

SOA Suite Setup for BPEL Process Flow
Oracle FLEXCUBE Investor Servicing
Release 12.0.3.0.0
[April] [2014]



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1. Introduction

1.1 Background

This document provides an overview of configuring SOA suite for FCIS BPEL process deployment, this document gives the fastest approach to bringing up FCIS BPEL process. Oracle documentation are to be referred for HA and other configuration patterns.

The audience for this document will be the development groups of BPEL process flows FLEXCUBE Investor Services.

1.2 Organization of the Document

The first chapter of this document gives an introduction with brief background and organization of the document. Subsequent chapters of this document will give the implementation details.

1.3 Acronyms and Abbreviations

DS	Design Specifications Document
FCIS	Flexcube Investor Servicing

2. Repository Creation Utility (RCU)

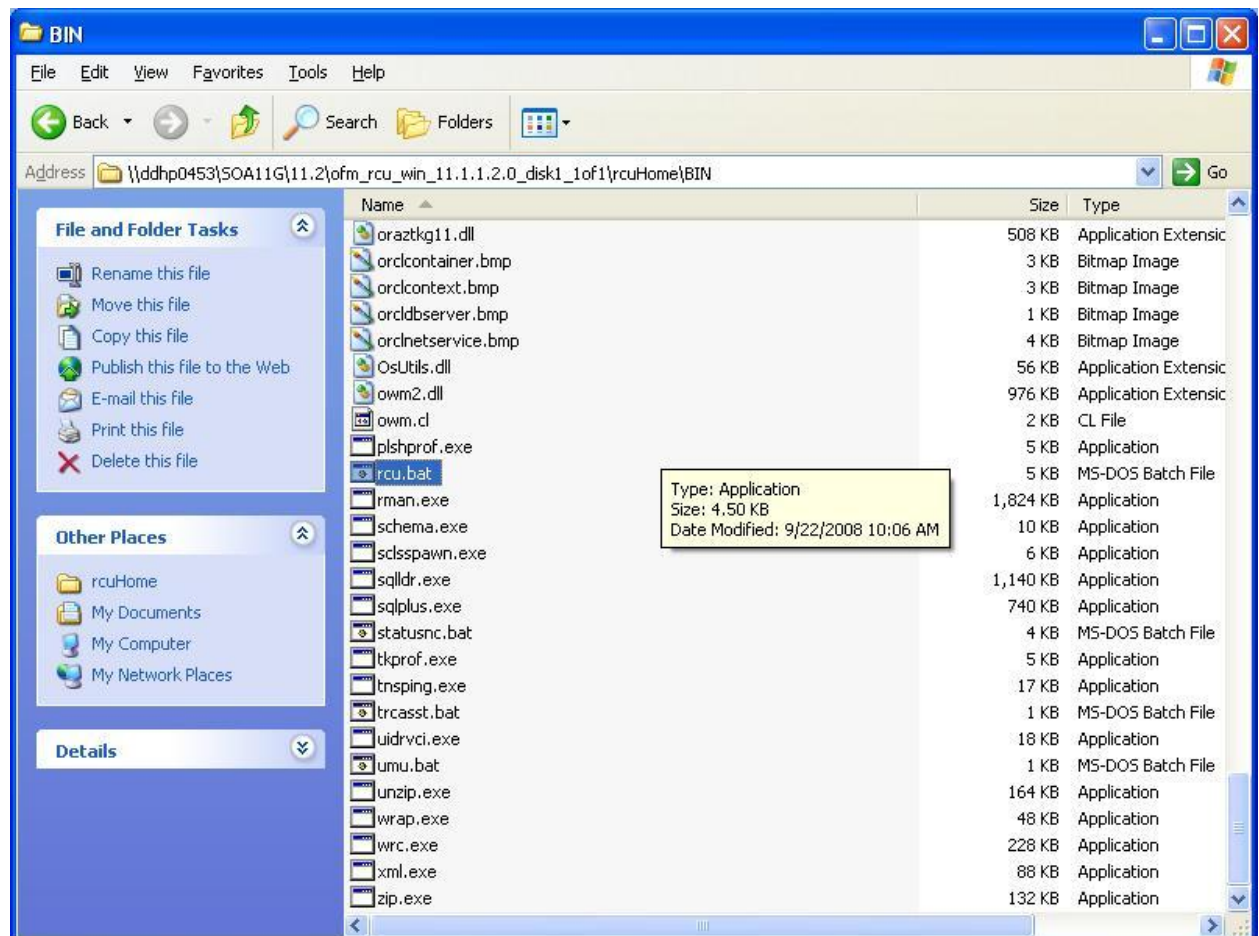
2.1 Introduction

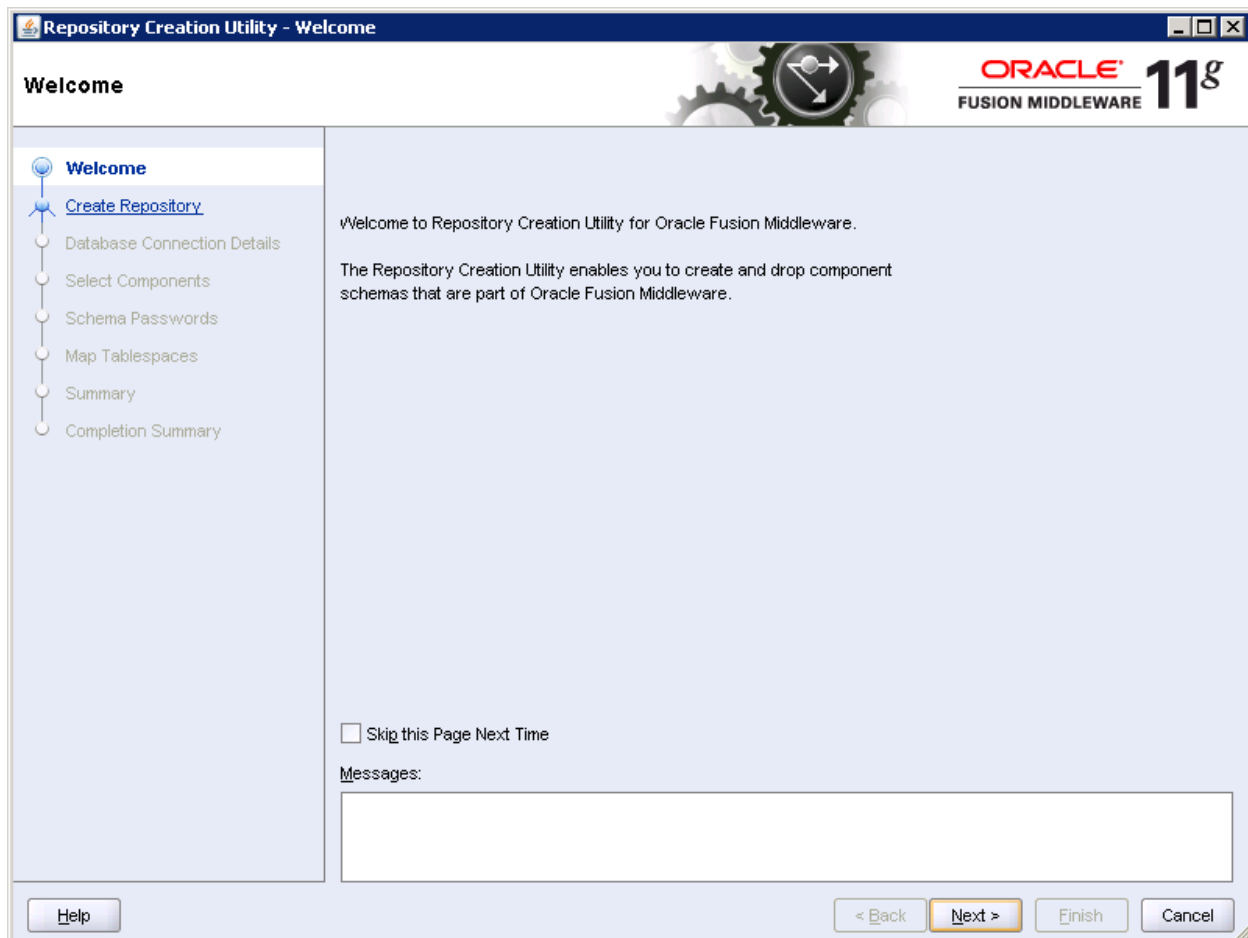
Oracle Repository Creation Utility (RCU) is used to create schemas that are required for SOA suite Installation.

The database required is Oracle Database 11g Enterprise Edition Release 11.1.0.7.0 + , Please check oracle certification matrix for qualified databases

2.2 Download URL for RCU Utility from Oracle

1. http://download.oracle.com/otn/nt/middleware/11g/ofm_rcu_win32_11.1.1.2.1_disk1_1of1.zip
2. Unzip to a folder
3. Run the rcu.bat







4. Select Create / Drop schemas

Repository Creation Utility - Step 2 of 7 : Database Connection Details

Database Connection Details

ORACLE 11g
FUSION MIDDLEWARE

[Welcome](#)
[Create Repository](#)
Database Connection Details
[Select Components](#)
[Schema Passwords](#)
[Map Tablespaces](#)
[Summary](#)
[Completion Summary](#)

Database Type: Oracle Database

Host Name: ddhp0240.i-flex.com
 For RAC database, specify VIP name or one of the Node name as Host name.

Port: 1521

Service Name: orcl.i-flex.com

Username: SYS
 User with DBA or SYSDBA privileges. Example:sys

Password:

Role: SYSDBA
 One or more components may require SYSDBA role for the operation to succeed.

Messages:

[Help](#)
[< Back](#)
[Next >](#)
[Finish](#)
[Cancel](#)

5. Provide oracle database connection properties
6. SYS credentials are required.

Repository Creation Utility - Checking Prerequisites

Checking Global Prerequisites

✓	Initializing repository configuration metadata	00:02.266(sec)
✓	Obtain properties of the specified database	00:00.110(ms)
✓	Check requirement for specified database	00:00.437(ms)
✓	Execute pre create operations	00:00.984(ms)

Operation completed. Click OK to continue to next page.

OK

Repository Creation Utility - Step 3 of 7 : Select Components

Select Components

Oracle 11g
FUSION MIDDLEWARE

[Welcome](#)
[Create Repository](#)
[Database Connection Details](#)
[Select Components](#)
[Schema Passwords](#)
[Map Tablespaces](#)
[Summary](#)
[Completion Summary](#)

A Prefix groups the components associated with one deployment.

☐ Select an existing Prefix
☒ Create a new Prefix

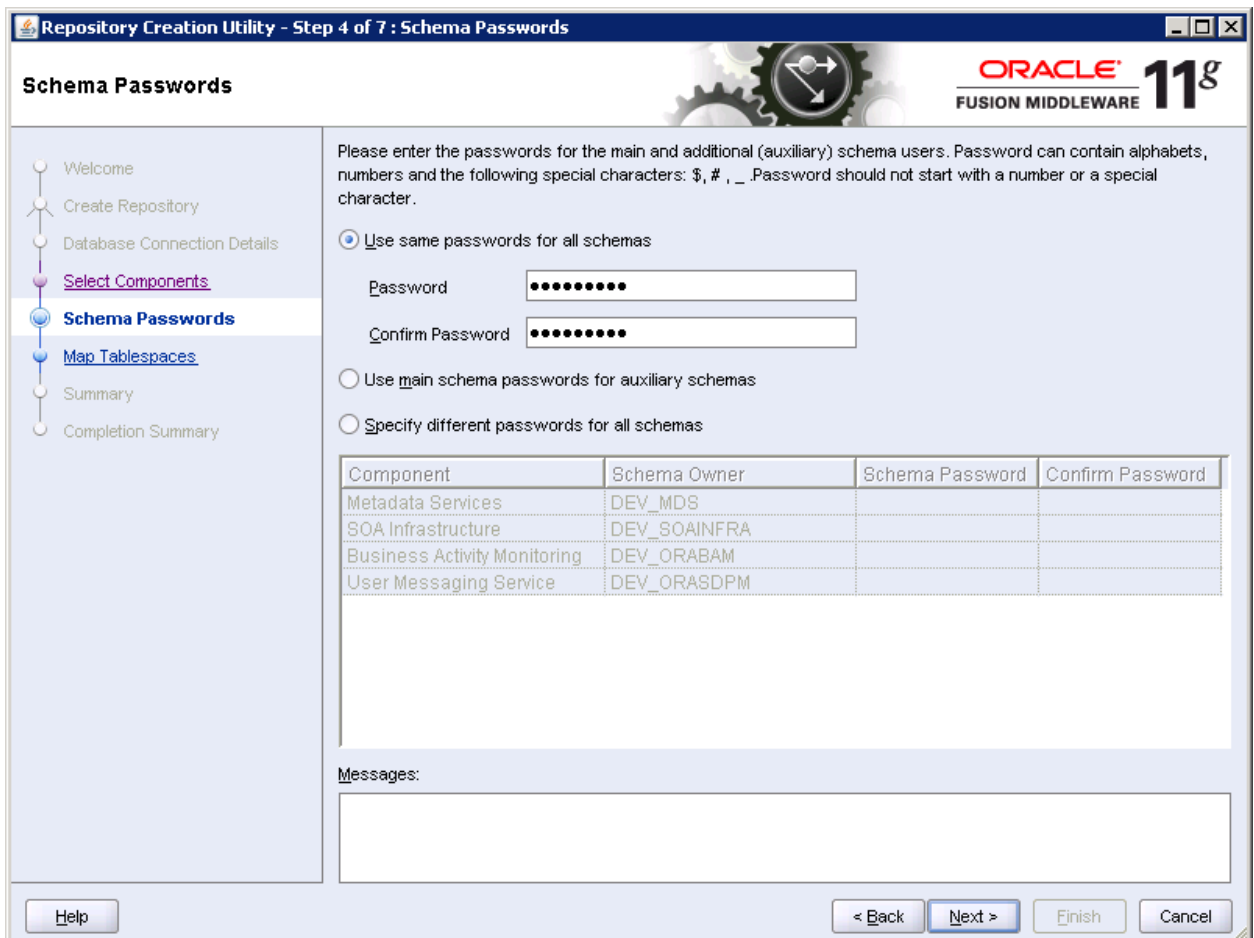
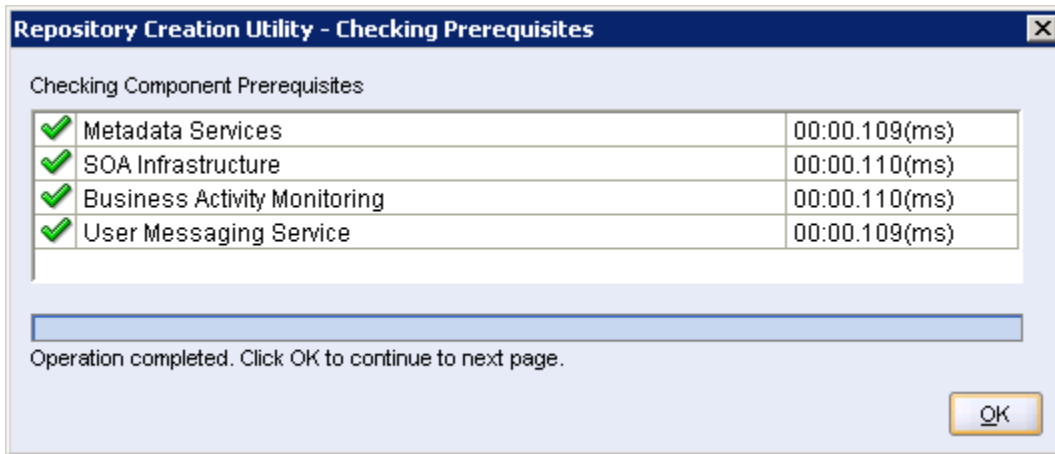
Prefix can contain only alpha-numeric characters. Prefix should not start with a number and should not contain any special characters.

DEV

Component	Schema Owner
<input type="checkbox"/> Oracle AS Repository Components	
<input checked="" type="checkbox"/> AS Common Schemas	
<input checked="" type="checkbox"/> Metadata Services	DEV_MDS
<input type="checkbox"/> Audit Services	IAU
<input type="checkbox"/> Enterprise Scheduler Service	ORAESS
<input type="checkbox"/> Identity Management	
<input type="checkbox"/> WebLogic Communication Services	
<input checked="" type="checkbox"/> SOA and BPM Infrastructure	
<input checked="" type="checkbox"/> SOA Infrastructure	DEV_SOAINFRA
<input checked="" type="checkbox"/> Business Activity Monitoring	DEV_ORABAM
<input checked="" type="checkbox"/> User Messaging Service	DEV_ORASDPM
<input type="checkbox"/> Webcenter Suite	
<input type="checkbox"/> Portal and BI	

Messages:

7. The prefix option is provided so that multiple soa schemas can be in the same instance.
8. On selecting SOA & BPM Infrastructure, by default AS Common Schemas and Metadata Services would be selected. Please do not uncheck them.
9. Business Activity Monitoring can be unchecked if not being used



10. Please make a note of the password / passwords being used.

Repository Creation Utility - Step 5 of 7 : Map Tablespaces

Map Tablespaces

Choose tablespaces for the selected components. The default and temporary tablespaces are specified in the table below.
To create new tablespaces or modify existing tablespaces click the 'Manage Tablespaces' button.

Component	Schema Owner	Default Tablespace	Temp Tablespace
Metadata Services	DEV_MDS	*DEV_MDS	*DEV_IAS_TEMP
SOA Infrastructure	DEV_SOAINFRA	*DEV_SOAINFRA	*DEV_IAS_TEMP
Business Activity Monit...	DEV_ORABAM	*DEV_ORABAM	*DEV_IAS_TEMP
User Messaging Service	DEV_ORASDPM	*DEV_IAS_ORASDPM	*DEV_IAS_TEMP

* Default tablespaces (specified in the configuration files) are to be created upon confirmation.

[Manage Tablespaces](#)

Messages:

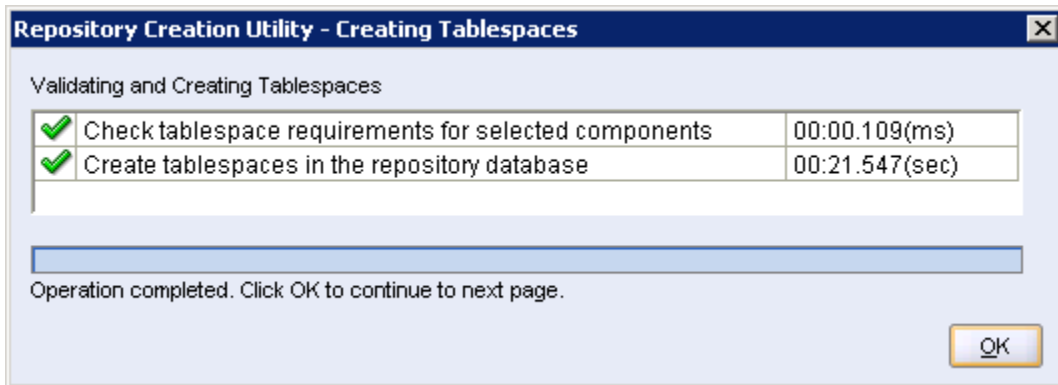
[Help](#) [< Back](#) [Next >](#) [Finish](#) [Cancel](#)

Repository Creation Utility

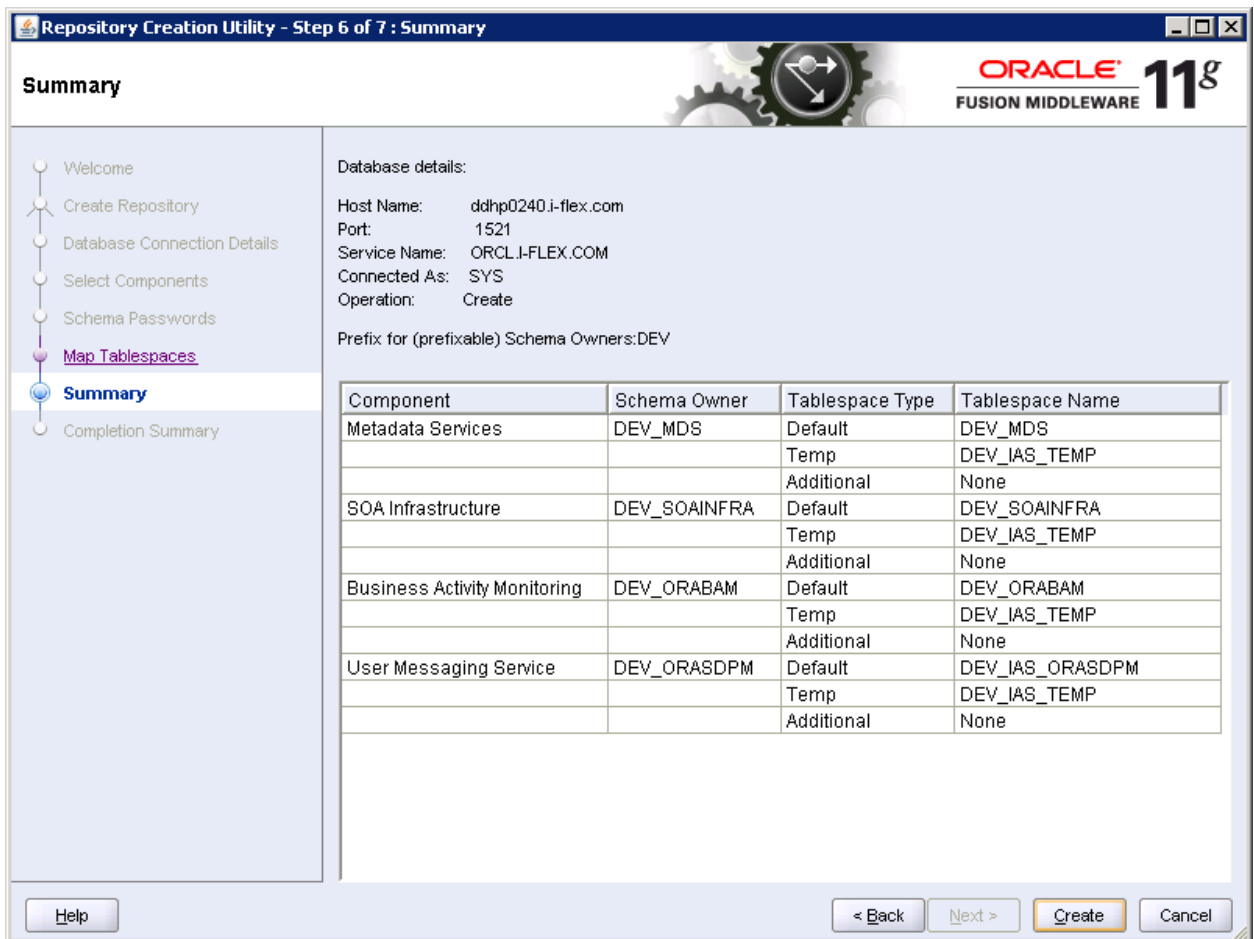
? Any tablespaces that do not already exist in the selected schemas will be created.

Click OK to create tablespaces.
Click Cancel to return to the wizard.

[OK](#) [Cancel](#)



11. Tablespaces creation .



12. Summary .

Repository Creation Utility - Step 7 of 7 : Completion Summary

Welcome

Create Repository

Database Connection Details

Select Components

Schema Passwords

Map Tablespaces

Summary

Completion Summary

Database details:

Host Name: ddhdp0240.i-flex.com
Port: 1521
Service Name: ORCL.I-FLEX.COM
Connected As: SYS
Operation: Create
RCU Logfile: \ddhdp0240\BPEL\11.2\ofm_rcu_win_11.1.1.2.0_disk1_1of1\rcuHome\rcu\log\logdir.2010-04-05_06-08\rcu.log
Component Log Directory: \ddhdp0240\BPEL\11.2\ofm_rcu_win_11.1.1.2.0_disk1_1of1\rcuHome\rcu\log\logdir.2010-04-05_06-08
Execution Time: 1 minute 16 seconds

Prefix for (prefixable) Schema Owners:DEV

Component	Status	Logfile	Time
Metadata Services	Success	mds.log	00:02.578(sec)
SOA Infrastructure	Success	soainfra.log	00:21.953(sec)
Business Activity Monitoring	Success	bam.log	00:24.422(sec)
User Messaging Service	Success	orasdpn.log	00:01.984(sec)

Help

< Back

Next >

Create

Close

13. Completion Summary.

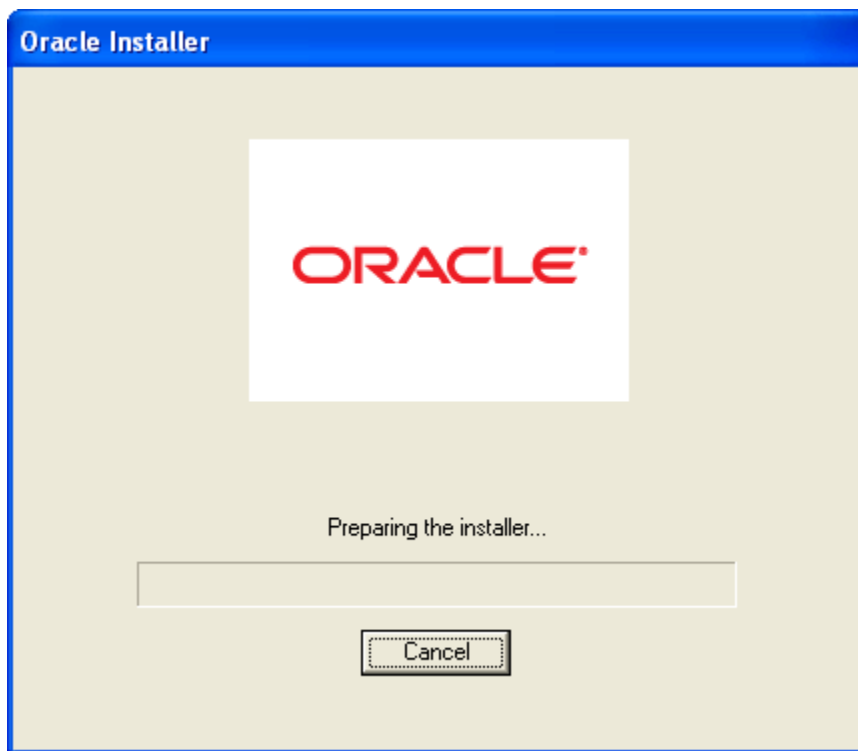
3. Oracle Weblogic 11gR1 (10.3.2)

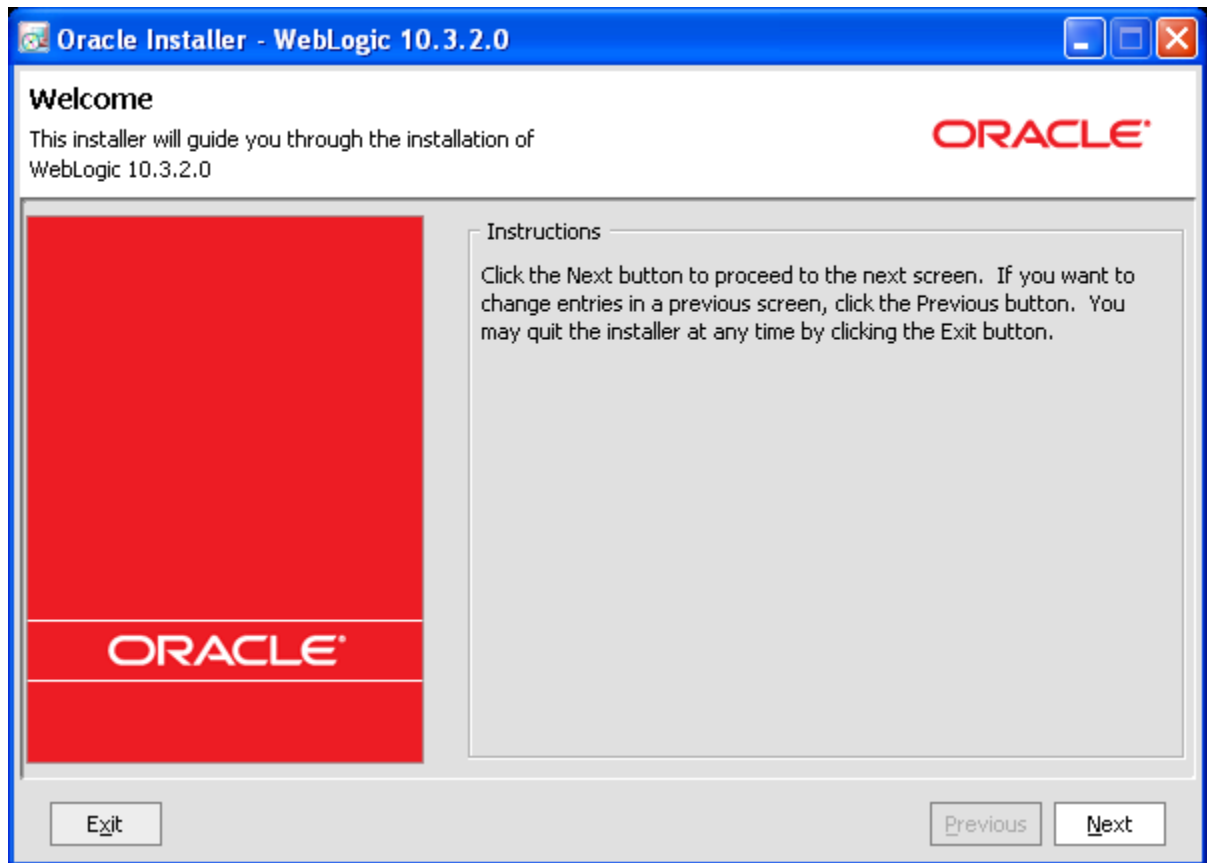
3.1 Introduction

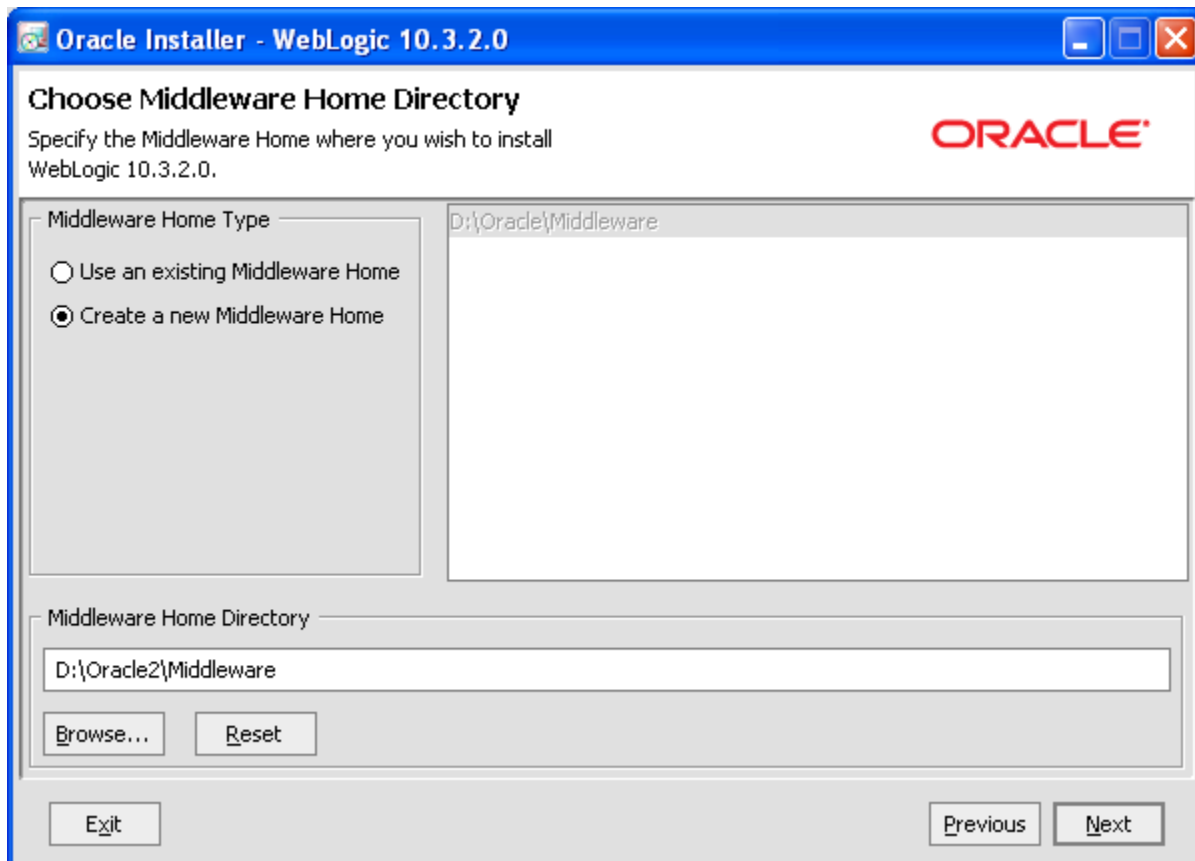
Oracle Weblogic 11gR1 I is the j2ee container for soa suite. The version required is 10.3.2

