SOA Suite Setup for BPEL Process Flow
Oracle FLEXCUBE Investor Servicing
Release 12.1.0.0.0
[October] [2015]

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1. Preface

1.1 Background

This document provides an overview of configuring SOA suite for Oracle FLEXCUBE Investor Servicing BPEL process deployment.

Refer to the Oracle documentation for HA and other configuration patterns.

1.2 Audience

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

1.3 Organization

This manual is organized as follows:

- The chapter 2 (Repository Creation Utility (RCU)) guides you through the use of repository creation utility
- Subsequent chapters contain implementation specific information

1.4 Acronyms and Abbreviations

Acronym/Abbreviation	Description
BPEL	Business Process Execution Language
HA	High Availability

2. Repository Creation Utility (RCU)

2.1 Introduction

You can use Oracle Repository Creation Utility (RCU) to create schemas that are required for SOA suite installation.

Refer to the Oracle certification matrix for qualified databases.

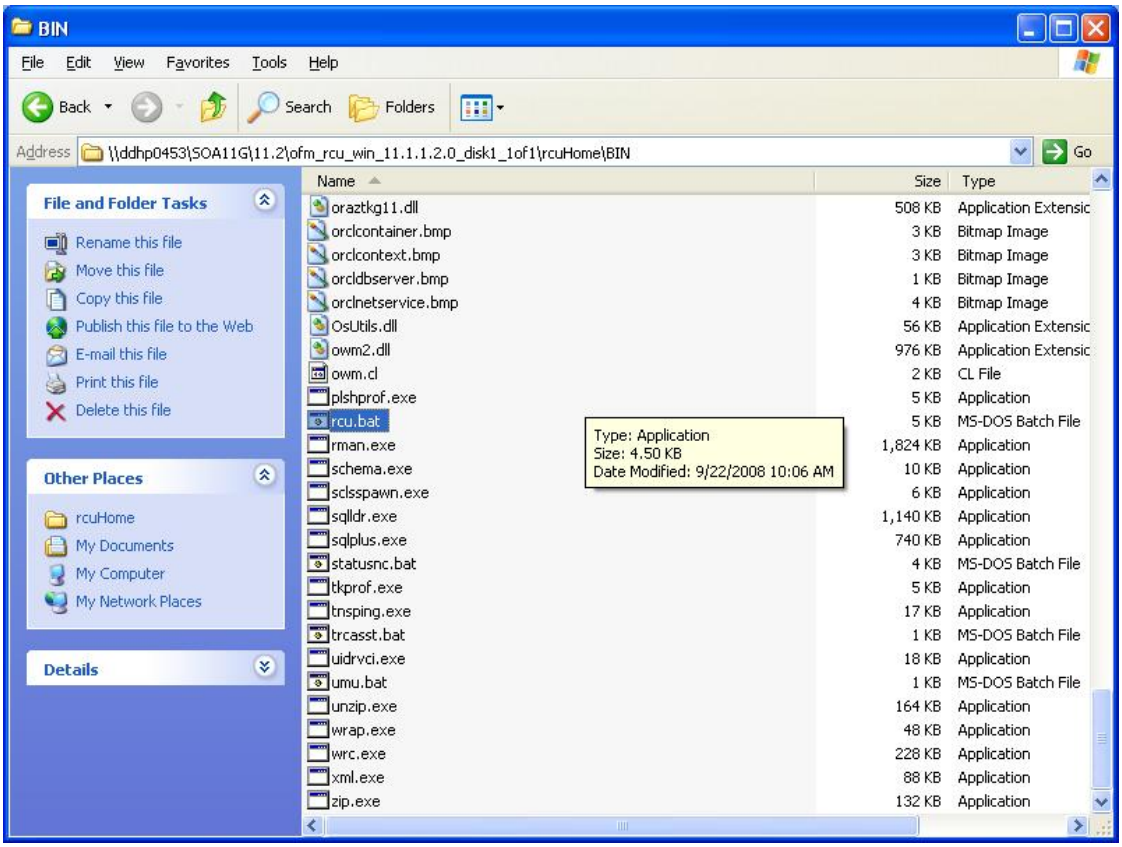
2.2 Running RCU Utility

For running RCU utility, follow the steps given below.

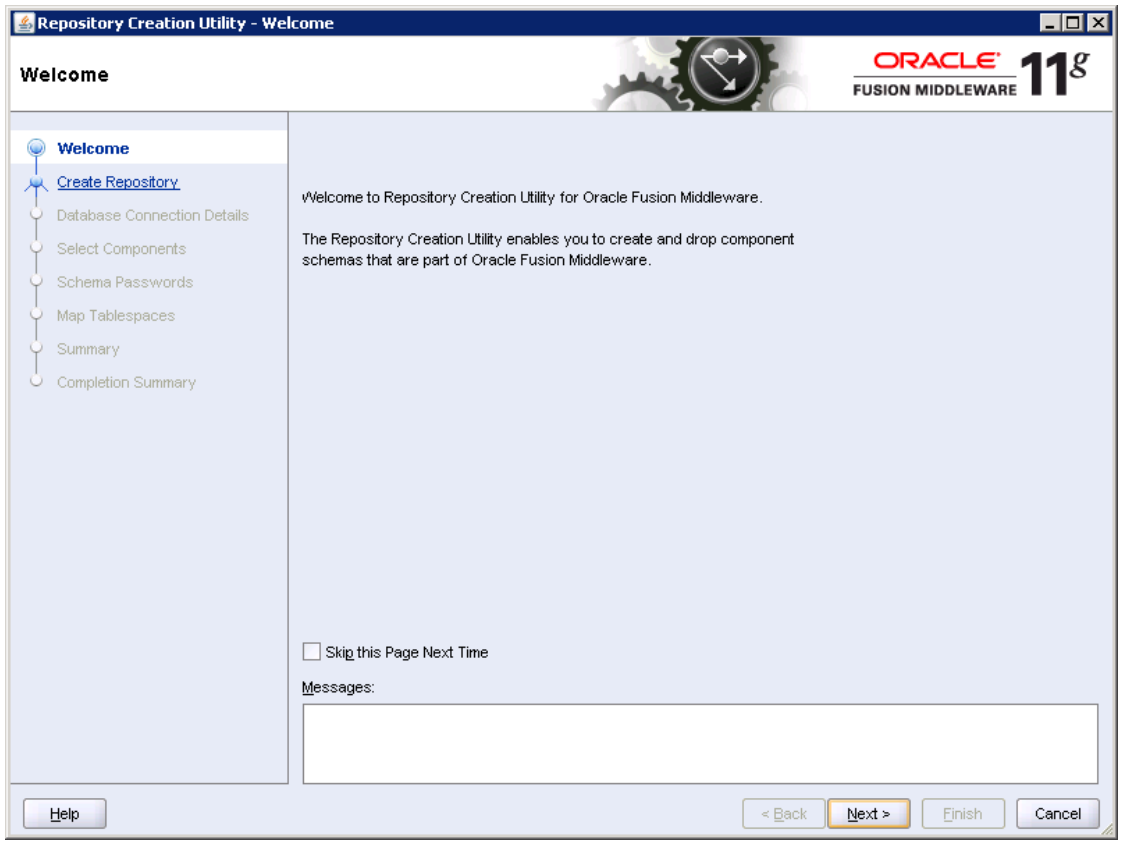
1. Download the RCU utility from the following URL.

   http://download.oracle.com/otn/nt/middleware/11g/ofm_rcu_win32_11.1.1.2.1_disk1_1of1.zip

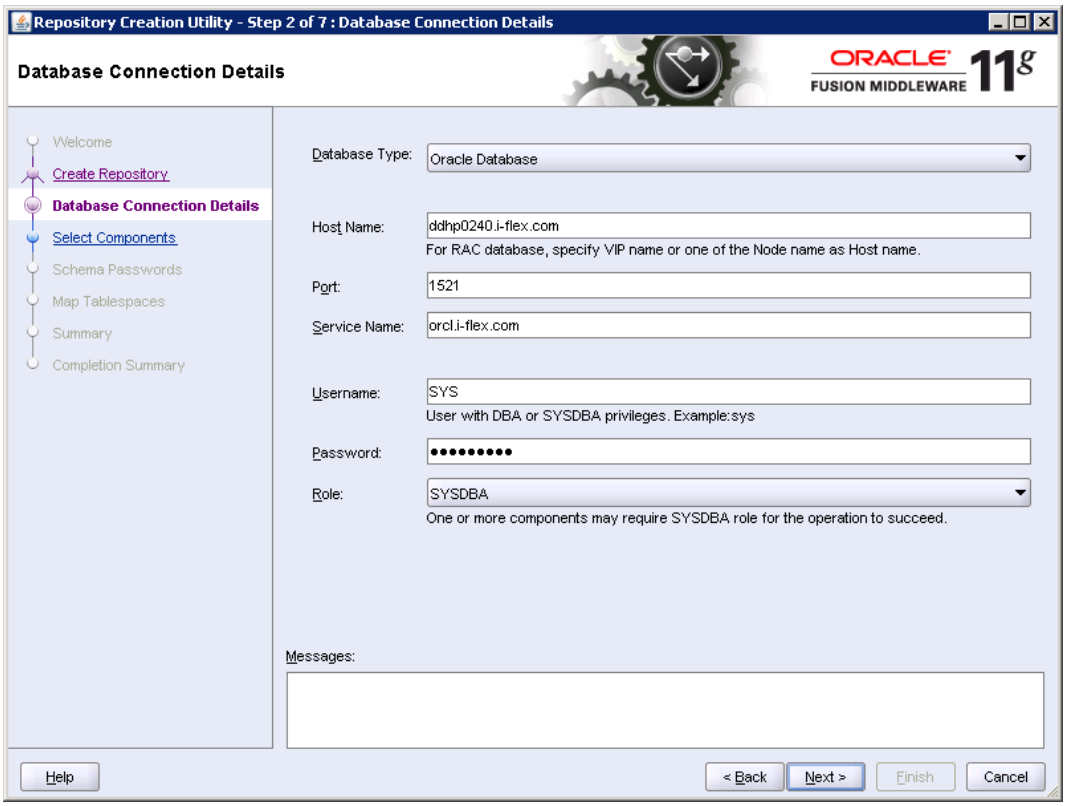
2. Unzip the contents into a folder.



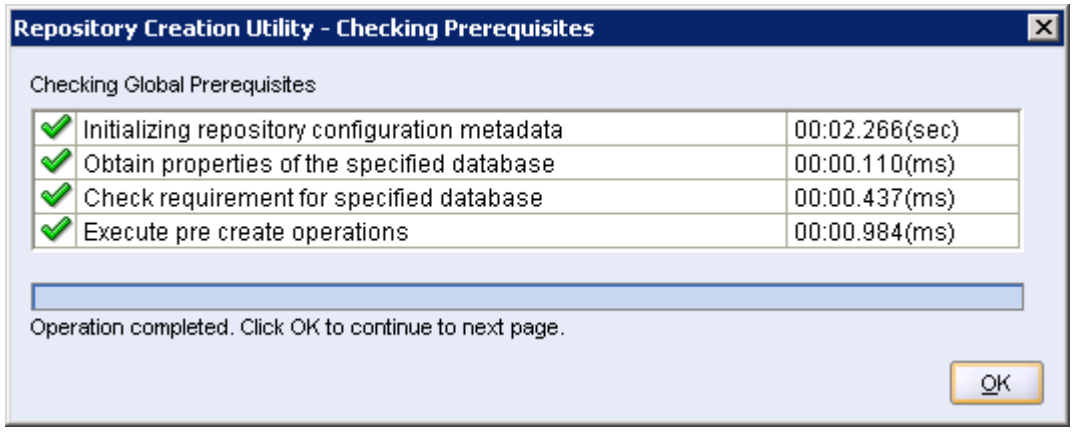
3. Run the *rcu.bat* from the extracted folder.

