3-2
3.1.3 Verifying Installation	3-11

4 Oracle HTTP Server Webgate Installation and Configuration

4.1 Configuring Oracle Webgate	4-1
4.2 Verifying Configuration of Oracle HTTP Server 12c WebGate	4-3

Index

Preface

- [Purpose](#)
- [Audience](#)
- [Documentation Accessibility](#)
- [Critical Patches](#)
- [Diversity and Inclusion](#)
- [Conventions](#)
- [Related Resources](#)
- [Screenshot Disclaimer](#)
- [Acronyms and Abbreviations](#)

Purpose

This guide is designed to help acquaint you with the Oracle Banking APIs application. This guide provides answers to specific features and procedures that the user need to be aware of the module to function successfully.

Audience

This document is intended for the following audience:

- Customers
- Partners

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>.

Access to Oracle Support

Oracle customer access to and use of Oracle support services will be pursuant to the terms and conditions specified in their Oracle order for the applicable services.

Critical Patches

Oracle advises customers to get all their security vulnerability information from the Oracle Critical Patch Update Advisory, which is available at [Critical Patches, Security Alerts and](#)

Bulletins. All critical patches should be applied in a timely manner to ensure effective security, as strongly recommended by [Oracle Software Security Assurance](#).

Diversity and Inclusion

Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
<code>monospace</code>	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Related Resources

For more information on any related features, refer to the following documents:

- [Oracle Banking APIs Installation Manuals](#)

Screenshot Disclaimer

Personal information used in the interface or documents is dummy and does not exist in the real world. It is only for reference purposes.

Acronyms and Abbreviations

The list of the acronyms and abbreviations used in this guide are as follows:

Table 1 Acronyms and Abbreviations

Abbreviation	Description
OBAPI	Oracle Banking APIs

1

Introduction

This guide helps you to do the pre-requisite setup required before the execution of OBDX 22.2.0.0.0 Installer.

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

- [Software List](#)
- [Pre-requisite Software Installation and OS Configuration for OBAPI Installer](#)
- [Python 3.8.0 installation on Linux Operating System](#)

1.1 Software List

Software Name	Version	Mandatory Software
Operating System	ORACLE LINUX 8.3	Y
Oracle Database	19.16.0.0.0	Y
Oracle Java Development Kit	11.0.16 or 11.0.14	Y
Oracle Weblogic Server	14.1.1.0.0	Y
Any HTTP Server	NA	Y
Oracle Digital Assistant (ODA)	20.05	N***
Python	3.8.x	Y****
Python Package: cx_Oracle	8.3.0	Y*****
Python Package: urwid	2.1.2	Y
Flyway	9.8.1	Y*****
Gradle	7.5.1	Y

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

** Required if Integration with Oracle Analytics Publisher is needed.

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

**** For python 3 installation refer section [Pre-requisite software installation and OS configuration for OBAPI Installer – Python 3.8.0 for Linux Operating System](#)

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

***** Required for database files execution

1.2 Pre-requisite Software Installation and OS Configuration for OBAPI Installer

Below steps assume Python 3.8.x is installed and available on server. You can verify the Python version by executing the command as shown below:

```
[root@~ - ~]# python3.8 -V
Python 3.8.0
```



Note:

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

Flyway Installation

Download the flyway version 9.8.1 zip file from flyway site

Unzip the downloaded zip file into the desire path.

Example :-

```
cd /home/obapiuser tar -xvzf
    flyway-commandline-9.8.1-linux-x64.tar.gz
FLYWAY_HOME=/home/obapiuser/flyway-9.8.1
    (flyway home path will be /home/obapiuser/flyway-9.8.1)
```

Gradle Installation

Download the gradle zip file from the gradle site

Unzip the downloaded zip file into the desire path

Example :

```
cd /home/obapiuser
unzip gradle-7.4.2-bin.zip
GRADLE_HOME=/home/obapiuser/gradle-7.4.2
```

cx_Oracle (Software Installation)

1. Oracle Instant Client

Download oracle-instantclient19.10-basic-19.10.0.0.0-1.x86_64.rpm from site

https://yum.oracle.com/repo/OracleLinux/OL7/oracle/instantclient/x86_64/getPackage/oracle-instantclient19.10-

Run the below command

```
dnf install oracle-instantclient19.10-basic-19.10.0.0.0-1.x86_64.rpm
```

```
[root@dc ~]# opt1 ls -rt
python3-3.8.0.tgz oracle-instantclient19.10-basic-19.10.0.0-1.x86_64.rpm
[root@dc ~]# dnf install oracle-instantclient19.10-basic-19.10.0.0-1.x86_64.rpm
Last metadata expiration check: 0:00:40 ago on Tue 08 Jun 2021 07:13:09 AM GMT.
Dependencies resolved.
=====
Package                               Architecture      Version            Repository          Size
-----
Installing:
oracle-instantclient19.10-basic        x86_64            19.10.0.0-1       @commandline        52 M
Installing dependencies:
libnl3                                  x86_64            2.28-127.0.3.el8_3.2  ol8_u3_baseos_patch 100 k
=====
Transaction Summary
-----
Install 2 Packages
Total size: 52 M
Total download size: 100 k
Installed size: 227 M
Is this ok [y/N]: y
Downloading Packages:
libnl3-2.28-127.0.3.el8_3.2.x86_64.rpm                                17 MB/s | 100 kB  00:00
Total                                                                    9.7 MB/s | 100 kB  00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing      : libnl3-2.28-127.0.3.el8_3.2.x86_64                                1/1
  Installing     : oracle-instantclient19.10-basic-19.10.0.0-1.x86_64                1/2
  Running scriptlet: oracle-instantclient19.10-basic-19.10.0.0-1.x86_64                2/2
  Verifying      : libnl3-2.28-127.0.3.el8_3.2.x86_64                                1/2
  Verifying      : oracle-instantclient19.10-basic-19.10.0.0-1.x86_64                2/2
Installed:
libnl3-2.28-127.0.3.el8_3.2.x86_64                                oracle-instantclient19.10-basic-19.10.0.0-1.x86_64
Complete!
[root@dc ~]# opt1 ls -rt
```

2. Install cx_Oracle
 - a. Download cx_Oracle from cx_Oracle (or cx-oracle.org) website
 - b. Extract the tar file as shown below

```
bash-4.2# tar -xvf urwid-2.1.2.tar.gz
urwid-2.1.2/
urwid-2.1.2/COPYING
urwid-2.1.2/MANIFEST.in
urwid-2.1.2/PKG-INFO
urwid-2.1.2/README.rst
urwid-2.1.2/docs/
urwid-2.1.2/docs/Makefile
urwid-2.1.2/docs/changelog.rst
urwid-2.1.2/docs/conf.py
urwid-2.1.2/docs/examples/
urwid-2.1.2/docs/examples/bigtext.py
urwid-2.1.2/docs/examples/bigtext.py.xdotool
urwid-2.1.2/docs/examples/bigtext.py.xdotool.png
```

- c. Browse into the extracted directory and run below command

```
python3.8 setup.py build_py
```

```
bash-4.4# python3.8 setup.py build_py
running build_py
```

- d. Execute below command to perform Urwid installation

```
python3.8 setup.py install
```

```
bash-4.4# python3.8 setup.py install
running install
running bdist_egg
running egg_info
writing cx_Oracle.egg-info/PKG-INFO
writing dependency_links to cx_Oracle.egg-info/dependency_links.txt
writing top-level names to cx_Oracle.egg-info/top_level.txt
reading manifest file 'cx_Oracle.egg-info/SOURCES.txt'
reading manifest template 'MANIFEST.in'
no previously-included directories found matching 'odpi/test'
no previously-included directories found matching 'odpi/samples'
writing manifest file 'cx_Oracle.egg-info/SOURCES.txt'
installing library code to build/bdist.linux-x86_64/egg
running install_lib
running build_ext
building 'cx_Oracle' extension
```

 **Note:**

Or you can install cx_oracle from step mention in section [Python 3.8.0 installation on Linux Operating System](#) below step 2

Urwid (Software Installation)

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

 **Note:**

Support version for Urwid is 2.1.2 (urwid-2.1.2.tar.gz)

2. Extract the tar file as shown below

```
bash-4.2# tar -xvf urwid-2.1.2.tar.gz
urwid-2.1.2/
urwid-2.1.2/COPYING
urwid-2.1.2/MANIFEST.in
urwid-2.1.2/PKG-INFO
urwid-2.1.2/README.rst
urwid-2.1.2/docs/
urwid-2.1.2/docs/Makefile
urwid-2.1.2/docs/changelog.rst
urwid-2.1.2/docs/conf.py
urwid-2.1.2/docs/examples/
urwid-2.1.2/docs/examples/bigtext.py
urwid-2.1.2/docs/examples/bigtext.py.xdotool
urwid-2.1.2/docs/examples/bigtext1.png
```

3. Browse into the extracted directory and run below command

```
# python3.8 setup.py build_py
```

```
oash-4.4# python3.8 setup.py build_py
running build_py
creating build
creating build/lib.linux-x86_64-3.8
creating build/lib.linux-x86_64-3.8/urwid
copying urwid/__init__.py -> build/lib.linux-x86_64-3.8/urwid
copying urwid/_async_kw_event_loop.py -> build/lib.linux-x86_64-3.8/urwid
copying urwid/canvas.py -> build/lib.linux-x86_64-3.8/urwid
copying urwid/command_map.py -> build/lib.linux-x86_64-3.8/urwid
copying urwid/compat.py -> build/lib.linux-x86_64-3.8/urwid
copying urwid/container.py -> build/lib.linux-x86_64-3.8/urwid
copying urwid/curses_display.py -> build/lib.linux-x86_64-3.8/urwid
copying urwid/decoration.py -> build/lib.linux-x86_64-3.8/urwid
copying urwid/display_common.py -> build/lib.linux-x86_64-3.8/urwid
copying urwid/escape.py -> build/lib.linux-x86_64-3.8/urwid
copying urwid/font.py -> build/lib.linux-x86_64-3.8/urwid
```

 **Note:**

Ensure Python 3.8.0 version should be available in PATH variable. Above execution should be done using Python 3.8.0.

4. Execute below command to perform Urwid installation

```
# python3.8 setup.py install
```

```
oash-4.4# python3.8 setup.py install
running install
running bdist_egg
running egg_info
writing urwid.egg-info/PKG-INFO
writing dependency_links to urwid.egg-info/dependency_links.txt
writing top-level names to urwid.egg-info/top_level.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
```

 **Note:**

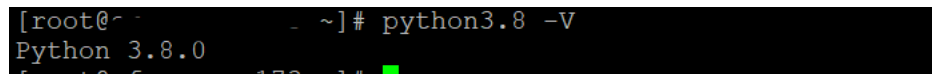
Or you can install urwid from section [Python 3.8.0 installation on Linux Operating System](#) below step 2 Ensure Python 3.8.0 version should be available in PATH variable. Above execution should be done using Python 3.8.0.

1.3 Python 3.8.0 installation on Linux Operating System

1. Execute below commands to install the python 3.8.0.

```
dnf groupinstall 'development tools'
dnf install bzip2-devel expat-devel gdbm-devel ncurses-devel openssl-devel
```

```
readline-devel  
wget sqlite-devel tk-devel xz-devel zlib-devel libffi-devel  
wget https://www.python.org/ftp/python/3.8.0/Python-3.8.0.tgz  
tar -xzf Python-3.8.0.tgz  
cd Python-3.8.0.  
./configure --enable-optimizations  
make altinstall  
python3.8 -version
```



```
[root@~ - ~]# python3.8 -V  
Python 3.8.0
```

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

```
pip3.8 install cx-Oracle==8.3.0  
pip3.8 install urwid==2.1.2
```

limits.conf (OS Configuration)

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

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. Refer section [Installing Stand-alone Weblogic Server](#) 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 "[Installing and Configuring Oracle HTTP Server \(Webtier\)](#)"
- Section "[Verifying the Installation](#)"
- [Installing and Configuring Oracle HTTP Server \(OHS\)](#)
- [Verifying Installation](#)

2.1 Installing and Configuring Oracle HTTP Server (OHS)

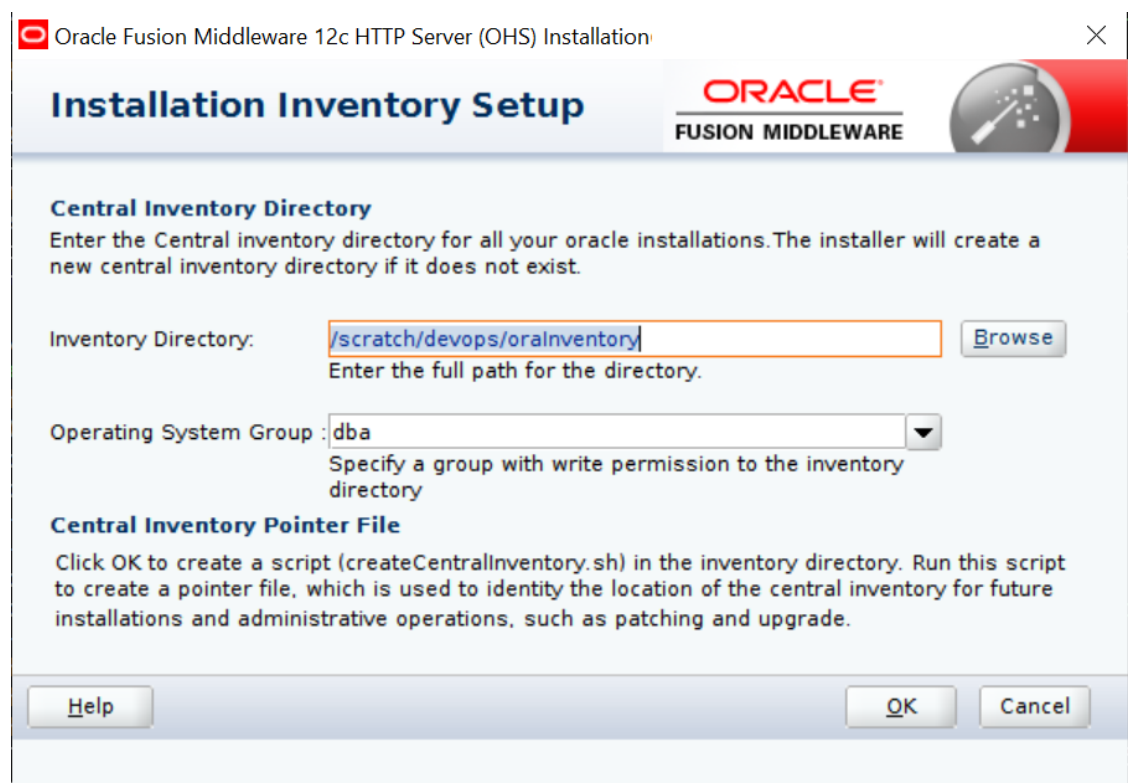
Obtain Oracle Web Tier from the Oracle Fusion Middleware Downloads. Download **webtier.zip** file to a directory, and unpack the downloaded archive that contains the installer.