3.2 Download URL from Oracle

1. http://www.oracle.com/technology/software/products/ias/htdocs/wls_main.html
2. Download based on your needs (Windows / Linux / Generic)
3. The installation process might slightly vary depending on the platform OS
4. This step may be skipped if the weblogic installation is available
5. Run the <...wls1032_win32...>.exe







6. Specify the middleware home the same will be used during SOA suite installation.

Oracle Installer - WebLogic 10.3.2.0

Register for Security Updates

Provide your email address to be informed of security issues, install the product, and initiate configuration manager. <http://www.oracle.com/support/policies.html>

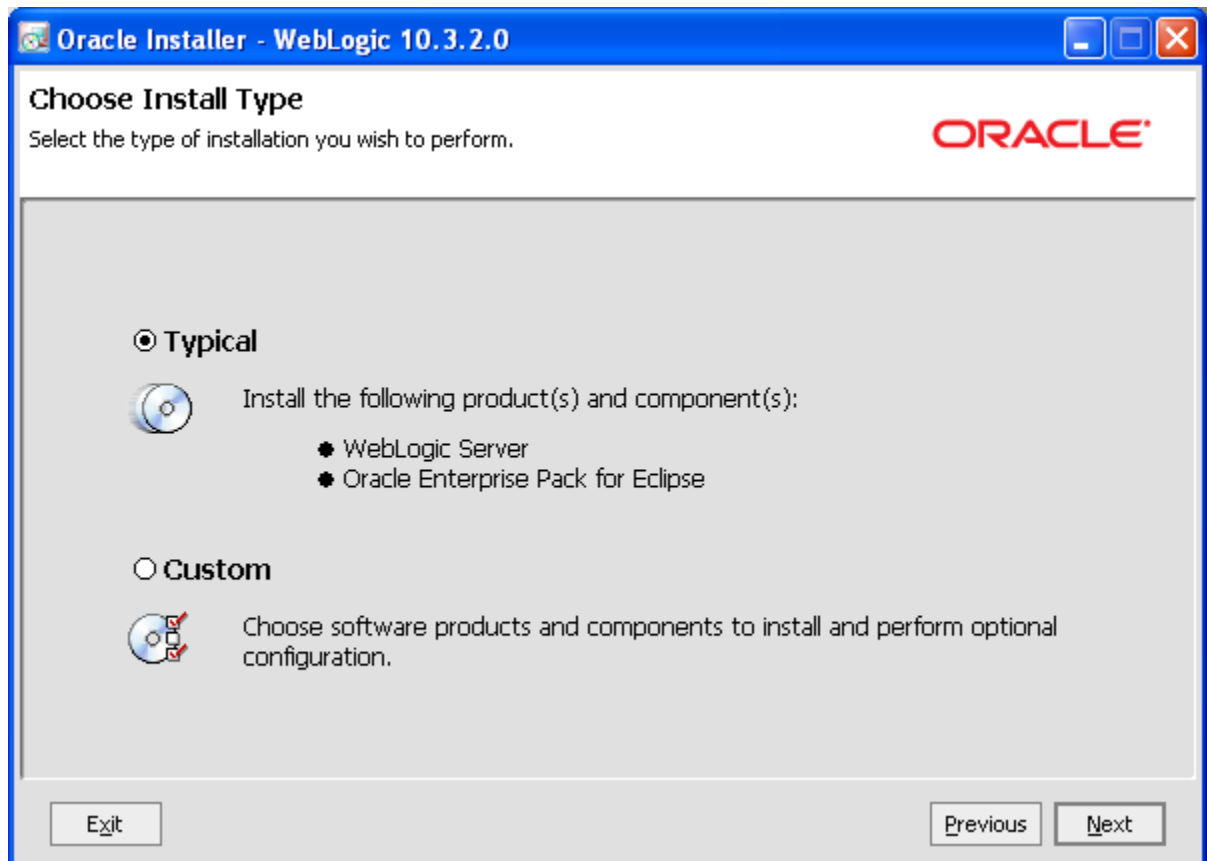
Email:

Easier for you if you use your My Oracle Support email address/username.

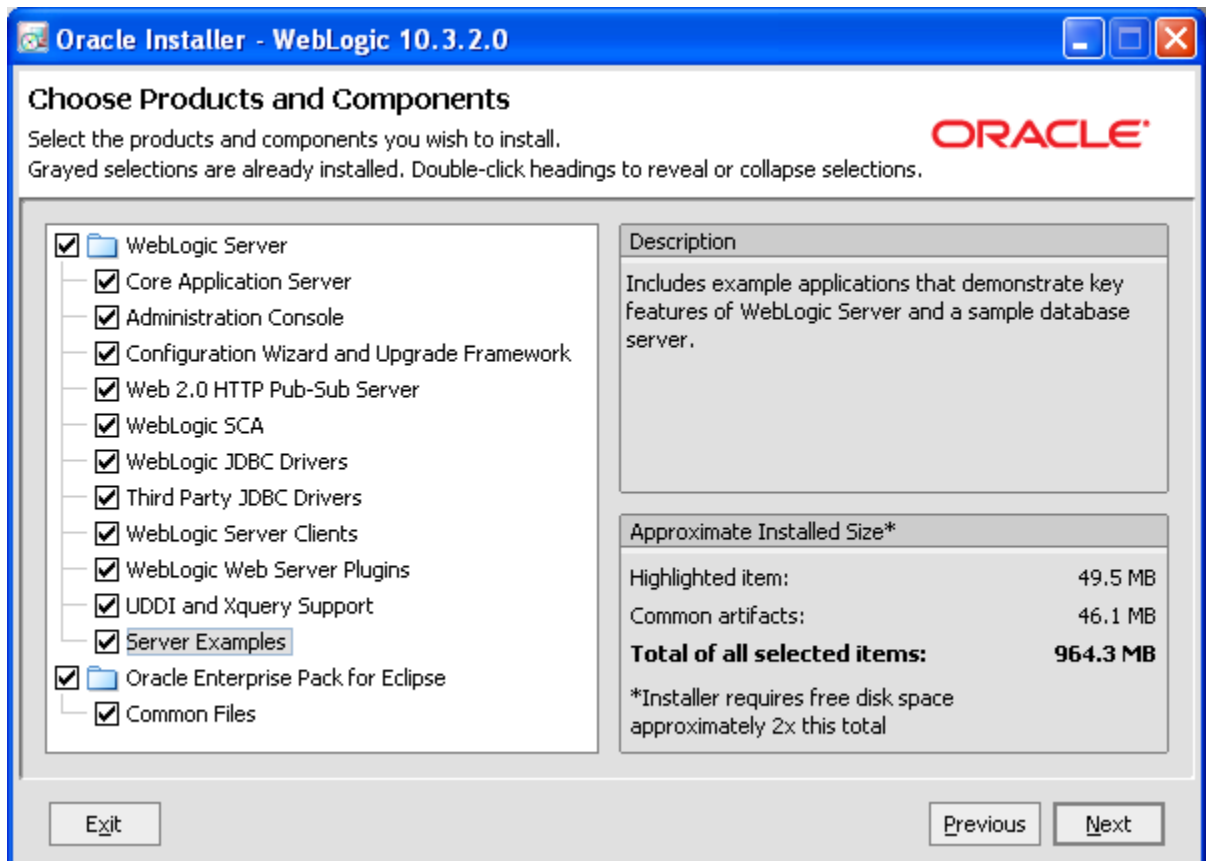
☒ I wish to receive security updates via My Oracle Support

My Oracle Support Password:

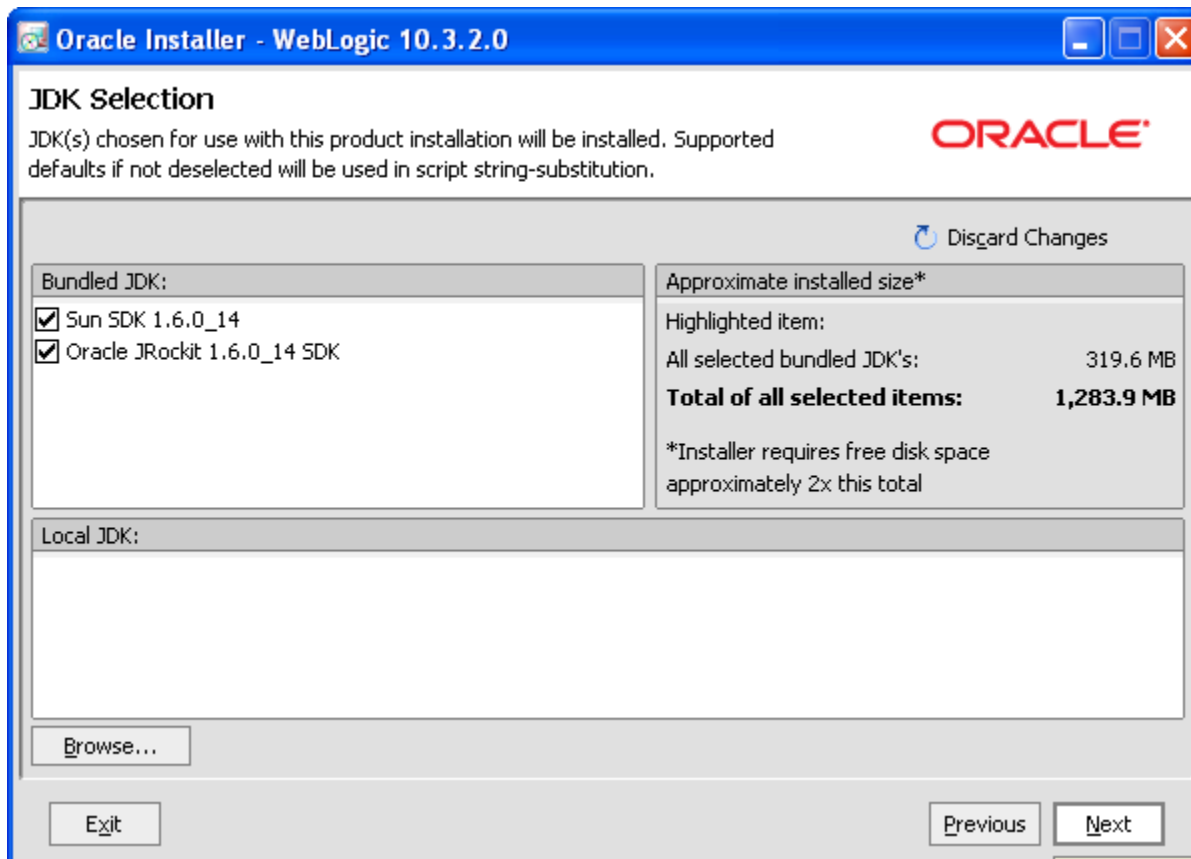
7. Register for security updates if needed



8. Choose typical / custom to customize installation



9. If custom , customize installation.




10. Select Bundled JDK that is needed.

Oracle Installer - WebLogic 10.3.2.0

Choose Product Installation Directories

Provide the directories where you wish to install WebLogic 10.3.2.0.

 Discard Changes

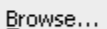
Middleware Home Directory

D:\Oracle2\Middleware

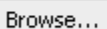
Product Installation Directories

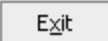
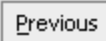
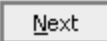
The Product Home might contain shared utilities and any products or components for which unique directories are not set.

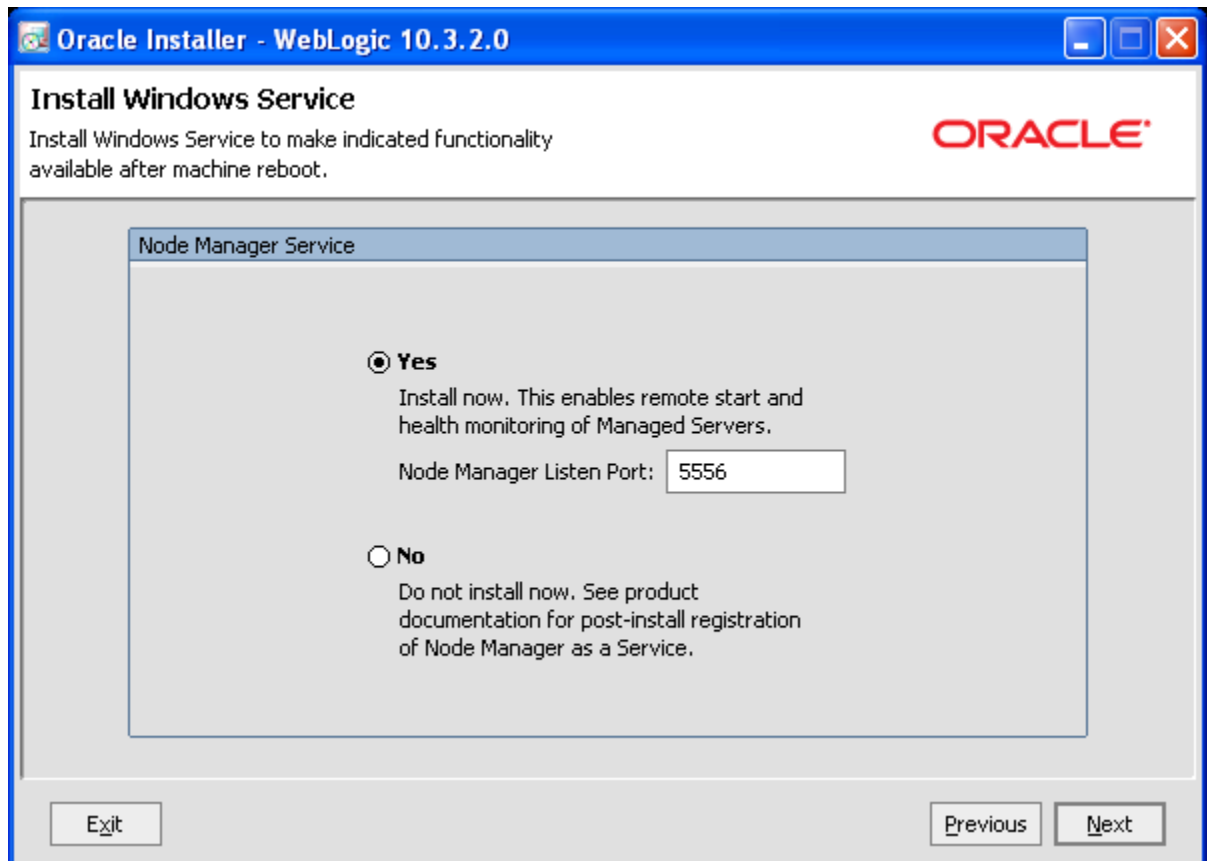
WebLogic Server:

D:\Oracle2\Middleware\wlserver_10.3 

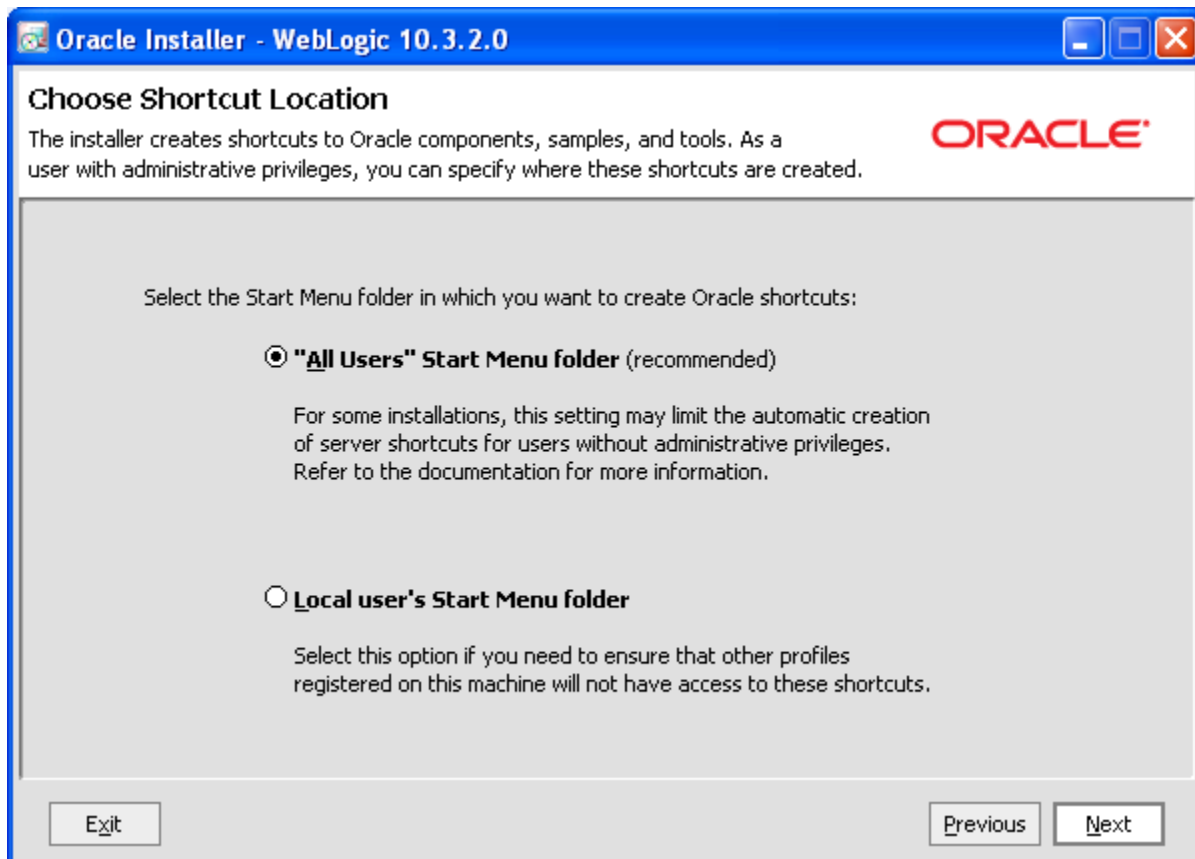
Oracle Enterprise Pack for Eclipse:

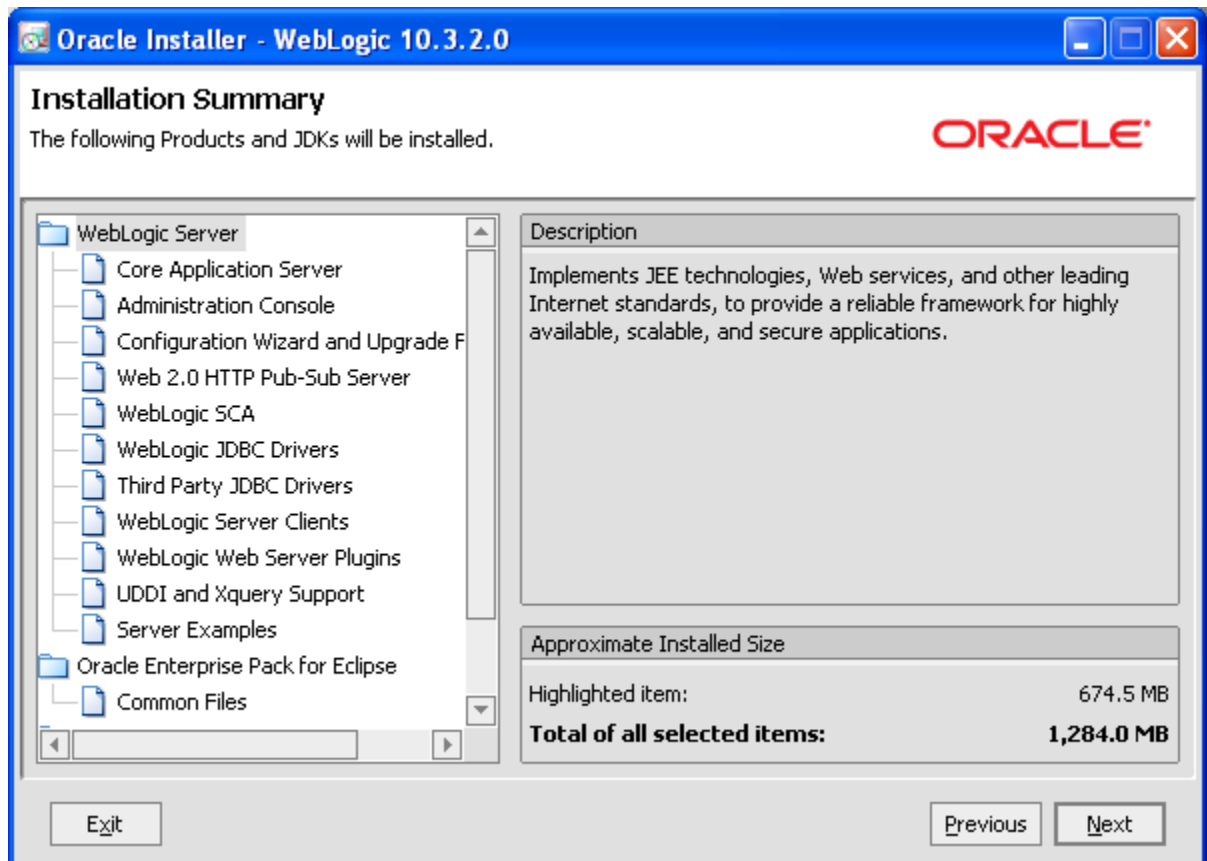
D:\Oracle2\Middleware\oepe_11gR1P51 

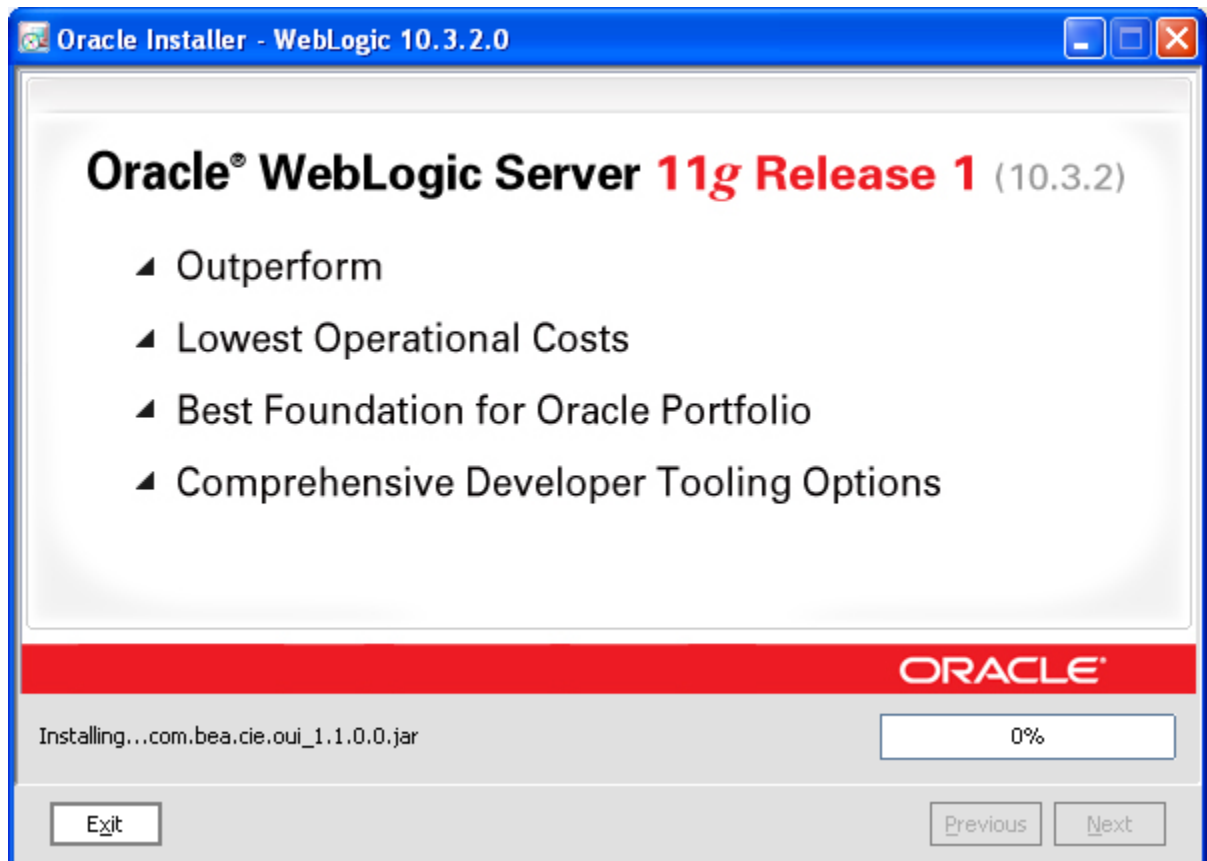
  

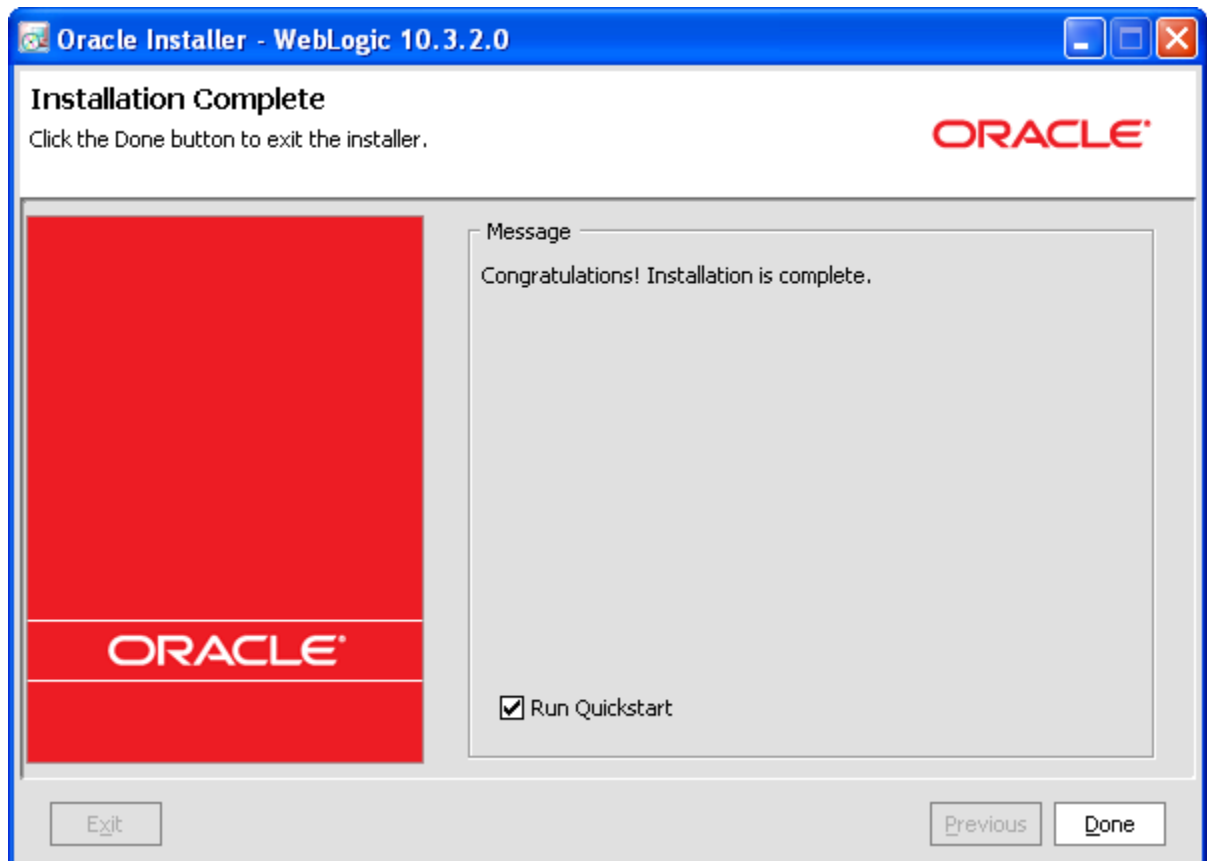


11. Install Node manager if remote start & monitoring is required needed.









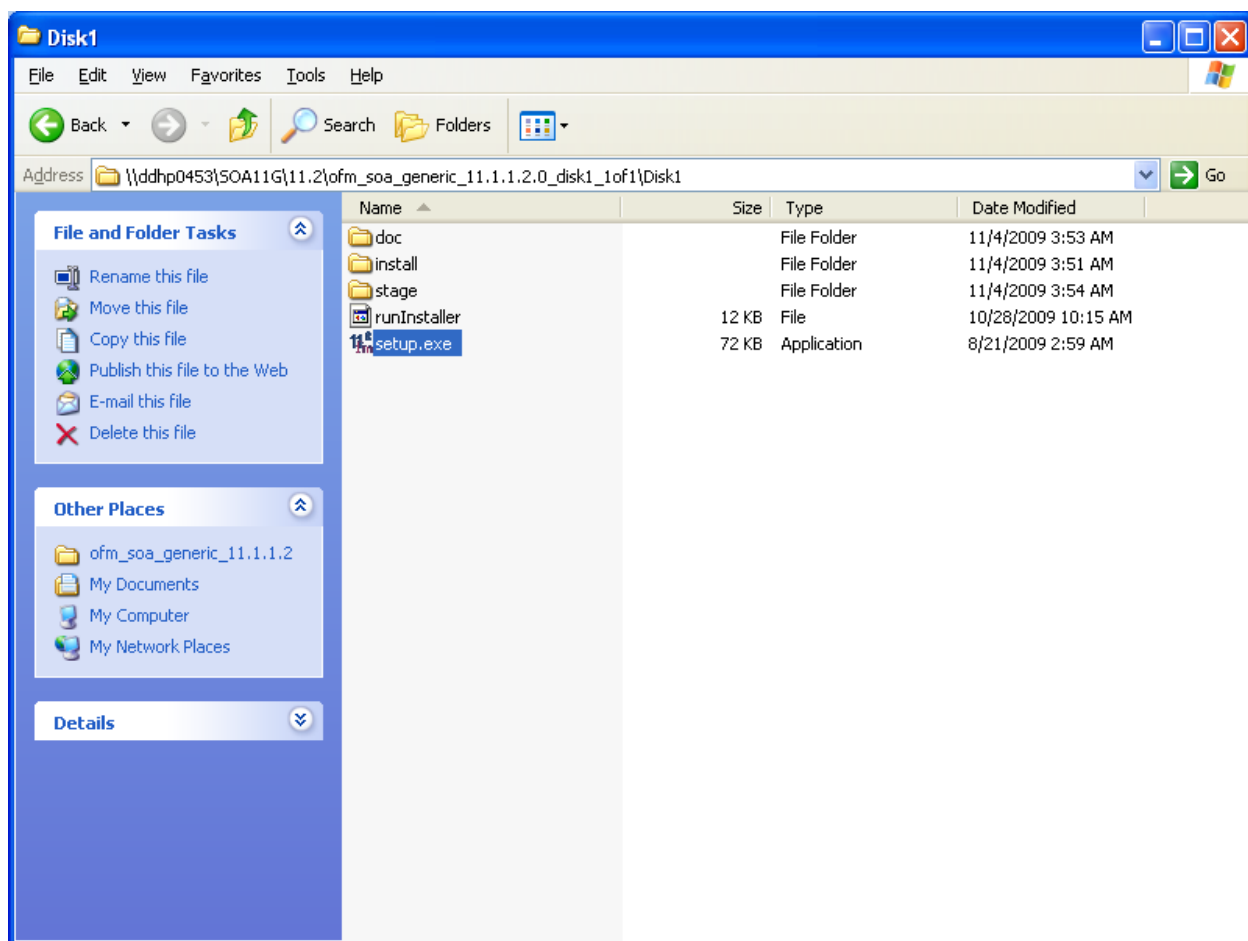
4. Oracle SOA suite 11gR1 (11.1.1.2.0)