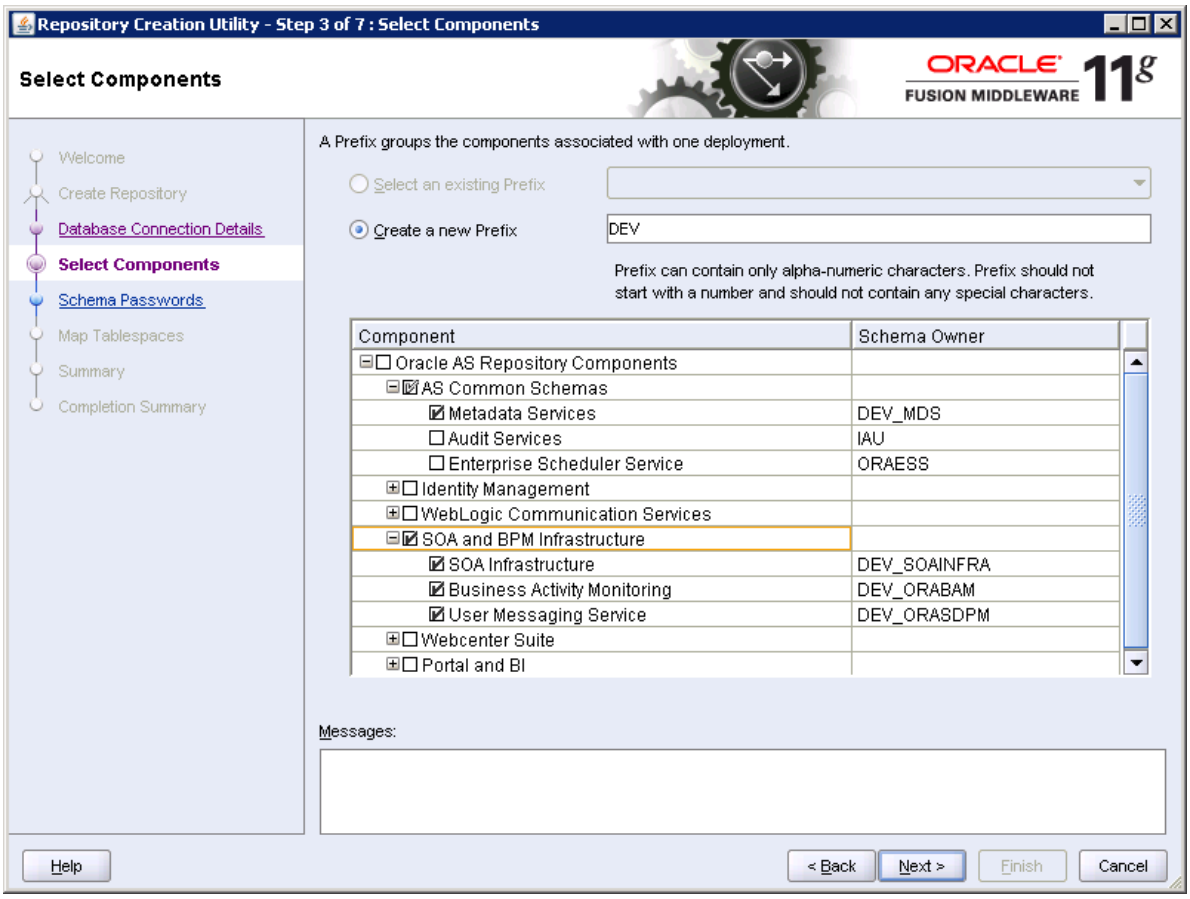


4. Select ‘Create Repository’ option and click ‘Next’ button.

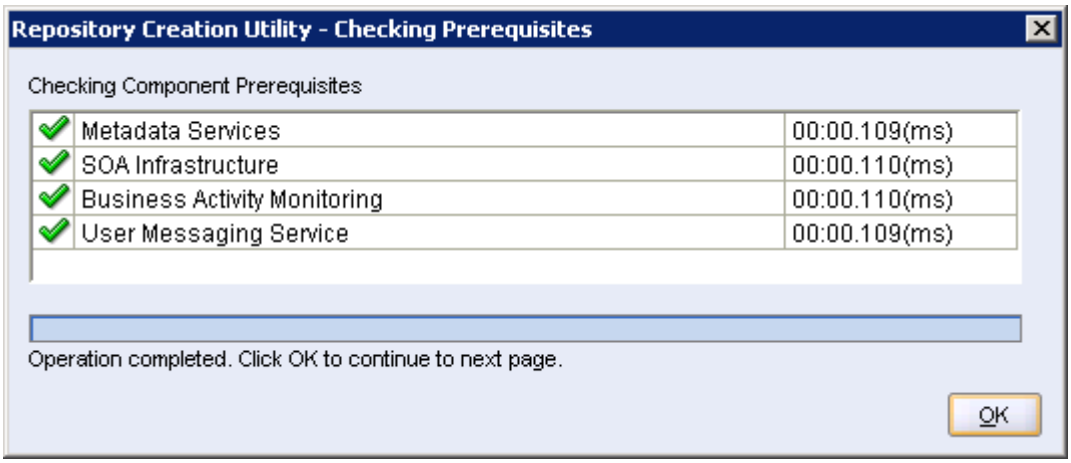


5. Provide oracle database connection properties. SYS credentials are required. Once you have specified the details, click 'Next' button.

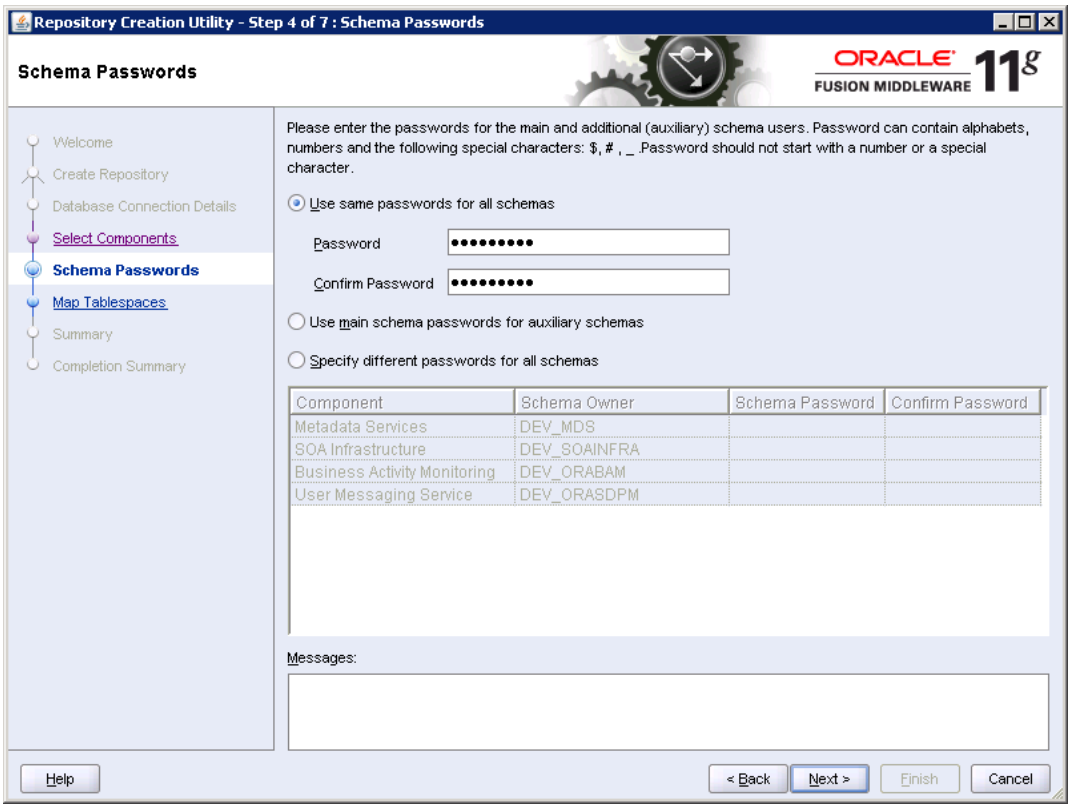




6. Create a new prefix in order to add multiple SOA schemas in the same instance.
7. On selecting SOA & BPM Infrastructure, by default ‘AS Common Schemas’ and ‘Metadata Services’ check-boxes are checked. Do not uncheck these options.
8. If you do not wish to use ‘Business Activity Monitoring’, you may uncheck it.

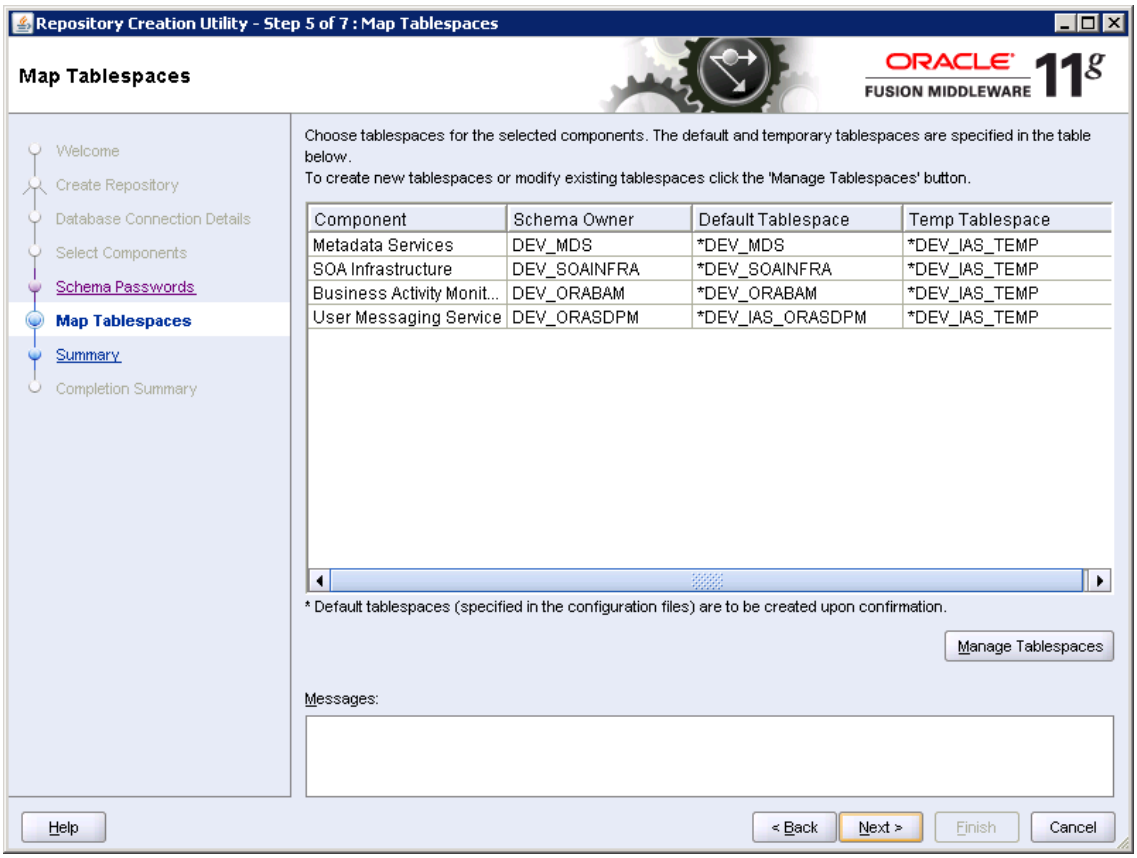


Click ‘OK’.

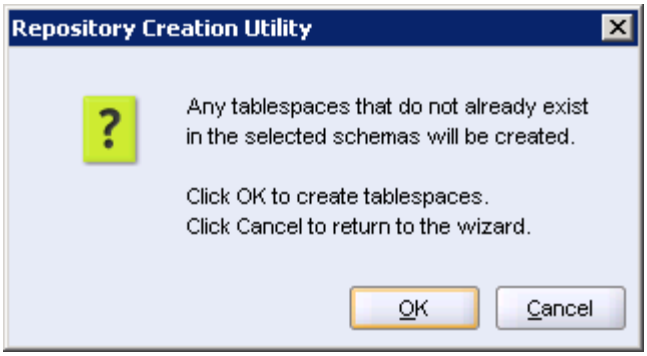


Note: It is important to remember the password or passwords that you enter during the process.

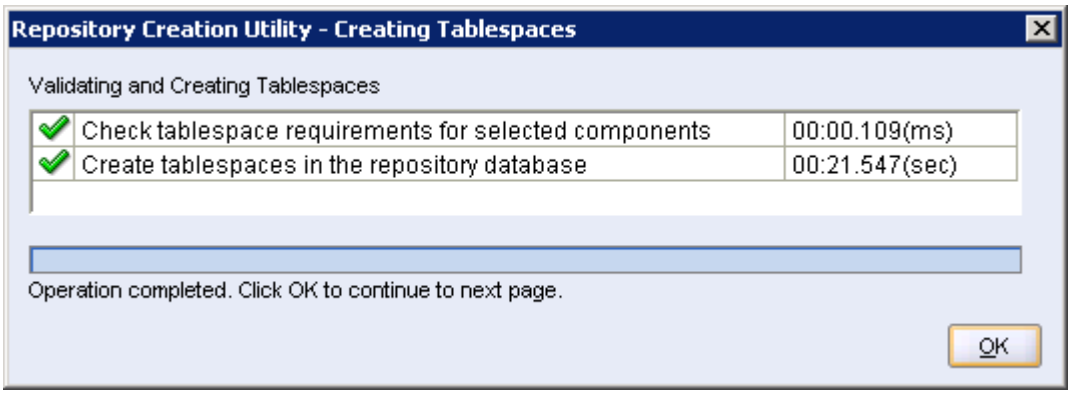
9. Specify the passwords and click ‘Next’ button.