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

```
./fmw_12.2.1.4.0_ohs_linux64.bin
```

Now, follow the instructions as shown below to **Install Webtier**,

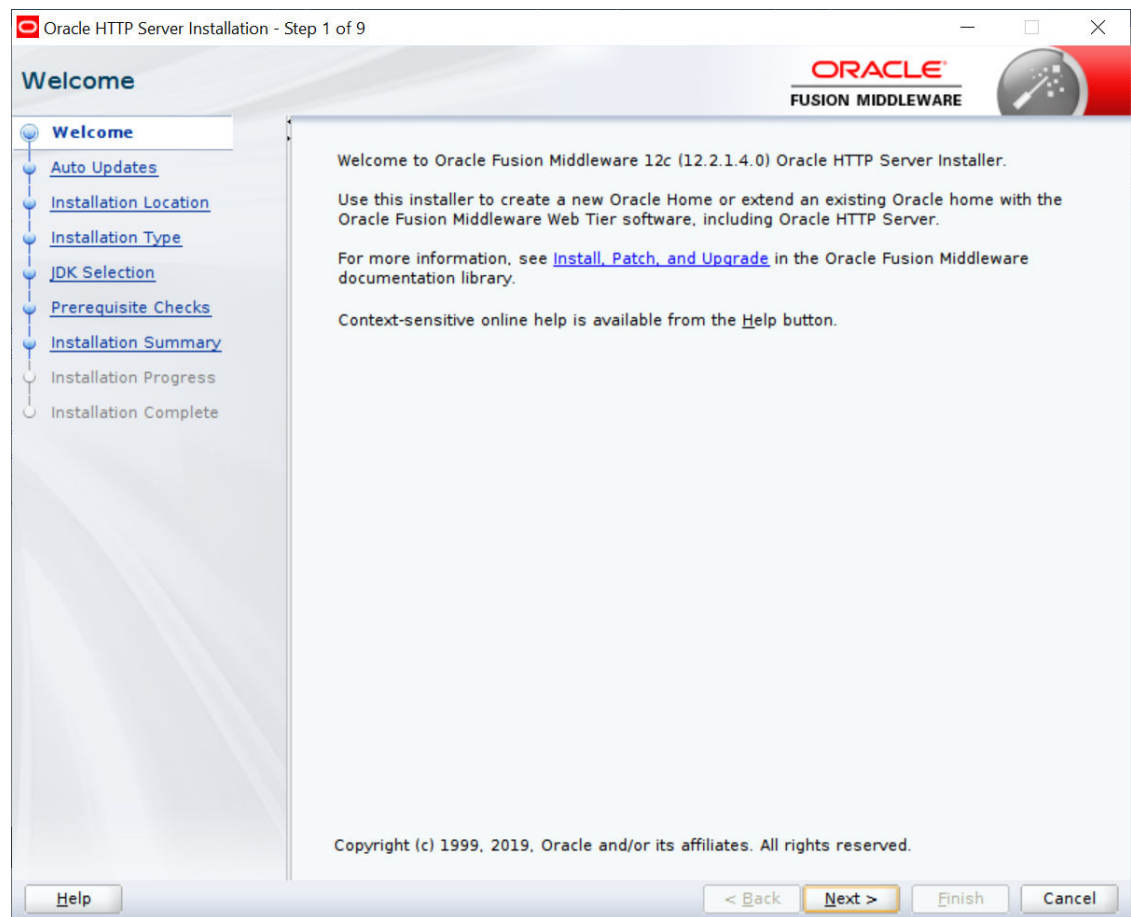
Specify Inventory Directory Screen



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.

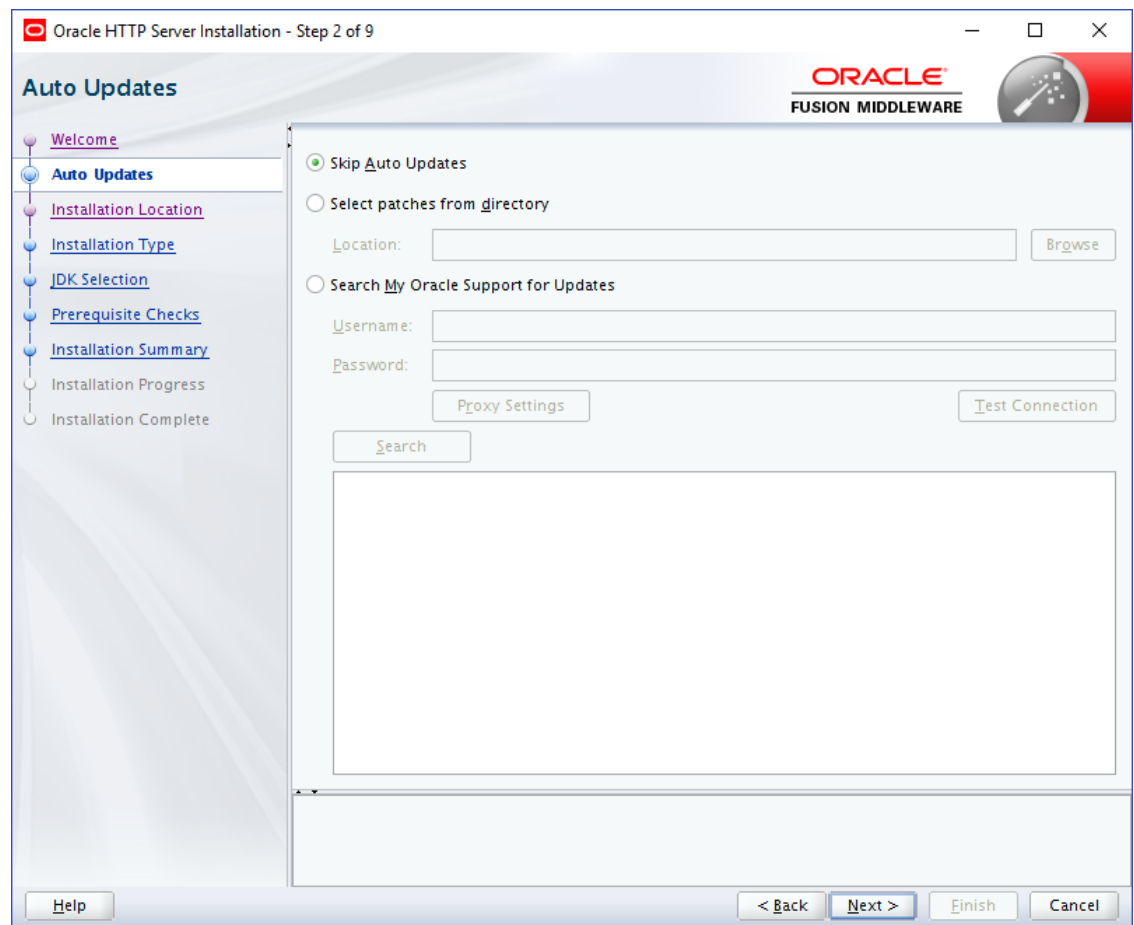
Welcome Screen



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

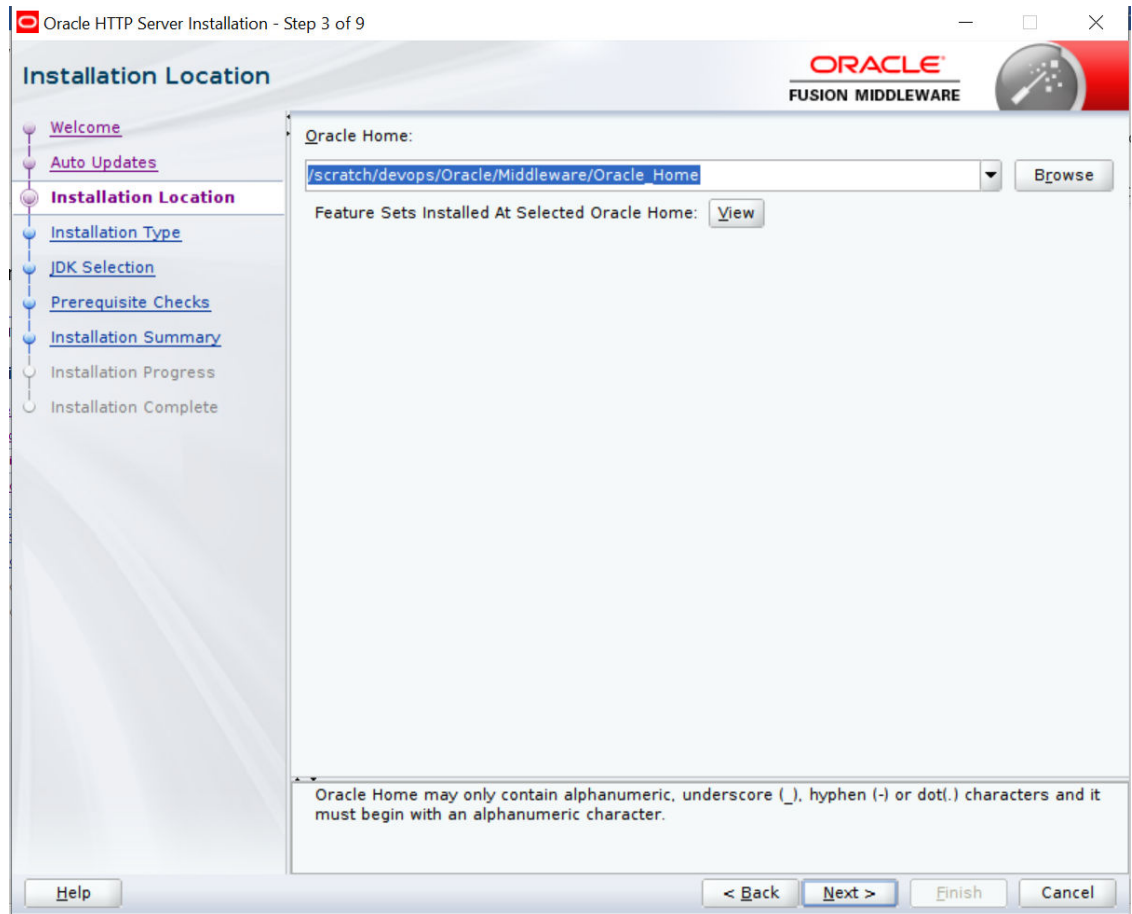
Click **Next** to continue.

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.)