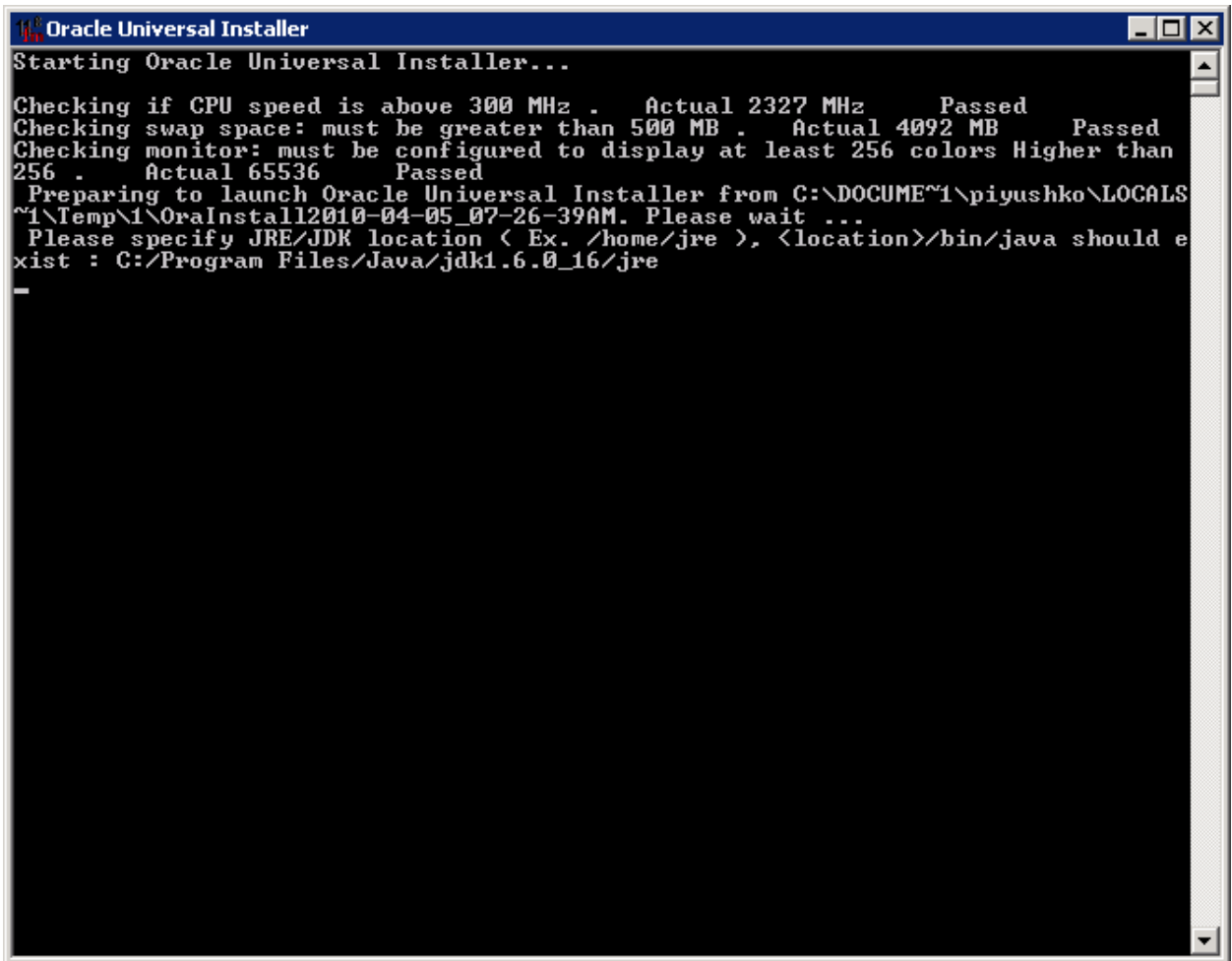
4.1 Introduction

Oracle SOA suite 11gR1 (11.1.1.2.0) is required for running FCIS BPEL Process flows. The version required is 11.1.1..2 .0

4.2 Download URL from Oracle

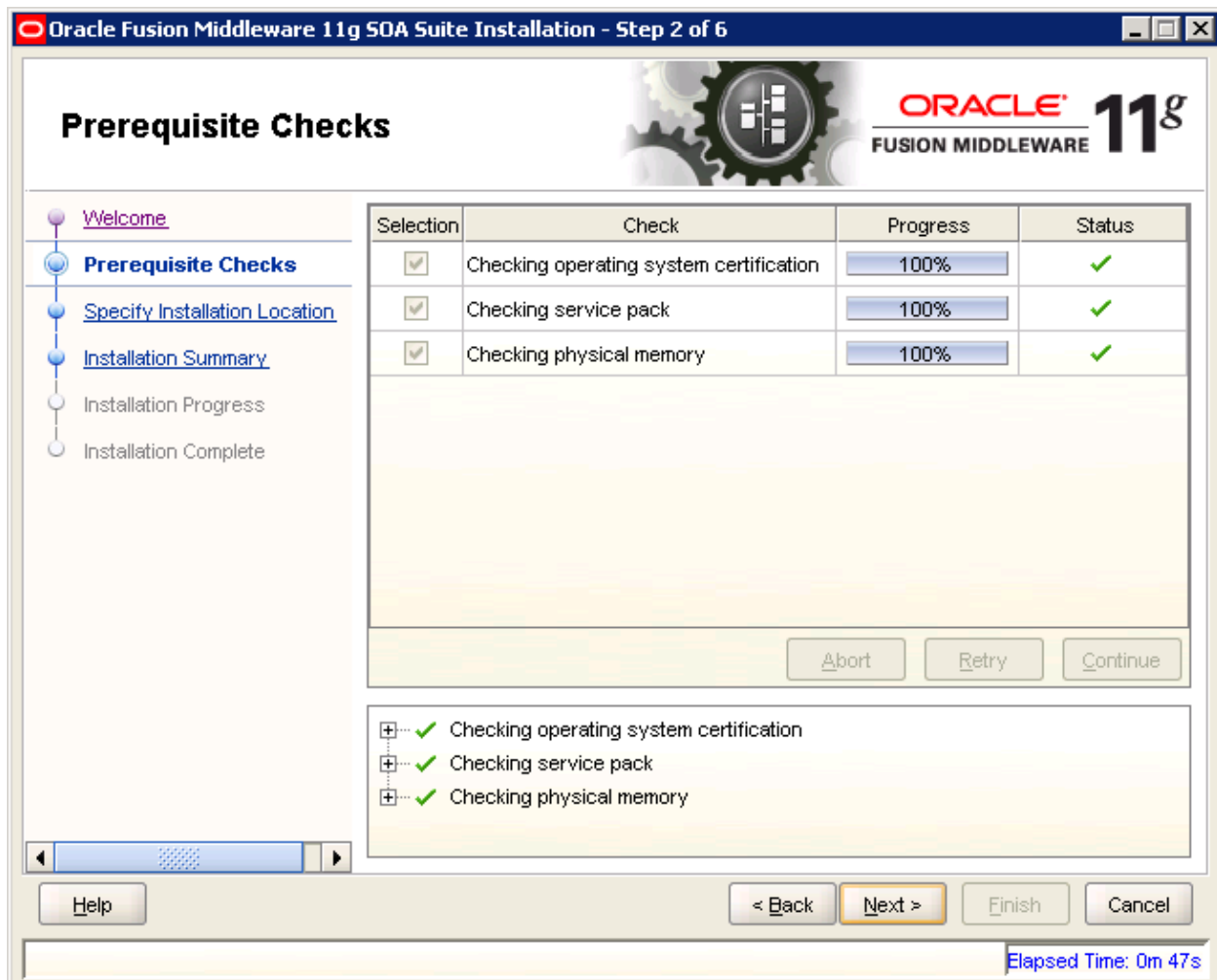
1. http://www.oracle.com/technology/software/products/ias/htdocs/wls_main.html
2. Download based on your needs (Windows / Linux / Generic)
3. The installation process might slightly vary depending on the platform / mode if installation (package / net..)
4. Unzip to a folder and run from Disk1 folder setup.exe

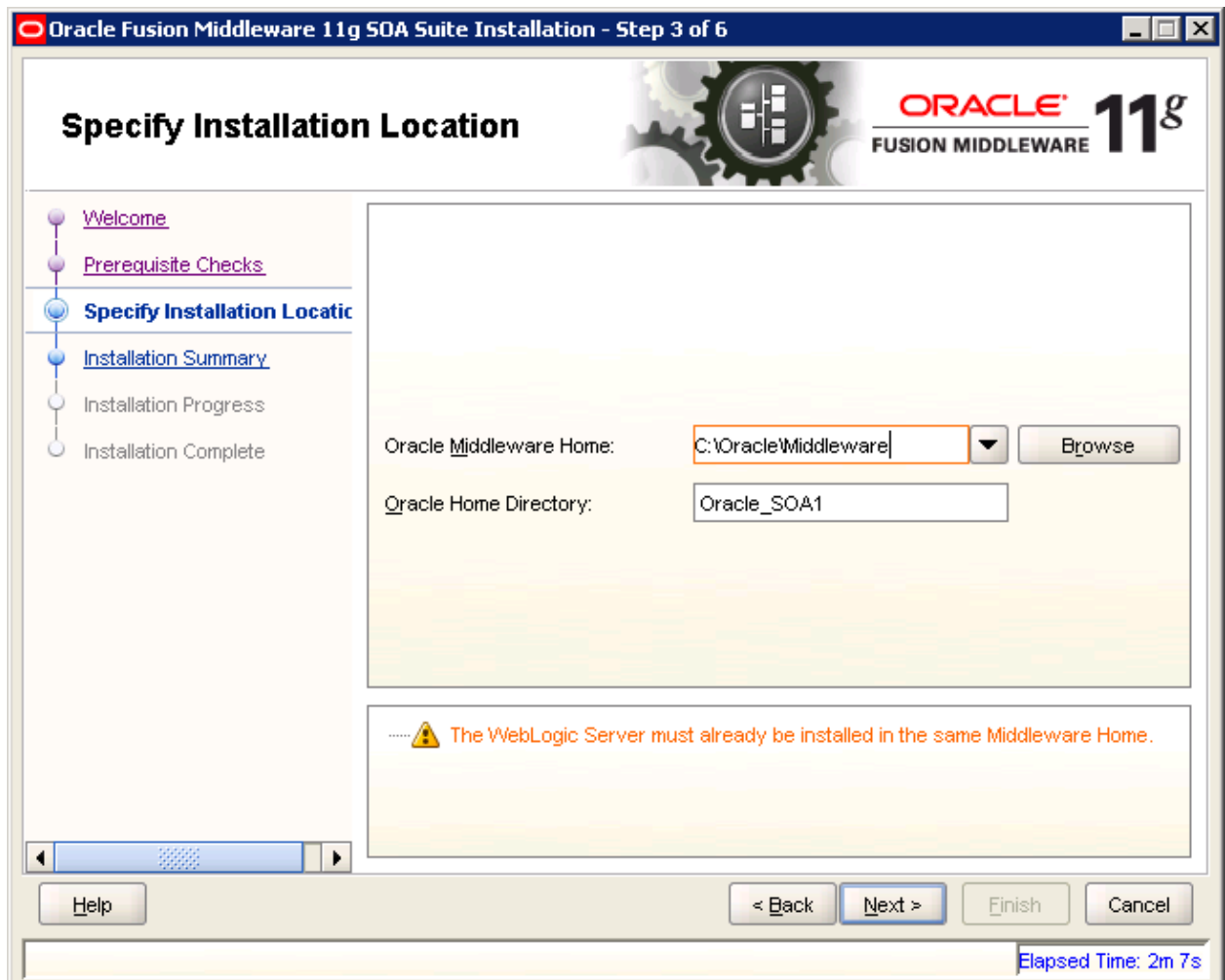




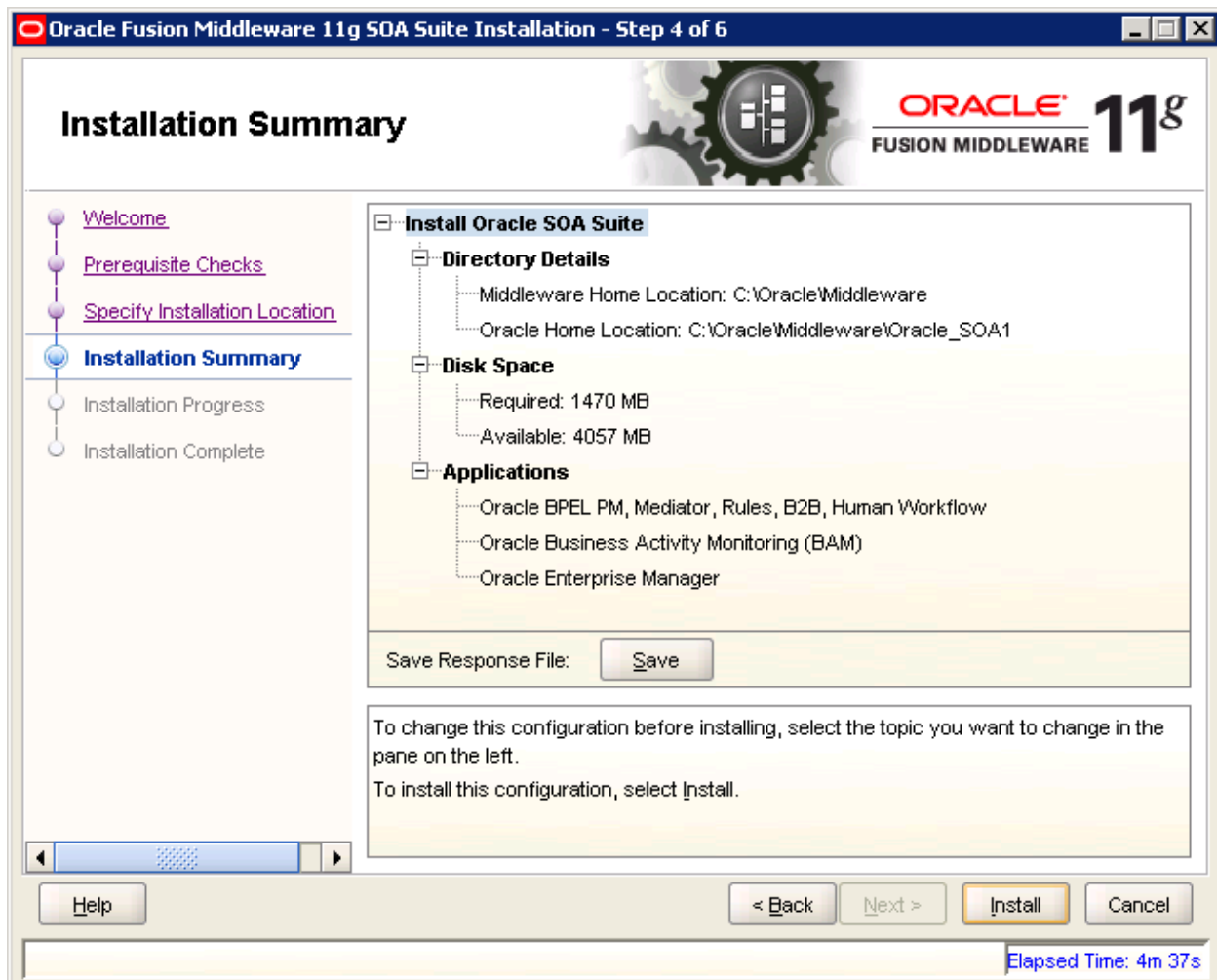
5. Specify JRE/JDK location for installation to proceed.