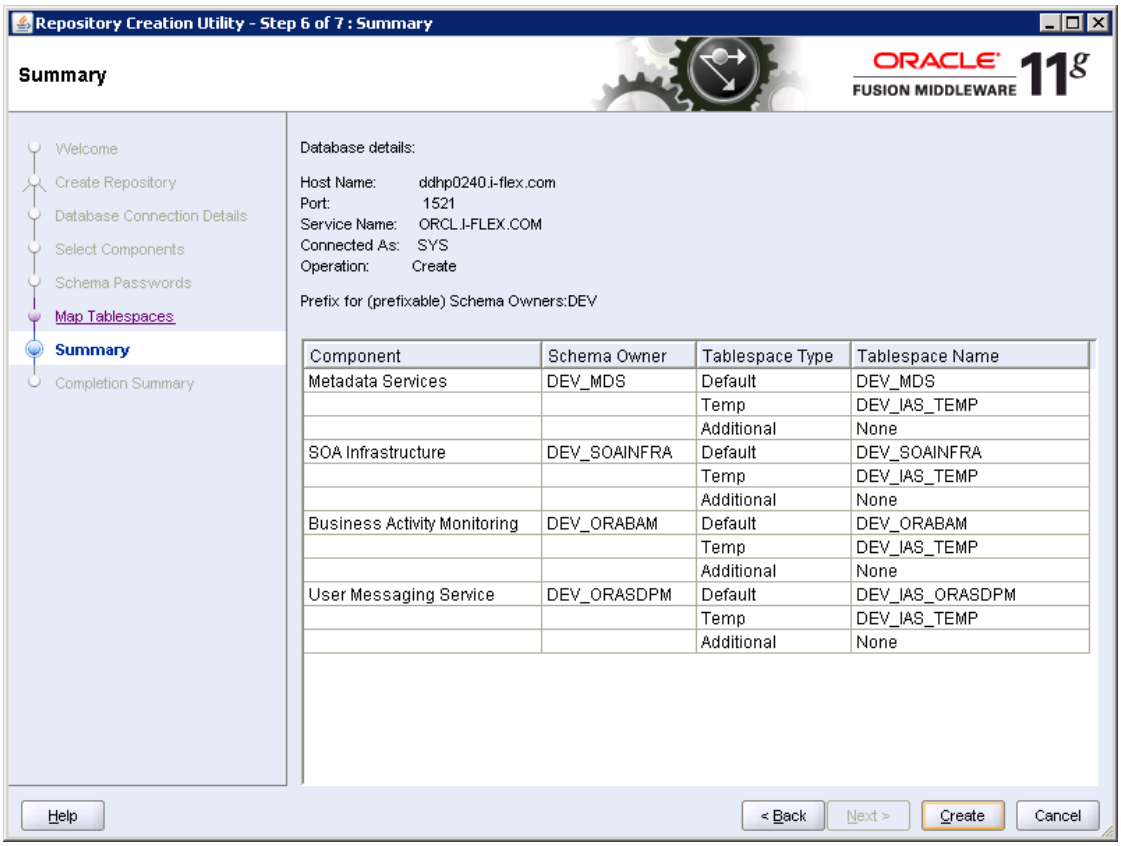
10. Click ‘Next’.



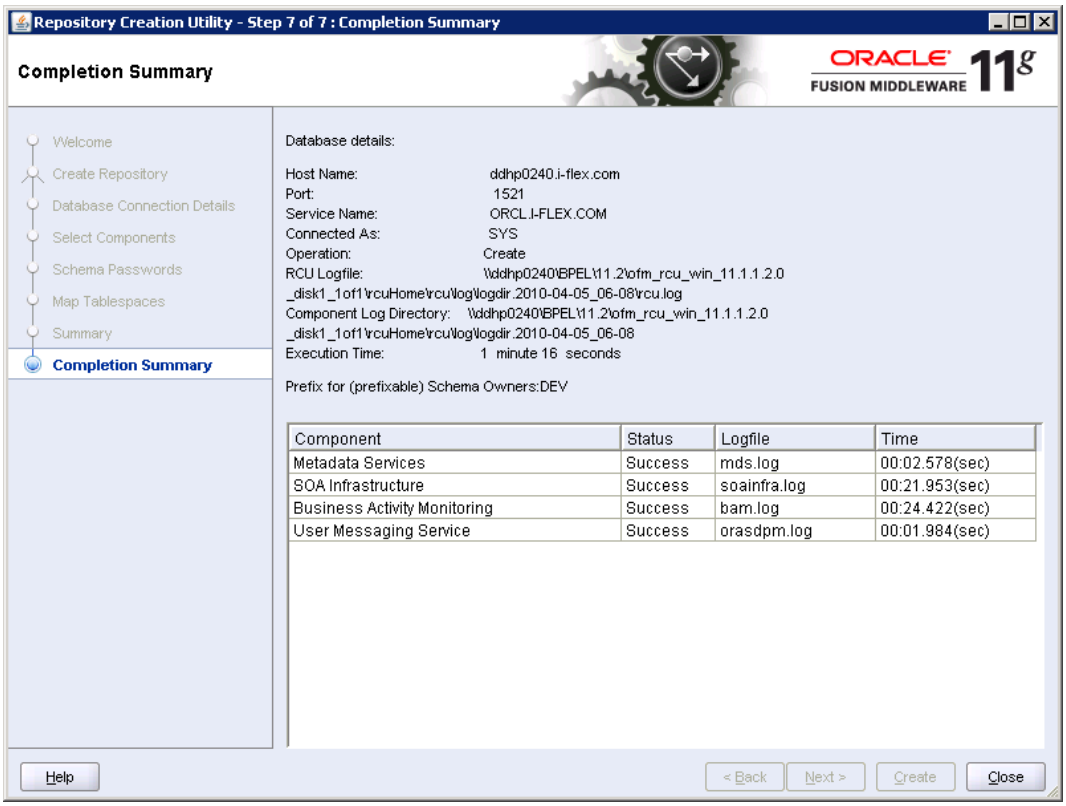
11. Click ‘OK’.



12. Tablespaces creation.



13. Summary .



14. Completion Summary

3. Oracle Weblogic 11gR1 (10.3.6)

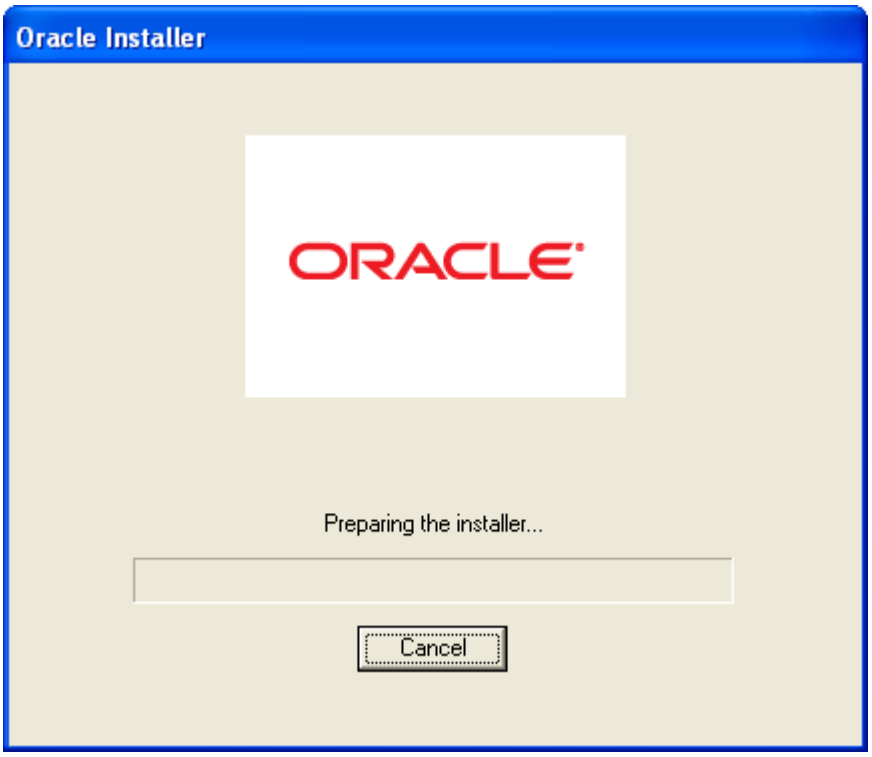
3.1 Introduction

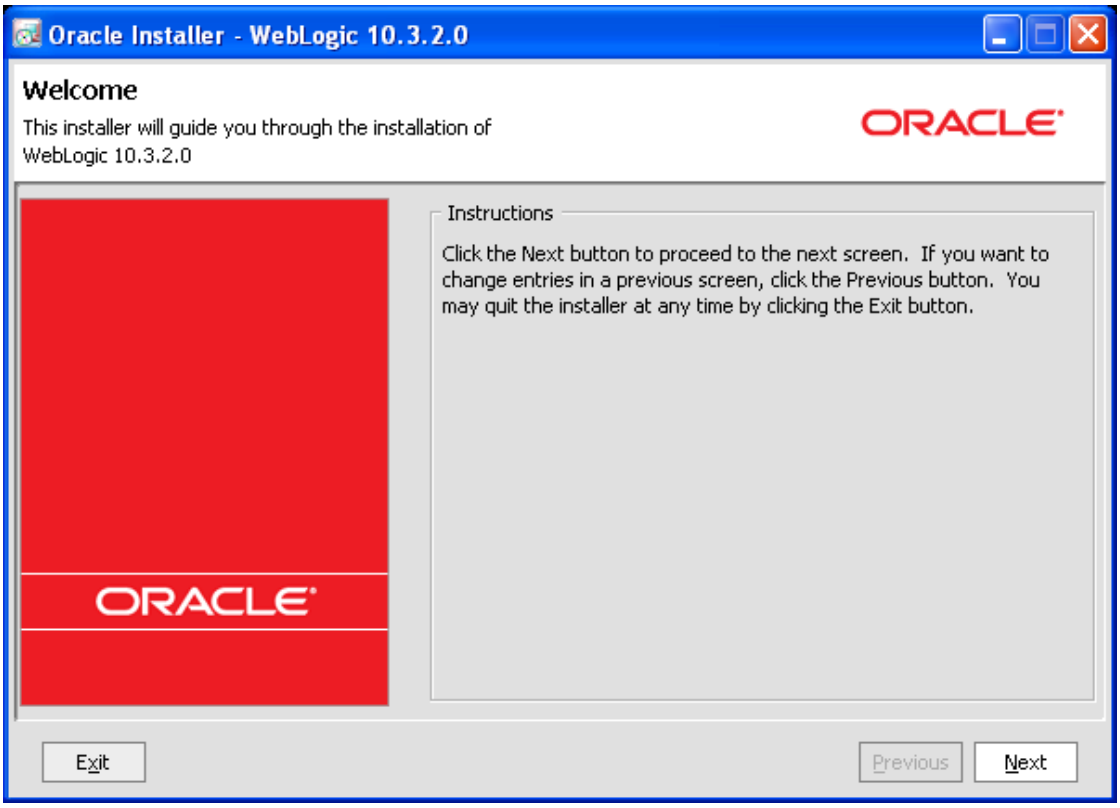
Oracle Weblogic 11gR1 I is the j2ee container for soa suite