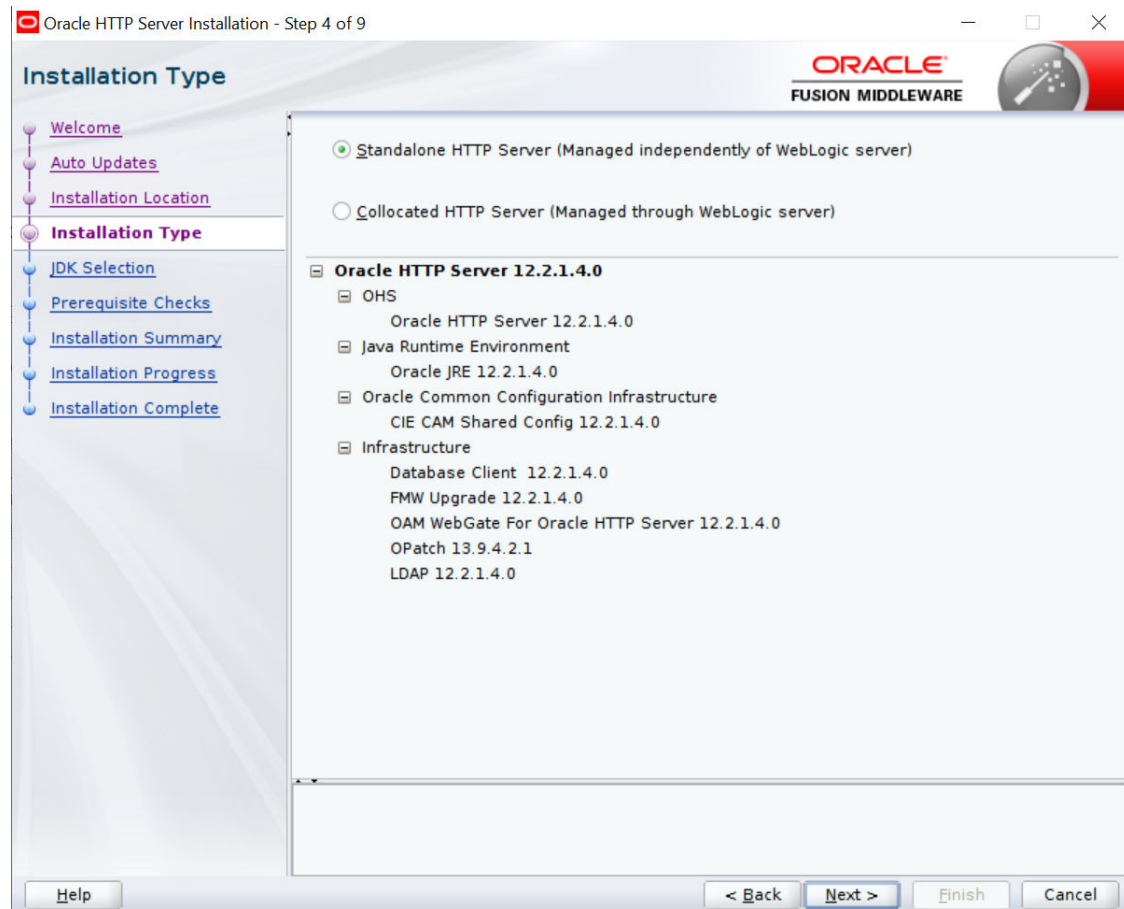
Select Installation Location



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



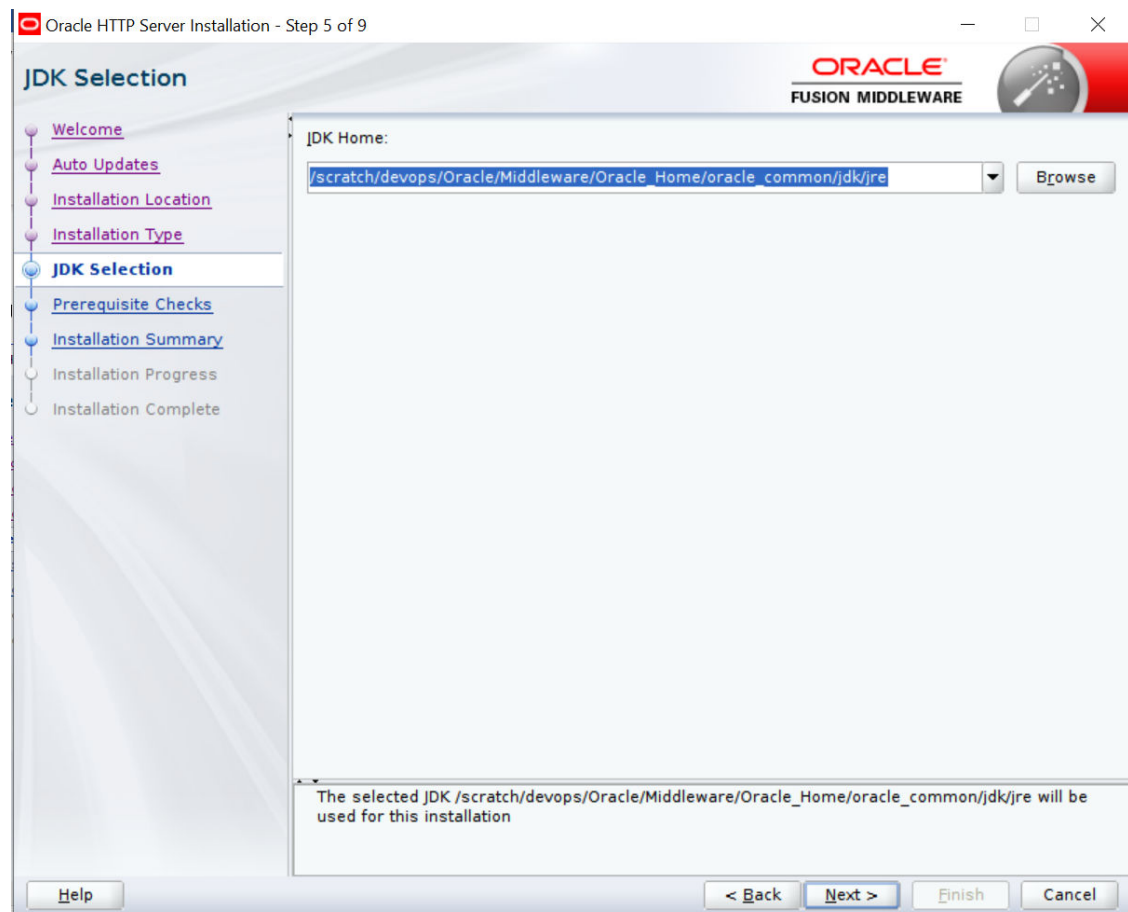
The following are the Installation Types available.

- 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).

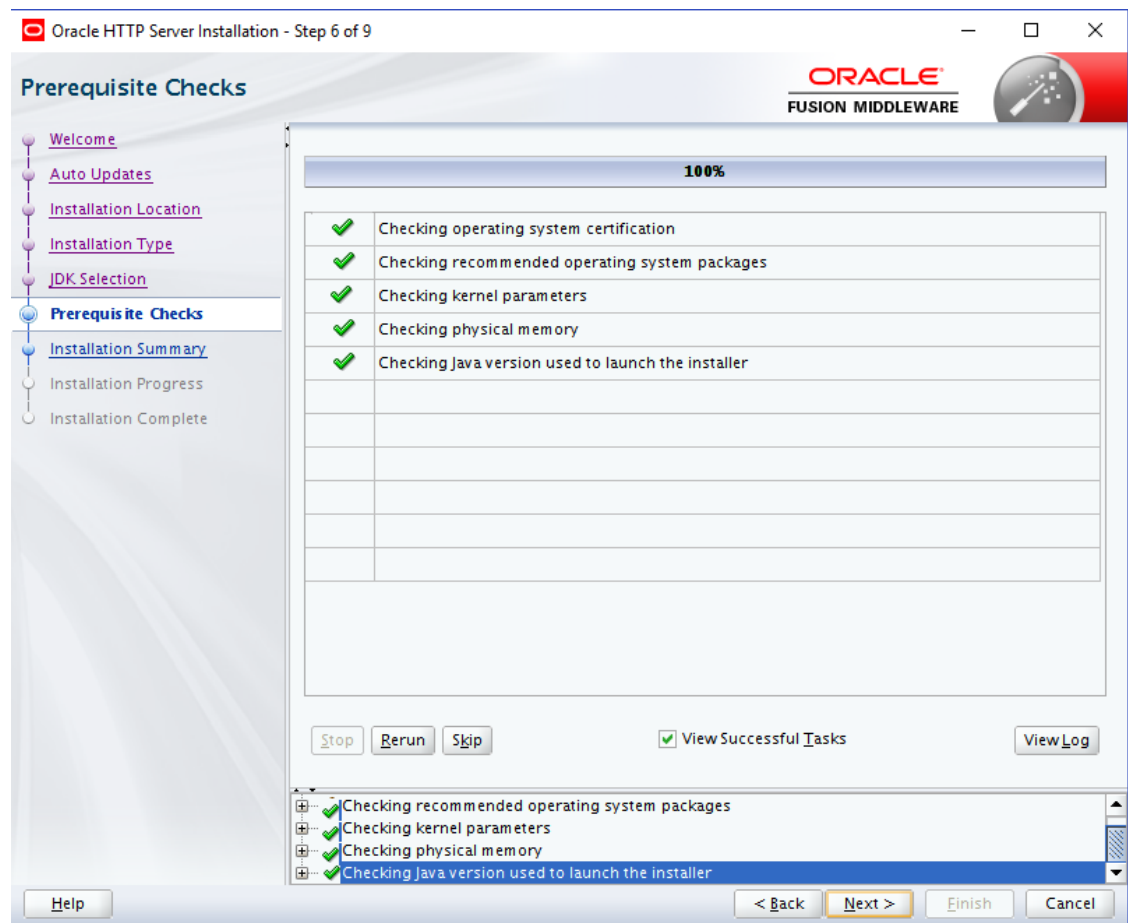
Click **Next** to continue.

Select JDK home



Click **Next** to continue.

Prerequisite Checks Screen

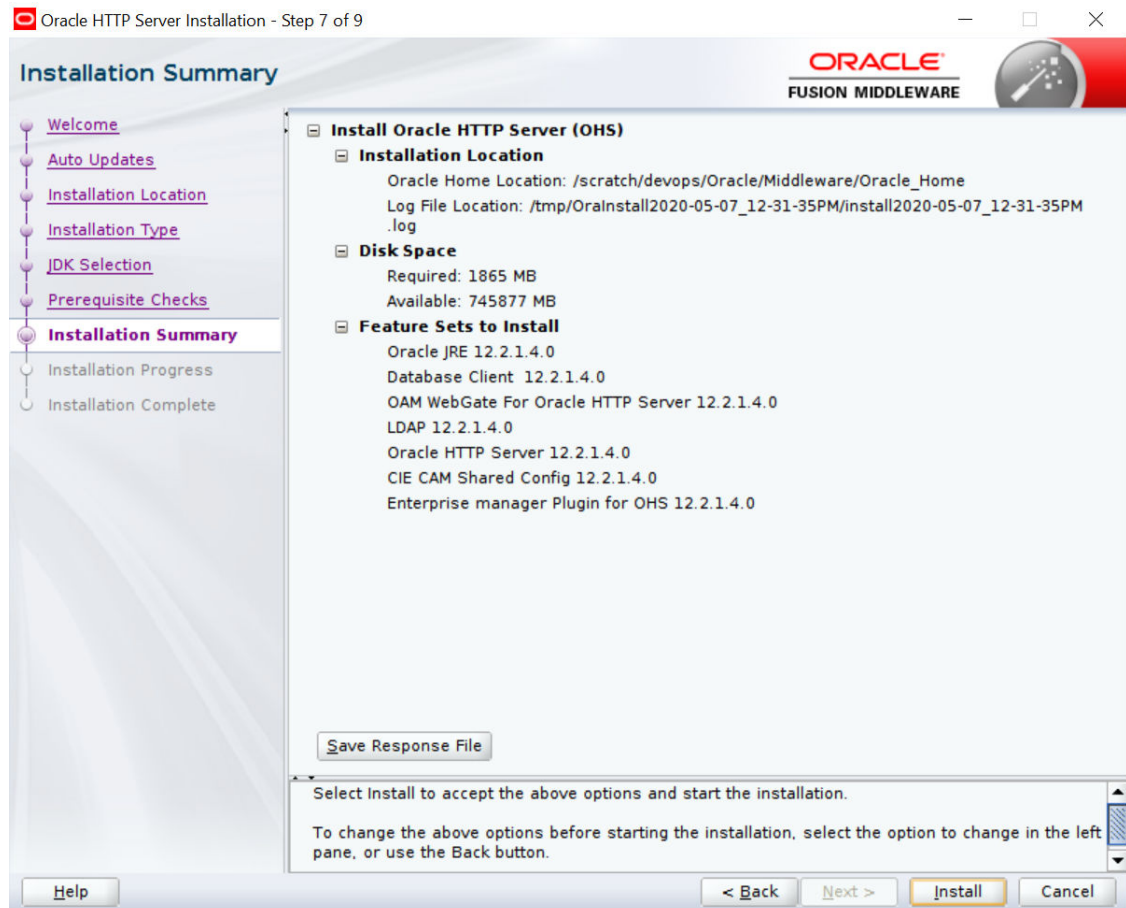


This screen shows whether the system requirements are met in order to install the software.

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.