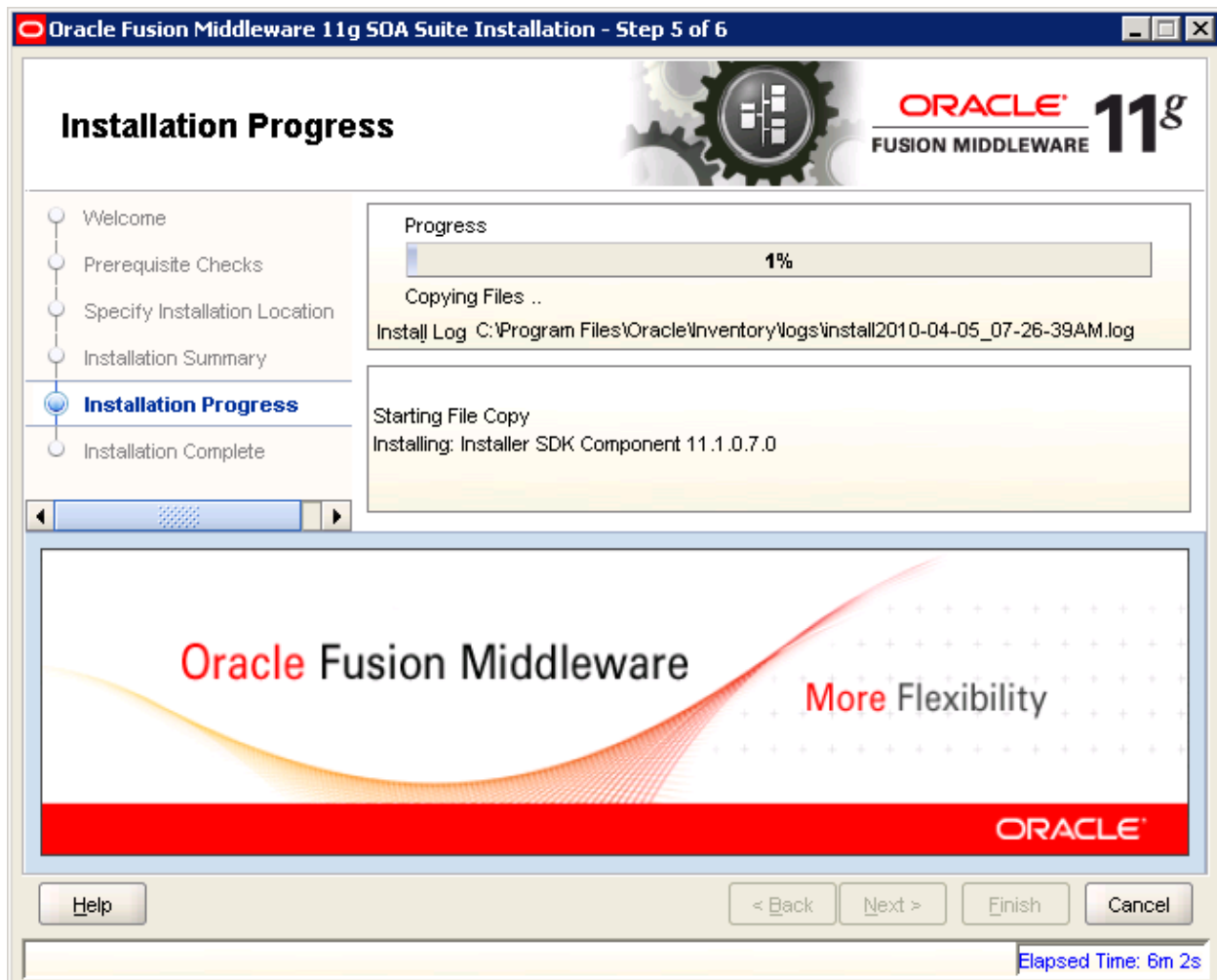


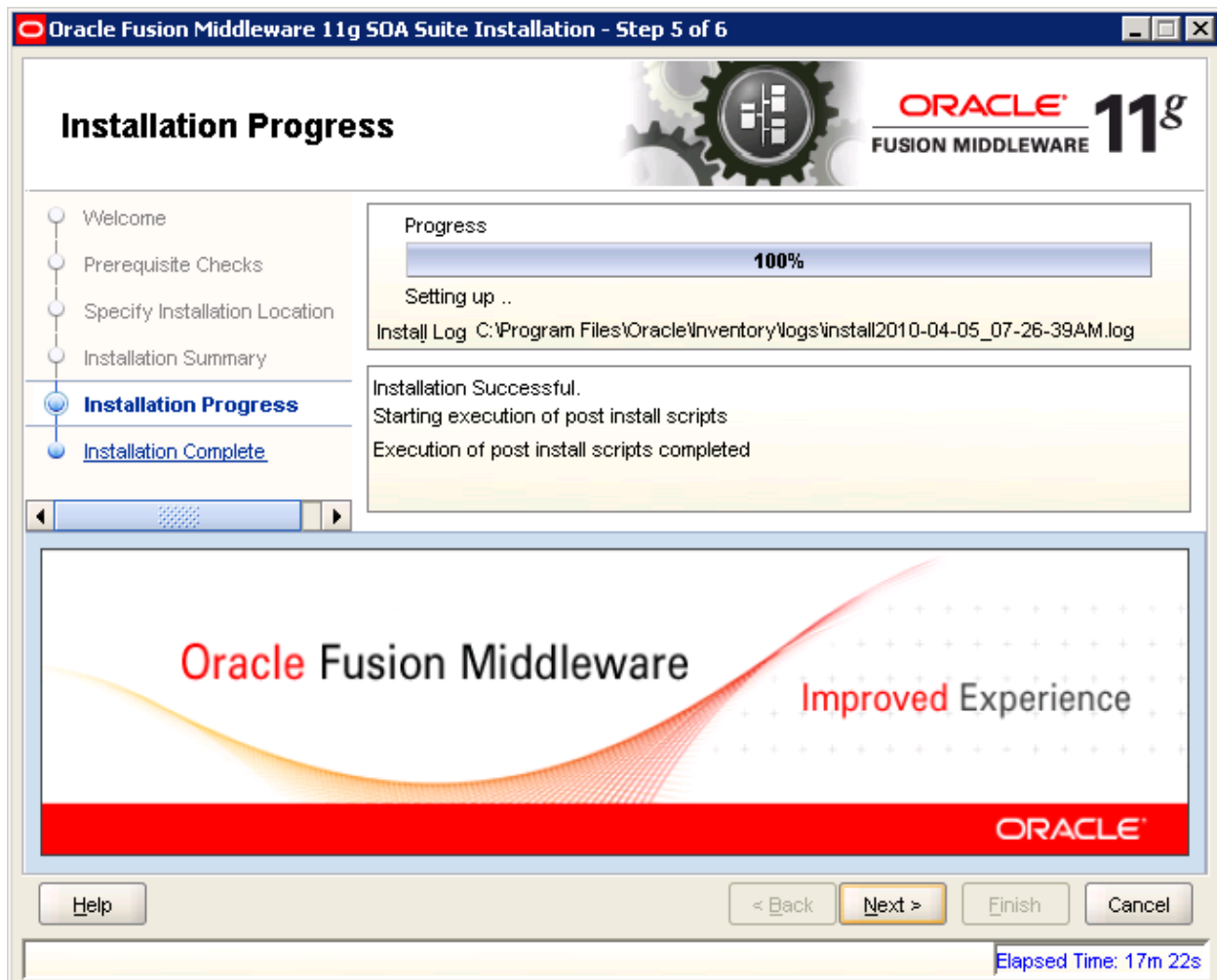


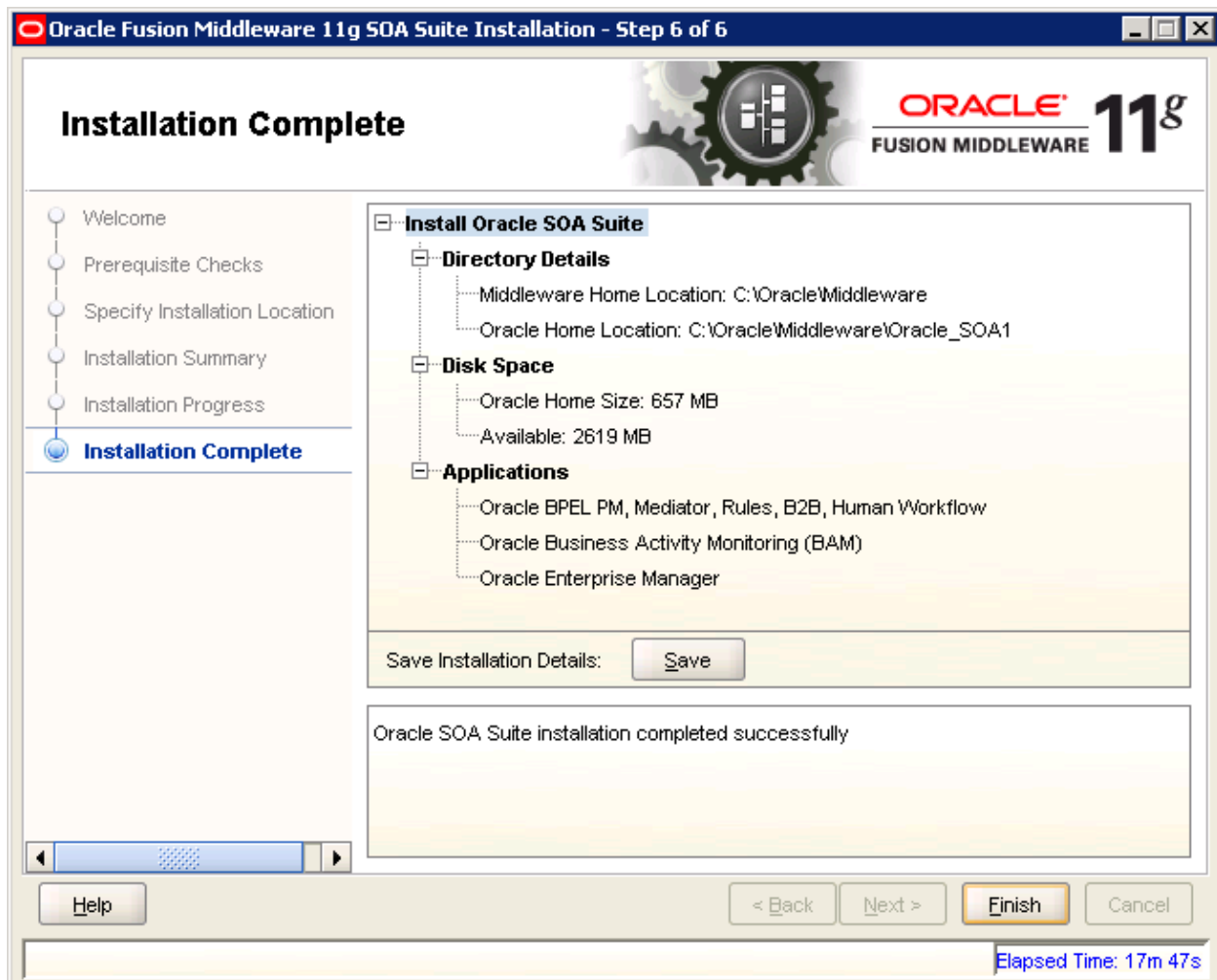


6. Specify the same middleware home that was used for WebLogic server.









5. Domain Configuration with Oracle SOA suite

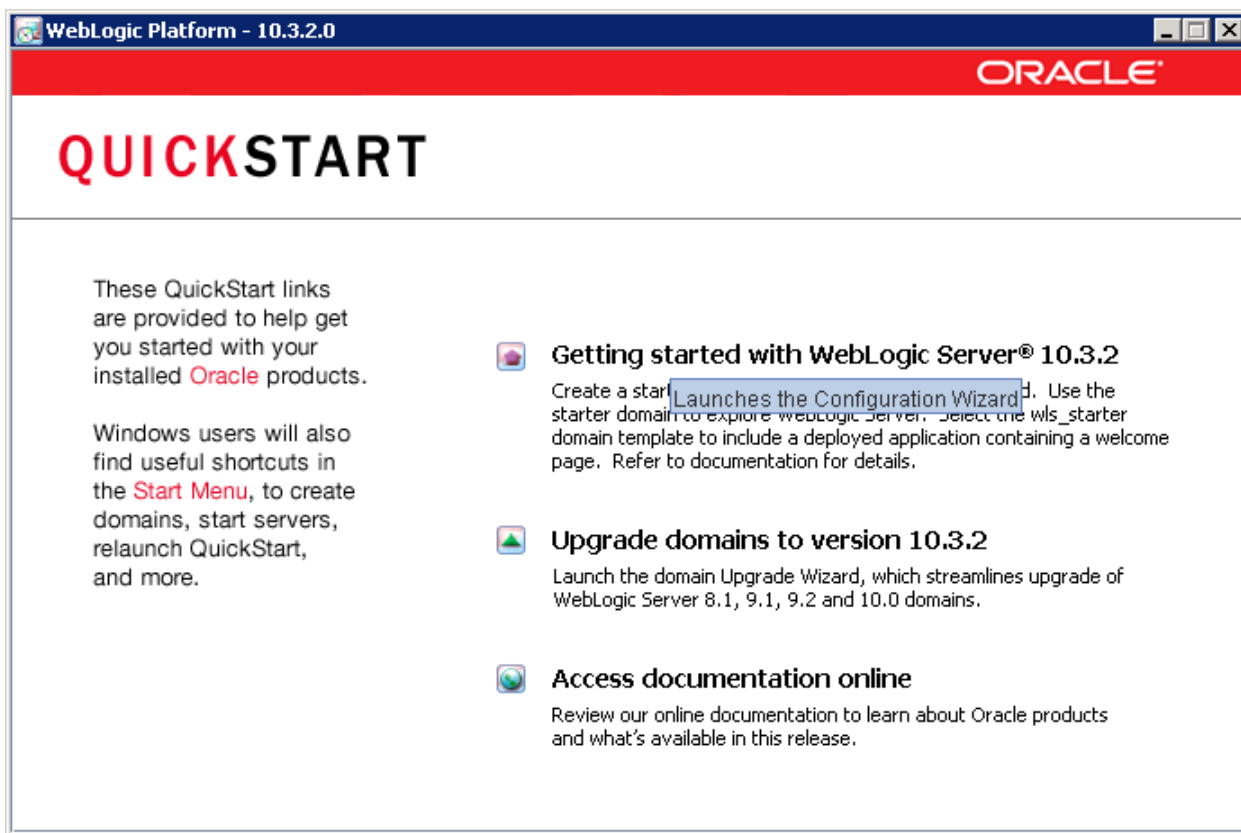
5.1 Introduction

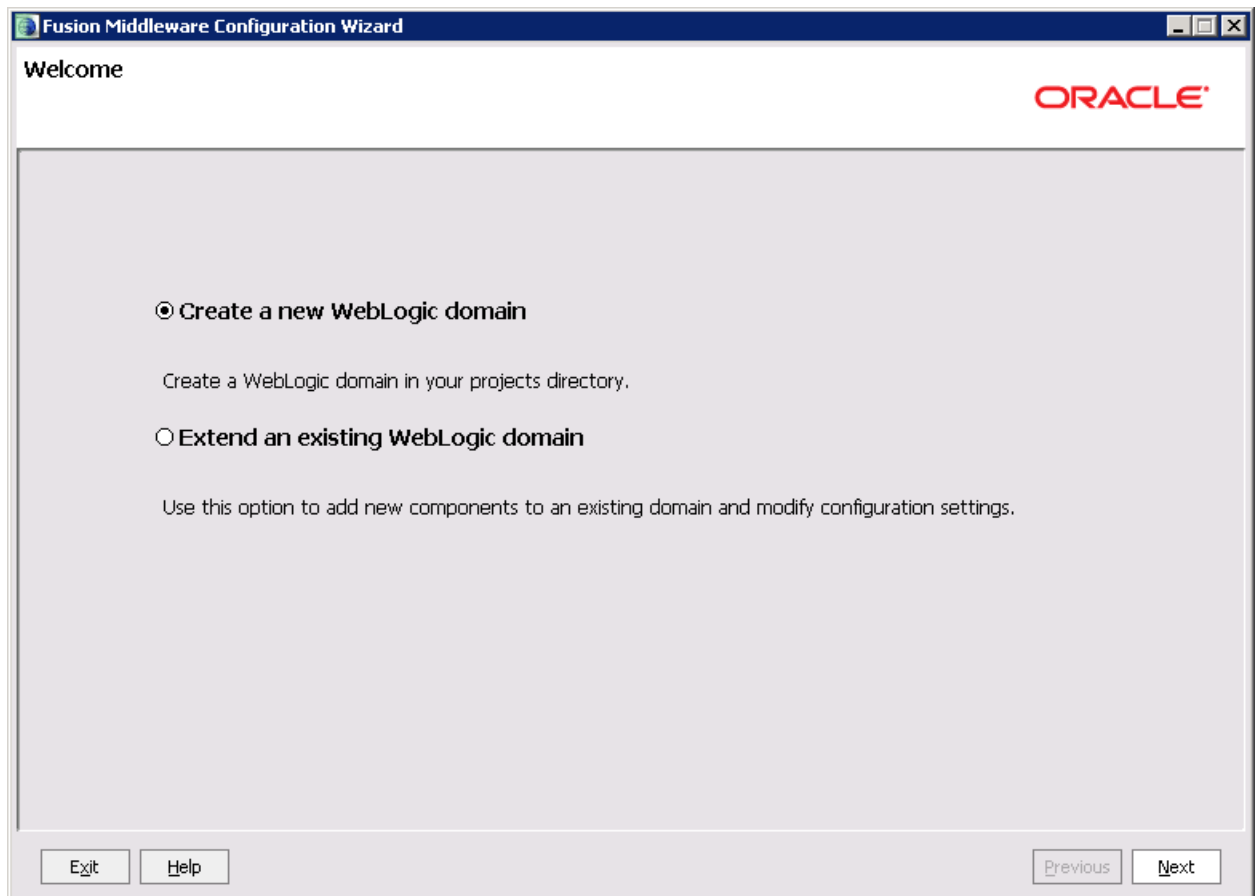
New domain can be configured or an existing domain can be extended with Oracle SOA suite components.

5.2 New Domain Configuration

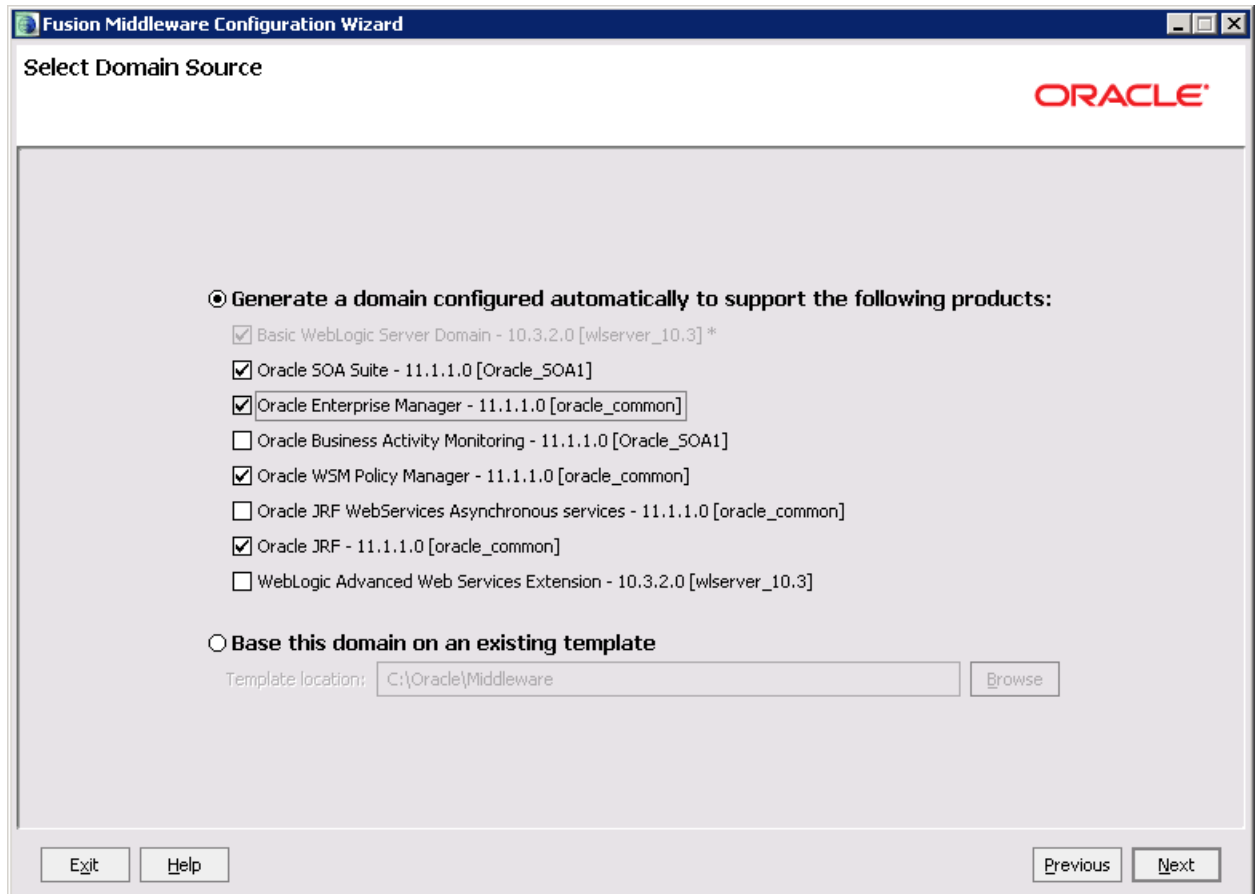
1. Run Config command

<middleware_home> wlsserver_10.3\common\bin\config or
<middleware_home> \Oracle_SOA1\common\bin\config





2. Create a new domain / extend an existing domain to include soa suite components.



3. On selecting Oracle SOA suite it automatically selects Oracle WSM Policy Manager, Oracle JRF
4. Select Oracle Enterprise Manager for managing / monitoring BPEL processes

Fusion Middleware Configuration Wizard

Specify Domain Name and Location

ORACLE

Enter the name and location for the domain and its applications:

Domain name:

Domain location:

Application location:

Fusion Middleware Configuration Wizard

Configure Administrator User Name and Password

ORACLE

Discard Changes

*User name: weblogic

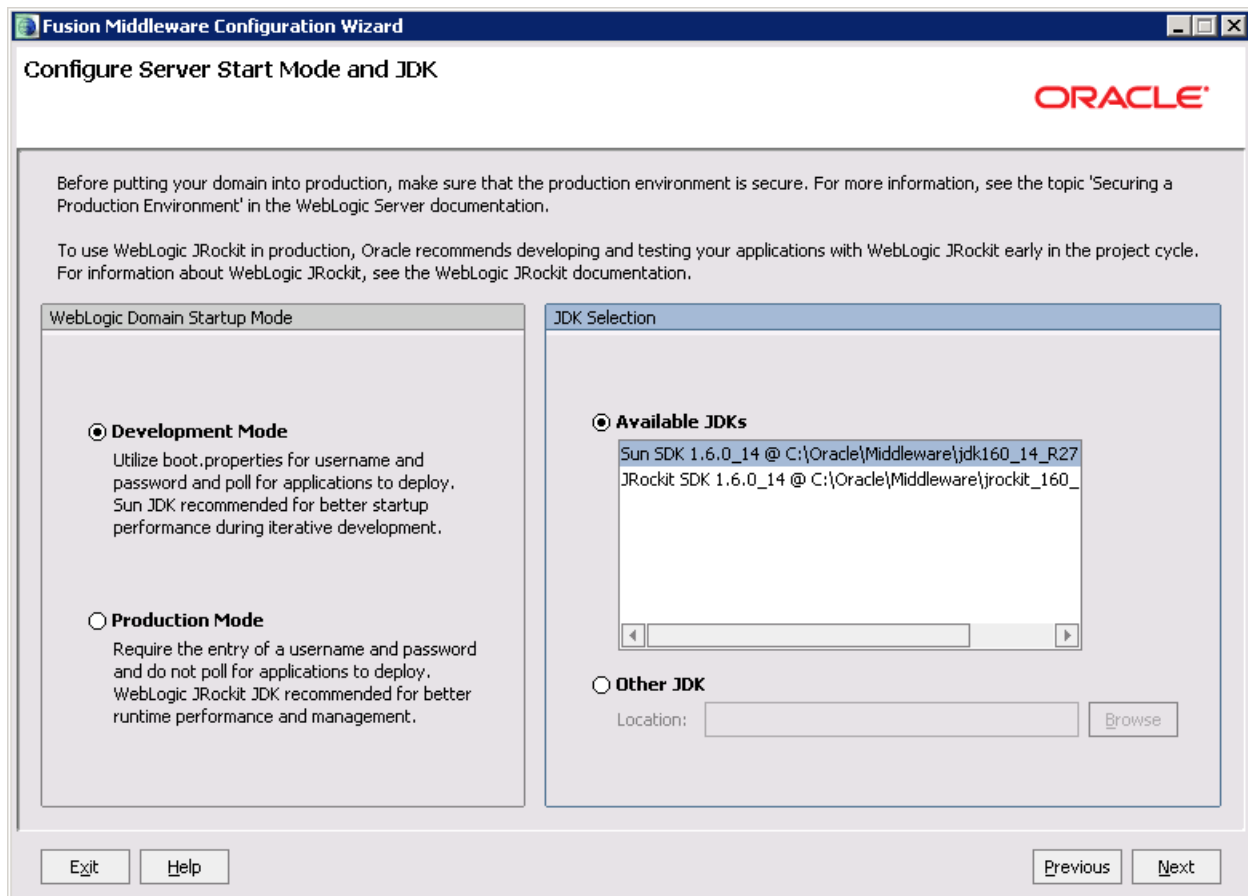
*User password: *****

*Confirm user password: *****

Description: This user is the default administrator.

Exit Help Previous Next

5. Configure Administrator user / password



6. Select jdk depending on the startup mode.

Fusion Middleware Configuration Wizard

Configure JDBC Component Schema

ORACLE

Note: Change only the input fields below that you wish to modify and values will be applied to all selected rows.

Vendor: DBMS/Service:

Driver: Host Name:

Schema Owner: Port:

Schema Password:

☐ Configure selected component schemas as RAC multi data source schemas in the next panel.

	Component Schema	DBMS/Service	Host Name	Port	Schema Owner	Schema Password
<input type="checkbox"/>	SOA Infrastructure	orcl	dbhost.example.com	1521	DEV_SOAINFRA	
<input type="checkbox"/>	User Messaging Service	orcl	dbhost.example.com	1521	DEV_ORASDPM	
<input type="checkbox"/>	OWSM MDS Schema	orcl	dbhost.example.com	1521	DEV_MDS	
<input type="checkbox"/>	SOA MDS Schema	orcl	dbhost.example.com	1521	DEV_MDS	

7. Configure schema components.
8. Select all the check boxes.

Fusion Middleware Configuration Wizard

Configure JDBC Component Schema

ORACLE

Note: Change only the input fields below that you wish to modify and values will be applied to all selected rows.

Vendor: DBMS/Service:

Driver: Host Name:

Schema Owner: Port:

Schema Password:

☐ Configure selected component schemas as RAC multi data source schemas in the next panel.

	Component Schema	DBMS/Service	Host Name	Port	Schema Owner	Schema Password
<input checked="" type="checkbox"/>	SOA Infrastructure	orcl	dbhost.example.com	1521	DEV_SOAINFRA	
<input checked="" type="checkbox"/>	User Messaging Service	orcl	dbhost.example.com	1521	DEV_ORASDPM	
<input checked="" type="checkbox"/>	OWSM MDS Schema	orcl	dbhost.example.com	1521	DEV_MDS	
<input checked="" type="checkbox"/>	SOA MDS Schema	orcl	dbhost.example.com	1521	DEV_MDS	

9. Provide the db parameters used during schema creation (RCU Utility)

Fusion Middleware Configuration Wizard

Configure JDBC Component Schema

ORACLE

Note: Change only the input fields below that you wish to modify and values will be applied to all selected rows.

Vendor: Oracle

DBMS/Service: ORCL.I-FLEX.COM

Driver: *Oracle's Driver (Thin) for Service connections; Versions:9.0.1,9.2.0

Host Name: ddhp0240.i-flex.com

Schema Owner: Varies among component schemas

Port: 1521

Schema Password: *****

☐ Configure selected component schemas as RAC multi data source schemas in the next panel.

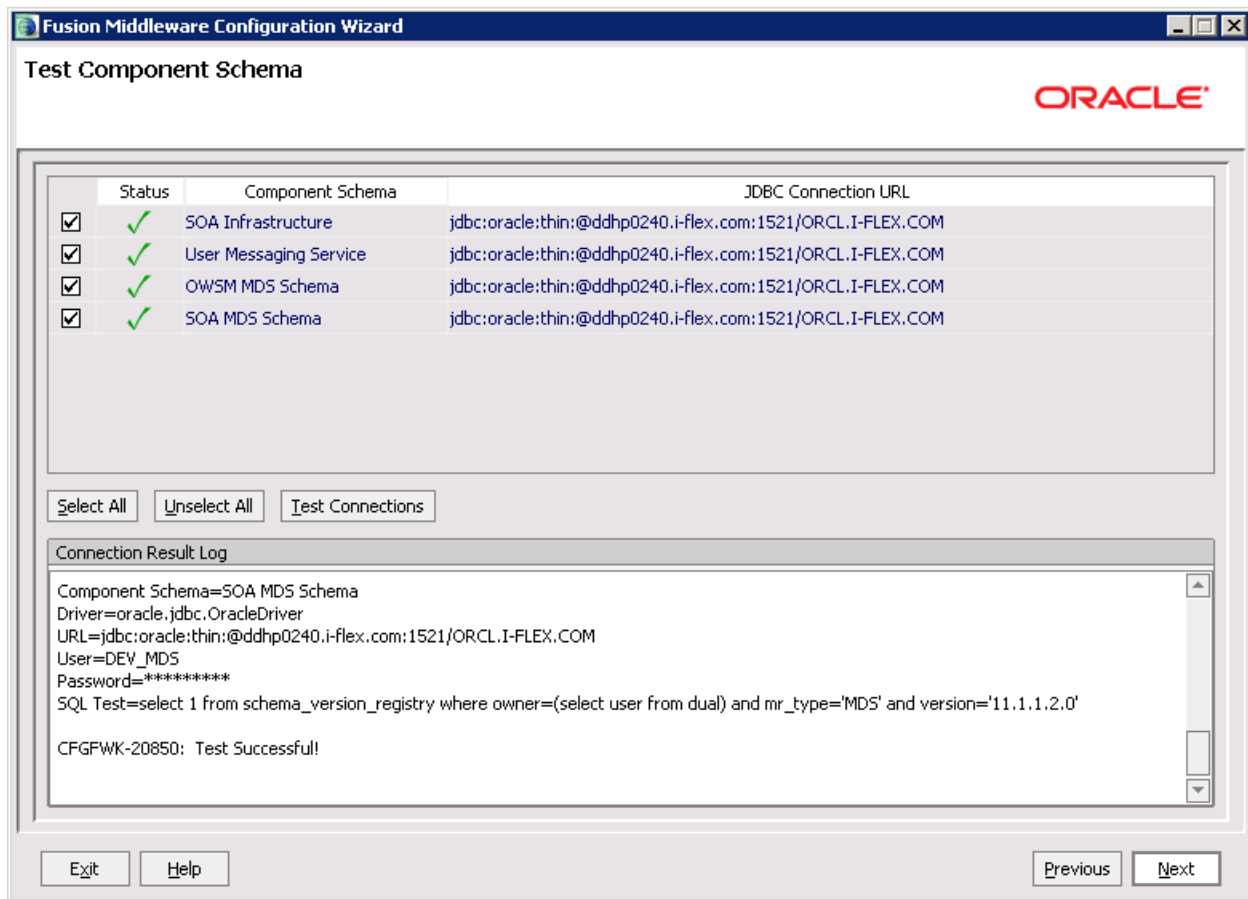
	Component Schema	DBMS/Service	Host Name	Port	Schema Owner	Schema Password
<input checked="" type="checkbox"/>	SOA Infrastructure	ORCL.I-FLEX.COM	ddhp0240.i-flex.com	1521	DEV_SOAINFRA	*****
<input checked="" type="checkbox"/>	User Messaging Service	ORCL.I-FLEX.COM	ddhp0240.i-flex.com	1521	DEV_ORASDPM	*****
<input checked="" type="checkbox"/>	OWSM MDS Schema	ORCL.I-FLEX.COM	ddhp0240.i-flex.com	1521	DEV_MDS	*****
<input checked="" type="checkbox"/>	SOA MDS Schema	ORCL.I-FLEX.COM	ddhp0240.i-flex.com	1521	DEV_MDS	*****