The version required is 10.3.6

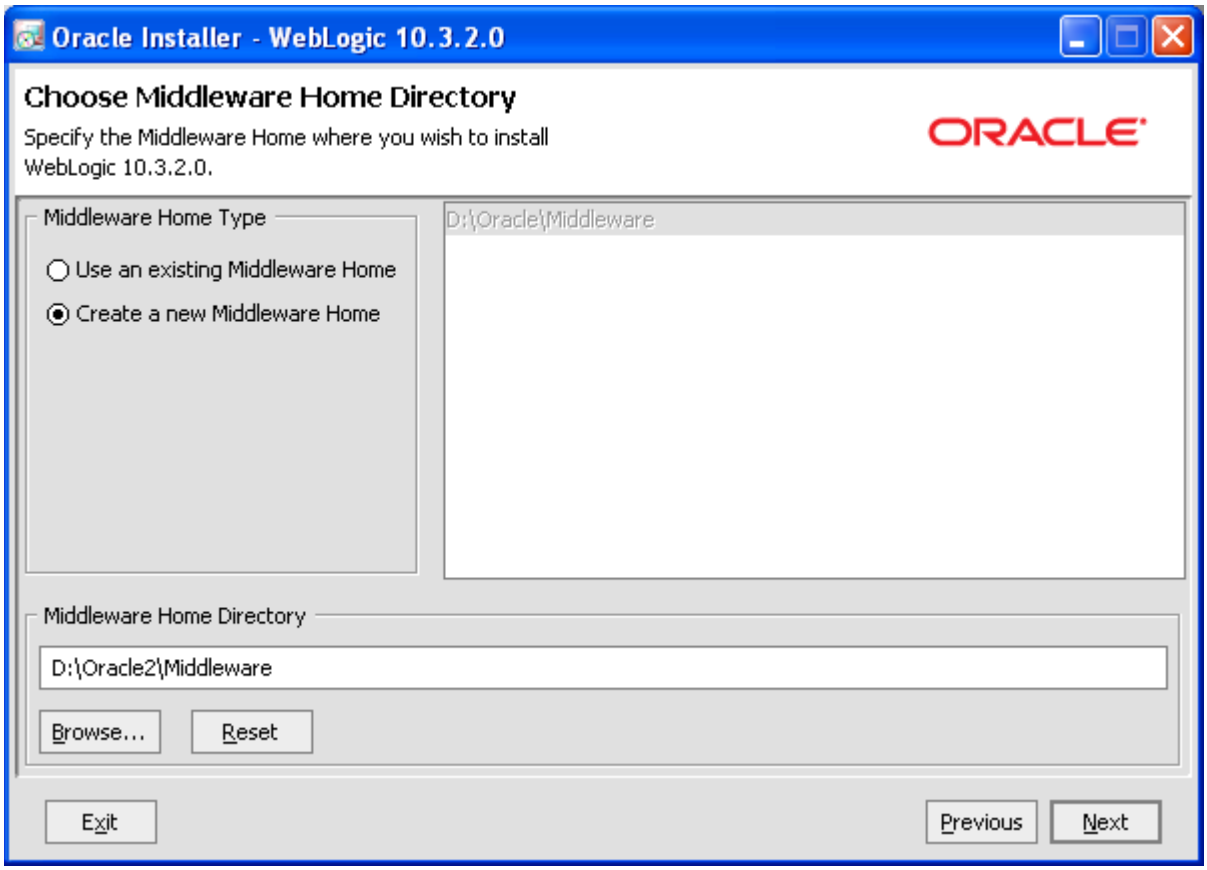
3.2 Download URL from Oracle

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

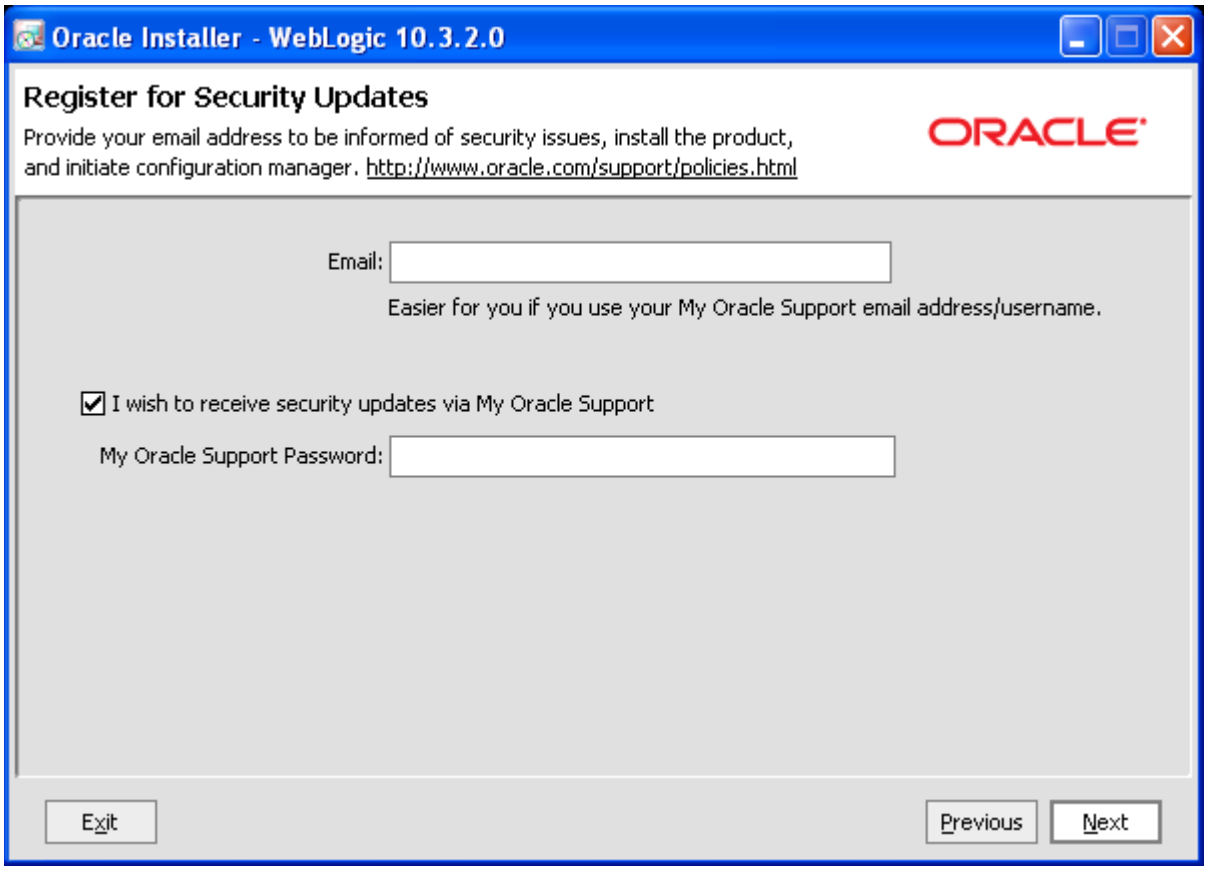



Oracle Installer - WebLogic 10.3.2.0
Welcome
This installer will guide you through the installation of WebLogic 10.3.2.0
ORACLE
Instructions
Click the Next button to proceed to the next screen. If you want to change entries in a previous screen, click the Previous button. You may quit the installer at any time by clicking the Exit button.
ORACLE
Exit
Previous
Next

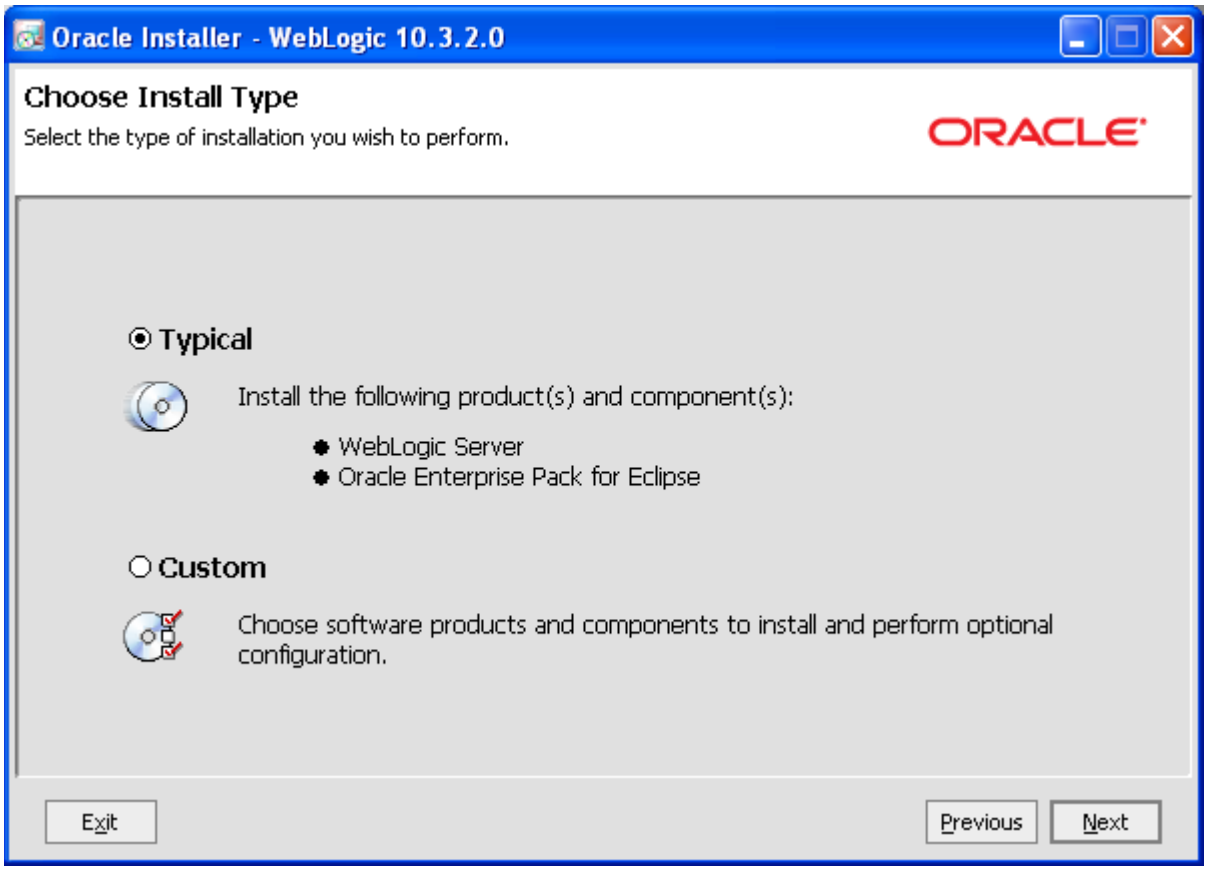
6. Click ‘Next’.



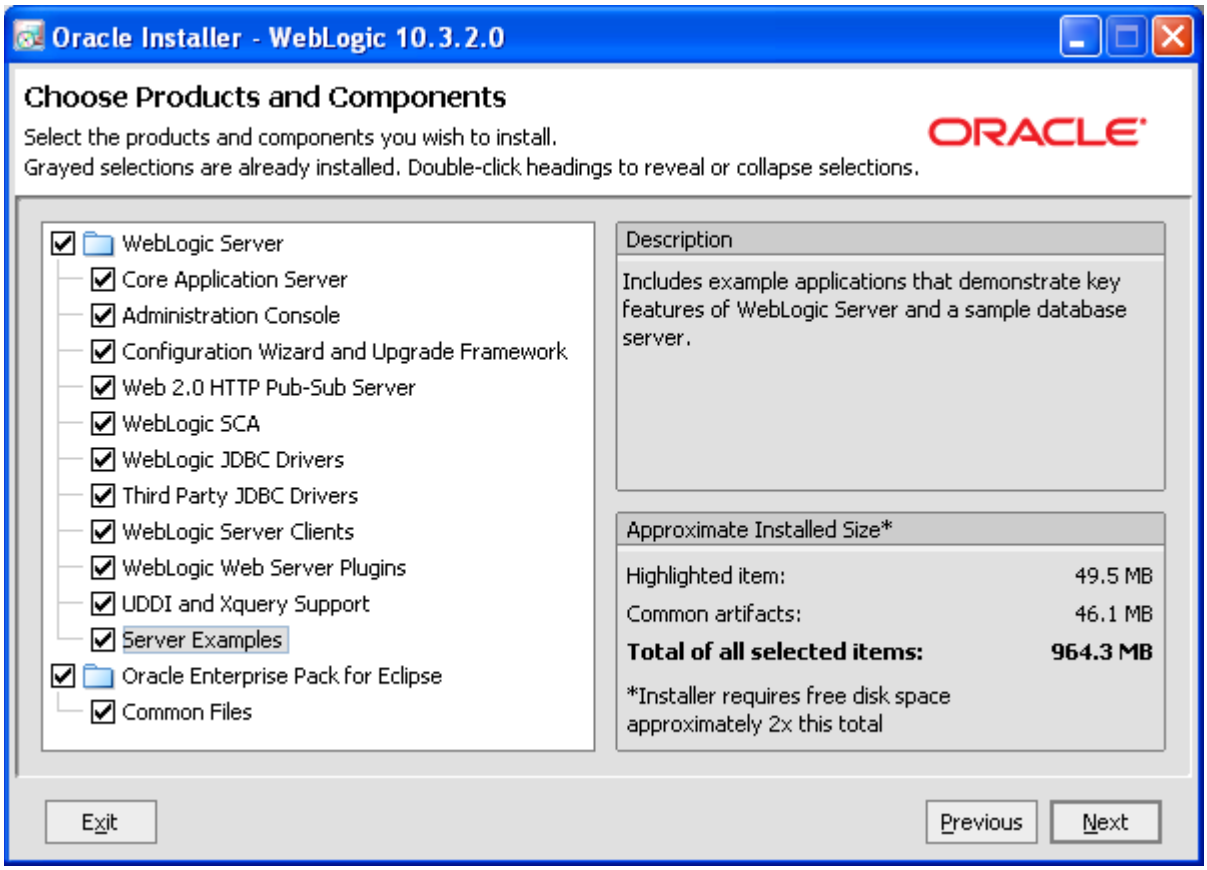
7. Specify the middleware home the same will be used during SOA suite installation.