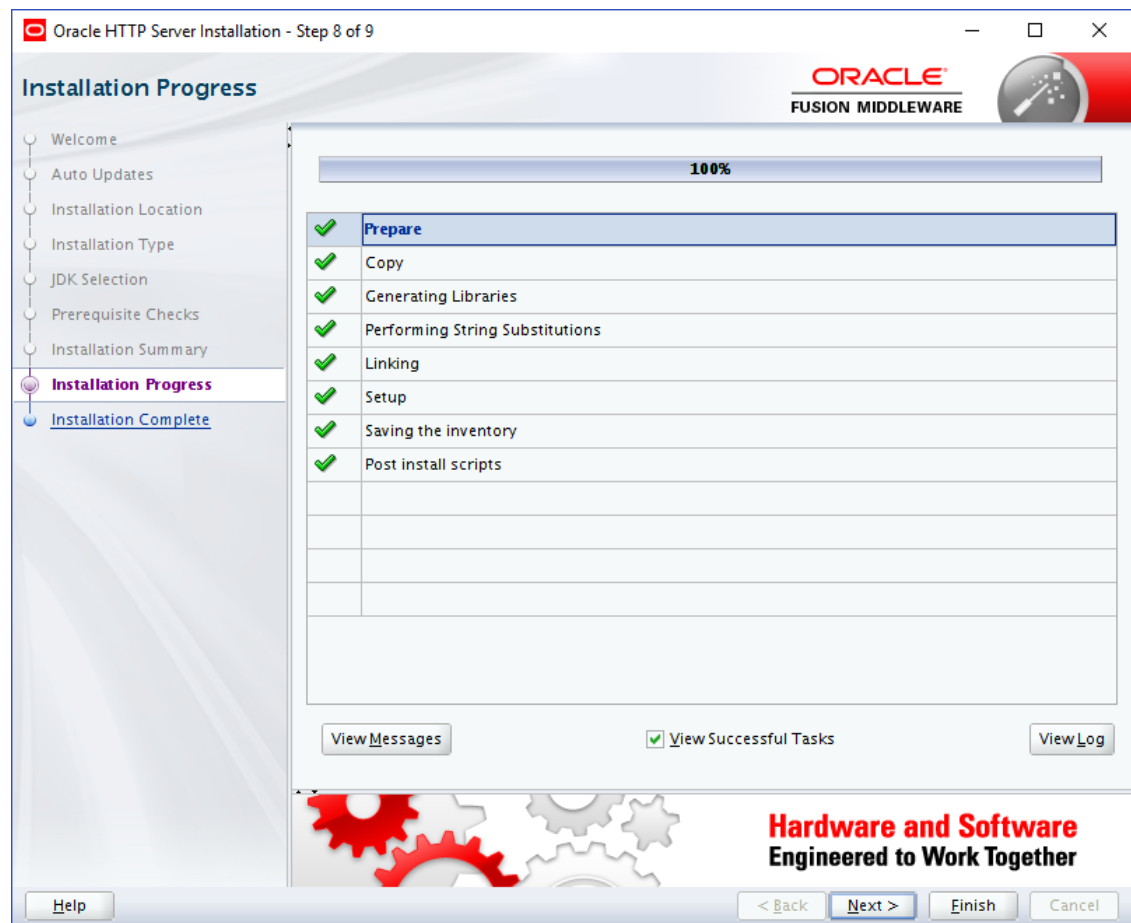
If you want to make any changes to the configuration before starting the installation, use the navigation pane, and select the topic you want to edit.

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

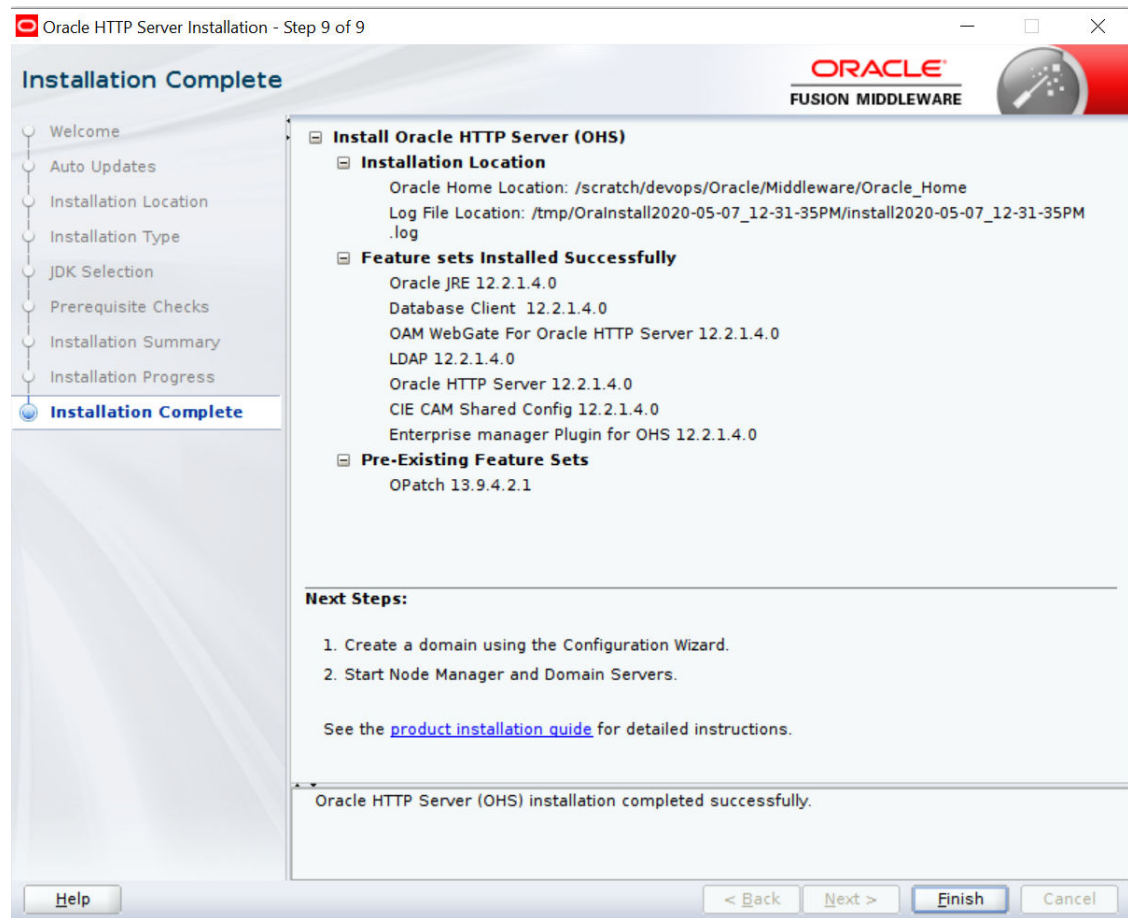


This screen shows the progress of the installation.

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.

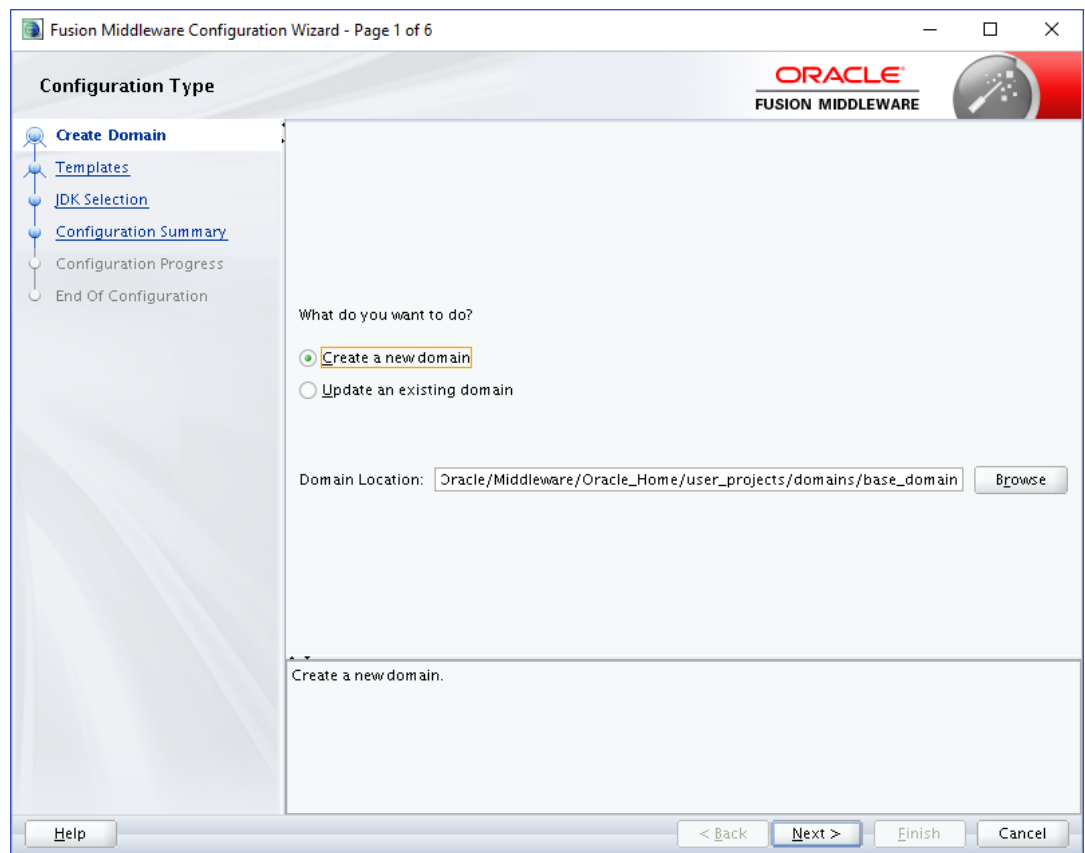
Configure the HTTP server

Follow below steps to configure domain for HTTP server

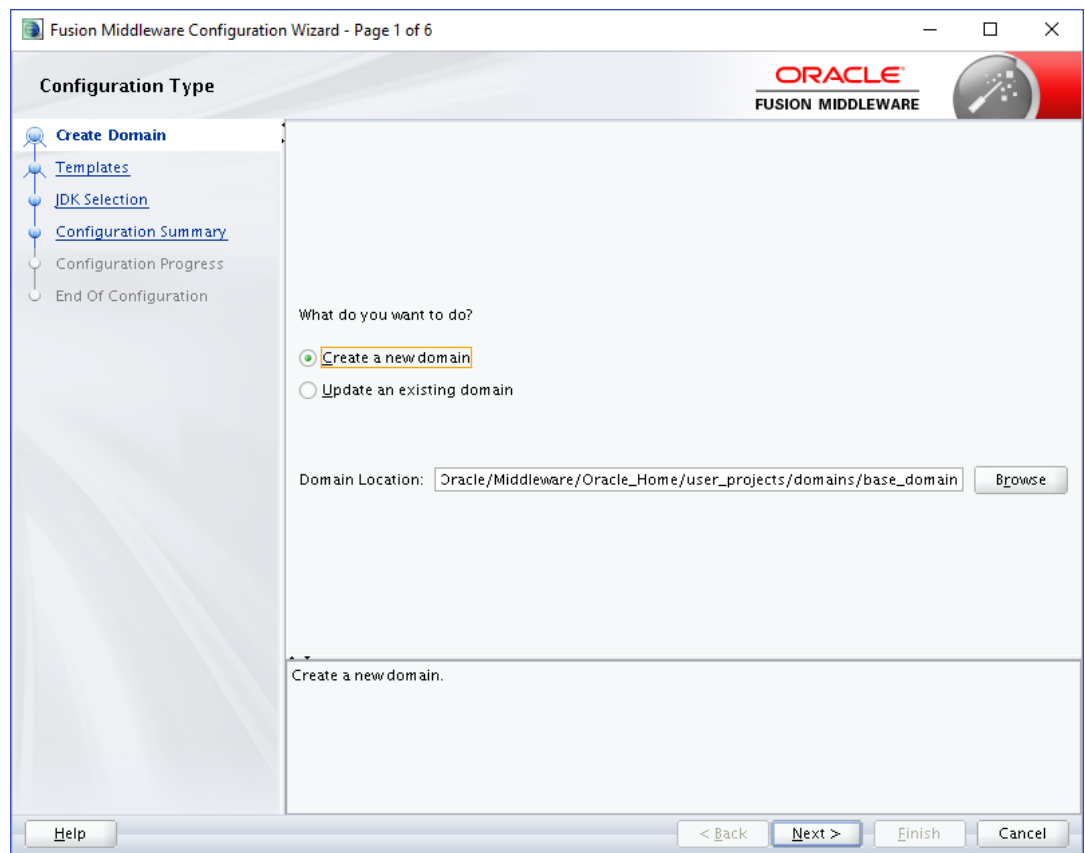
1. Browse <Middleware_Home>/oracle_common/common/bin directory
2. Execute below command

```
./config.sh
```