Exit

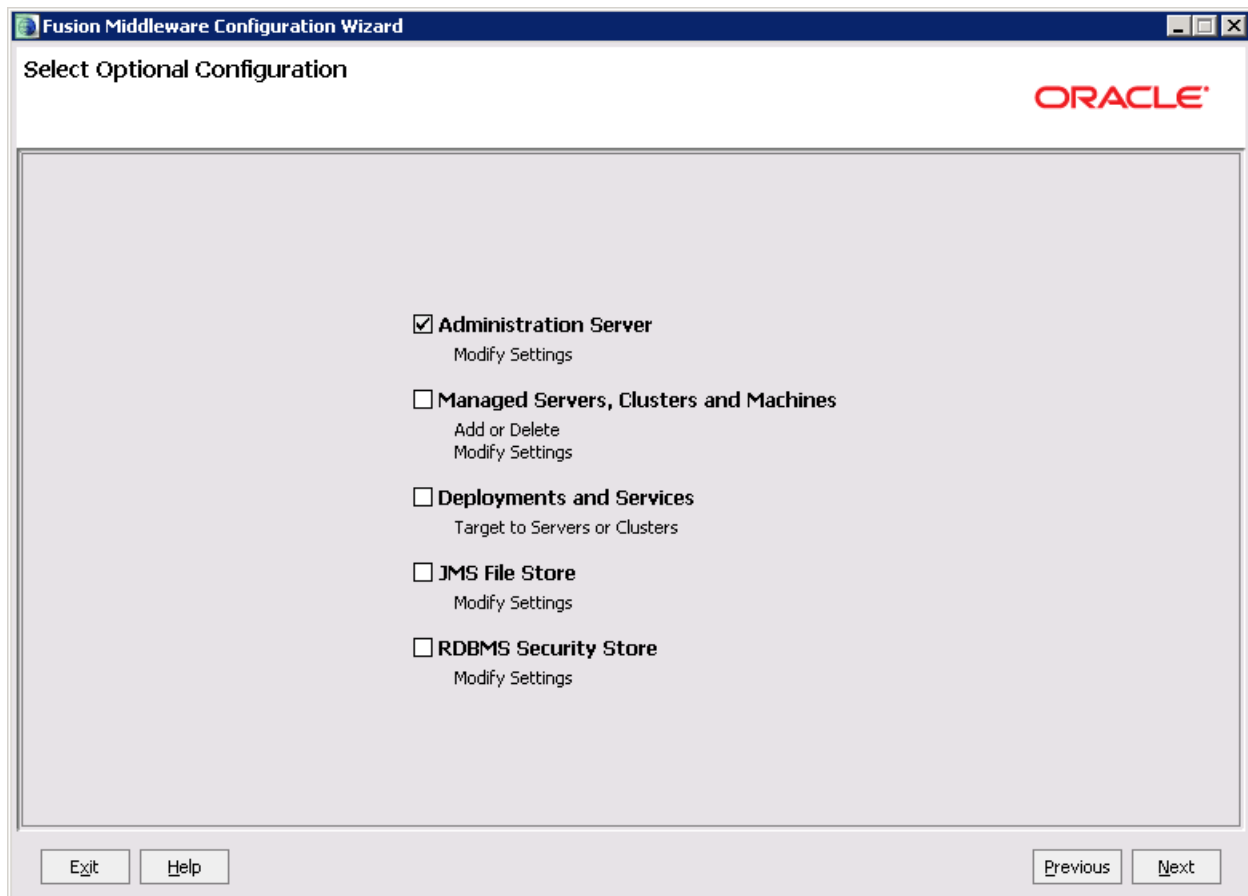
Help

Previous

Next



10. Test the database connectivity



11. Select the Administration Server & Managed Server

Fusion Middleware Configuration Wizard

Configure the Administration Server

ORACLE

Discard Changes

*Name: AdminServer

*Listen address: All Local Addresses

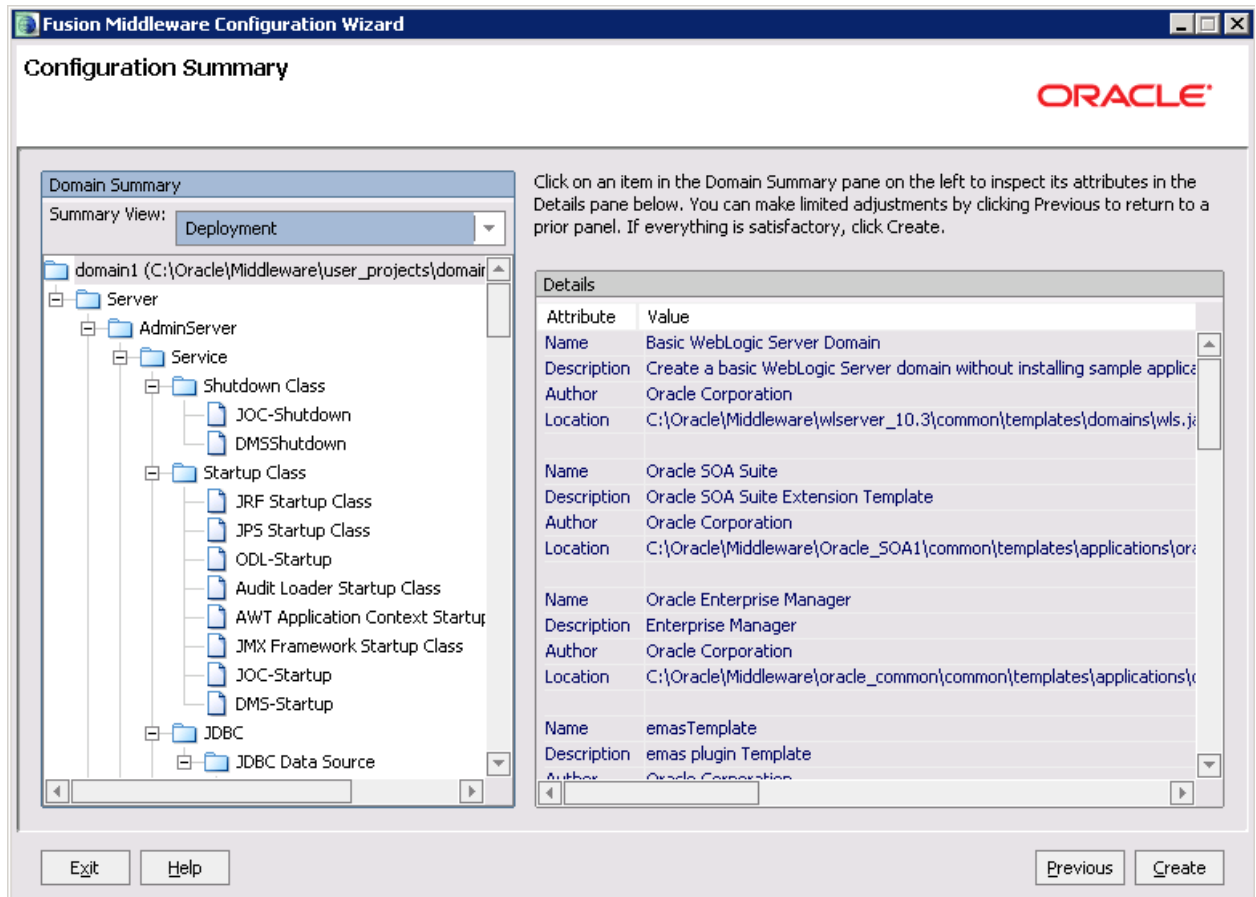
Listen port: 7003

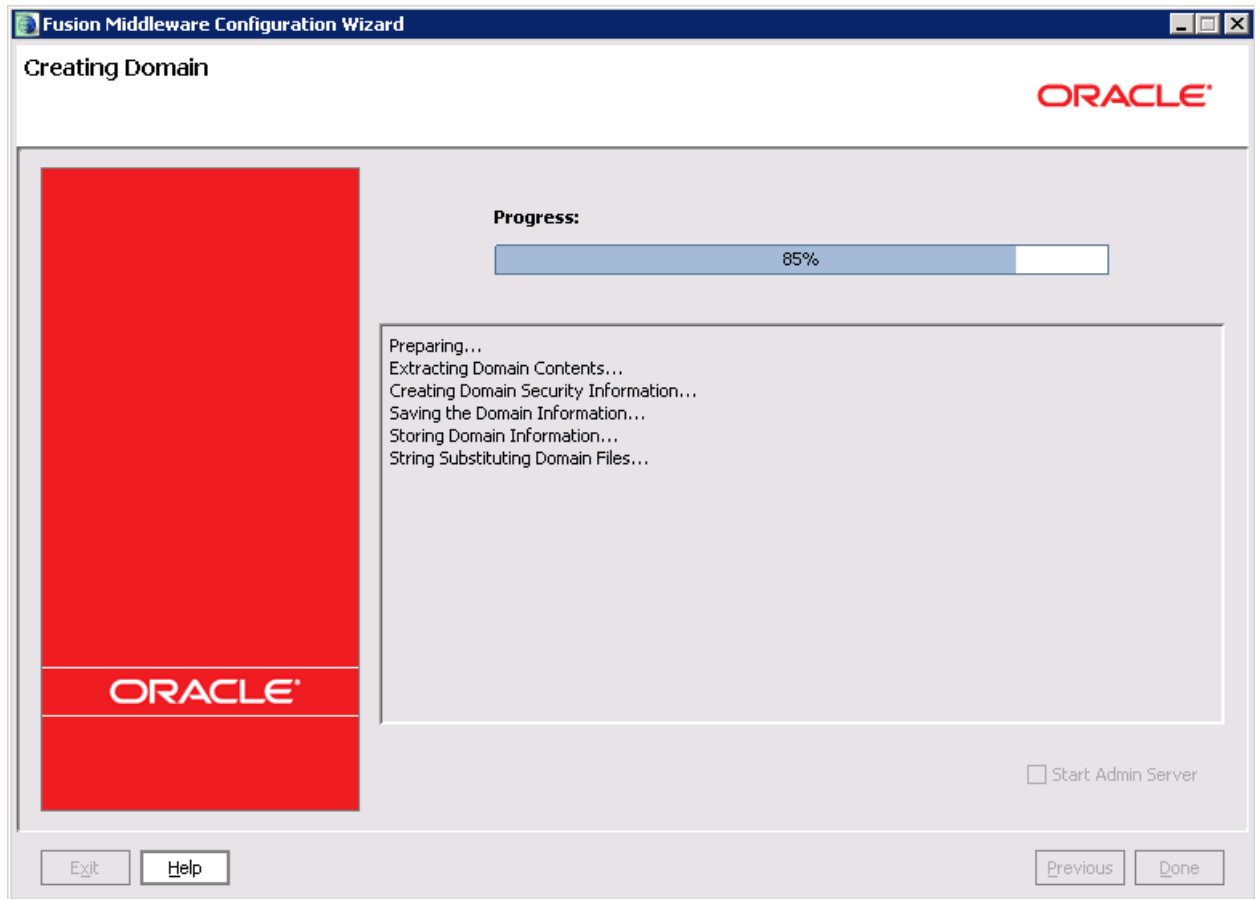
SSL listen port: N/A

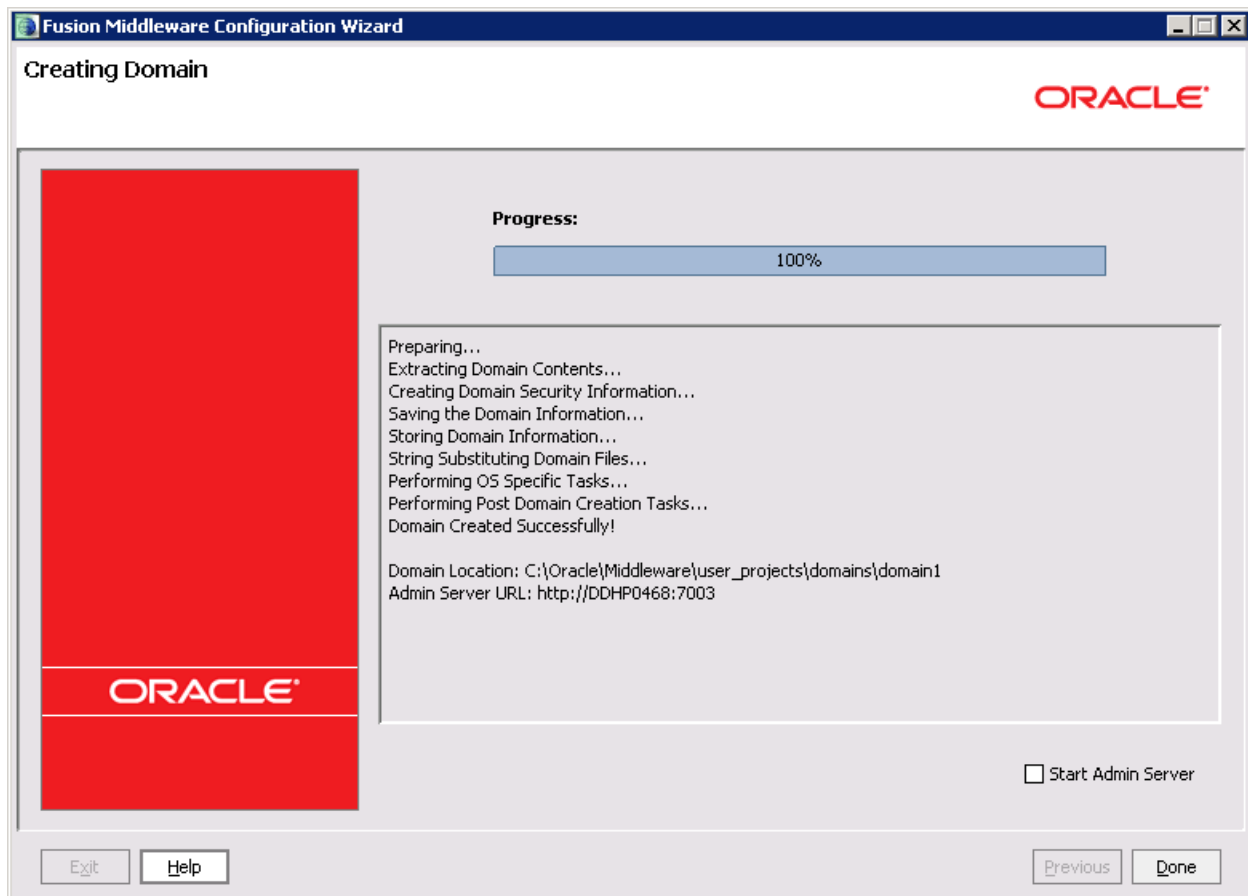
SSL enabled: ☐

Exit Help Previous Next

12. Configure the Administration Server & Managed Server







6. Oracle HTTP server Installation & Configuration.

6.1 Introduction

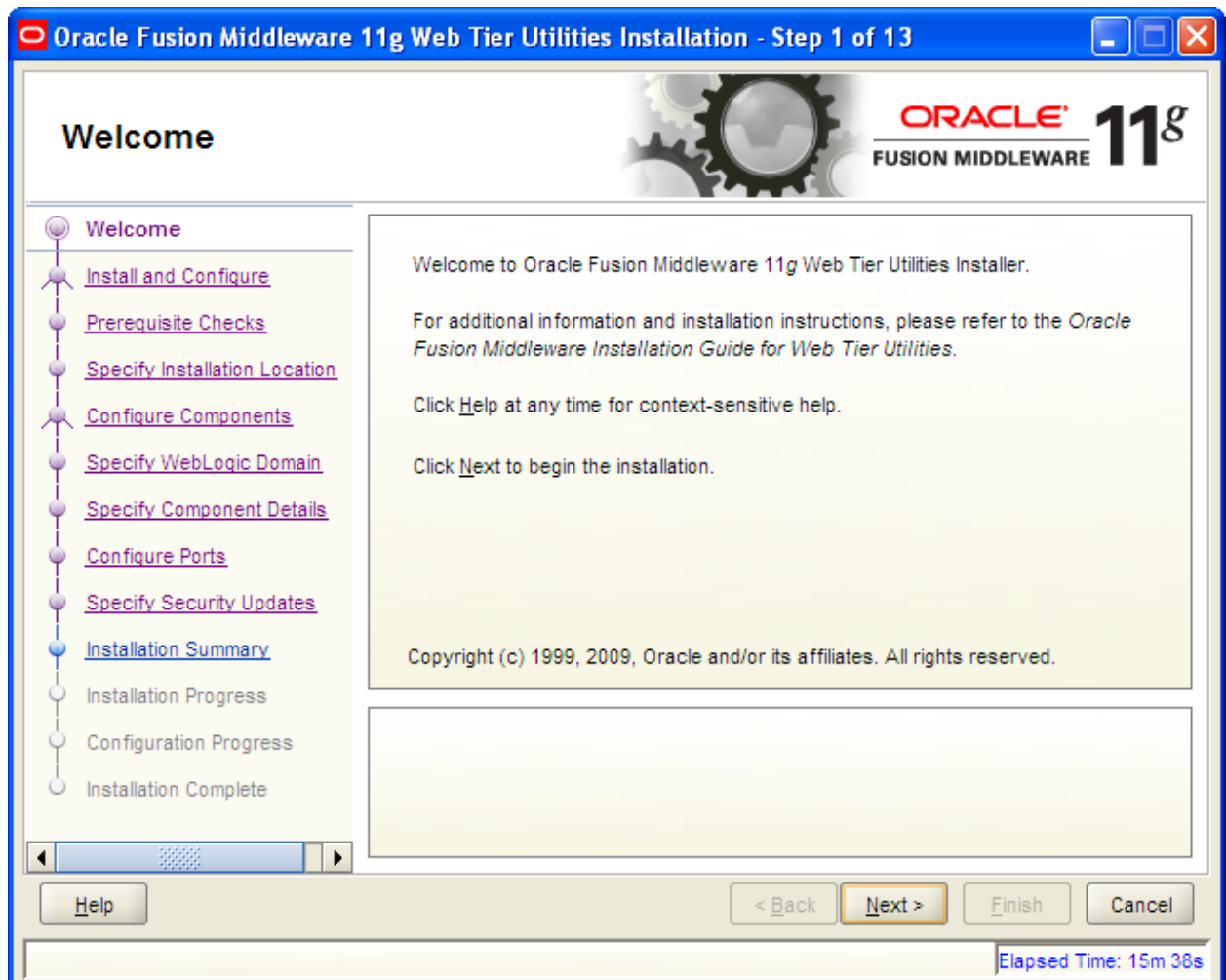
Oracle HTTP server is typically configured in front of weblogic application server , The choice of deployment and SSL terminator will depend on the deployment configuration expected .

Download URL – Please check for appropriate version , The version depicted here is 11.1.1.2

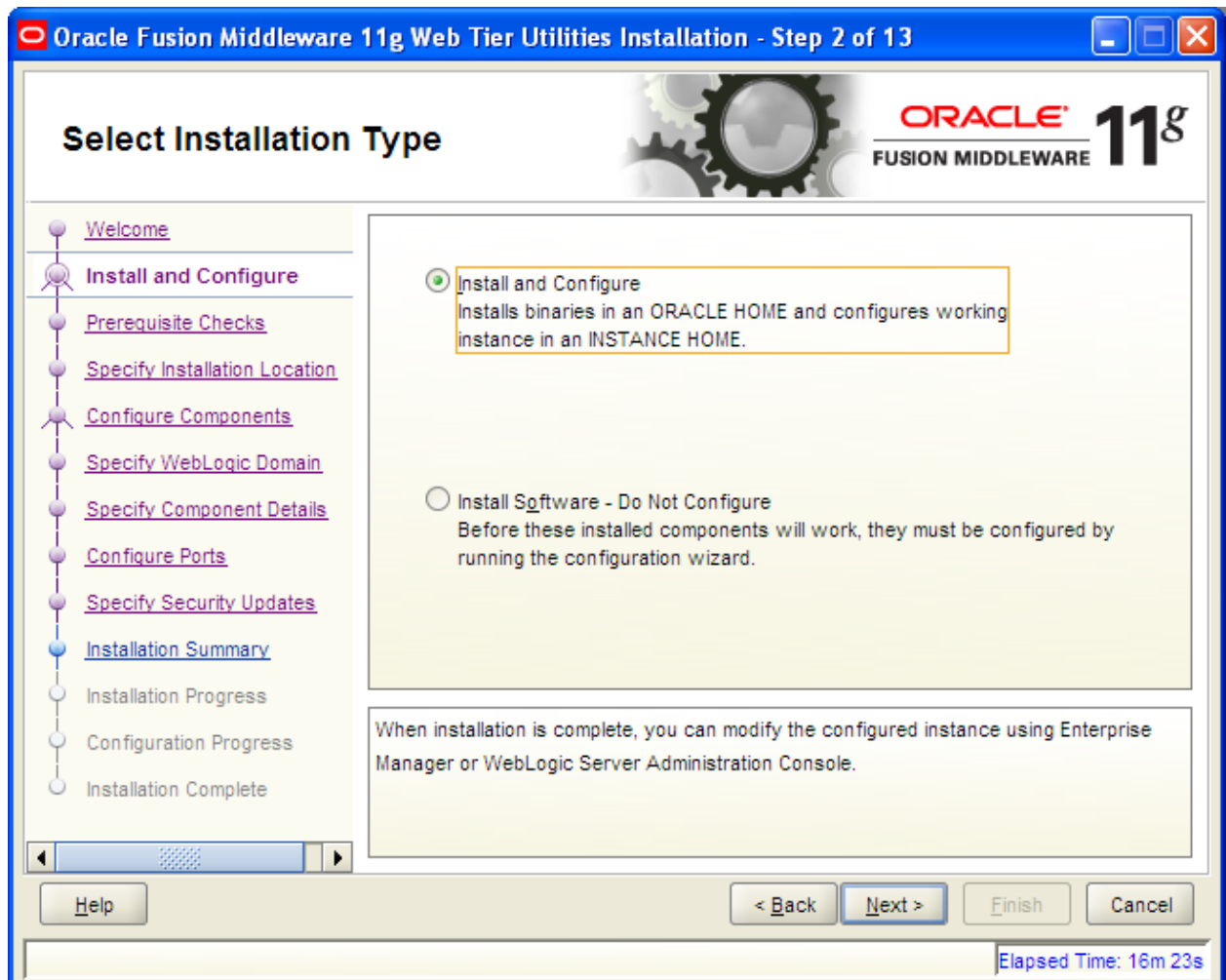
<http://www.oracle.com/technology/software/index.html>

6.2 Installation & Configuration

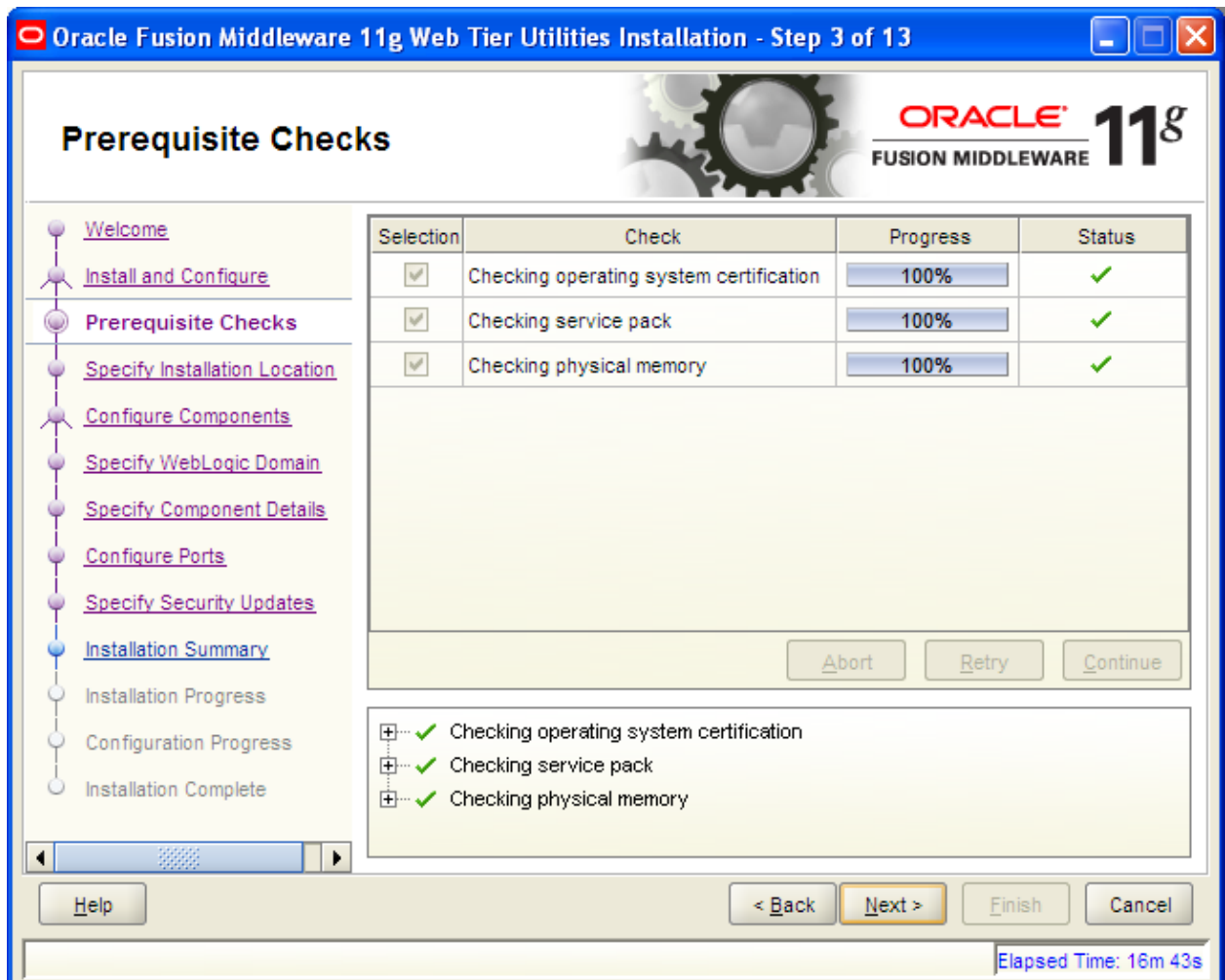
- Run setup.exe



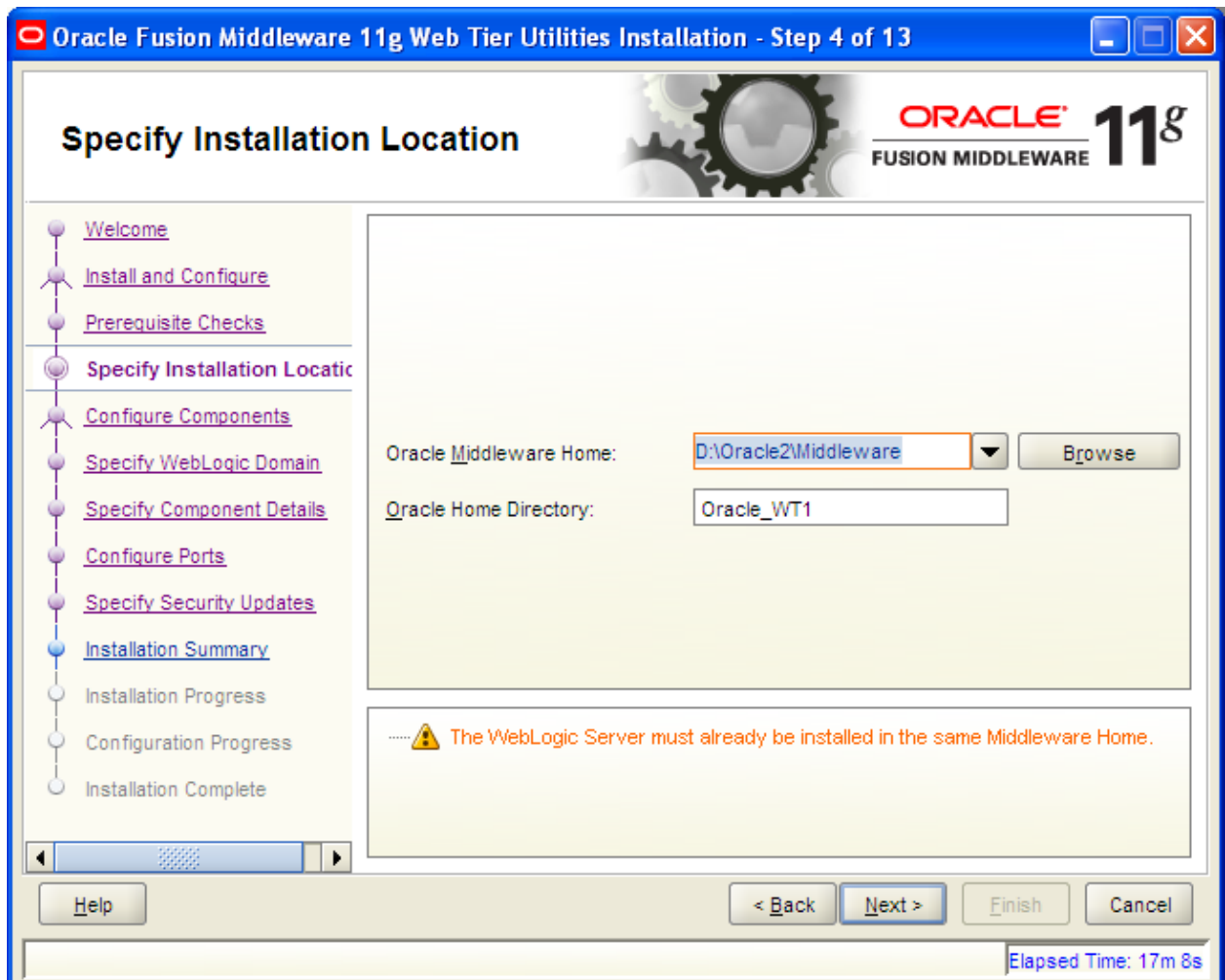
13. Select Install & Configure.



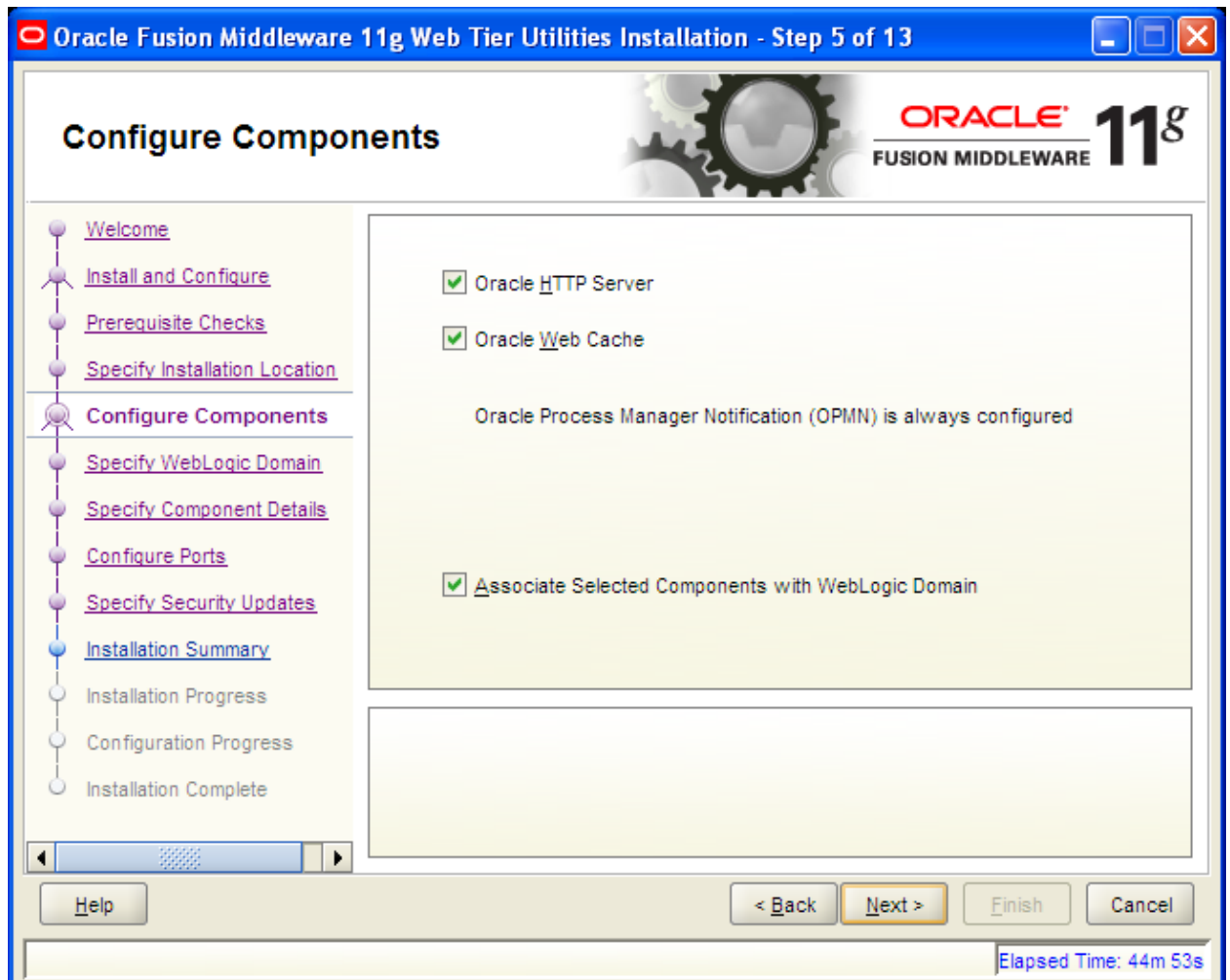
14. Check if prerequisite checks are passed.



15. Select the middleware home where weblogic server is already installed.




16. Choose components Oracle HTTP Server / Oracle Webcache.



17. Specify weblogic domain details.

Oracle Fusion Middleware 11g Web Tier Utilities Installation - Step 6 of 14

Specify WebLogic Domain



[Welcome](#)
[Install and Configure](#)
[Prerequisite Checks](#)
[Specify Installation Location](#)
[Configure Components](#)
[Specify WebLogic Domain](#)
[Specify Component Details](#)
[Web Cache Administrator](#)
[Configure Ports](#)
[Specify Security Updates](#)
[Installation Summary](#)
[Installation Progress](#)
[Configuration Progress](#)
[Installation Complete](#)

Domain Host Name:
Domain Port No:
User Name:
Password:


[Help](#) [< Back](#) [Next >](#) [Finish](#) [Cancel](#)

Elapsed Time: 45m 28s

18. Location where components to be installed.

Oracle Fusion Middleware 11g Web Tier Utilities Installation - Step 7 of 14

Specify Component Details



[Welcome](#)
[Install and Configure](#)
[Prerequisite Checks](#)
[Specify Installation Location](#)
[Configure Components](#)
[Specify WebLogic Domain](#)
[Specify Component Details](#)
[Web Cache Administrator](#)
[Configure Ports](#)
[Specify Security Updates](#)
[Installation Summary](#)
Installation Progress
Configuration Progress
Installation Complete

Instance Home Location:

Instance Name:

QHS Component Name:


Web Cache Component Name:

Elapsed Time: 45m 58s

19. Credentials for web cache administrator.

Oracle Fusion Middleware 11g Web Tier Utilities Installation - Step 8 of 14

Web Cache Administrator Password



[Welcome](#)
[Install and Configure](#)
[Prerequisite Checks](#)
[Specify Installation Location](#)
[Configure Components](#)
[Specify WebLogic Domain](#)
[Specify Component Details](#)
Web Cache Administrator
[Configure Ports](#)
[Specify Security Updates](#)
[Installation Summary](#)
Installation Progress
Configuration Progress
Installation Complete

Web Cache Administrator Password:

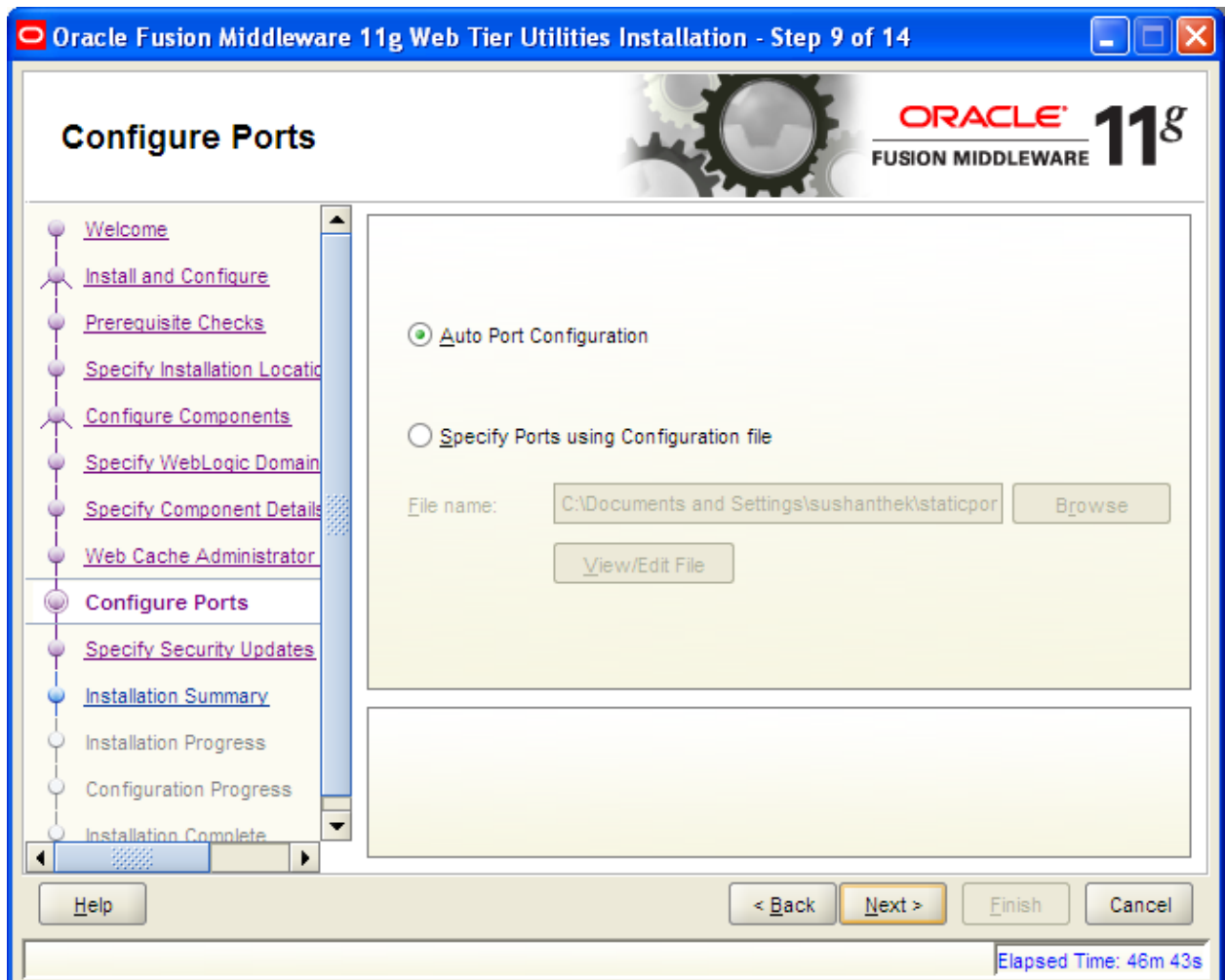
Confirm Password:

Valid passwords are 5 to 30 characters long, must begin with an alphabetic character, use only alphanumeric, underscore (_), dollar (\$) or pound (#) characters and include at least one number.