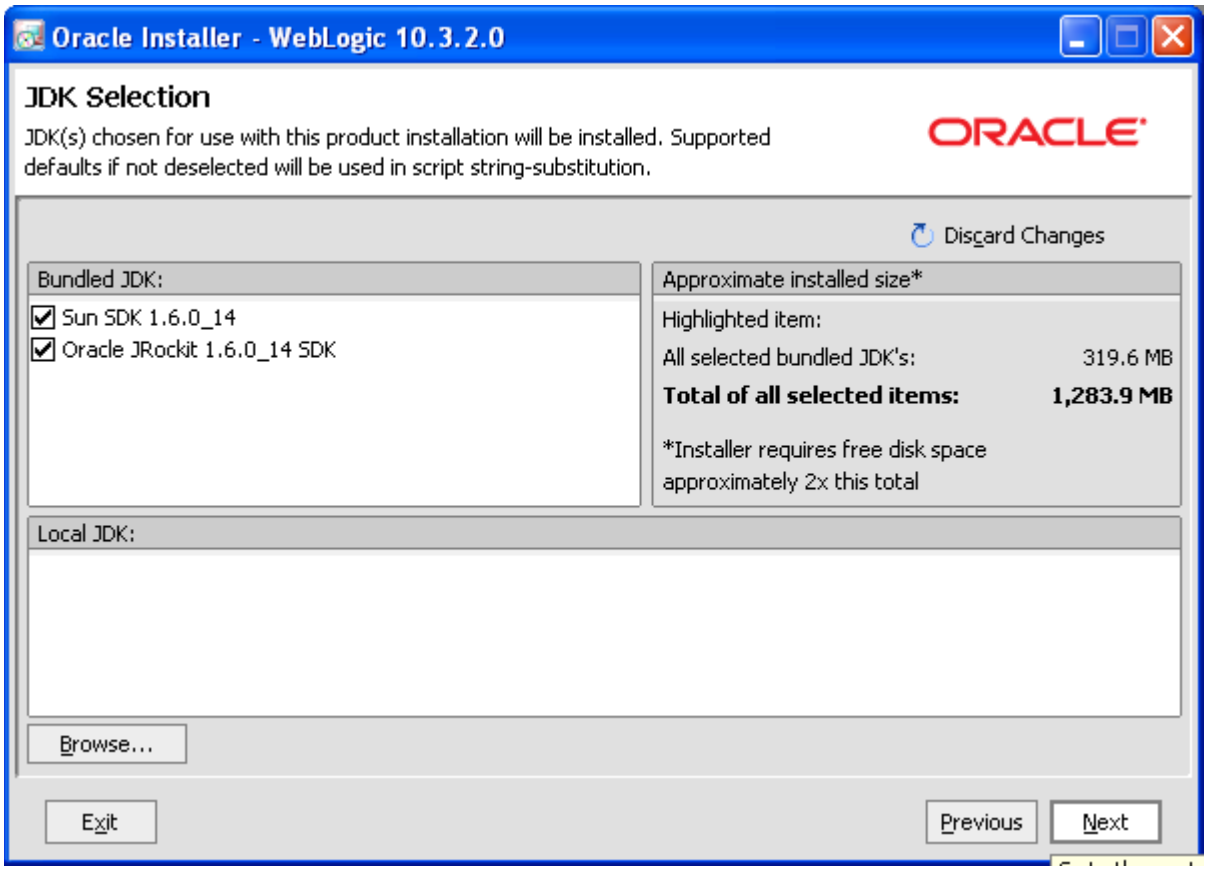
8. Register for security updates if needed



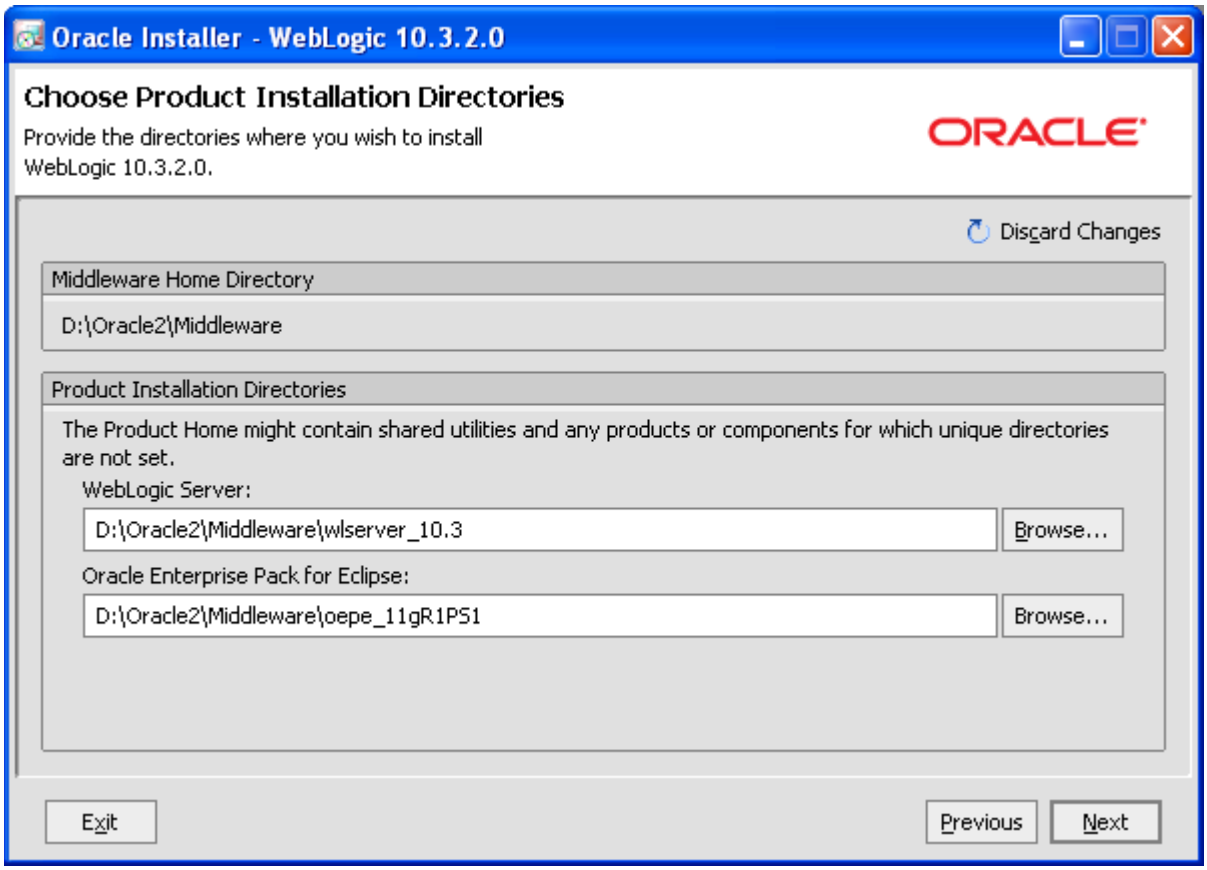
9. Choose typical or custom to customize installation