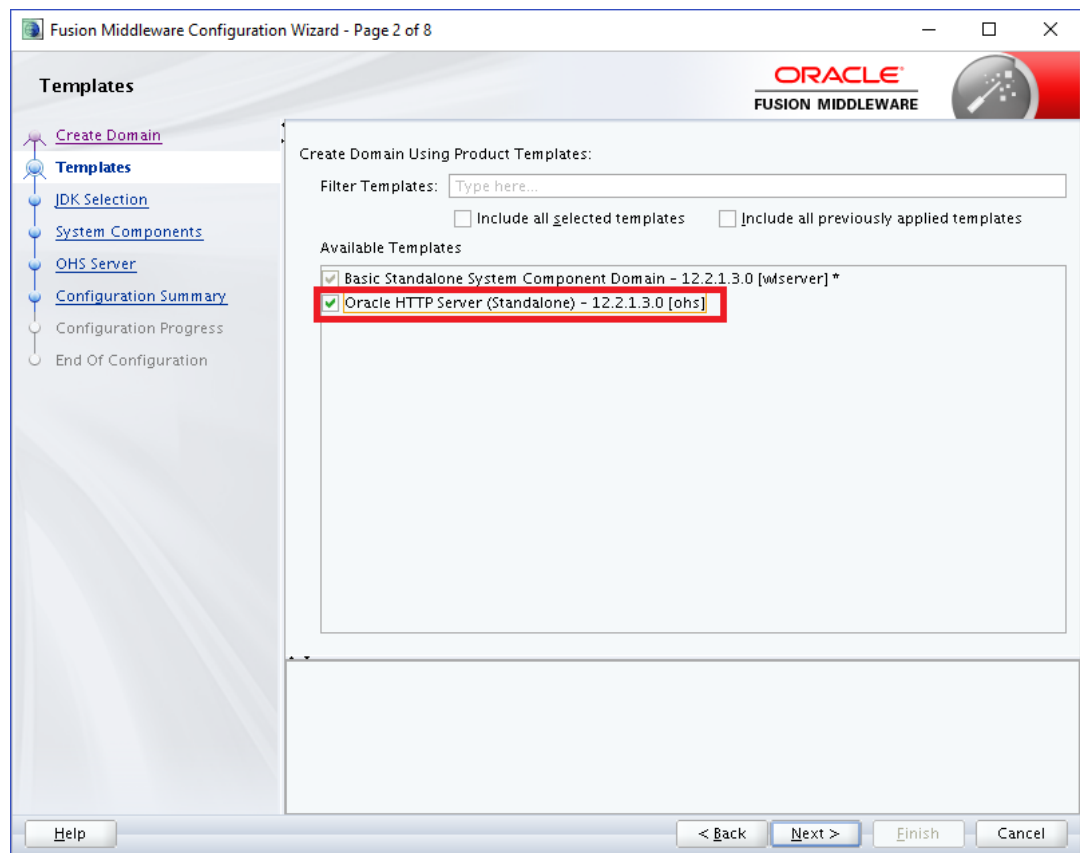
Below screen will be displayed



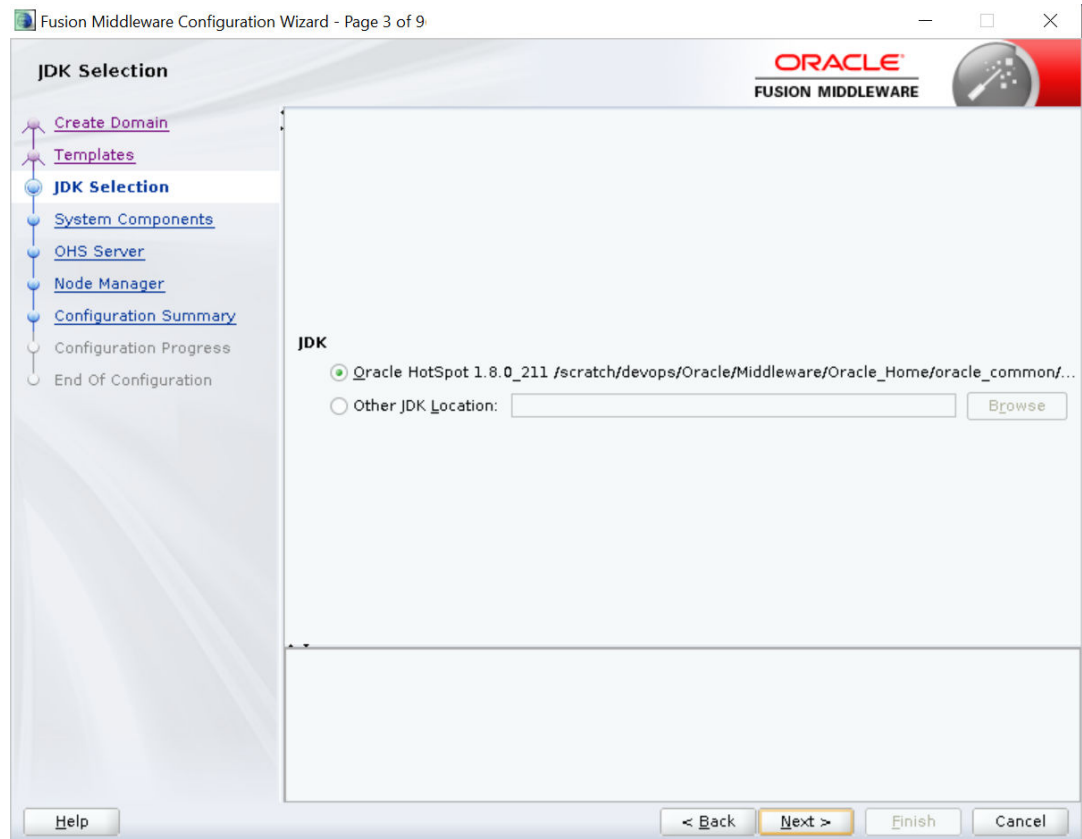
3. Select **“Create a new domain”** option and select Domain location. Click **Next**.



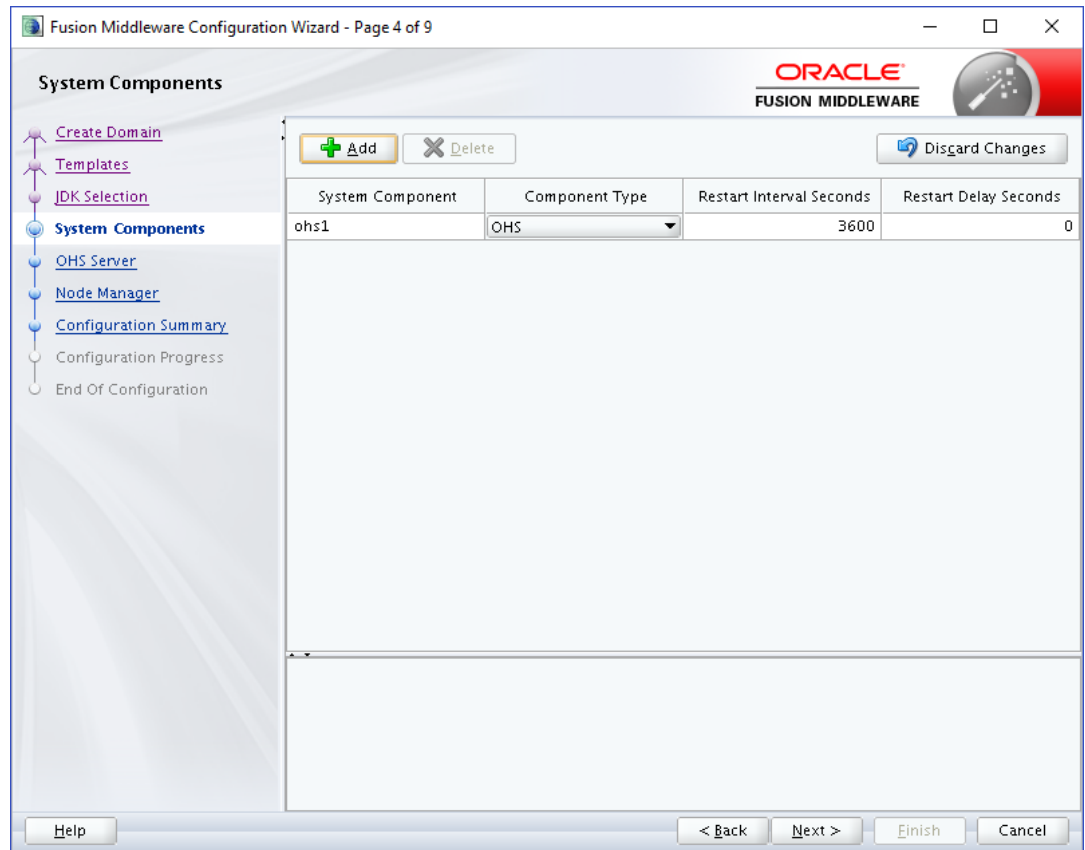
4. Select Oracle HTTP Server option and click Next.



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 'Fusion Middleware Configuration Wizard - Page 5 of 9' window. The title bar includes the Oracle logo and 'FUSION MIDDLEWARE'. The left sidebar contains a navigation tree with the following items: 'Create Domain', 'Templates', 'JDK Selection', 'System Components', 'OHS Server' (highlighted), 'Node Manager', 'Configuration Summary', 'Configuration Progress', and 'End Of Configuration'. The main area is titled 'OHS Server' and contains a 'System Component' dropdown menu set to 'ohs1'. Below this are several input fields: 'Admin Host' (obdxohs.in.oracle.com), 'Admin Port' (9999), 'Listen Address' (obdxohs.in.oracle.com), 'Listen Port' (7777), 'SSL Listen Port' (4443), and 'Server Name' (http://obdxohs.in.oracle.com:7777). At the bottom, there are buttons for 'Help', '< Back', 'Next >', 'Finish', and 'Cancel'.

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

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

The screenshot shows the 'Node Manager' configuration page of 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', 'Node Manager' (highlighted), 'Configuration Summary', 'Configuration Progress', and 'End Of Configuration'. The main content area is titled 'Node Manager' and features the Oracle Fusion Middleware logo. It contains two sections: 'Node Manager Type' and 'Node Manager Credentials'. In the 'Node Manager Type' section, the 'Per Domain Default Location' radio button is selected, and the 'Node Manager Home' text field contains the path 'oracle_home/user_projects/domains/base_domain/nodemanager', with a 'Browse' button to its right. The 'Per Domain Custom Location' radio button is unselected. In the 'Node Manager Credentials' section, the 'Username' field contains 'obdxohsnode', and both the 'Password' and 'Confirm Password' fields are masked with dots. At the bottom of the window, there are four buttons: 'Help', '< Back', 'Next >', and 'Finish', with a 'Cancel' button also present.

Fusion Middleware Configuration Wizard - Page 6 of 9

Node Manager

ORACLE
FUSION MIDDLEWARE

Create Domain
Templates
JDK Selection
System Components
OHS Server
Node Manager
Configuration Summary
Configuration Progress
End Of Configuration

Node Manager Type

☒ Per Domain Default Location
☐ Per Domain Custom Location

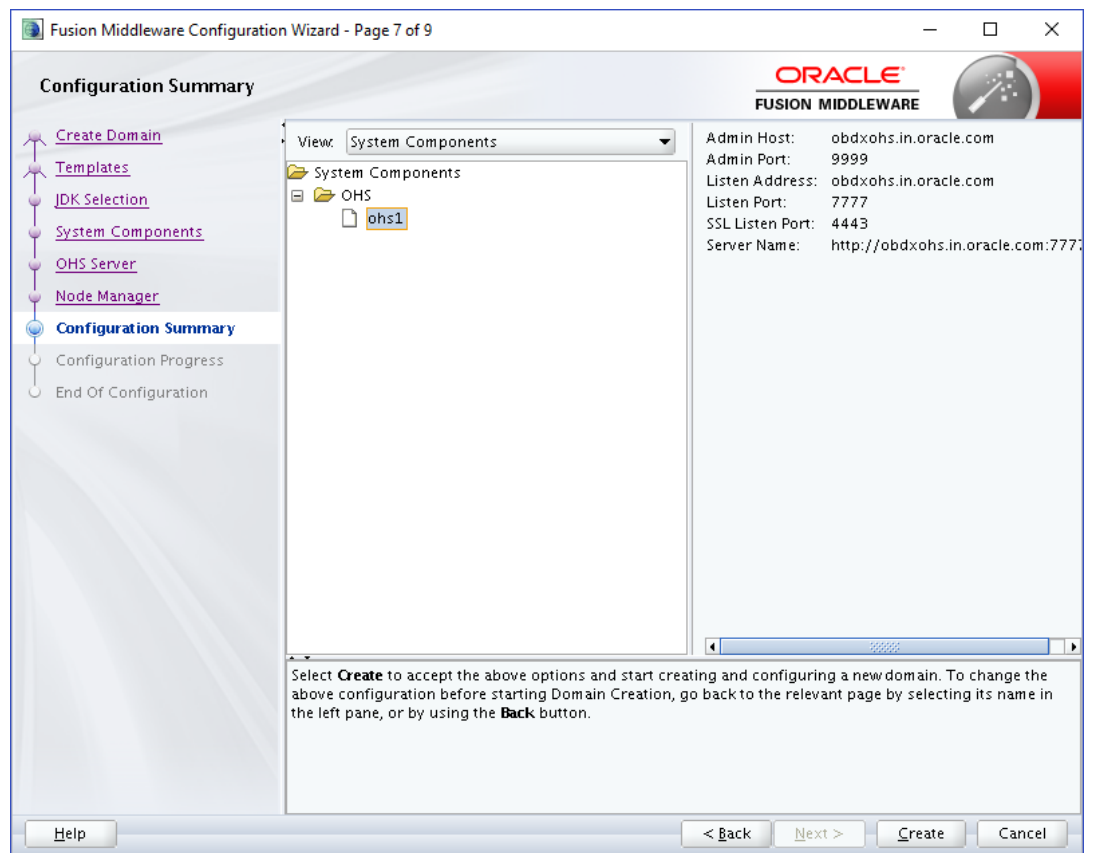
Node Manager Home: oracle_home/user_projects/domains/base_domain/nodemanager