[Help](#) [< Back](#) [Next >](#) [Finish](#) [Cancel](#)

Elapsed Time: 46m 23s

20. Port configuration – Use specify port if custom ports are to be configured for various services.



21. If you are an administrator and require security updates from oracle , provide details and subscribe.

Oracle Fusion Middleware 11g Web Tier Utilities Installation - Step 10 of 14

Specify Security Updates

Provide your email address to be informed of security issues, install the product and initiate configuration manager. [View details.](#)

Email:

Easier for you if you use your My Oracle Support email address/username.

☐ I wish to receive security updates via My Oracle Support.

My Oracle Support Password:

Installation Summary

Installation Progress

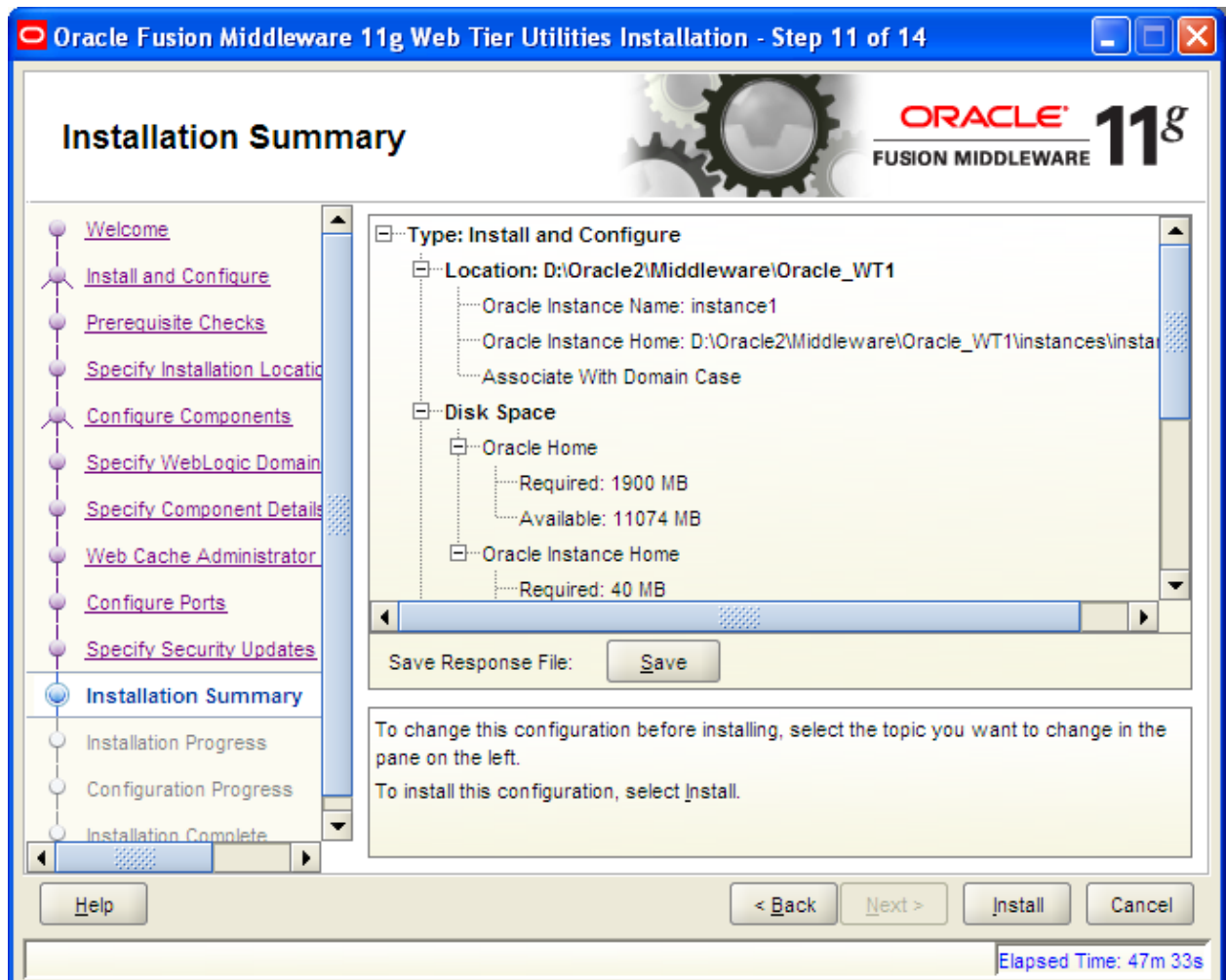
Configuration Progress

Installation Complete

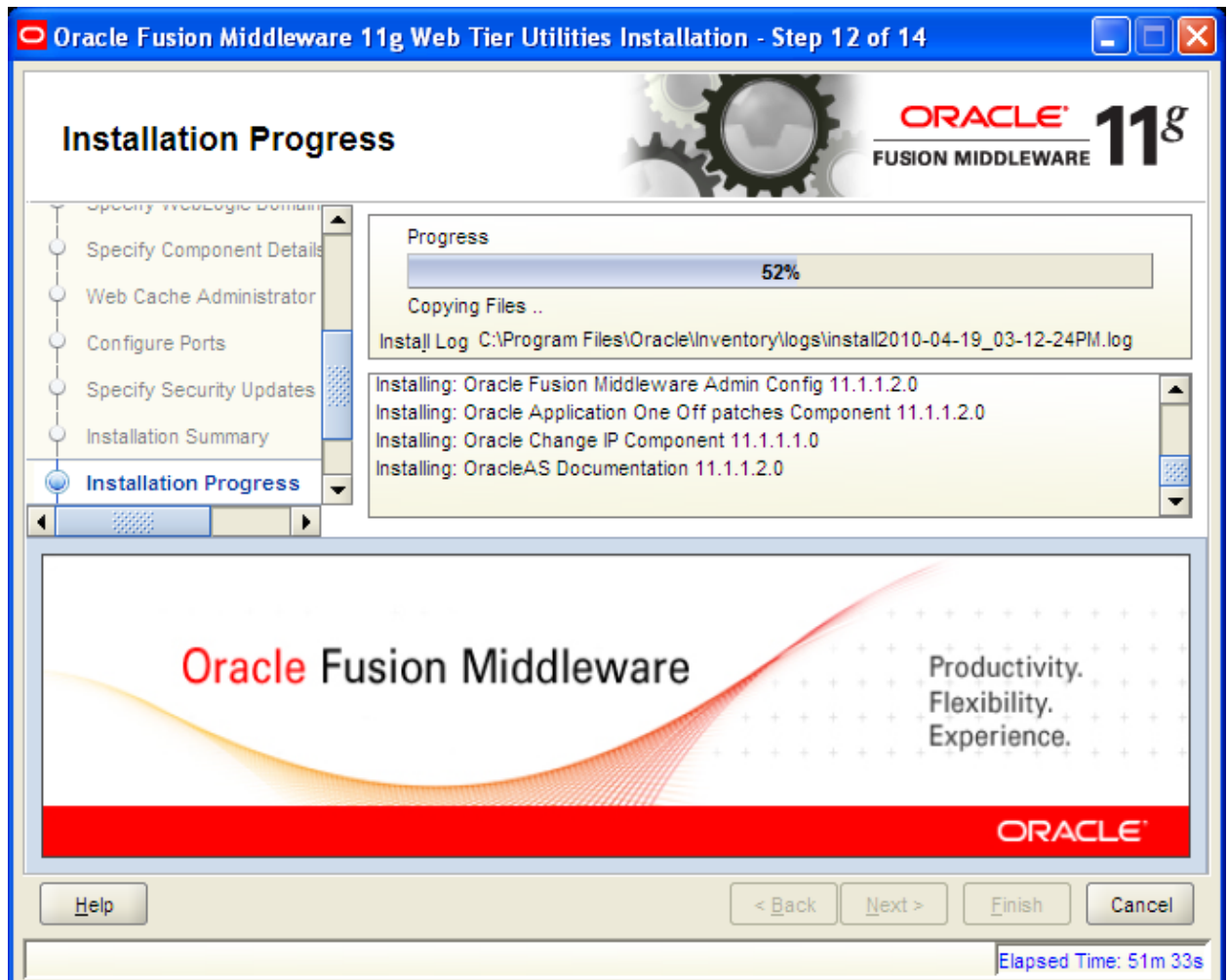
Help < Back Next > Finish Cancel

Elapsed Time: 47m 13s

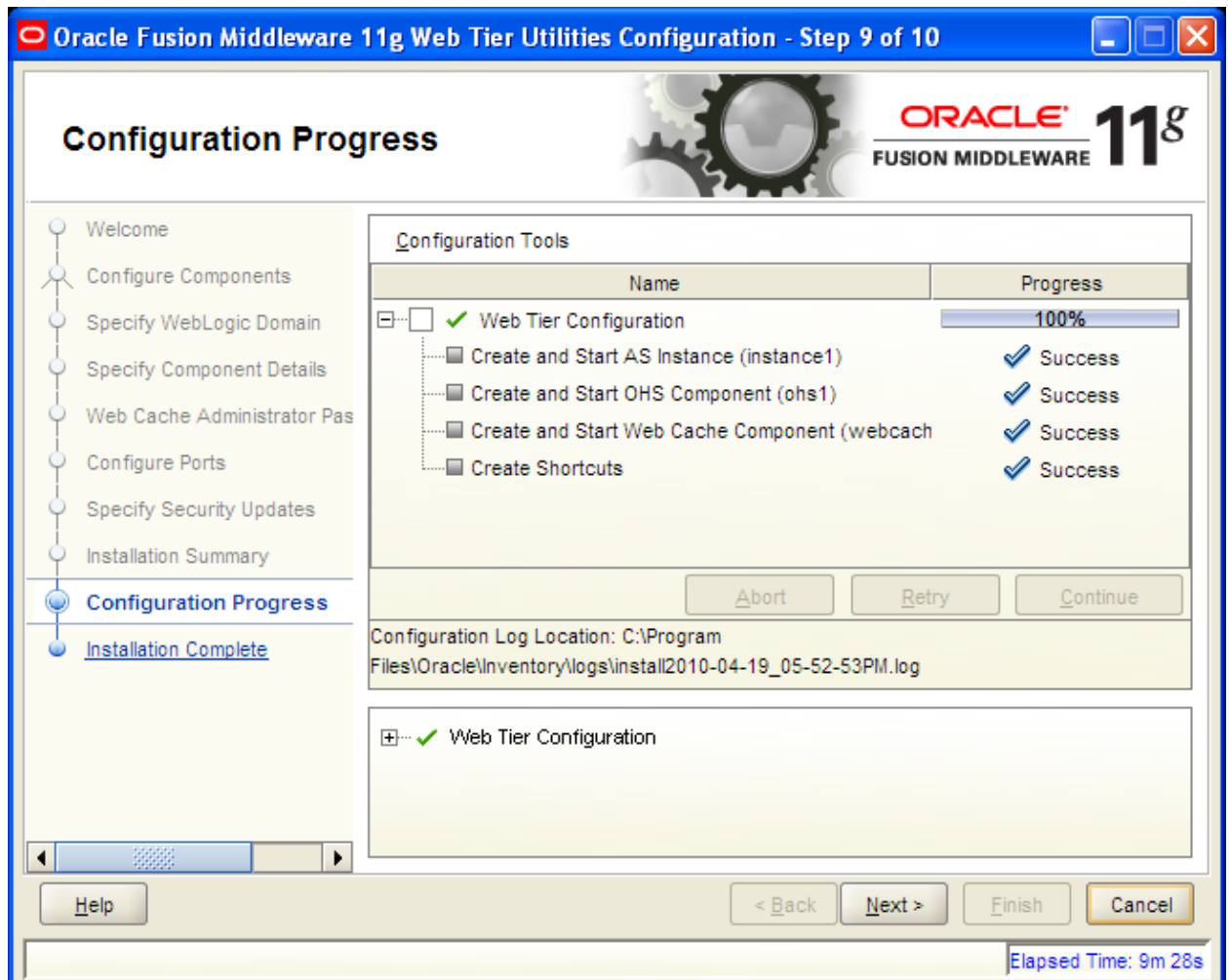
22. Review installation summary.



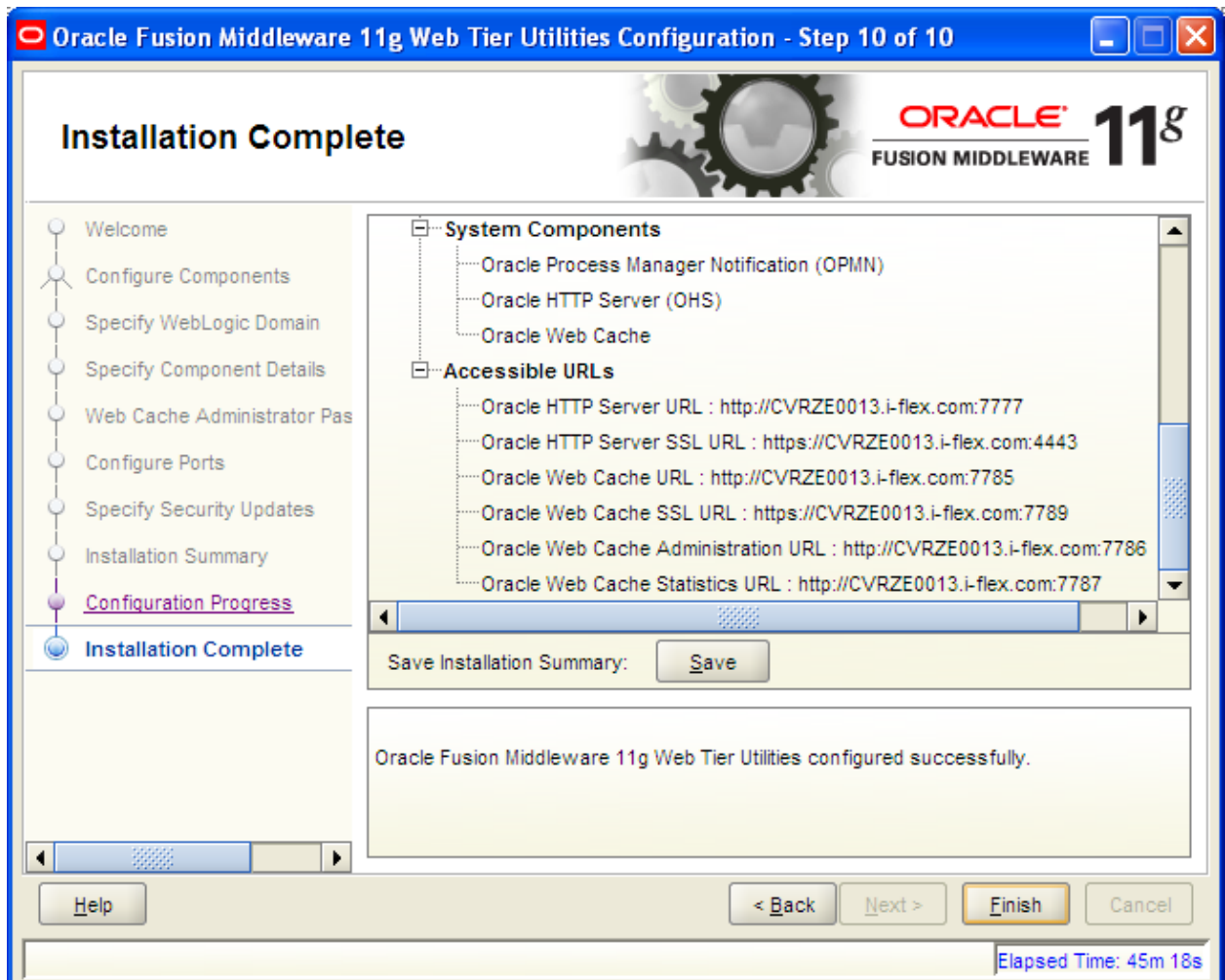
23. Review installation progress.



24. Review configuration progress.



25. Installation complete.



7. Generating Self Signed certificate & Configuring SSL

Self signed certificates are used for development environment , for production environment certificate from a issuing authorities like (verisign / thwarte..) are to be used..

7.1 Orapki utility to create wallet & self signed certificate

This document gives details of using orapki utility for creating wallet and self signed certificates.

7.1.1.1 Orapki utility

With

1. Oracle Client < bin>
2. WLS <<middleware>/oracle_common/bin

7.1.1.2 Wallet creation

```
orapki wallet create -wallet D:\oracle2\Middleware\wallet\ -pwd welcome123 -auto_login
```

7.1.1.3 Generating self signed certificatey

```
orapki wallet add -wallet D:\oracle2\Middleware\wallet\ -dn "CN=cvrze0013.i-  
flex.com,OU=BPD,O=Oracle,L=iflexpark,ST=Karnataka,C=IN" -keysize 1024 -self_signed -  
validity 365 -pwd welcome123
```

7.1.1.4 Add wallet to ssl.conf

ssl.conf can be located in
<middleware_home>/<ohs_home>/instances/<instance_name>/config/OHS/<ohsname>

E.g

```
<middleware_home>Oracle_WT1/instances/instance1/config/OHS/ohs1/ssl.conf
```

```
# SSL Certificate Revocation List Check
```

```
# Valid values are On and Off
```

```
SSLCRLCheck Off
```

```
#Path to the wallet
```

```
SSLWallet /data1/appsrvrs/wls1032/Oracle/Middleware/wallet
```

```
<FilesMatch "\.(cgi|shtml|phtml|php)$">
```

```
SSLOptions +StdEnvVars

</FilesMatch>
```

7.1.1.5 **Mod_wl_ohs.conf modification to forward request to weblogic server**

Mod_wl_ohs.conf can be located in
<middleware_home>/<ohs_home>/instances/<instance_name>/config/OHS/<ohsname>

E.g

<middleware_home>Oracle_WT1/instances/instance1/config/OHS/ohs1/mod_wl_ohs.conf

Sample configuration given below , please modify as per the application context and ports configured.

NOTE : This is a template to configure mod_weblogic.

```
LoadModule weblogic_module "${ORACLE_HOME}/ohs/modules/mod_wl_ohs.so"
```

This empty block is needed to save mod_wl related configuration from EM to this file when changes are made at the Base Virtual Host Level

```
<IfModule weblogic_module>
```

```
#   WebLogicHost <WEBLOGIC_HOST>
```

```
#   WebLogicPort <WEBLOGIC_PORT>
```

```
#   Debug ON
```

```
#   WLLogFile /tmp/weblogic.log
```

```
#   MatchExpression *.jsp
```

```
</IfModule>
```

```
# <Location /weblogic>
```

```
#   SetHandler weblogic-handler
```

```
#   PathTrim /weblogic
```

```
#   ErrorPage http://WEBLOGIC_HOME:WEBLOGIC_PORT/
```

```
# </Location>
```

```
<Location /console>
```

```
    SetHandler weblogic-handler
```

```

    WebLogicHost localhost
    WeblogicPort 9001
</Location>
<Location /em>
    SetHandler weblogic-handler
    WebLogicHost localhost
    WeblogicPort 9001
</Location>
<Location /consolehelp>
    SetHandler weblogic-handler
    WebLogicHost localhost
    WeblogicPort 9001
</Location>
<Location /FCJNeoWeb>
    SetHandler weblogic-handler
    WebLogicHost localhost
    WeblogicPort 9003
</Location>
<Location /FCJNeoFgl>
    SetHandler weblogic-handler
    WebLogicHost localhost
    WeblogicPort 9003
</Location>
<Location /ELGatewayClient>
    SetHandler weblogic-handler
    WebLogicHost localhost
    WeblogicPort 9003

```

</Location>

8. Pre-Deployment Tasks

This section explains the Pre-Deployment tasks which need to be carried manually for FCIS + BPEL Integration.

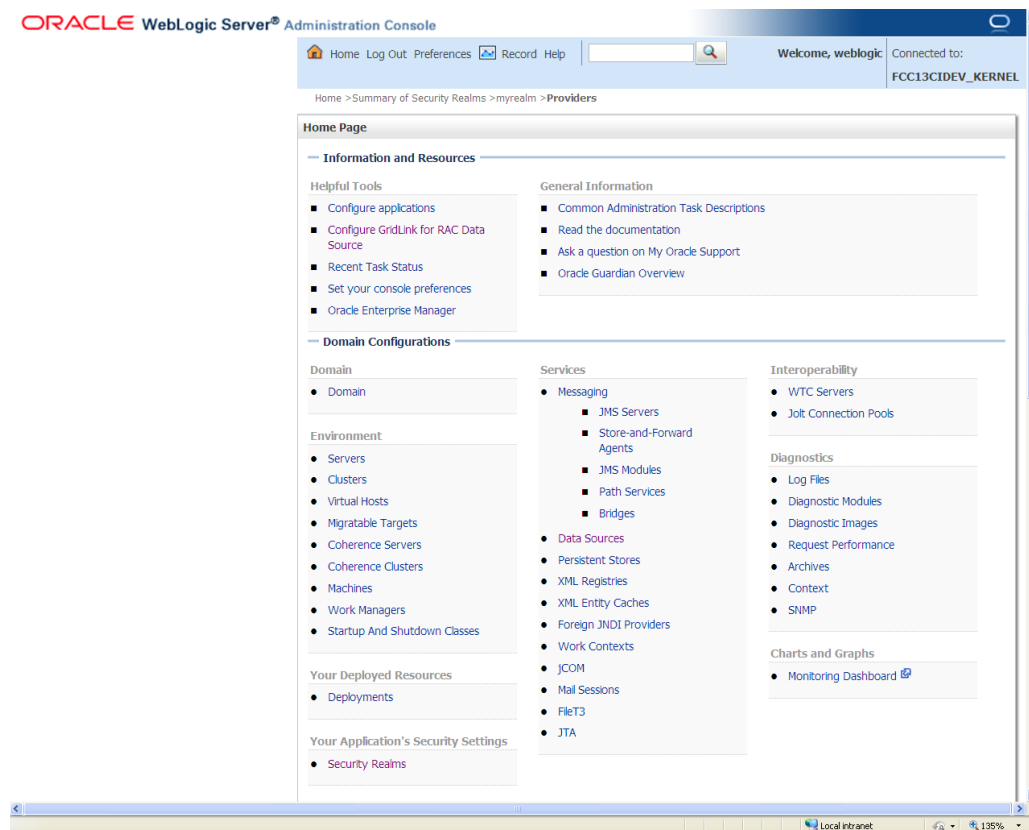
8.1 FCIS and BPEL Integration

If the EAR has been created with BPEL as a PlugIn then along with FCIS EAR file, Installer creates one more JAR file by name FCBPELCIS.jar. Before deploying FCIS EAR file following tasks should be completed.

8.1.1.1 Provider Configuration

Provider configuration has to be done from the weblogic console of SOA.

1. Login to Console.
2. Click on Security Realms.



3. Click on myrealm.

The screenshot shows the Oracle WebLogic Server Administration Console. The top navigation bar includes links for Home, Log Out, Preferences, Record, and Help. The user is logged in as 'weblogic' and is connected to the 'FCC13CIDEV_KERNEL' domain. The breadcrumb trail indicates the current location: Home > Summary of Security Realms > myrealm > Providers > Summary of Security Realms.

The main content area is titled 'Summary of Security Realms'. It contains a description of a security realm and a table listing the configured realms. The table has two columns: 'Name' and 'Default Realm'. There is one entry in the table with the name 'myrealm' and the default realm set to 'true'.

On the left side of the console, there is a 'Change Center' section with a link to 'View changes and restarts'. Below that is the 'Domain Structure' tree, which shows the hierarchy of the domain: FCC13CIDEV_KERNEL > Environment > Deployments > Services > Security Realms. The 'Security Realms' node is currently selected.

Name	Default Realm
myrealm	true

4. Click on Providers tab and click on new button to create new authentication provider.
5. Give Provider name as FCJSQLProvider and type as SQLAuthenticator.

ORACLE WebLogic Server® Administration Console

Home Log Out Preferences Record Help Welcome, weblogic Connected to: FCC13CIDEV_KERNEL

Home > Summary of Security Realms > myrealm > Providers > Summary of Security Realms > myrealm > Providers > FCJSQLProvider > myrealm > **Providers**

Create a New Authentication Provider

OK Cancel

Create a new Authentication Provider

The following properties will be used to identify your new Authentication Provider.

* Indicates required fields

The name of the authentication provider.

* **Name:** SQLProvider

This is the type of authentication provider you wish to create.

Type: SQLAuthenticator

OK Cancel

Change Center

[View changes and restarts](#)

Configuration editing is enabled. Future changes will automatically be activated as you modify, add or delete items in this domain.

Domain Structure

- FCC13CIDEV_KERNEL
 - Environment
 - Deployments
 - Services
 - Security Realms
 - Interoperability
 - Diagnostics

Local intranet 135%

ORACLE WebLogic Server® Administration Console

Home Log Out Preferences Record Help Welcome, weblogic Connected to: FCC13CIDEV_KERNEL

Home > Summary of Security Realms > myrealm > Providers > Summary of Security Realms > myrealm > Providers

Settings for myrealm

Configuration Users and Groups Roles and Policies Credential Mappings **Providers** Migration

Authentication Password Validation Authorization Adjudication Role Mapping Auditing Credential Mapping

Certification Path Keystores

An Authentication provider allows WebLogic Server to establish trust by validating a user. You must have one Authentication provider in a security realm, and you can configure multiple Authentication providers in a security realm. Different types of Authentication providers are designed to access different data stores, such as LDAP servers or DBMS. You can also configure a Realm Adapter Authentication provider that allows you to work with users and groups from previous releases of WebLogic Server.

[Customize this table](#)

Authentication Providers

New Delete Reorder Showing 1 to 3 of 3 Previous Next

<input type="checkbox"/>	Name	Description	Version
<input type="checkbox"/>	FCJSQLProvider	Provider that performs DBMS authentication	1.0
<input type="checkbox"/>	DefaultAuthenticator	WebLogic Authentication Provider	1.0
<input type="checkbox"/>	DefaultIdentityAsserter	WebLogic Identity Assertion provider	1.0

New Delete Reorder Showing 1 to 3 of 3 Previous Next

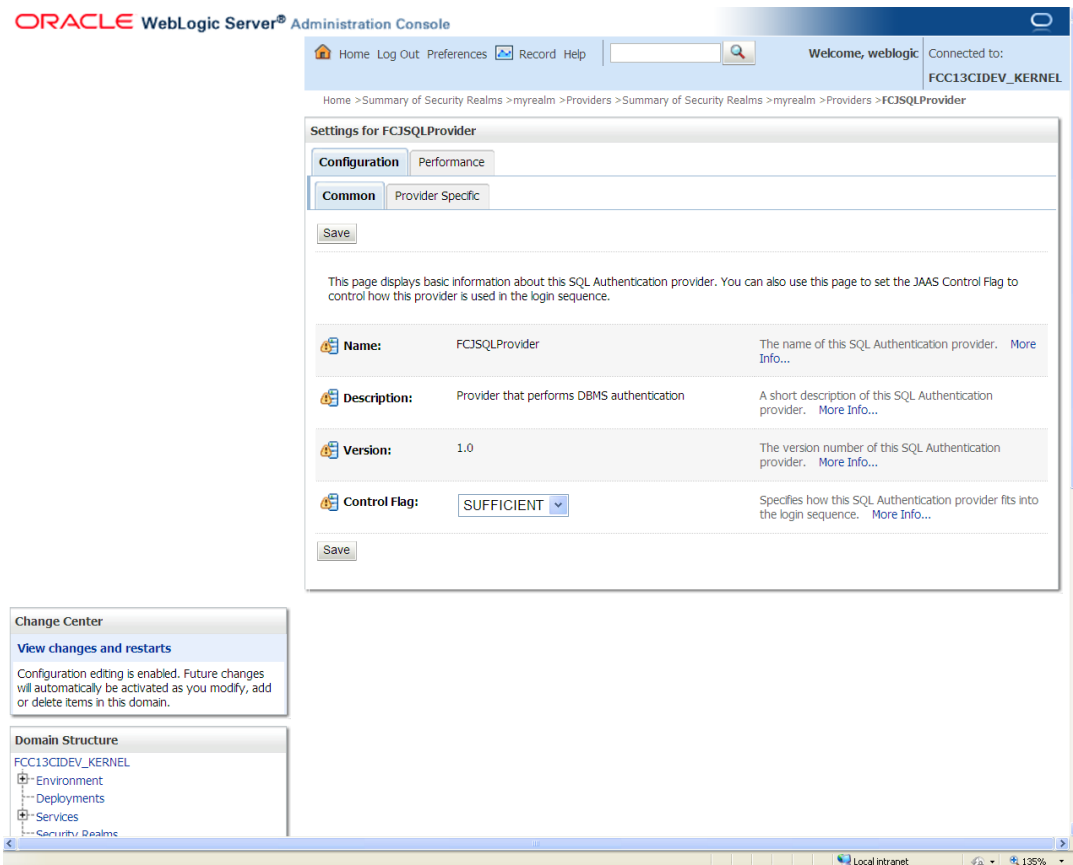
Change Center
[View changes and restarts](#)
Configuration editing is enabled. Future changes will automatically be activated as you modify, add or delete items in this domain.