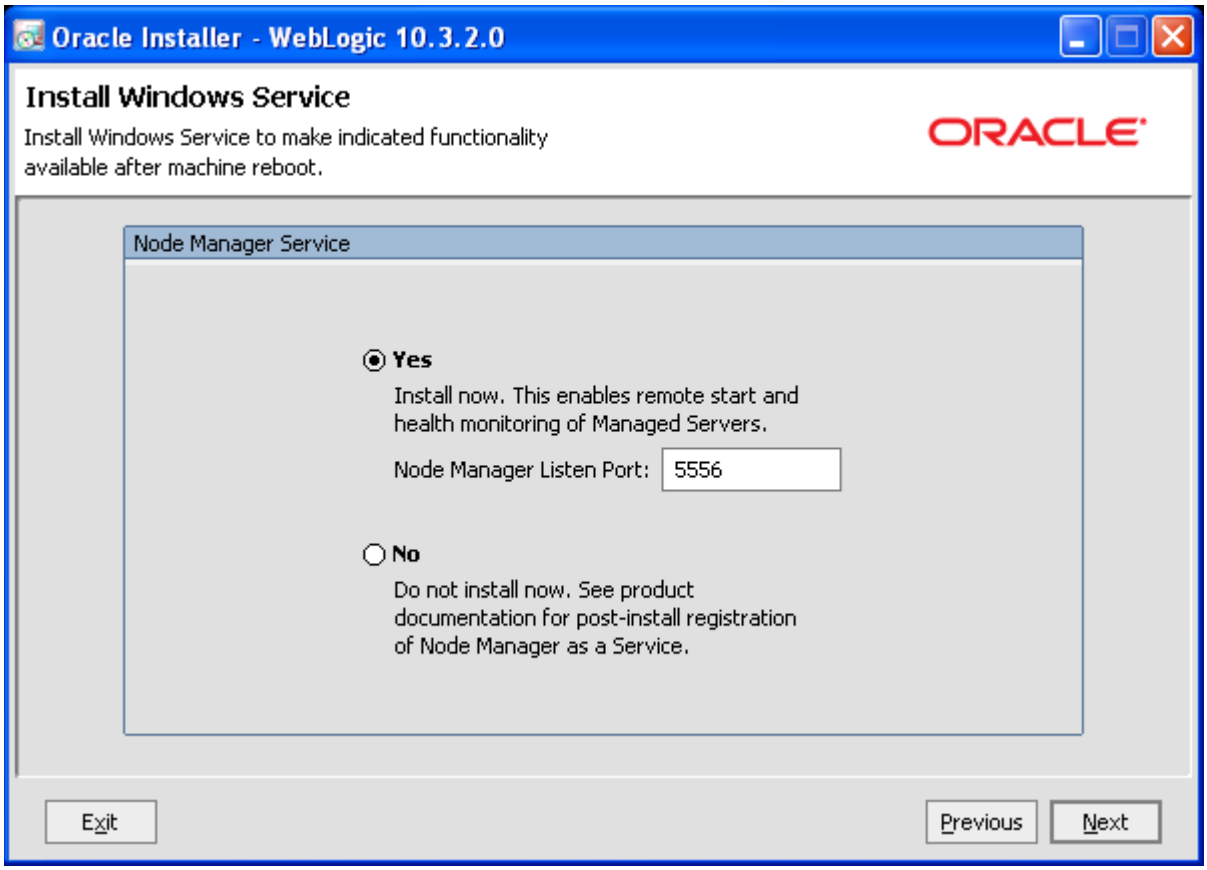
10. If custom , customize installation



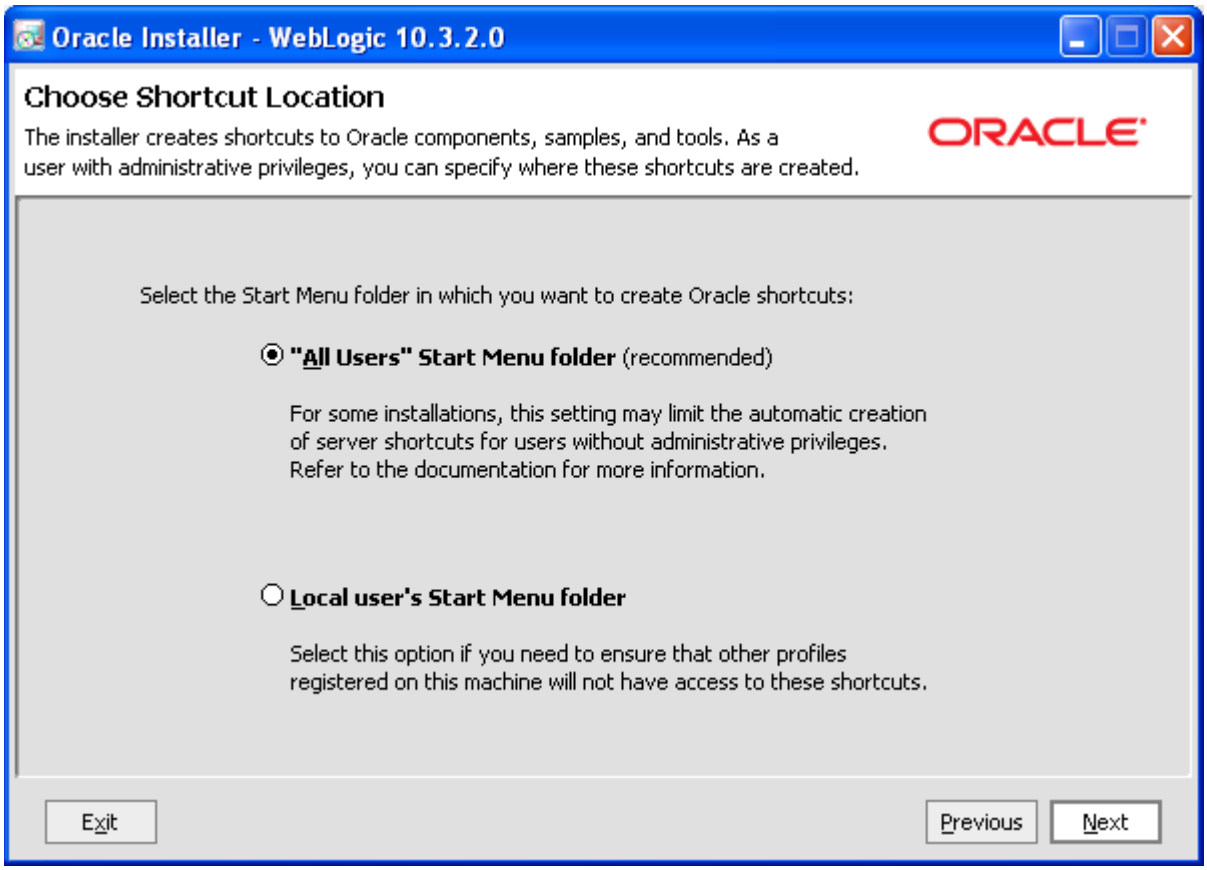
11. Select Bundled JDK that is needed

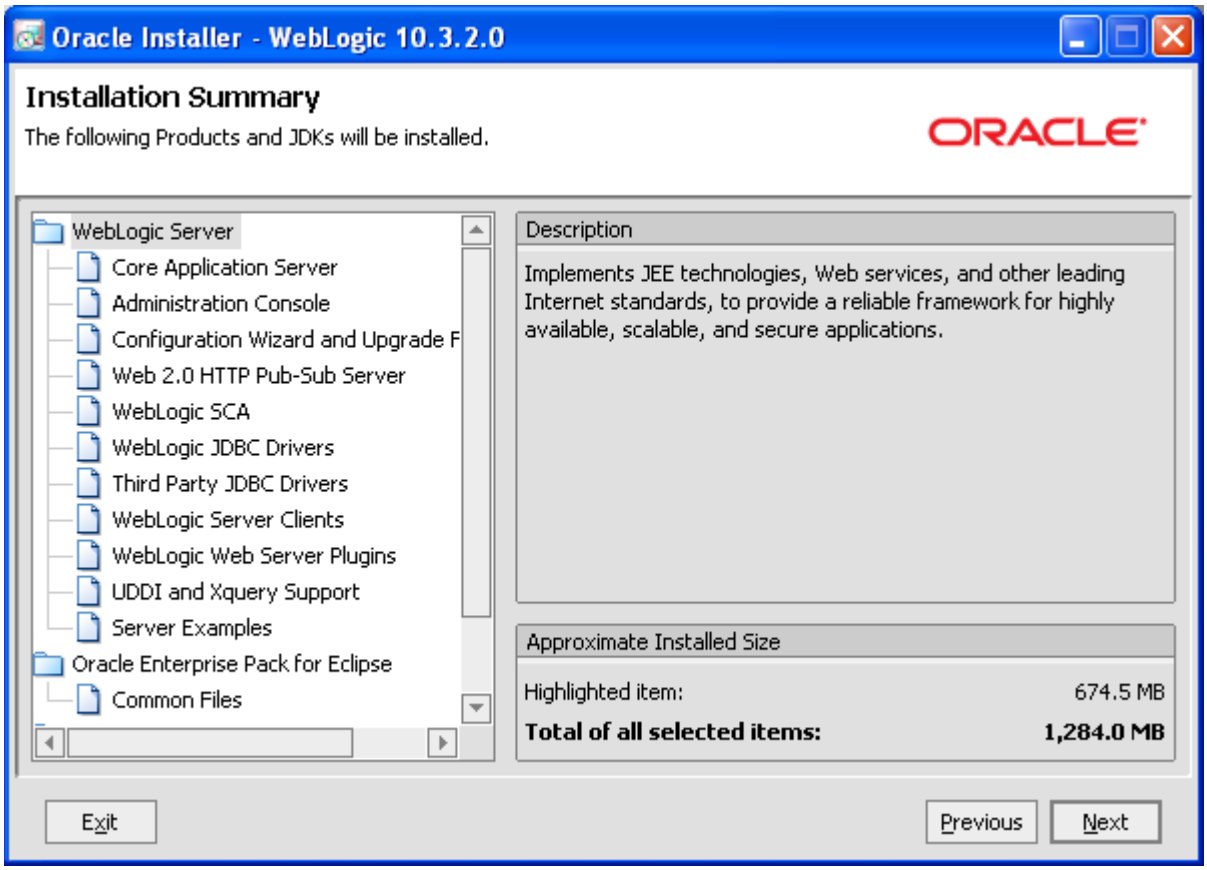


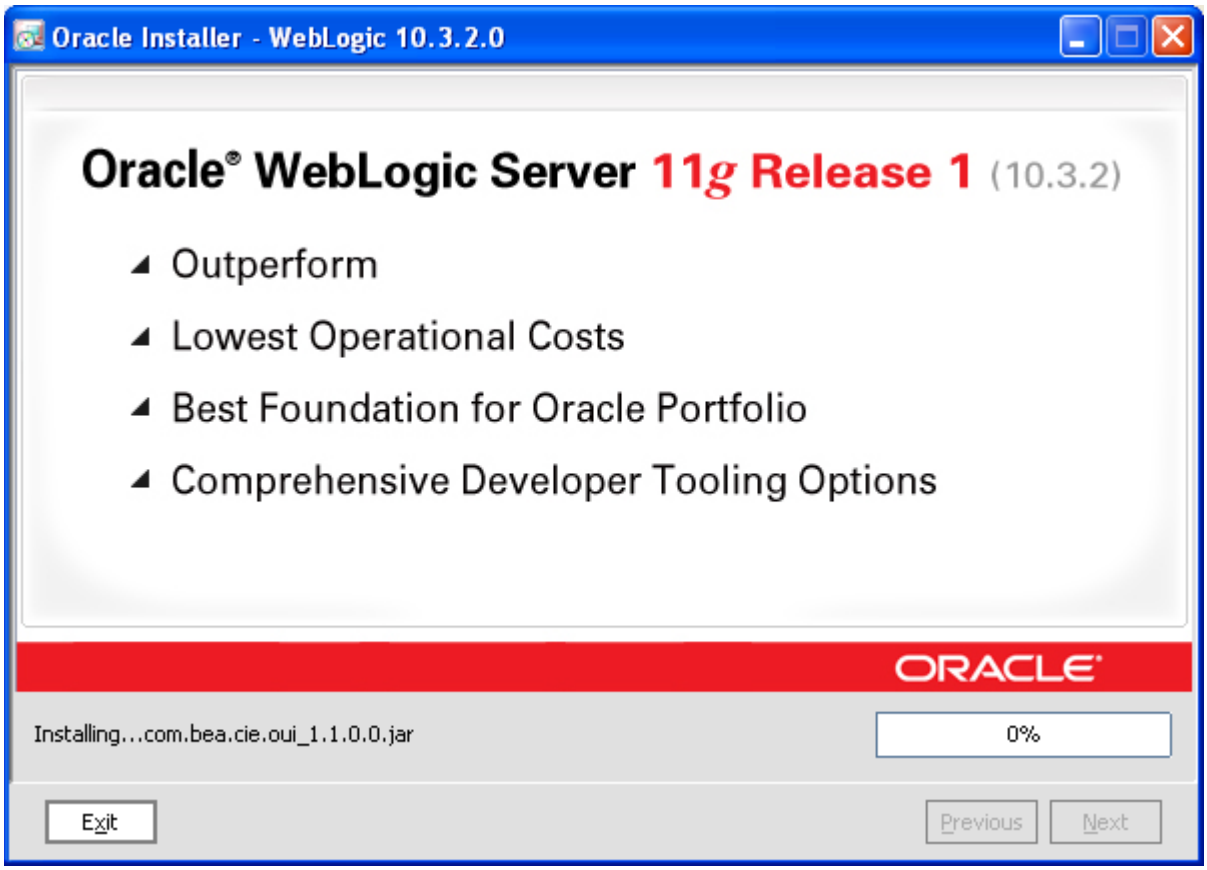
12. Click ‘Next’.



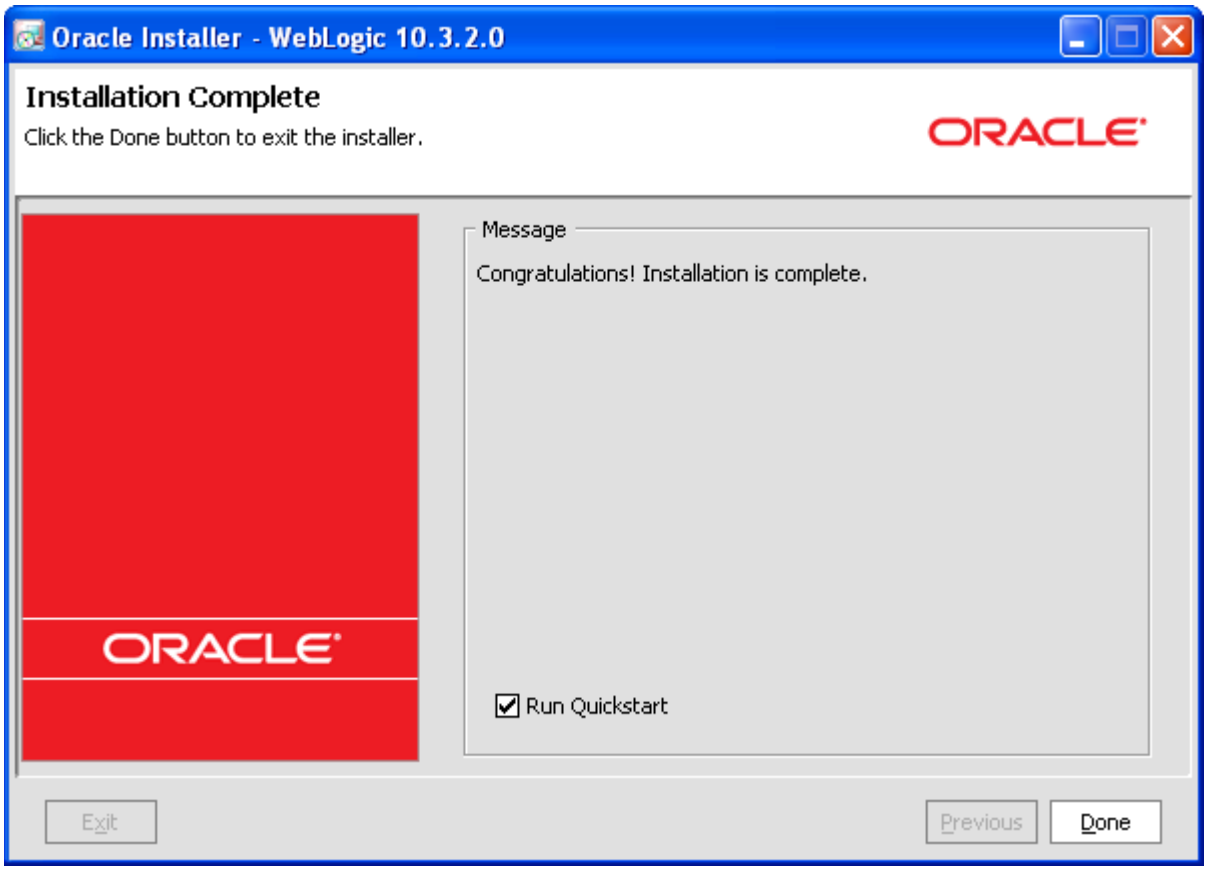
13. Install Node manager if remote start and monitoring is required needed.