Node Manager Credentials

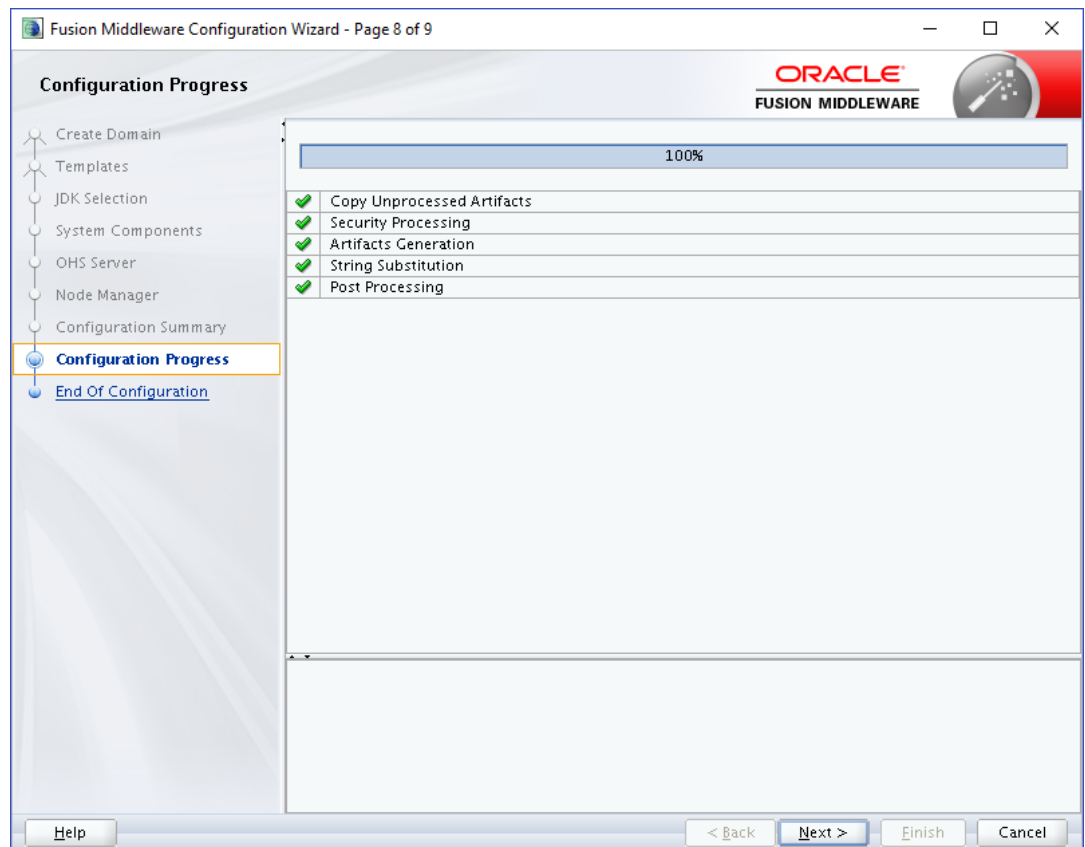
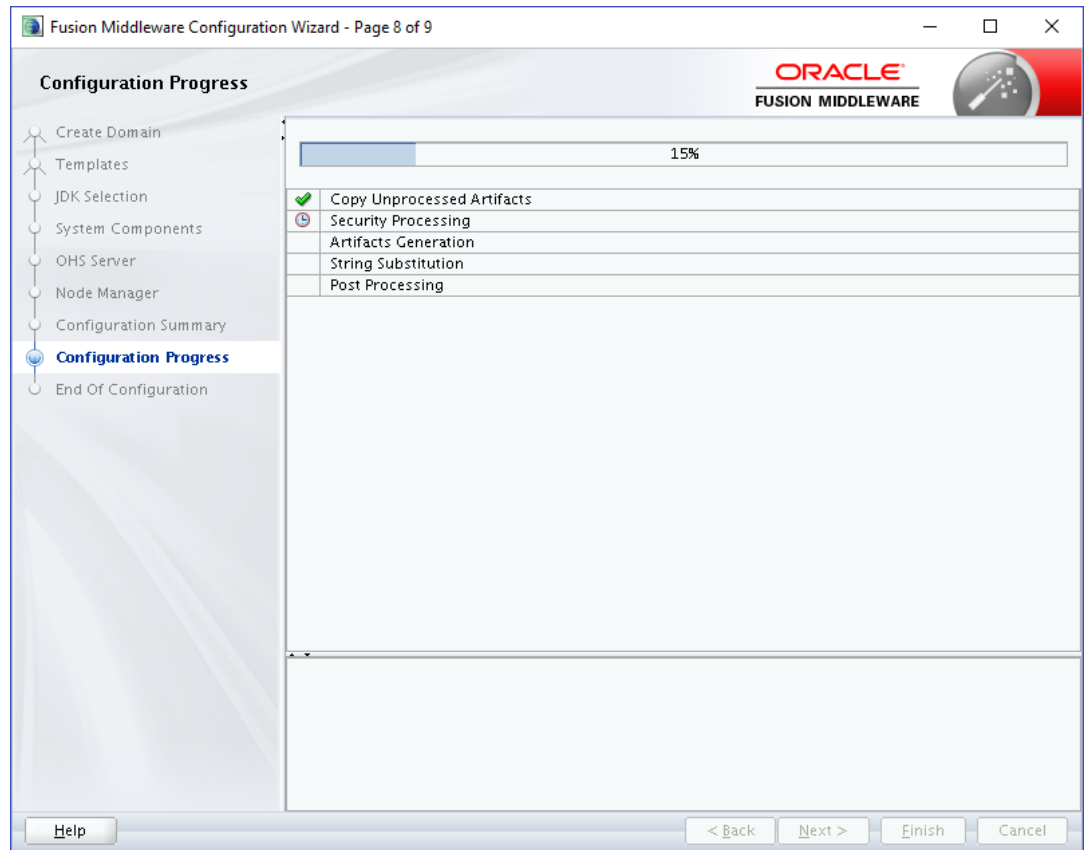
Username: obdxohsnode
Password:
Confirm Password:

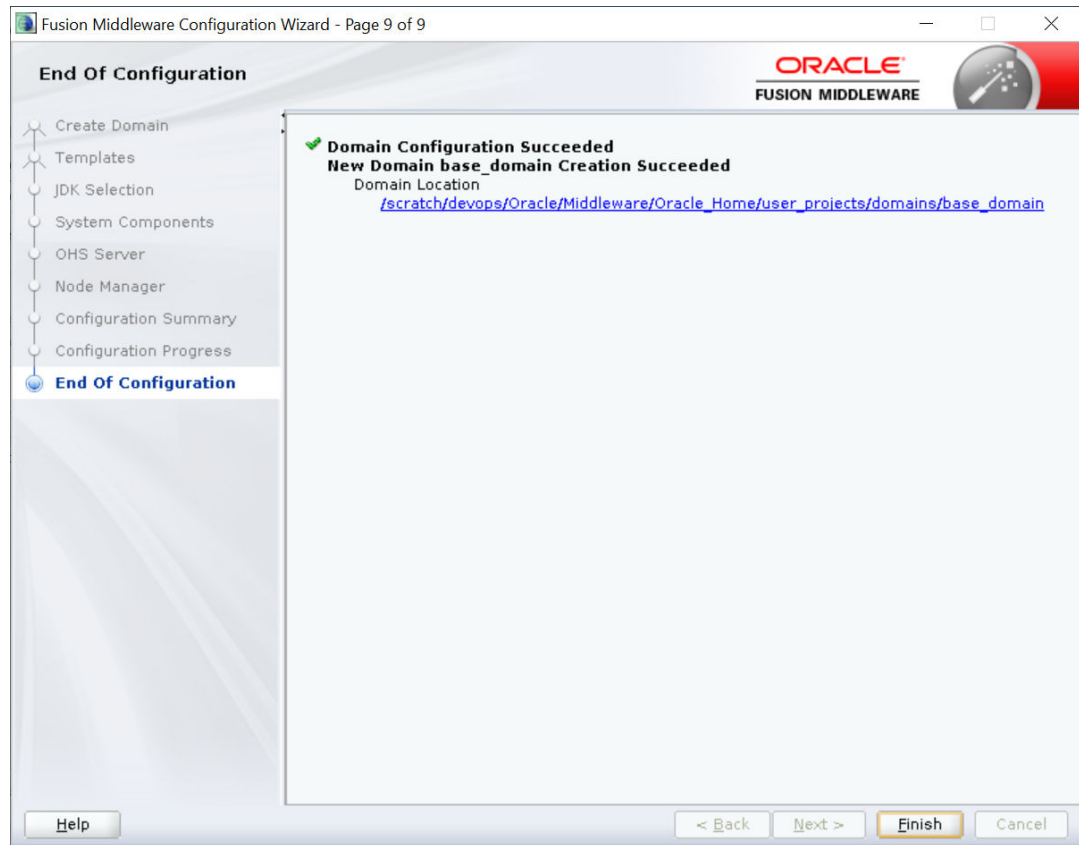
Help < Back Next > Finish Cancel

9. Review summary and click **Create**.



10. Below installation progress can be seen;





2.2 Verifying 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
/scratch/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>

ORACLE Oracle HTTP Server 12c

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 Fusion Middleware Applications.

The diagram illustrates the Oracle HTTP Server 12c architecture. At the center is a circular platform containing 'Local Content', 'OHF' (Oracle HTTP Framework), 'Load Balancing', 'Authentication', 'Audit', and 'Identity Management'. To the left, 'Process Management and HA', 'Certificate management', 'Automation', and 'Test to Production' are shown as inputs. Below the platform, 'Fusion Lifecycle Tools' and 'Enterprise Manager' (labeled 'Manage, monitor, diagnose') are shown as management and monitoring components. The platform is connected to 'Fusion Middleware Applications' on the right.

Features

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

Administration / Monitoring

- Server Administration**
 - Leverages WebLogic 12c administration interfaces to provide a simple, consistent and distributed administration model for administering Oracle HTTP Server, Oracle WebLogic 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.
- Robust Migration Tool**
 - Integrated migration tools make it easy to migrate existing Oracle HTTP Server 11g deployments to Oracle HTTP Server 12c.

3

Installing and Configuring Weblogic Server 14c

This chapter describes the steps for installing the Weblogic Server version 14.1.1.0.0:

- Section "[Installing Stand-alone Weblogic](#)"
- [Installing Stand-alone Weblogic Server](#)

3.1 Installing Stand-alone Weblogic Server

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

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

- Section "[Pre-requisite - Installing Java 1.14](#)"
- Section "[Installing Weblogic Server](#)"
- Section "[Verifying the Installation](#)"
- [Pre-requisite - Installing Java 11](#)
- [Installing Weblogic](#)
- [Verifying Installation](#)