Domain Structure

Done Local Intranet 135%

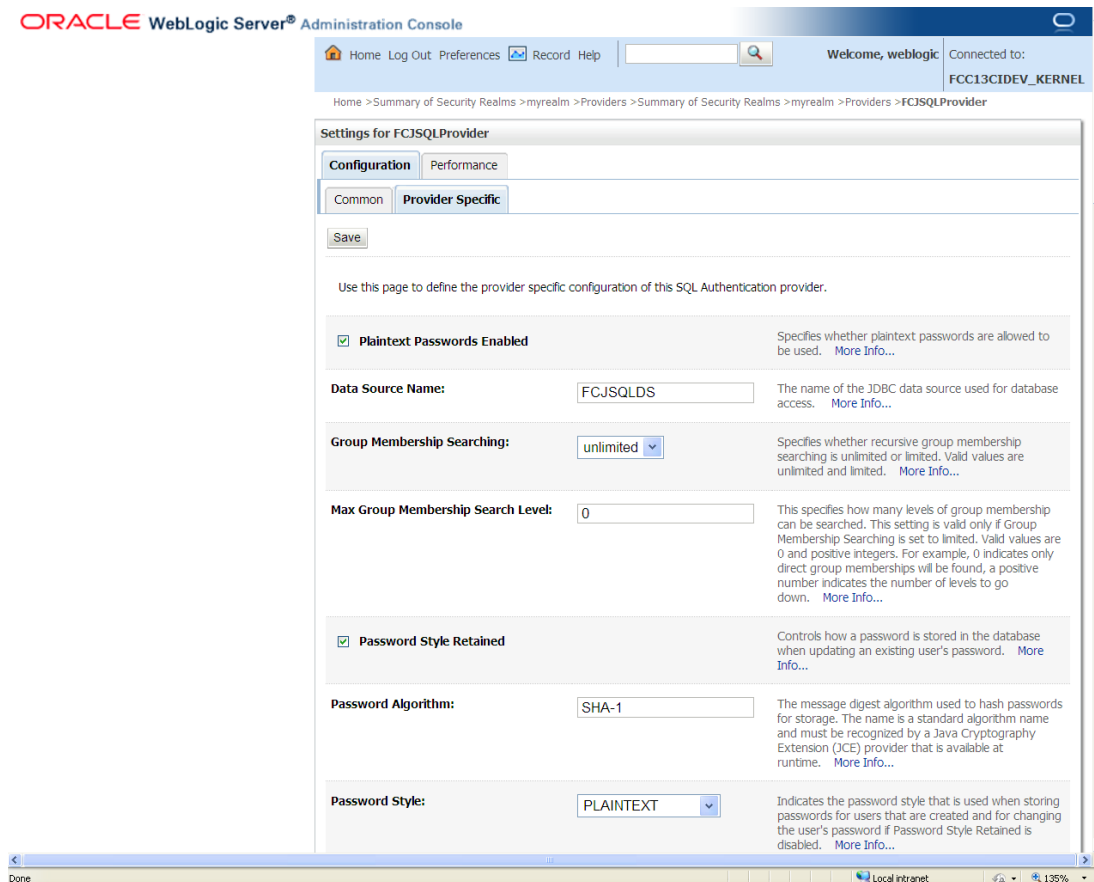
(Click Reorder to bring provider to first of all providers)

6. Click on FCJSQLProvider.
7. In Common tab change the control flag to "SUFFICIENT"



8. In Provider Specific tab

- check Plaintext Passwords Enabled.
- set DataSource name as Flexcube JNDI Name.
- select password style as PLAINTEXT.



d. Modify the query for the following fields to include “csvw_bpel” before the table. For example change

the query for **SQL Get Users Password** from “SELECT U_PASSWORD FROM **USERS** WHERE

U_NAME = ?” to “SELECT U_PASSWORD FROM **csvw_bpel_USERS** WHERE U_NAME = ?”.

1. SQL Get Users Password
2. SQL User Exists
3. SQL Group Exists
4. SQL Is Member
5. SQL List Member Groups
6. SQL List Group Members

e. Apart from above mentioned fields, make all other fields as blank as per the screenshot of which is below.

Search for `<serviceInstances>` tag and add the following code between `<serviceInstances>` and `</serviceInstances>` tags.

```
<serviceInstance name="idstore.custom" provider="custom.provider"
location="dumb">

<description>Custom Identity Store Service Instance</description>

<property name="idstore.type" value="CUSTOM"/>

<property name="ADF_IM_FACTORY_CLASS"
value="com.ofss.fcc.bpel.security.idm.providers.stddb.FCIdentityStoreFactory"
/>

<property name="DATASOURCE_NAME" value="jdbc/fcjddevDS"/>

</serviceInstance>
```

Make sure JNDI given ie jdbc/fcjddevDS matches the value given during Property file creation.

Search for `<jpsContexts default="default">` tag and make the following changes in the code between `<jpsContexts default="default">` and `</jpsContexts>` as highlighted below.

```
<jpsContext name="flex">

    <serviceInstanceRef ref="credstore"/>

    <serviceInstanceRef ref="keystore"/>

    <serviceInstanceRef ref="policystore.xml"/>

    <serviceInstanceRef ref="audit"/>

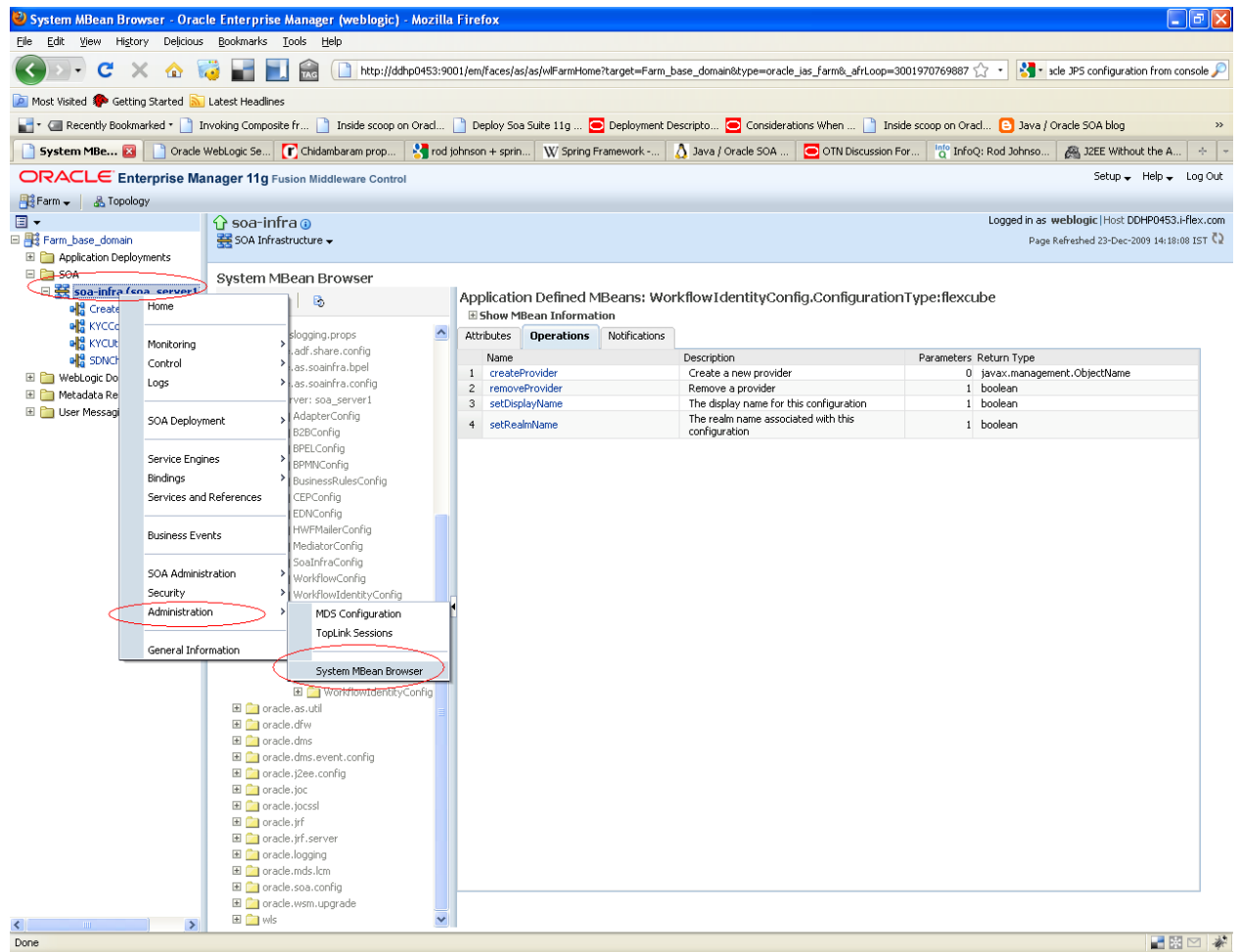
    <serviceInstanceRef ref="idstore.custom"/>

</jpsContext>
```

8.1.1.3 WorkFlow Identity Configuration

WorkFlow Identity Configuration needs to be done from Enterprise Manager Console of SOA.

1. Login to EM Console
2. Expand SOA and right click on soa-infra(soa-server1). Go to Adminsitration and click on System MBean Browser.



3. Expand oracle.as.soainfra.config → Server : soa_server1 (Managed Server Name) → WorkflowIdentityConfig. And Click on **human-workflow** and select **Operation** tab from right side and select **createConfiguration** option.

System MBean Browser - Oracle Enterprise Manager (weblogic) - Mozilla Firefox

http://ddhp0453:9001/em/faces/as/as/wlFarmHome?target=Farm_base_domain&type=oracle_ias_farm&_afLoop=3001970769887

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System MBE... Oracle WebLogic Se... Chidanbaram prop... rod johnson + sprin... W/ Spring Framework ... Java / Oracle SOA ... OTN Discussion For... InfoQ: Rod Johnso... J2EE Without the A...

ORACLE Enterprise Manager 11g Fusion Middleware Control

Setup Help Log Out

soa-infra SOA Infrastructure

Logged in as weblogic | Host DDHP0453.J-flex.com
Page Refreshed 23-Dec-2009 14:18:08 IST

System MBean Browser

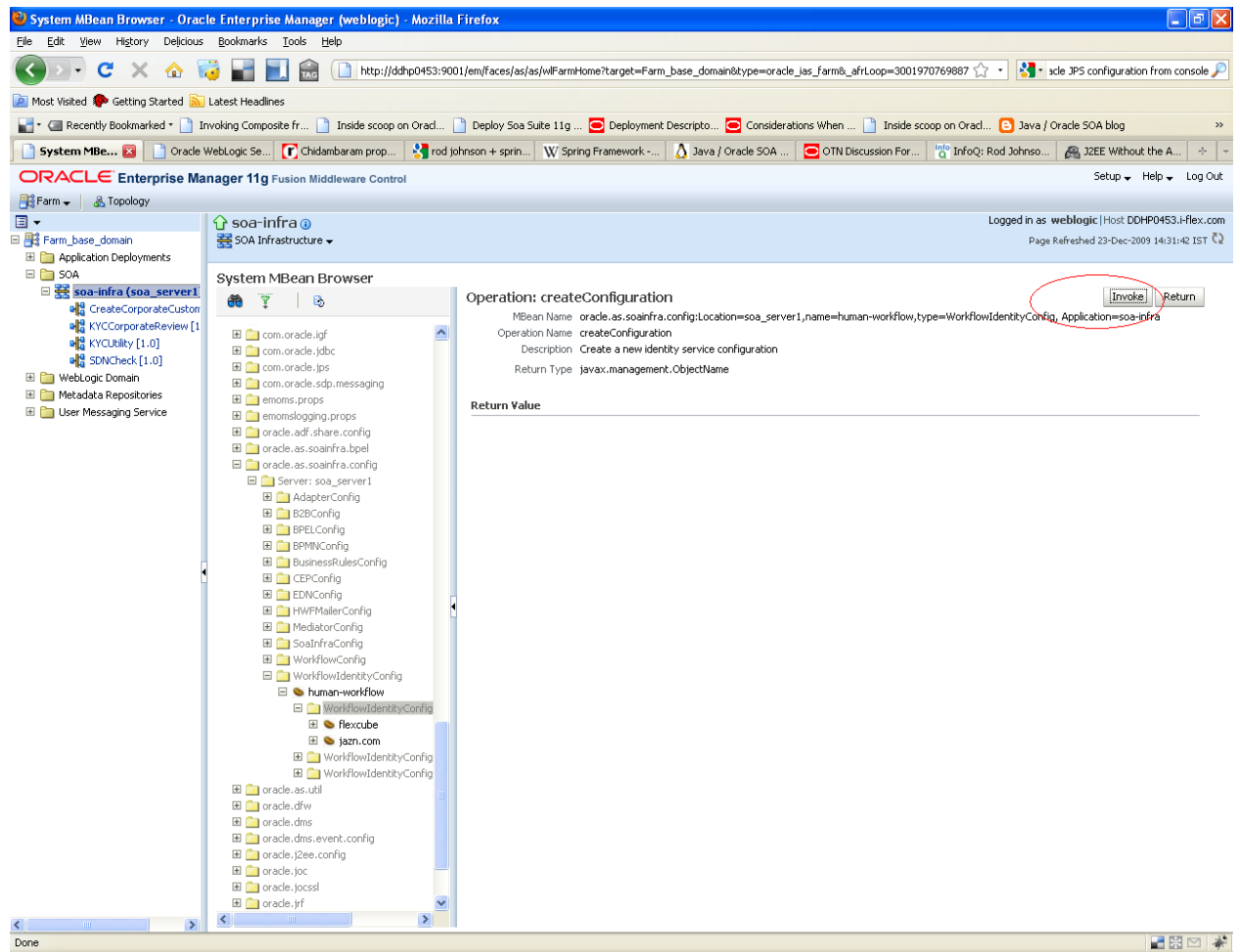
Application Defined MBeans: WorkflowIdentityConfig.ConfigurationType:flexcube

Show MBean Information

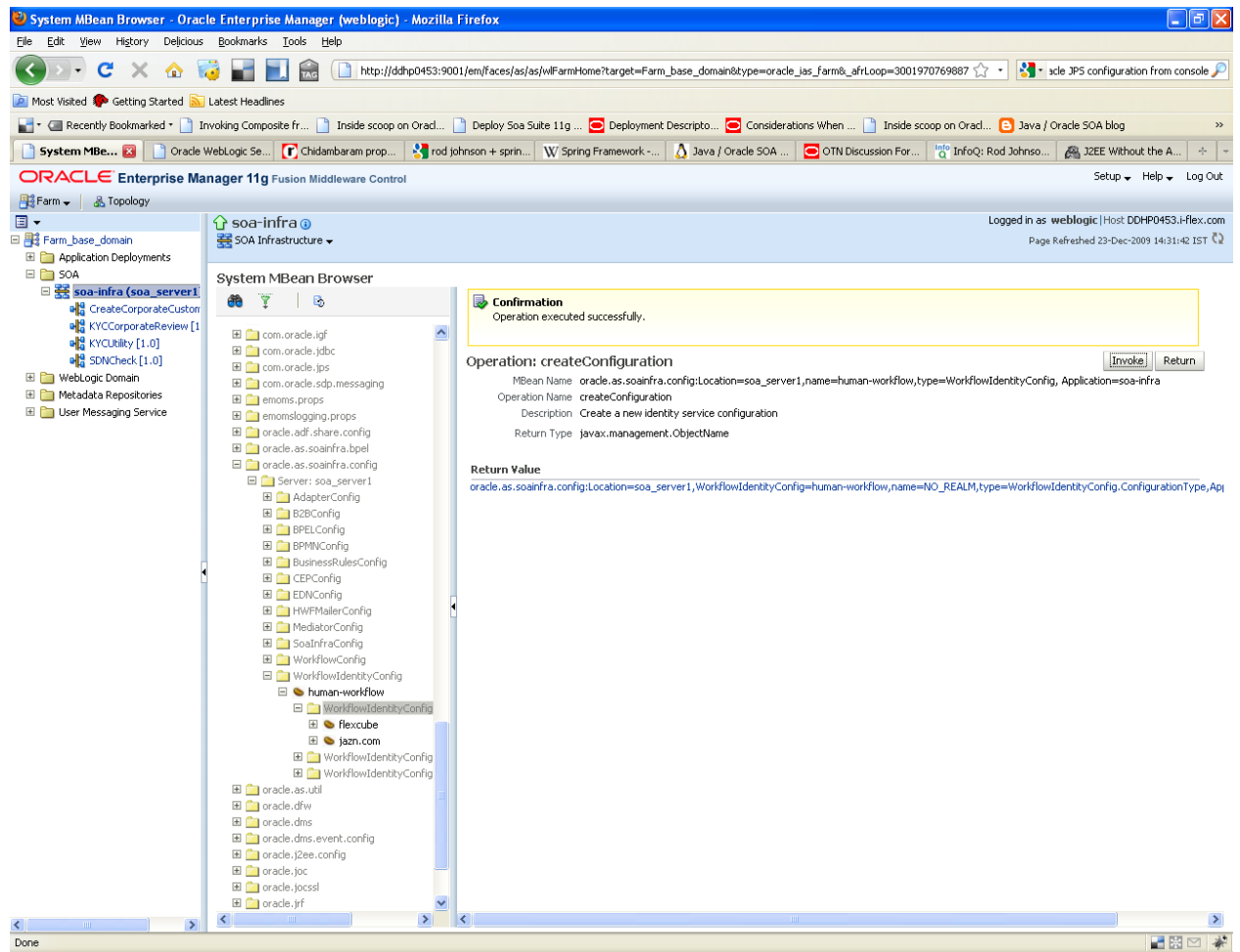
Name	Description	Parameters	Return Type
1 createProvider	Create a new provider	0 javax.management.ObjectName	
2 removeProvider	Remove a provider	1 boolean	
3 setDisplayName	The display name for this configuration	1 boolean	
4 setRealmName	The realm name associated with this configuration	1 boolean	

http://ddhp0453:9001/em/faces/as/as/wlFarmHome?target=Farm_base_domain&type=oracle_ias_farm&_afLoop=3001970769887412#

4. Click on **Invoke** option.



5. The following Confirm message will be displayed.



6. Refresh the MBean Browser and expand **WorkflowIdentityConfig.ConfigurationType**. New Configuration will be available with name **NO_REALM**.

System MBean Browser - Oracle Enterprise Manager (weblogic) - Mozilla Firefox

http://ddhp0453:9001/em/faces/as/wlFarmHome?target=Farm_base_domain&type=oracle_jas_farm&_afLoop=3001970769887

System MBean Browser

soa-infra

System MBean Browser

Application Defined MBeans: WorkflowIdentityConfig:human-workflow

Show MBean Information

Name	Description	Access	Value
1 ConfigMBean	If true, it indicates that this MBean is a Config MBean.	R	true
2 Configurations	The various configuration settings for Identity Service	R	oracle.as.soainfra.config:Location=soa_...
3 eventProvider	If true, it indicates that this MBean is an event provider as defined by JSR-77.	R	true
4 eventTypes	All the event's types emitted by this MBean.	R	jmx.attribute.change
5 objectName	The MBean's unique JMX name	R	oracle.as.soainfra.config:name=human-w...
6 Properties	Get a list of the Identity Service configuration properties. Each property is a simple name-value pair.	R	oracle.as.soainfra.config:Location=soa_...
7 ReadOnly	If true, it indicates that this MBean is a read only MBean.	R	false
8 RestartNeeded	Indicates whether a restart is needed.	R	false
9 ServiceExtensions	List of service extension.	R	oracle.as.soainfra.config:Location=soa_...
10 SystemMBean	If true, it indicates that this MBean is a System MBean.	R	false

- Click on **NO_REALM**. And Click on **Attributes** tab. Change default attribute of NO_REALM to true from false.

System MBean Browser - Oracle Enterprise Manager (weblogic) - Mozilla Firefox

http://ddhp0453:9001/em/faces/as/as/wlFarmHome?target=Farm_base_domain&type=oracle_iar_farm&_afLoop=3001970769887

System MBean Browser - Oracle Enterprise Manager 11g Fusion Middleware Control

soa-infra

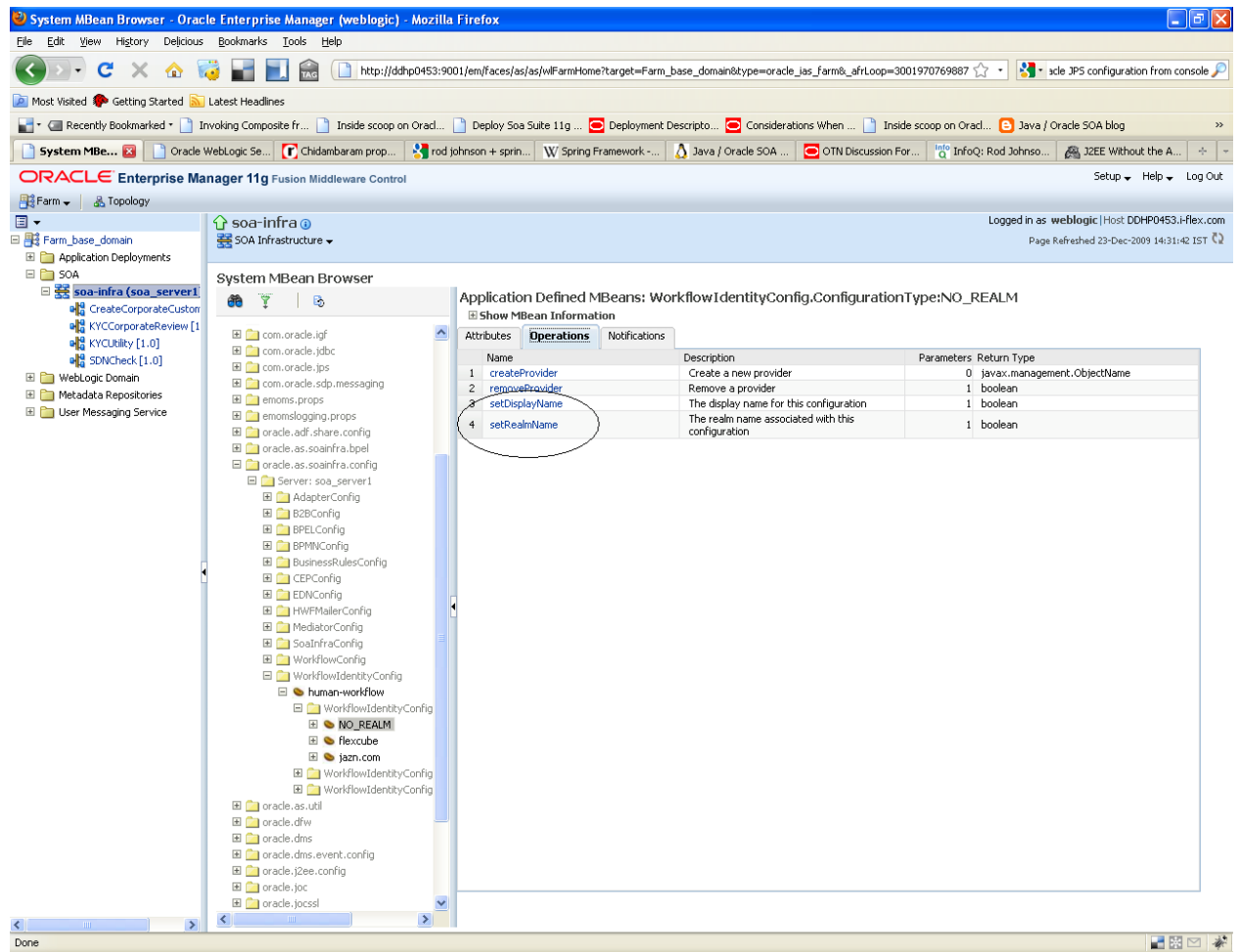
System MBean Browser

Application Defined MBeans: WorkflowIdentityConfig.ConfigurationType:NO_REALM

Show MBean Information

Name	Description	Access	Value
1 ConfigMBean	If true, it indicates that this MBean is a Config MBean.	R	true
2 Default	True if the corresponding configuration is the default. False otherwise	RW	false
3 DisplayName	The display name for this configuration	R	true
4 eventProvider	If true, it indicates that this MBean is an event provider as defined by JSR-77.	R	true
5 eventTypes	All the event's types emitted by this MBean.	R	jmx.attribute.change
6 objectName	The MBean's unique JMX name	R	oracle.as.soainfra.config:WorkflowIdentity
7 Providers	Names of the MBeans for managing the associated providers.	R	oracle.as.soainfra.config:WorkflowIdentity
8 ReadOnly	If true, it indicates that this MBean is a read only MBean.	R	false
9 RealmName	The realm name associated with this configuration	R	NO_REALM
10 RestartNeeded	Indicates whether a restart is needed.	R	false
11 SystemMBean	If true, it indicates that this MBean is a System MBean.	R	false

8. Click on **Operations** tab. And Click on **setRealmName**.



9. Enter the value as 'flexcube' or 'flexcube1'. and Click on **invoke**.

Operation: setRealmName

MBean Name: oracle.as.soainfra.config:Location=soa_server1,WorkflowIdentityConfig=human-workflow,name=flexcube,type=WorkflowIdentityConfig.ConfigurationType,Application=soa-infra

Operation Name: setRealmName

Description: The realm name associated with this configuration

Return Type: boolean

Invoke Revert Return

Parameters

Name	Type	Value
p1	java.lang.String	flexcube

Return Value

10. Refresh the MBean Browser. Expand flexcube → WorkflowIdentityConfig.ConfigurationType.ProviderType and Click on oracle.soa.management.config.identity.ProviderType@.... Click on Attributes tab. And provide the following values.
 - a. Change Name to JspProvider1 or JspProvider2.
 - b. Verify value of PropertyType and Service. PropertyType should be **JPS** and Service should be **Identity**.

System MBean Browser

Application Defined MBeans: WorkflowIdentityConfig.....ProviderType:oracle.....ProviderType@Bfcad2 Apply Revert

Show MBean Information

Attributes Operations Notifications

Name	Description	Access	Value
1 ClassName	The class name of the provider.	R	
2 ConfigMBean	If true, it indicates that this MBean is a Config MBean.	R	true
3 Connection	Name of the MXBean for managing the associated Connection.	R	
4 eventProvider	If true, it indicates that this MBean is an event provider as defined by JSR-77.	R	true
5 eventTypes	All the event's types emitted by this MBean.	R	jmx.attribute.change
6 Name	The name of the provider.	RW	JspProvider1
7 objectName	The MBean's unique JMX name	R	oracle.as.soainfra.config.WorkflowIdentityConfig
8 Properties	Names of the MXBeans for managing the associated properties.	R	
9 ProviderType	The provider type for this provider configuration.	R	JPS
10 ReadOnly	If true, it indicates that this MBean is a read only MBean.	R	false
11 RestartNeeded	Indicates whether a restart is needed.	R	false
12 RoleControls	Name of the MXBean for managing the associated Role Control.	R	
13 Service	The associated service.	R	Identity
14 SystemMBean	If true, it indicates that this MBean is a System MBean.	R	false
15 UserControls	Name of the MXBean for managing the associated User Control.	R	

emmslogging.props
oracle.adf.share.config
oracle.as.soainfra.bpel
oracle.as.soainfra.config
Server: soa_server1
AdapterConfig
B2BConfig
BPELConfig
BPMNConfig
BusinessRulesConfig
CEPConfig
EDNConfig
HWFMailConfig
MediatorConfig
SoaInfraConfig
WorkflowConfig
WorkflowIdentityConfig
human-workflow
WorkflowIdentityConfig.Cc
flexcube
WorkflowIdentityCo
oracle.soa.man
jazzn.com
WorkflowIdentityConfig.Pr
WorkflowIdentityConfig.Sc

11. Select createProperty option from **Operations** tab and click on **Invoke**. It will create new Property under JspProvider1.

System MBean Browser - Oracle Enterprise Manager (weblogic) - Mozilla Firefox

http://ddhp0453:9001/em/faces/as/as/vlFarmHome?target=Farm_base_domain&type=oracle_jas_farm&_afLoop=3001970769887

Oracle Enterprise Manager 11g Fusion Middleware Control

Logged in as weblogic | Host: DDHP0453.I-flex.com
Page Refreshed 23-Dec-2009 14:40:30 IST

System MBean Browser

Application Defined MBeans: WorkflowIdentityConfig....ProviderType:jpsProvider2

Show MBean Information

Name	Description	Parameters	Return Type
1 createConnection	Create a new connection.	0 javax.management.ObjectName	0 boolean
2 createProperty	Create a new property.	0 javax.management.ObjectName	0 boolean
3 createRoleControls	Create a new Role Control.	0 javax.management.ObjectName	0 boolean
4 createUserControls	Create a new User Control.	0 javax.management.ObjectName	0 boolean
5 removeConnection	Remove a connection.	0 boolean	0 boolean
6 removeProperty	Remove a new property.	1 boolean	0 boolean
7 removeRoleControls	Remove Role Control.	0 boolean	0 boolean
8 removeUserControls	Remove User Control.	0 boolean	0 boolean
9 setClassName	The class name of the provider.	1 boolean	1 boolean
10 setProviderType	The provider type for this provider configuration.	1 boolean	1 boolean
11 setService	The associated service.	1 boolean	1 boolean

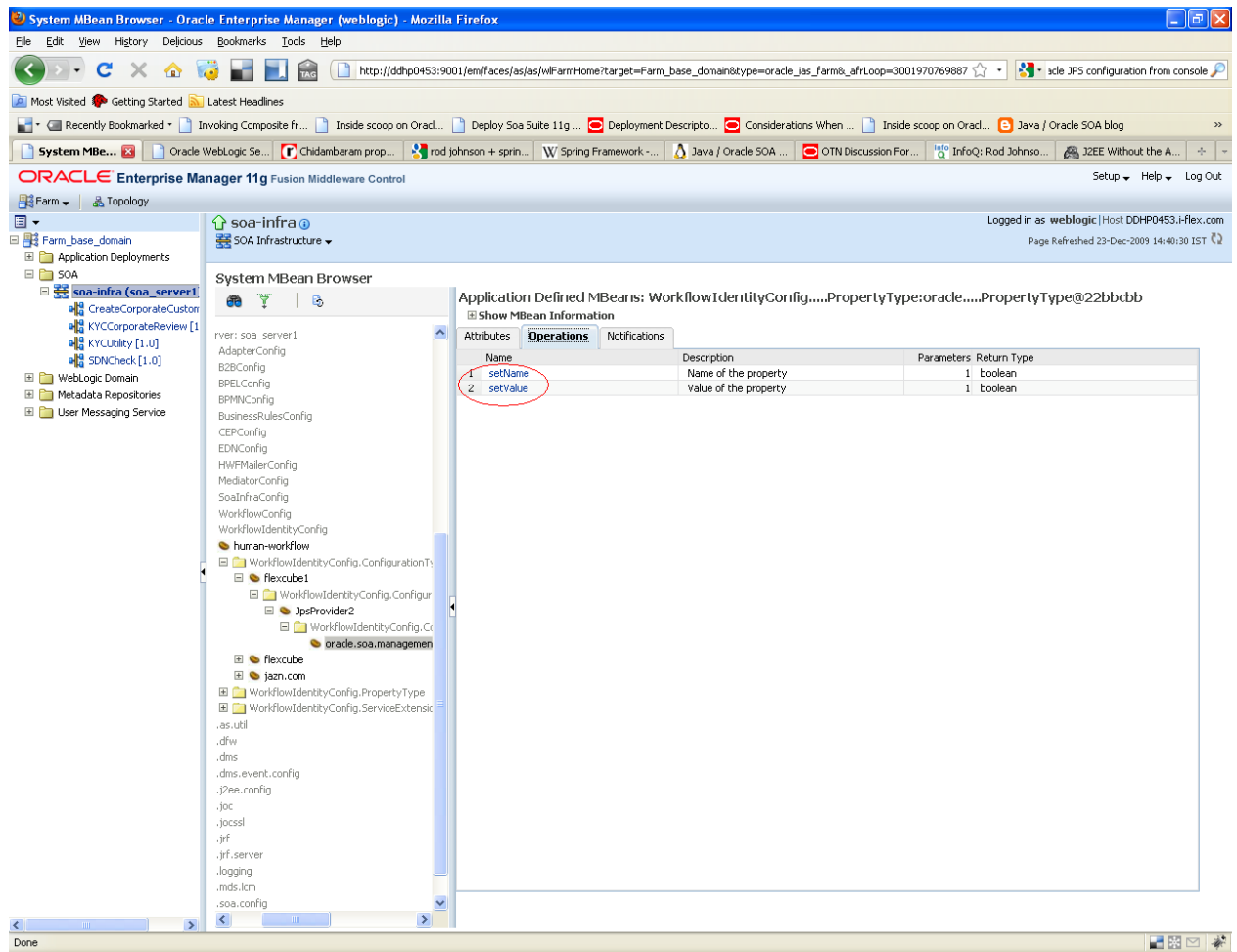
12. Select the newly create property and change the Name and Value using **setName** and **setValue** option from **Operation** tab.