Oracle Installer - WebLogic 10.3.2.0
Choose Shortcut Location
The installer creates shortcuts to Oracle components, samples, and tools. As a user with administrative privileges, you can specify where these shortcuts are created.
ORACLE
Select the Start Menu folder in which you want to create Oracle shortcuts:
"All Users" Start Menu folder (recommended)
For some installations, this setting may limit the automatic creation of server shortcuts for users without administrative privileges. Refer to the documentation for more information.
Local user's Start Menu folder
Select this option if you need to ensure that other profiles registered on this machine will not have access to these shortcuts.
Exit
Previous
Next


Oracle Installer - WebLogic 10.3.2.0
Installation Summary
The following Products and JDKs will be installed.
ORACLE
WebLogic Server
Core Application Server
Administration Console
Configuration Wizard and Upgrade F
Web 2.0 HTTP Pub-Sub Server
WebLogic SCA
WebLogic JDBC Drivers
Third Party JDBC Drivers
WebLogic Server Clients
WebLogic Web Server Plugins
UDDI and Xquery Support
Server Examples
Oracle Enterprise Pack for Eclipse
Common Files
Description
Implements JEE technologies, Web services, and other leading Internet standards, to provide a reliable framework for highly available, scalable, and secure applications.
Approximate Installed Size
Highlighted item: 674.5 MB
Total of all selected items: 1,284.0 MB
Exit
Previous
Next


Oracle Installer - WebLogic 10.3.2.0
Oracle® WebLogic Server 11g Release 1 (10.3.2)
Outperform
Lowest Operational Costs
Best Foundation for Oracle Portfolio
Comprehensive Developer Tooling Options
ORACLE
Installing...com.bea.cie.oui_1.1.0.0.jar
0%
Exit
Previous
Next

ORACLE


Oracle Installer - WebLogic 10.3.2.0
Installation Complete
Click the Done button to exit the installer.
ORACLE
ORACLE
Message
Congratulations! Installation is complete.
Run Quickstart
Exit
Previous
Done

4. Oracle SOA Suite 11gR1(11.1.1.7)

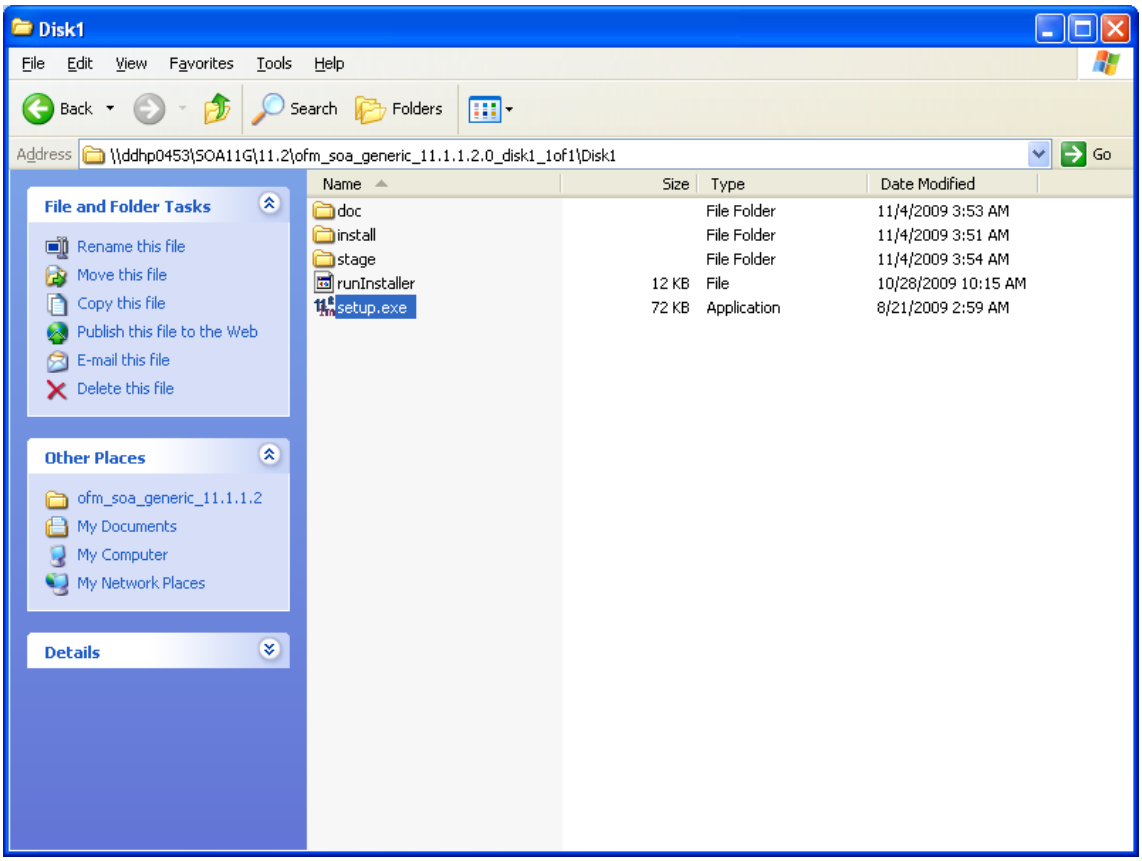
4.1 Introduction

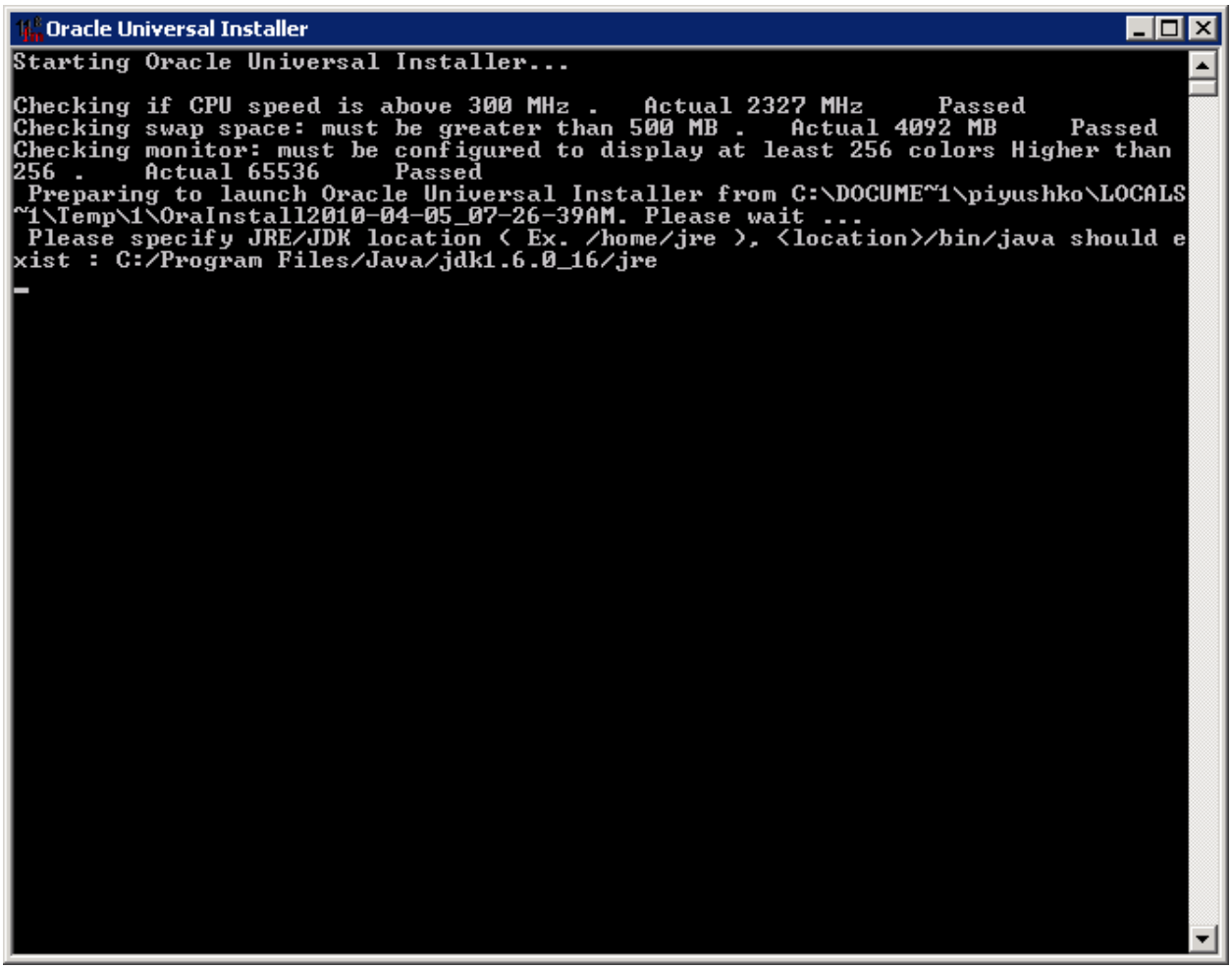
Oracle SOA suite 11gR1 (11.1.1.7) is required for running FCIS BPEL Process flows