3.1.1 Pre-requisite - Installing Java 11

- Obtain the Java tarball pack from the Oracle Java Downloads. Download `jdk-8u281-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-8u281-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_281
export PATH=$JAVA_HOME/bin:$PATH
```

3.1.2 Installing Weblogic

- Obtain Weblogic Server 14.1.1.0.0 zip from the Oracle Downloads. Extract the downloaded zip to get **fmw_14.1.1.0.0_wls.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_14.1.1.0.0_wls.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.

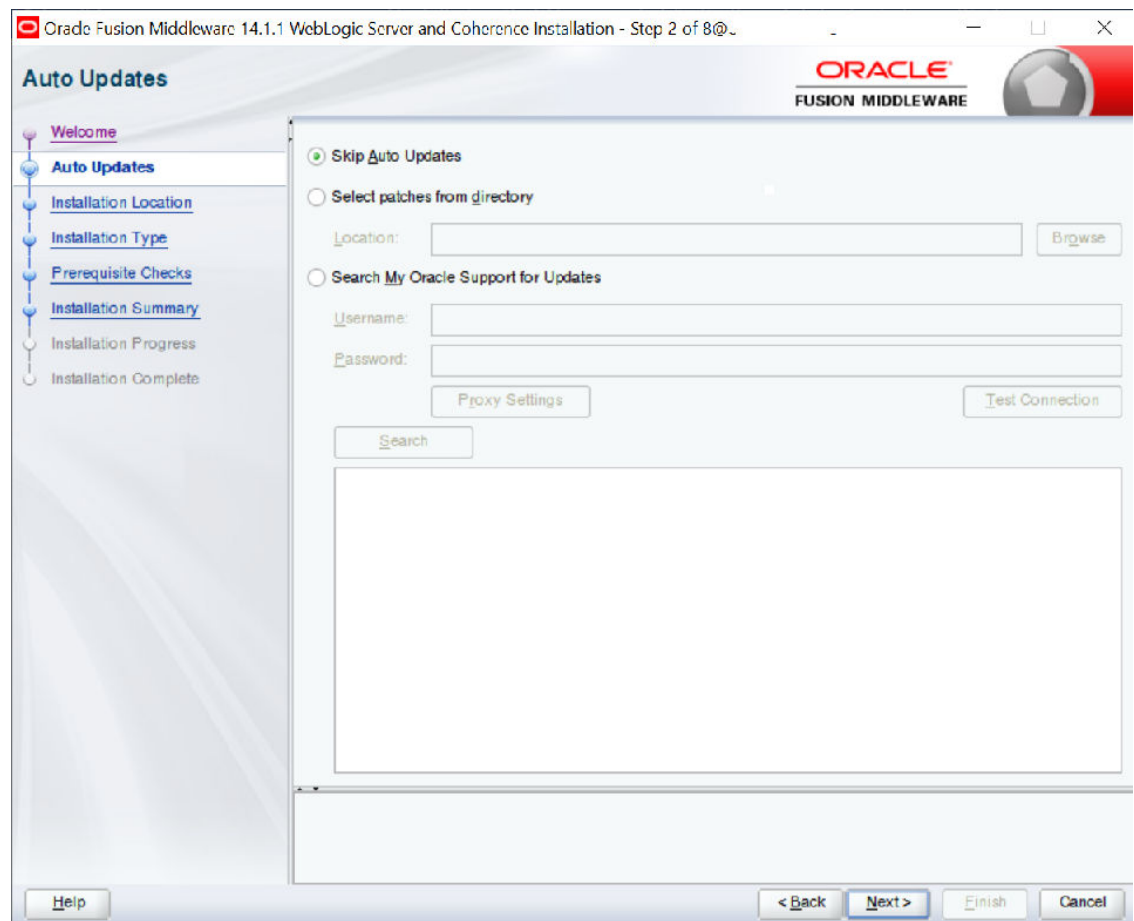
Welcome Screen



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

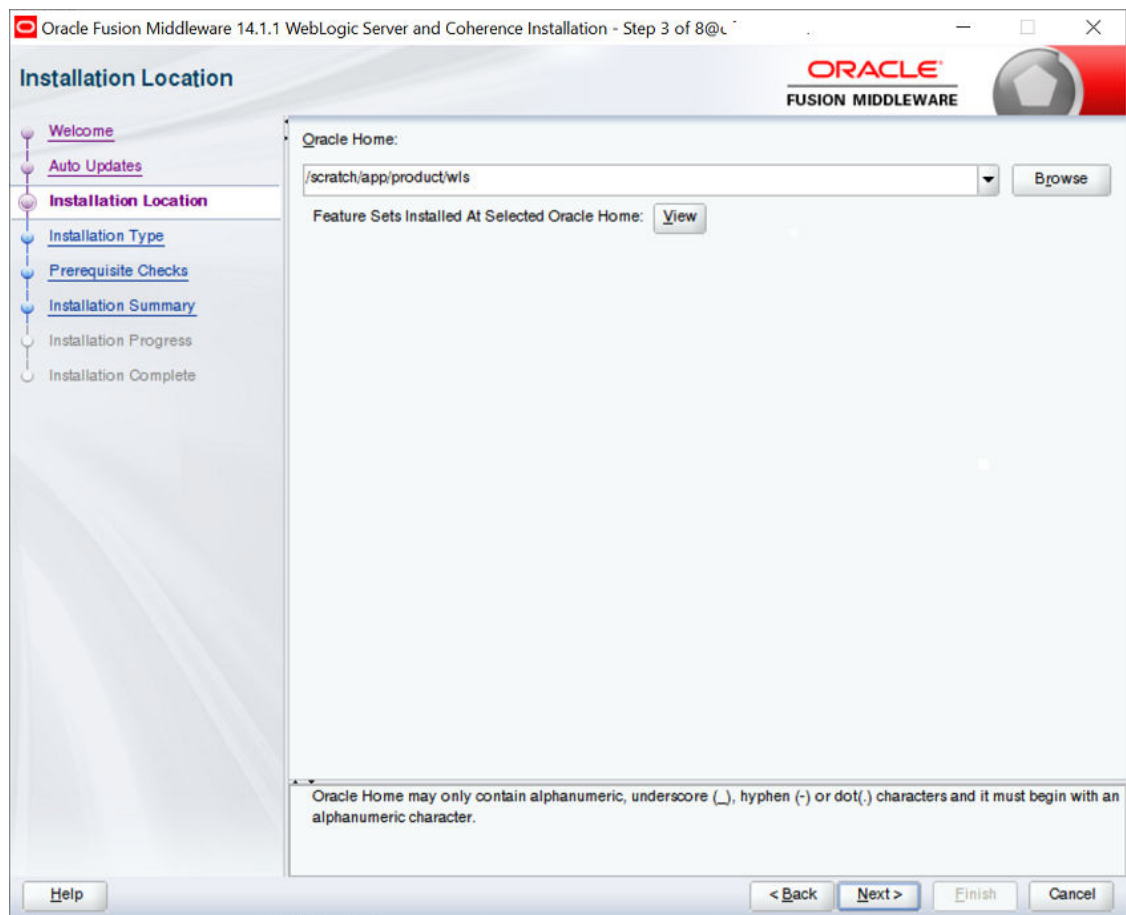
Click **Next** to continue.

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



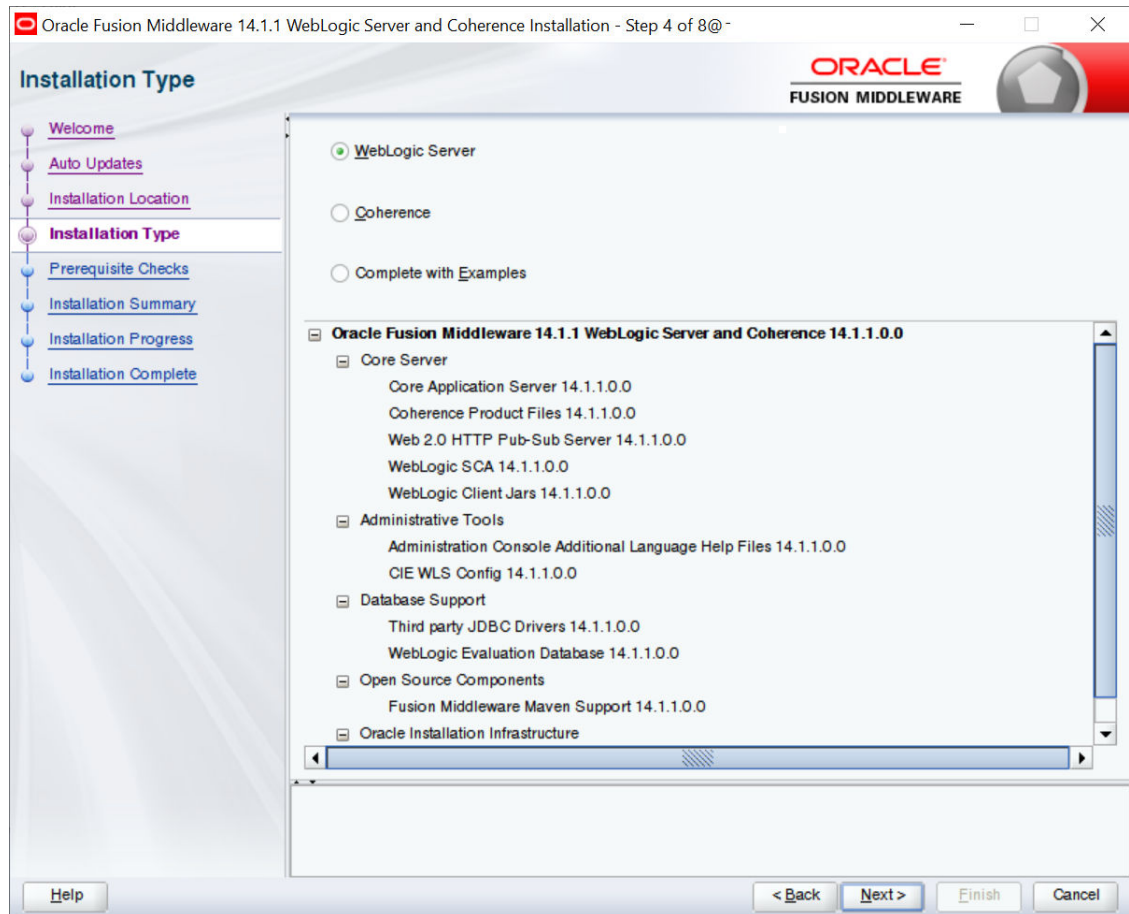
Specify the following installation locations:

- 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

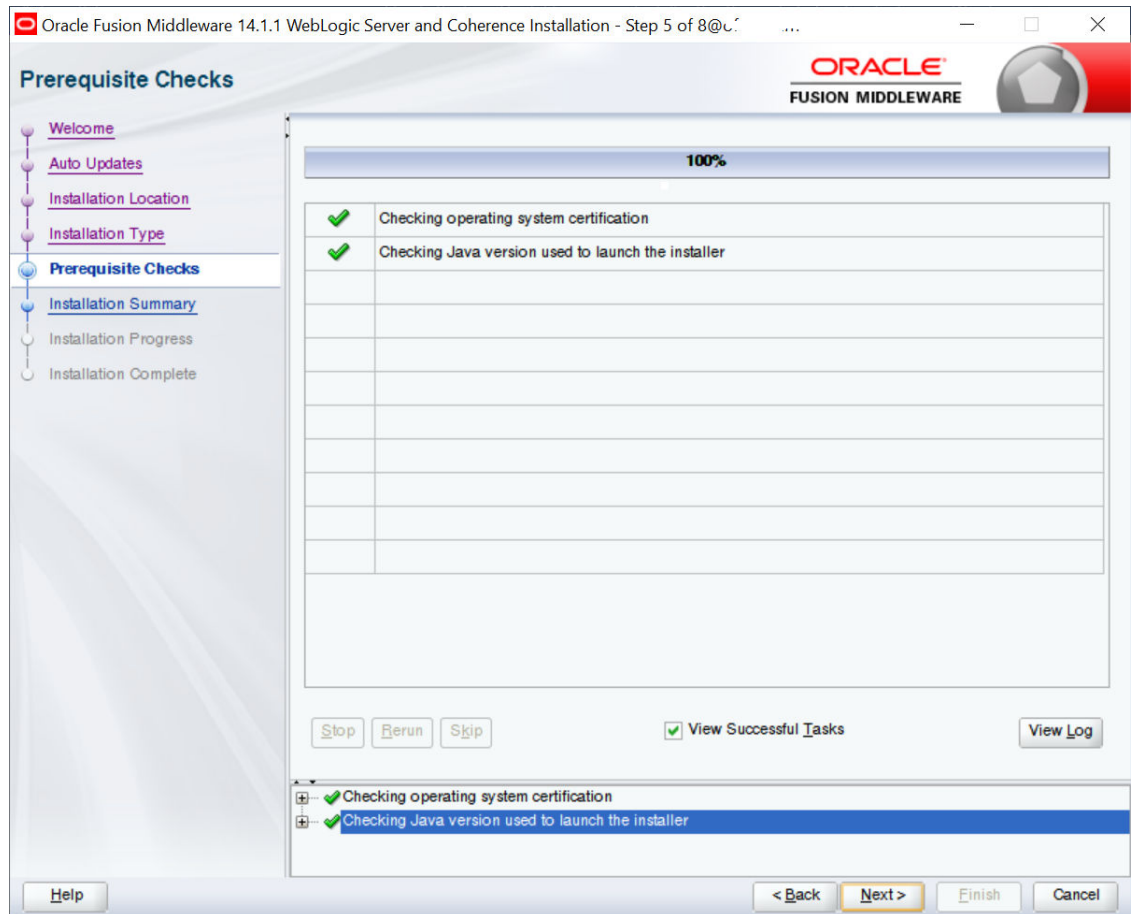


Following are the installation types:

- Weblogic Server
- Coherence
- Complete with Examples

Select Weblogic Server and click **Next** to continue.

Prerequisite Checks Screen

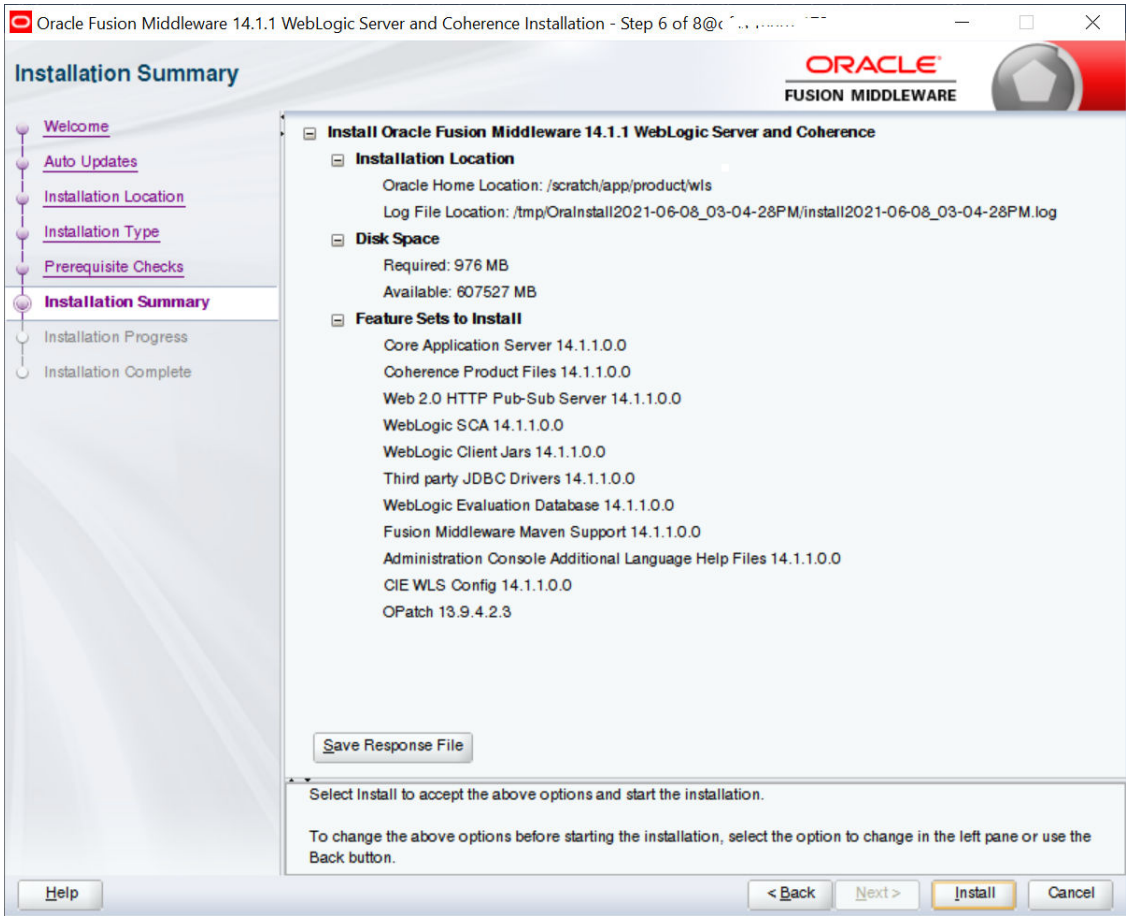


This screen shows whether the system requirements are met in order to install the software.

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**.

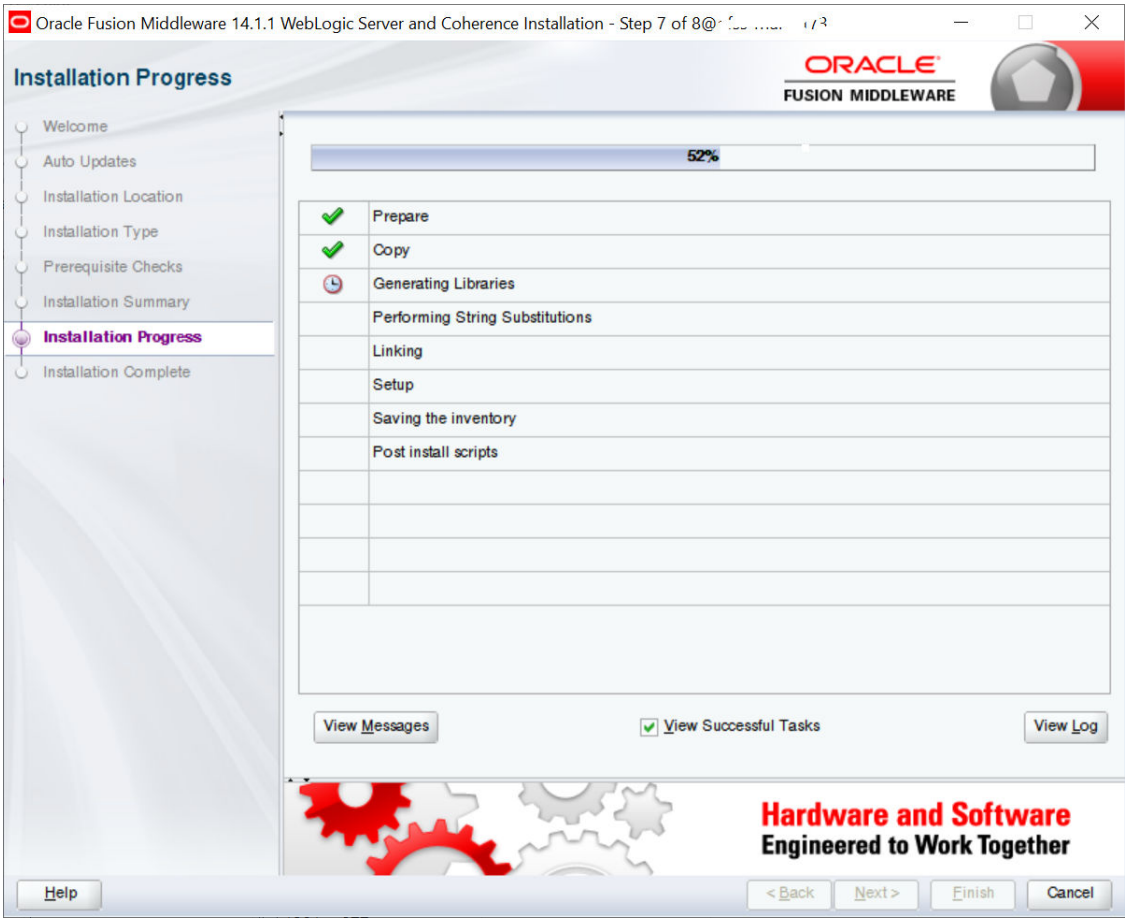
If you want to make any changes to the configuration before starting the installation, use the navigation pane, and select the topic you want to edit.

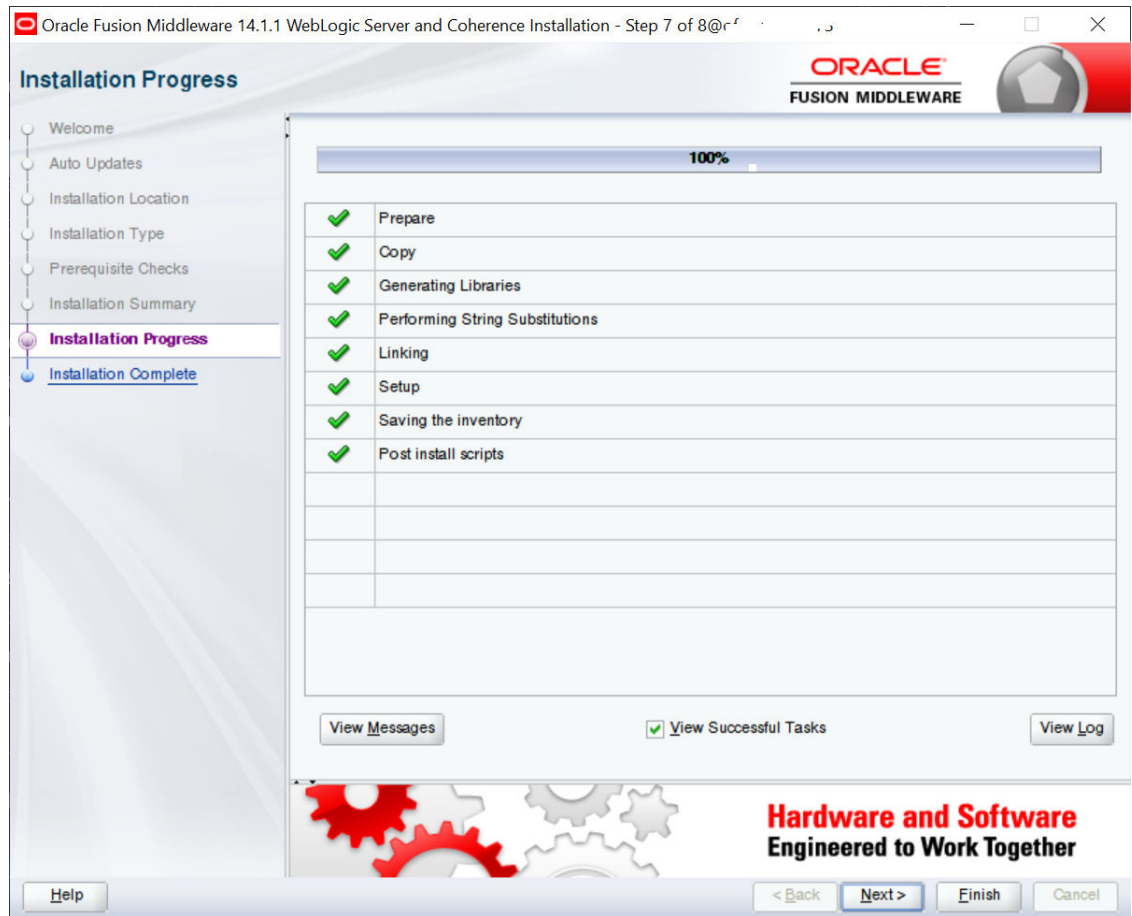
If you want to save this configuration to a text file (called a response file), click **Save**. You will be prompted for the location of name of the file you want to create (for example, `silent_install.rsp`). This file can be used later if you choose to perform the same installation from the command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

Click **Install**.

Then screen shows the progress of the installation.

Installation Progress Screen

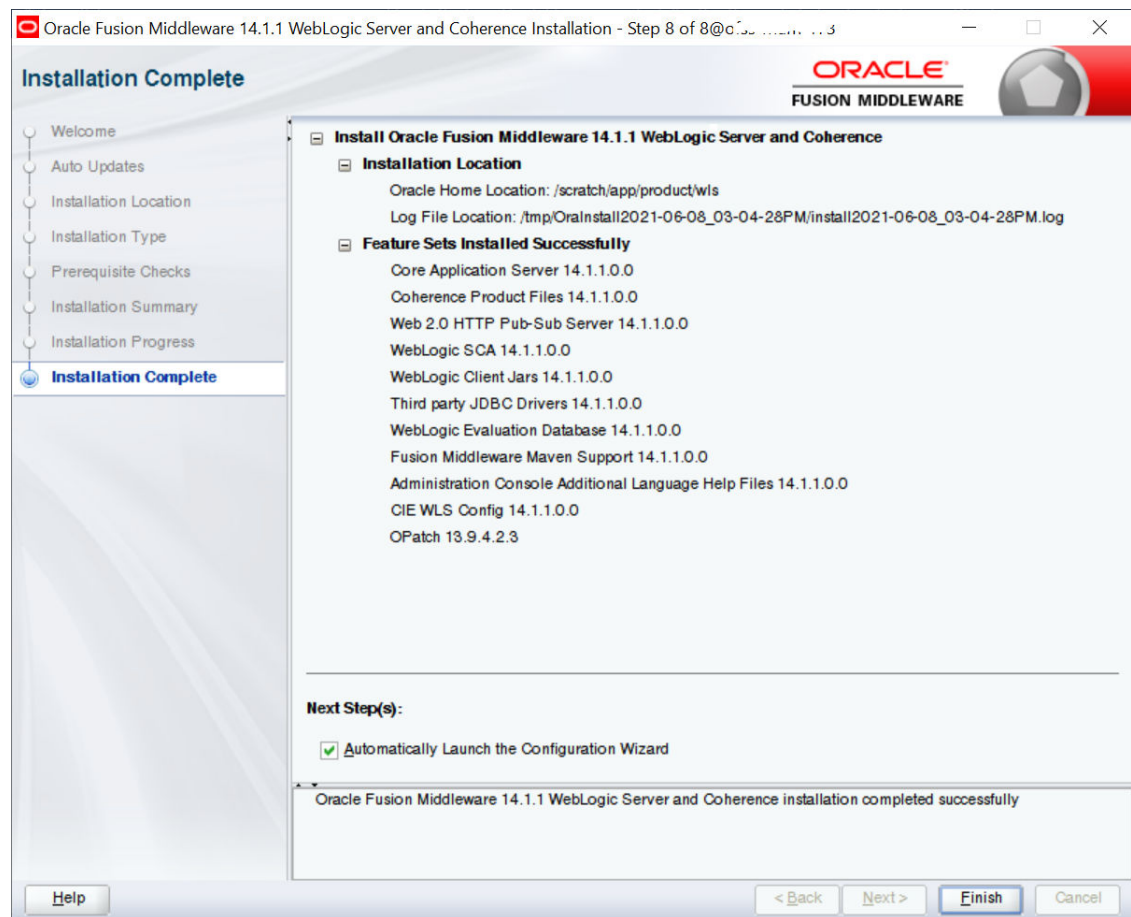




This screen shows the progress of the installation. Click **Next**.

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 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.

4

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 "[Configuring Oracle Webgate](#)"
- Section "[Verifying the Installation and Configuration of Oracle HTTP Server WebGate](#)"
- Section "[Registering the New Oracle HTTP Server 12c WebGate](#)"
- [Configuring Oracle Webgate](#)
- [Verifying Configuration of Oracle HTTP Server 12c WebGate](#)