Name should be **jpsContextName**

Value should be **flex**.



the value **flex** given above should be same as the value given for jpsContext in section JPS Configuration earlier in this document.

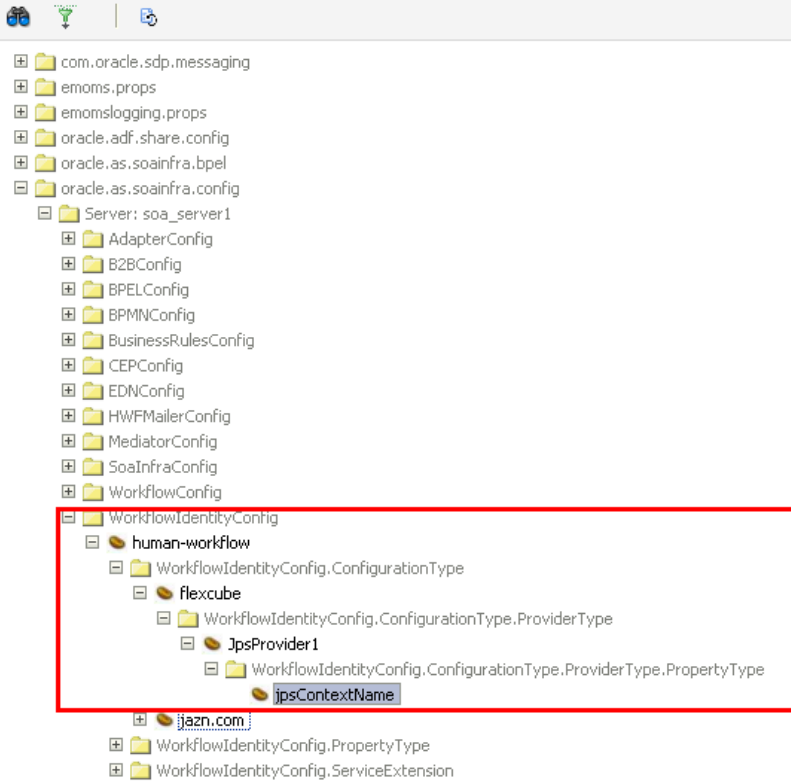


13. Click on jazn.com . Click on **Attributes** tab. Change value of Default attribute to false.



14. Restart both Weblogic and SOA Server. After restart of the server verify the details. Final structure should be similar to attached screen.

System MBean Browser



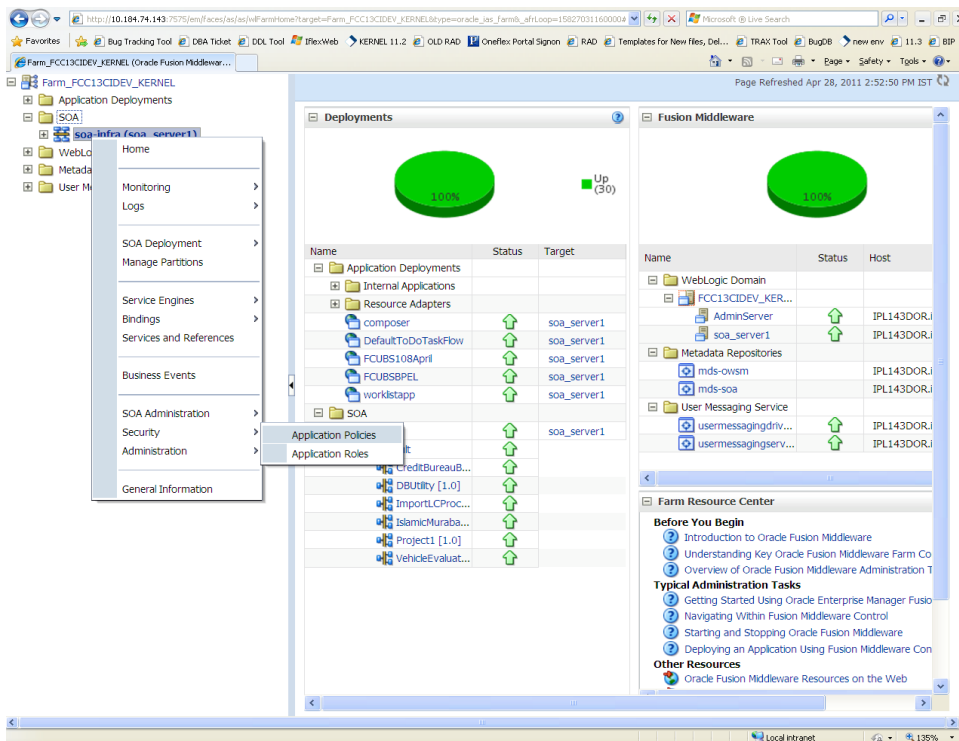
- Launch the SOA worklist app using URL [http://\(IP_Address\):\(port_no\)/integration/worklistapp](http://(IP_Address):(port_no)/integration/worklistapp) and verify the List for Realm. flexcube and jazn.com should be available.



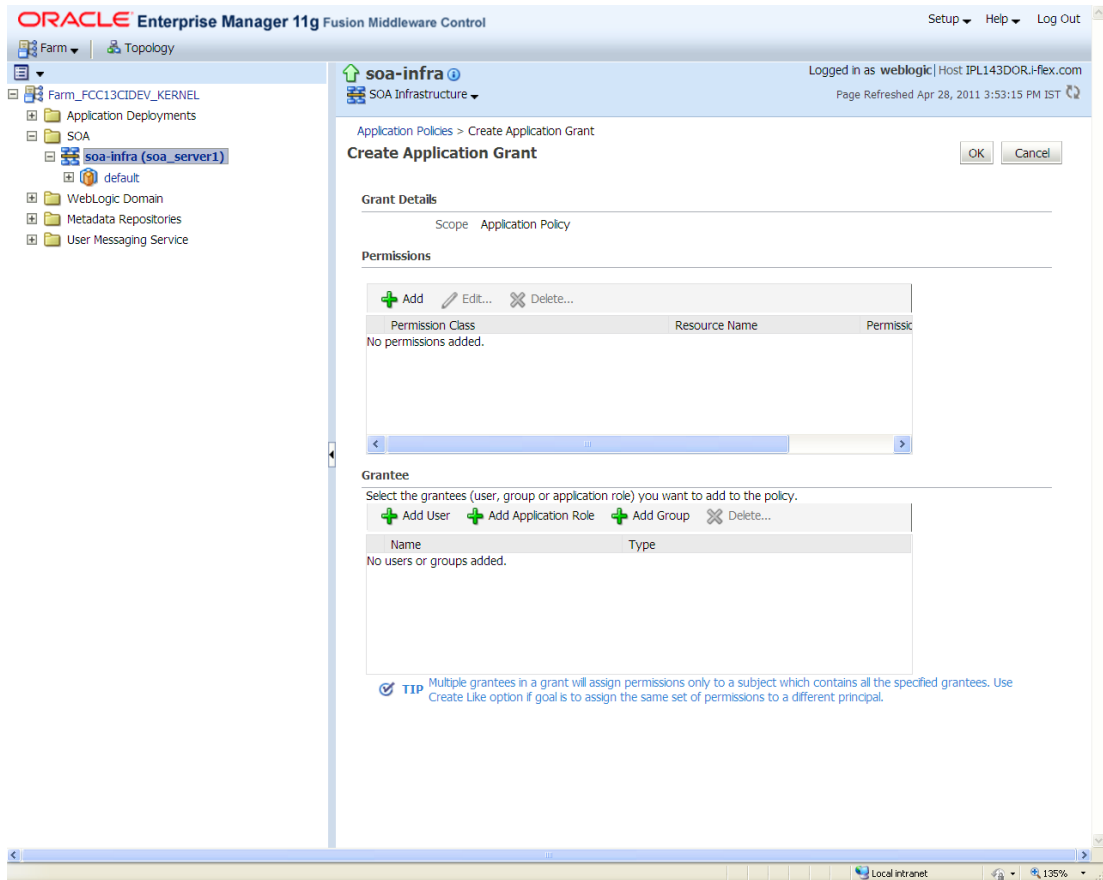
8.1.1.4 Security Policy Configuration

Security Policy Configuration need to be done from the Enterprise Manager console of the SOA.

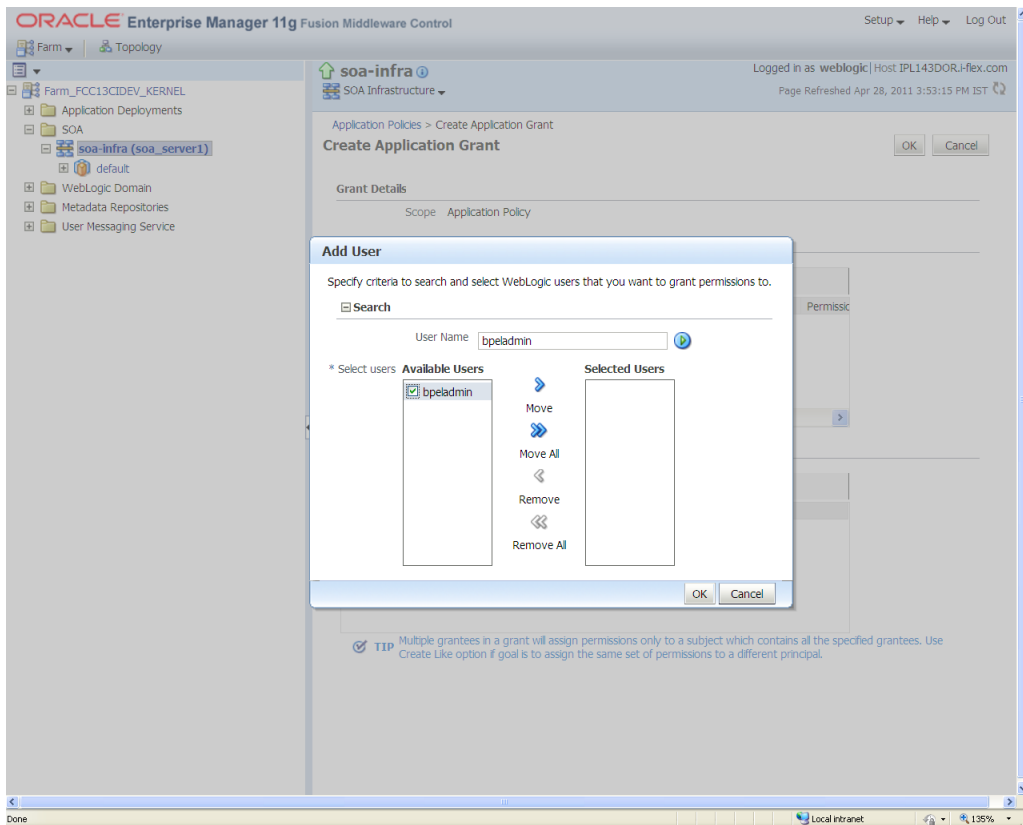
1. Login to Enterprise Manager Console.
2. Right click on soa-infra and select security → Application Policies

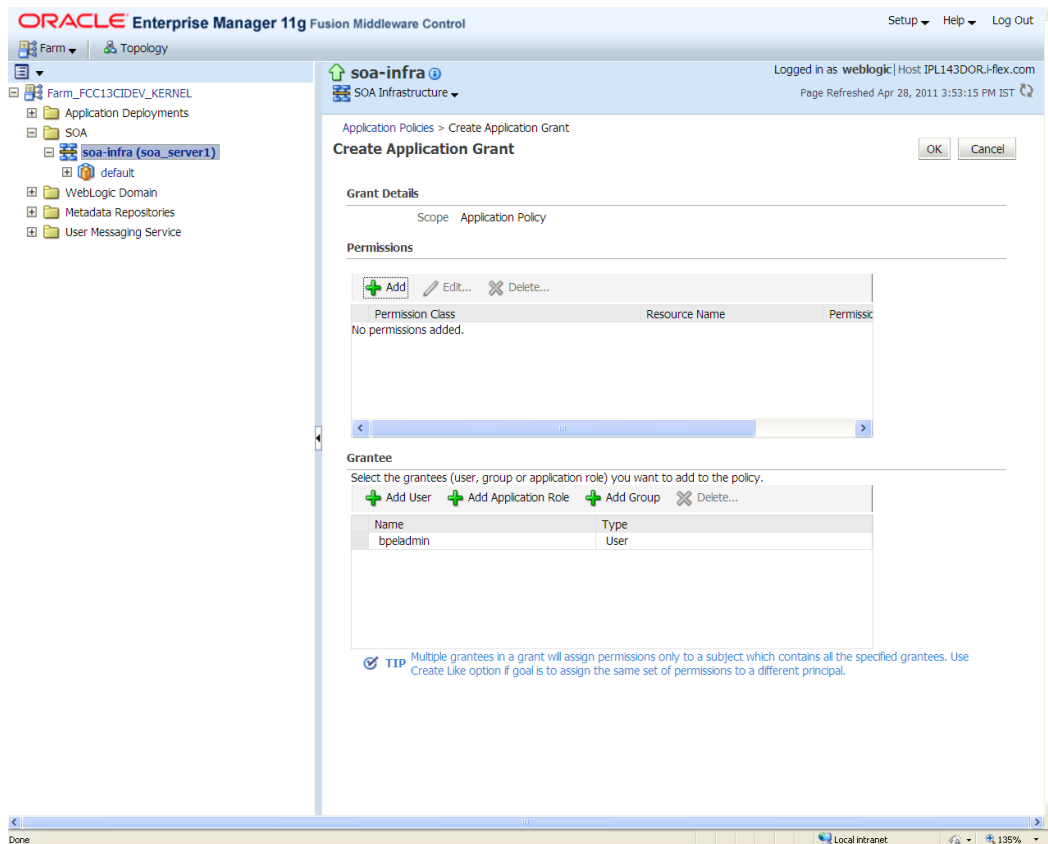


3. Click on add user under grantee to select user to which the policy is to be added.

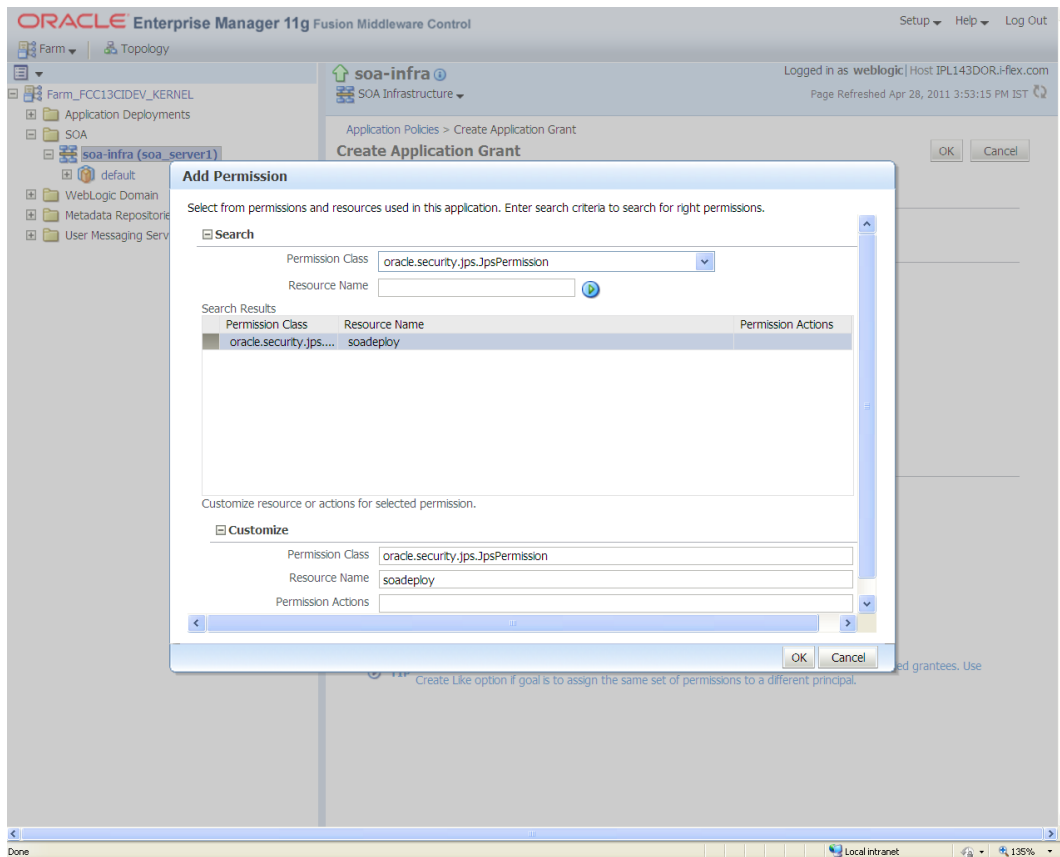


4. Search for the user **bpeladmin** for which the permission has to be granted.
5. Select the user and click OK.

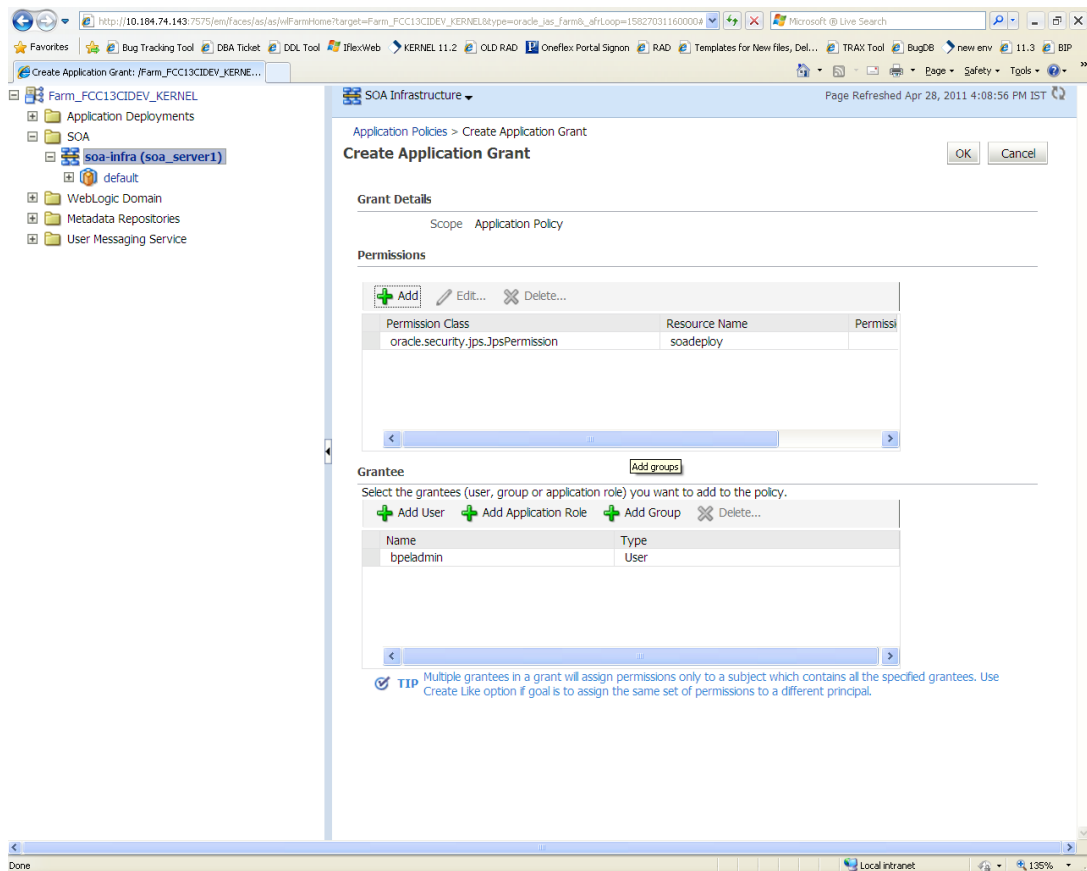




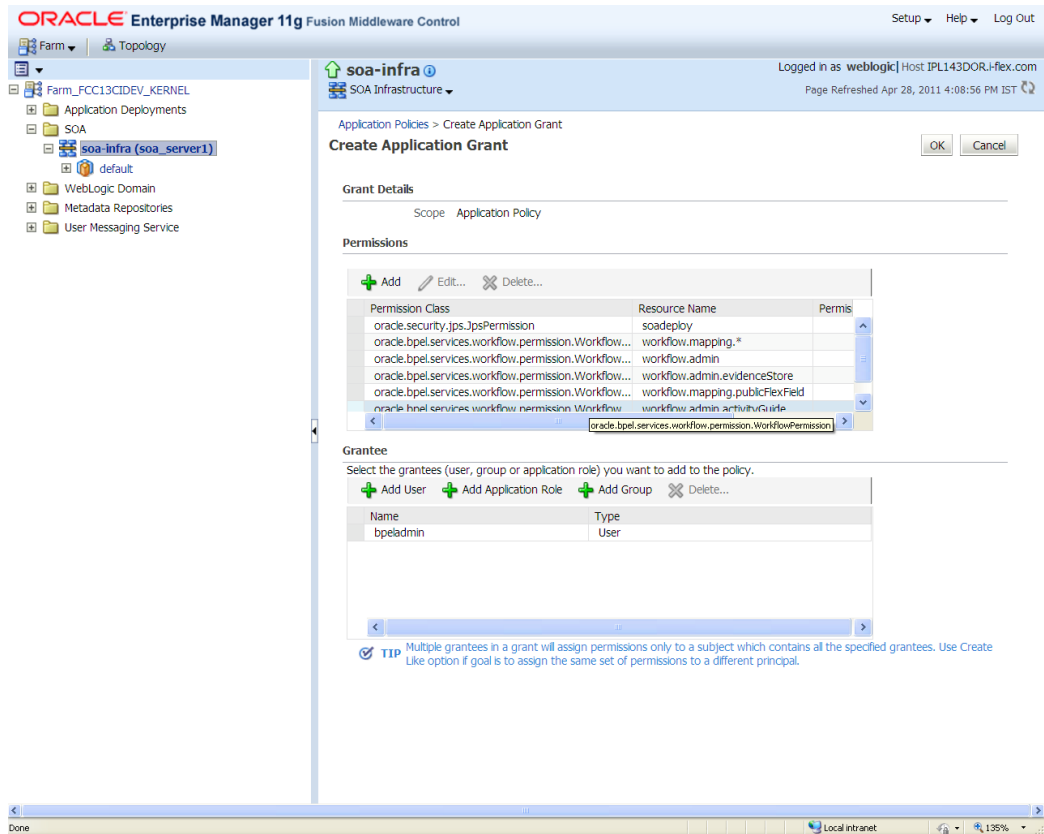
- Click on add button under Permission to add privileges for the user and select from permission and search to get permission and resource name.



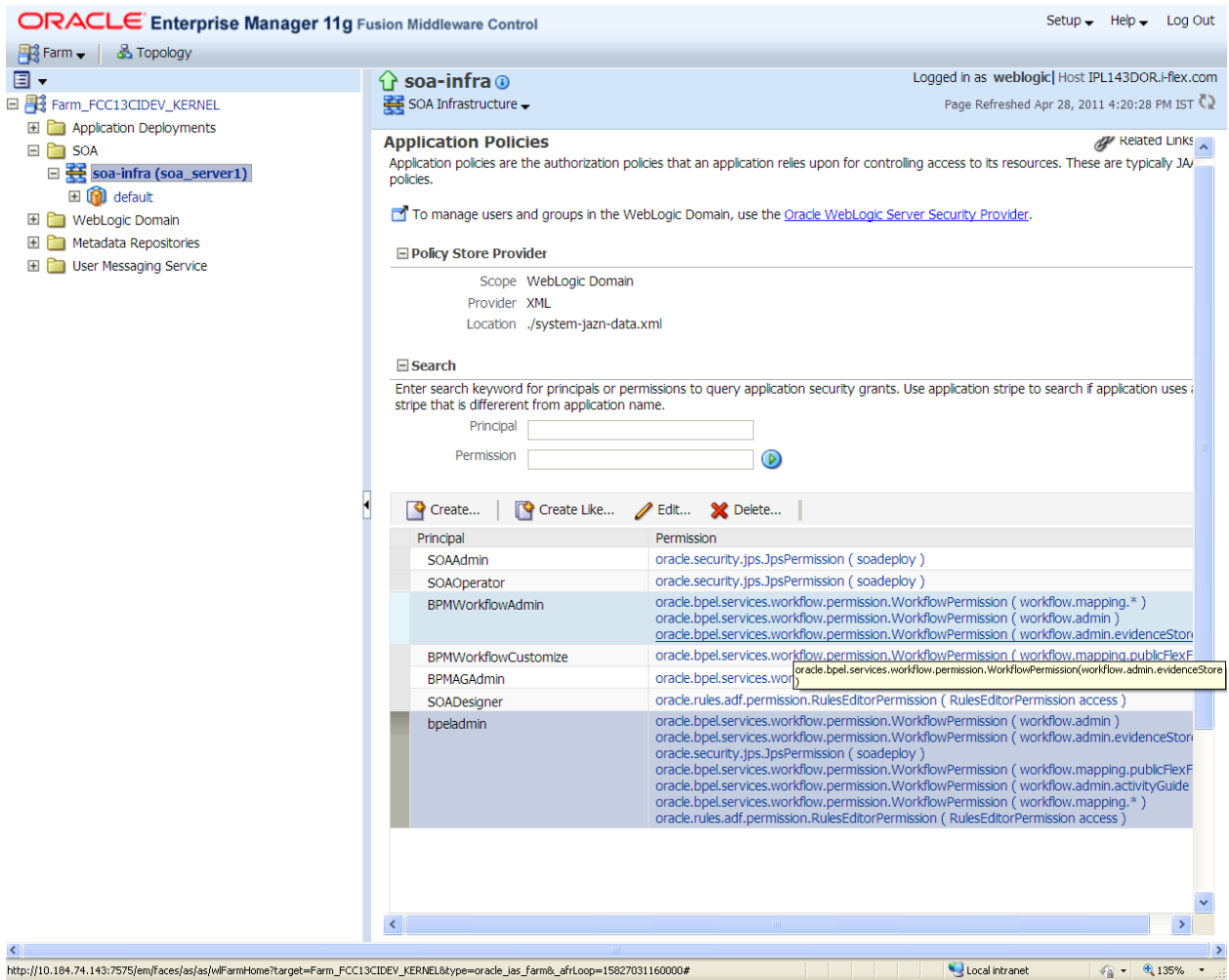
7. Click on required permissions and click ok to set permission for the user.



8. Similarly select all other permissions available and add.



9. Click OK to apply permission to the user. It should look like below.



8.1.1.5 CIS Configuration

Along with FCIS Ear file, Installer creates BPELCIS.jar file.

- Create separate jar files for FCBPELCIS.jar as follows.
 1. Create two separate folders (ie..cac,cis)and copy the jar file on both folders.
 2. Rename the jar in cac folder as FCBPELCAC.jar
 3. From the cis folder,open the jarfile and delete cac folder from com/ofss/fcc/bpel to create actual FCBPELCIS.jar
 4. From the cac folder,open the jarfile and delete dao and security folders from /ofss/fcc/bpel to create actual FCBPELCAC.jar
- Open this FCBPELCAC JAR file and open CIS.Properties file which is available under **com\ofss\fcc\bpel\cac** folder.
- set the **JNDI.name** value to the JNDI name given during Property file creation.
- After the above said changes the FCBPELCAC.jar file should be placed in the server side at <MIDDLEWARE_HOME>Oracle_SOA1\soa\modules\oracle.soa.workflow_11.1.x.

- open *oracle.soa.workflow.jar* from
<MIDDLEWARE_HOME>\Oracle_SOA1\soa\modules\oracle.soa.workflow_11.1.x. and
edit *Manifest.mf* file to add FCBPELCAC.jar in class path as below

Manifest-Version: 1.0

Implementation-Vendor: Oracle

Ant-Version: Apache Ant 1.7.0

Implementation-Title: Oracle SOA Workflow

Implementation-Version: 11.1.1

Product-Name: Oracle SOA Workflow

Class-Path: ./FCBPELCAC.jar ./bpm-services.jar

Created-By: 10.0-b23 (Sun Microsystems Inc.)

Product-Version: 11.1.1.0.0

Specification-Version: 11.1.1

Extension-Name: oracle.soa.workflow

- Now copy FCBPELCIS.jar from cis folder to
<MIDDLEWARE_HOME>\user_projects\domains\<DOMAIN_NAME>\lib
- Restart the Server.



SOA Suite Setup for BPEL Process Flow
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