- [Registering New Oracle HTTP Server 12c WebGate](#)

4.1 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/scratch/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  
/scratch/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/  
base_domain/config  
/fmwconfig/components/OHS/ohs1-oh /scratch/devops/Oracle/Middleware/  
Oracle_Home
```

```
deployWebGate]$ ./deployWebGateInstance.sh -w /scratch/devops/Oracle/Middleware/Oracle_Home/user_projects/d  
omains/base_domain/config/fmwconfig/components/OHS/ohs1 -oh /scratch/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: /scratch/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: /scratch/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 /scratch/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
/scratch/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/
base_domain/config
/fmwconfig/components/OHS/ohs1 -oh /scratch/devops/Oracle/Middleware/
Oracle_Home
```

```
InstallTools]$ ./EditHttpConf -w /scratch/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_d
omain/config/fmwconfig/components/OHS/ohs1 -oh /scratch/devops/Oracle/Middleware/Oracle_Home
The web server configuration file was successfully updated
/scratch/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/components/OHS/ohs1/httpd.c
onf has been backed up as /scratch/devops/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain/config/fmwconfig/c
omponents/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: /scratch/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: /scratch/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.

4.2 Verifying 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`

4.3 Registering 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 **Creating WebGate Agent on OAM Console**” under **Oracle Access Management Configuration** chapter.

Index

C

Configuring Oracle Webgate, [4-1](#)

I

Installing and Configuring Oracle HTTP Server (OHS), [2-2](#)

Installing and Configuring Weblogic Server 14c, [3-1](#)

Installing Stand-alone Weblogic Server, [3-1](#)

Installing Weblogic, [3-2](#)

Introduction, [1-1](#)

O

Oracle HTTP Server Installation, [2-1](#)

Oracle HTTP Server Webgate Installation and Configuration, [4-1](#)

P

Pre-requisite - Installing Java 11, [3-1](#)

Pre-requisite Software Installation and OS Configuration for OBAPI Installer, [1-1](#)
Python 3.8.0 installation on Linux Operating System, [1-5](#)

R

Registering New Oracle HTTP Server 12c WebGate, [4-3](#)

S

Software List, [1-1](#)

V

Verifying Configuration of Oracle HTTP Server 12c WebGate, [4-3](#)

Verifying Installation, [2-21](#), [3-11](#)