The version required is 11.1.1.7

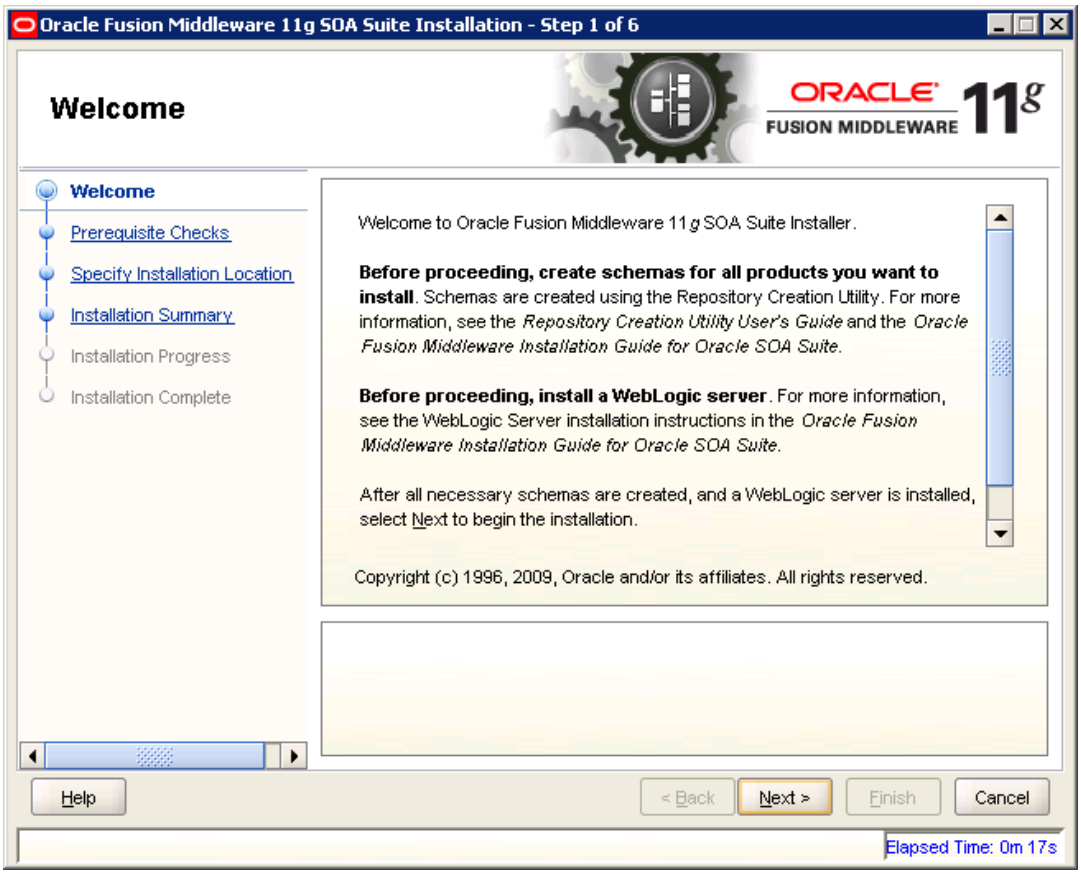
4.2 Download URL from Oracle

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

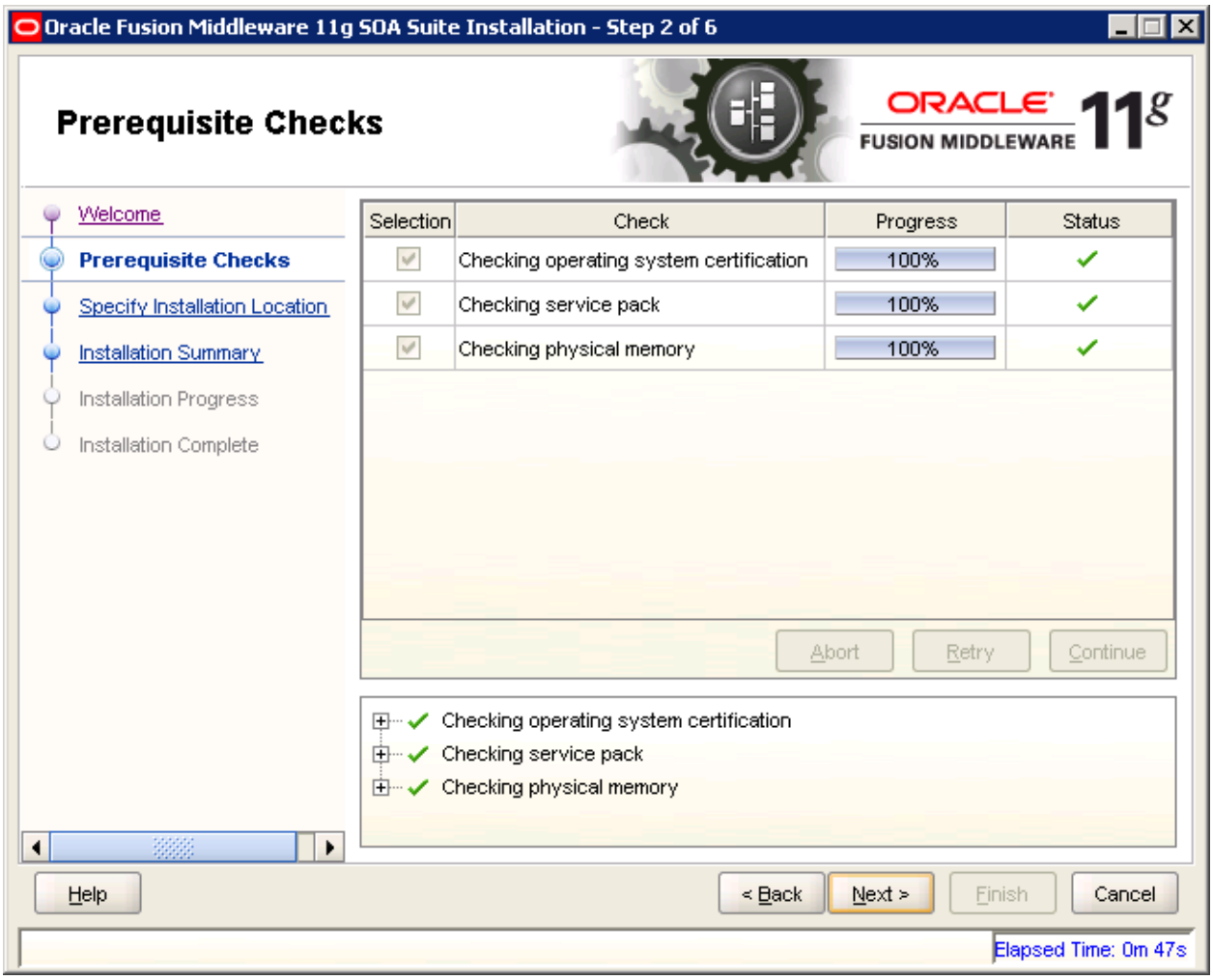

Disk1
File Edit View Favorites Tools Help
Back Search Folders
Address \\ddhp0453\SOA11G\11.2\ofm_soa_generic_11.1.1.2.0_disk1_1of1\Disk1
Go
File and Folder Tasks
Rename this file
Move this file
Copy this file
Publish this file to the Web
E-mail this file
Delete this file
Other Places
ofm_soa_generic_11.1.1.2
My Documents
My Computer
My Network Places
Details
Name
Size
Type
Date Modified
doc
File Folder
11/4/2009 3:53 AM
install
File Folder
11/4/2009 3:51 AM
stage
File Folder
11/4/2009 3:54 AM
runInstaller
12 KB
File
10/28/2009 10:15 AM
setup.exe
72 KB
Application
8/21/2009 2:59 AM



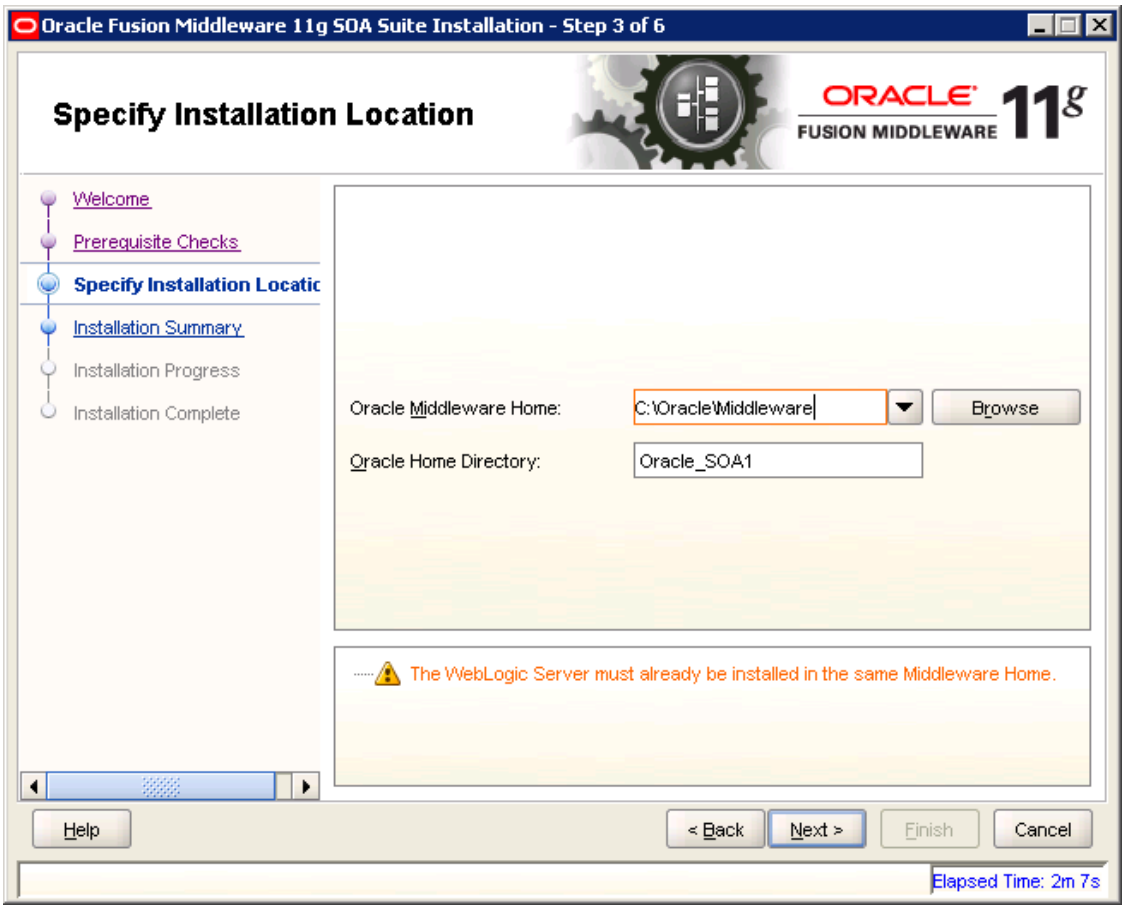
5. Specify JRE/JDK location for installation to proceed.


Oracle Fusion Middleware 11g SOA Suite Installation - Step 1 of 6
Welcome
ORACLE
FUSION MIDDLEWARE 11g
Welcome
Prerequisite Checks
Specify Installation Location
Installation Summary
Installation Progress
Installation Complete
Welcome to Oracle Fusion Middleware 11g SOA Suite Installer.
Before proceeding, create schemas for all products you want to install. Schemas are created using the Repository Creation Utility. For more information, see the Repository Creation Utility User's Guide and the Oracle Fusion Middleware Installation Guide for Oracle SOA Suite.
Before proceeding, install a WebLogic server. For more information, see the WebLogic Server installation instructions in the Oracle Fusion Middleware Installation Guide for Oracle SOA Suite.
After all necessary schemas are created, and a WebLogic server is installed, select Next to begin the installation.
Copyright (c) 1996, 2009, Oracle and/or its affiliates. All rights reserved.
Help
< Back
Next >
Finish
Cancel
Elapsed Time: 0m 17s

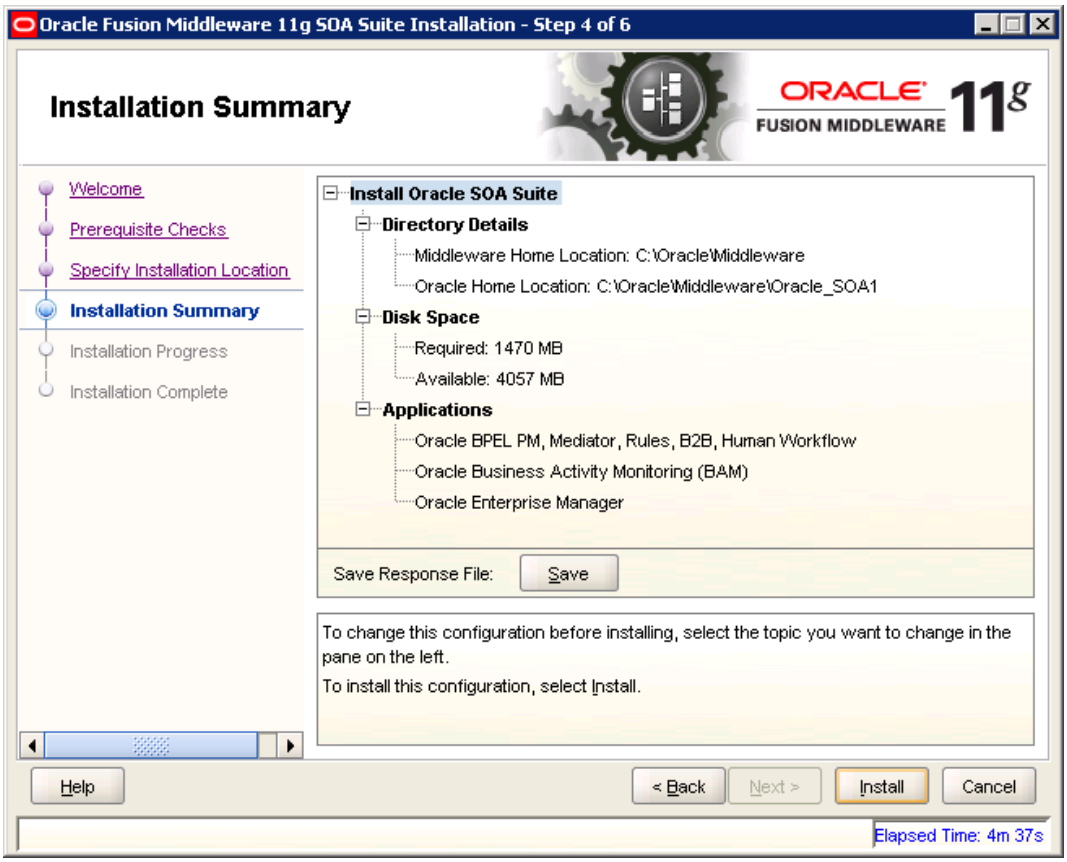
6. Click'Next'.


Oracle Fusion Middleware 11g SOA Suite Installation - Step 2 of 6
Prerequisite Checks
ORACLE
FUSION MIDDLEWARE 11g
Welcome
Prerequisite Checks
Specify Installation Location
Installation Summary
Installation Progress
Installation Complete
Selection
Check
Progress
Status
Checking operating system certification
100%
Checking service pack
100%
Checking physical memory
100%
Abort
Retry
Continue
Checking operating system certification
Checking service pack
Checking physical memory
Help
< Back
Next >
Finish
Cancel
Elapsed Time: 0m 47s

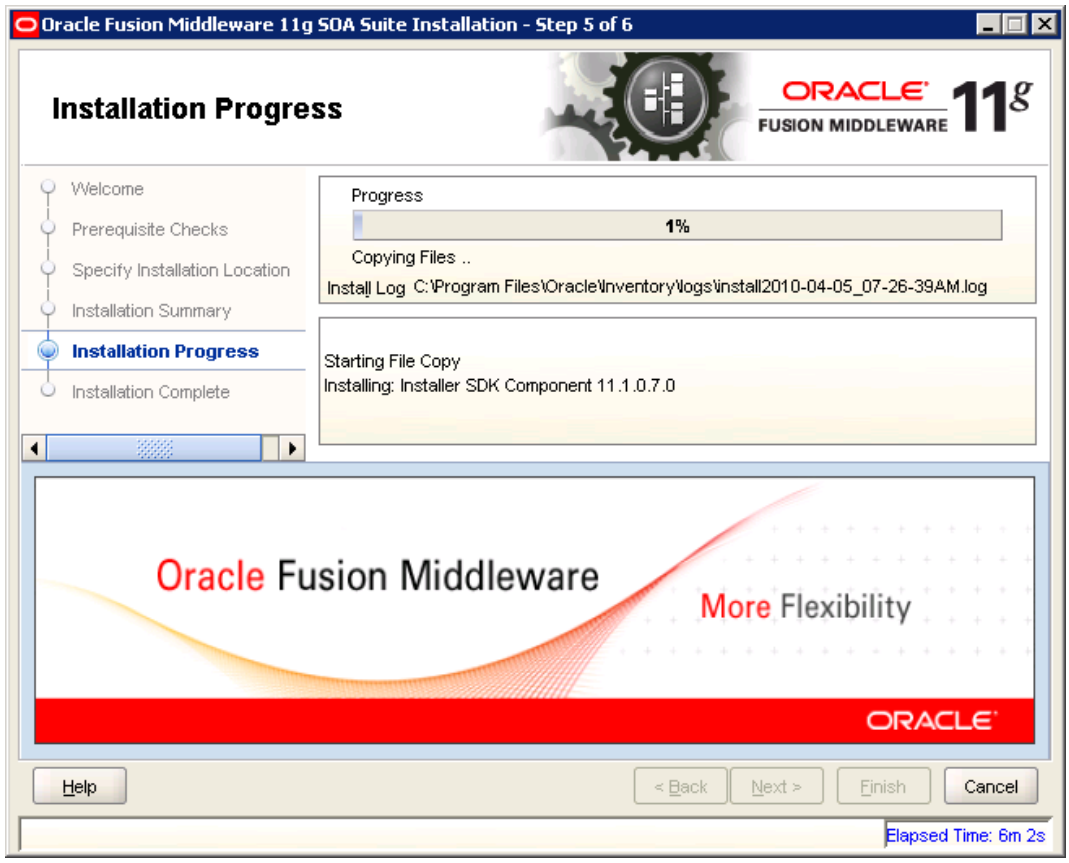
7. Click ‘Next’.



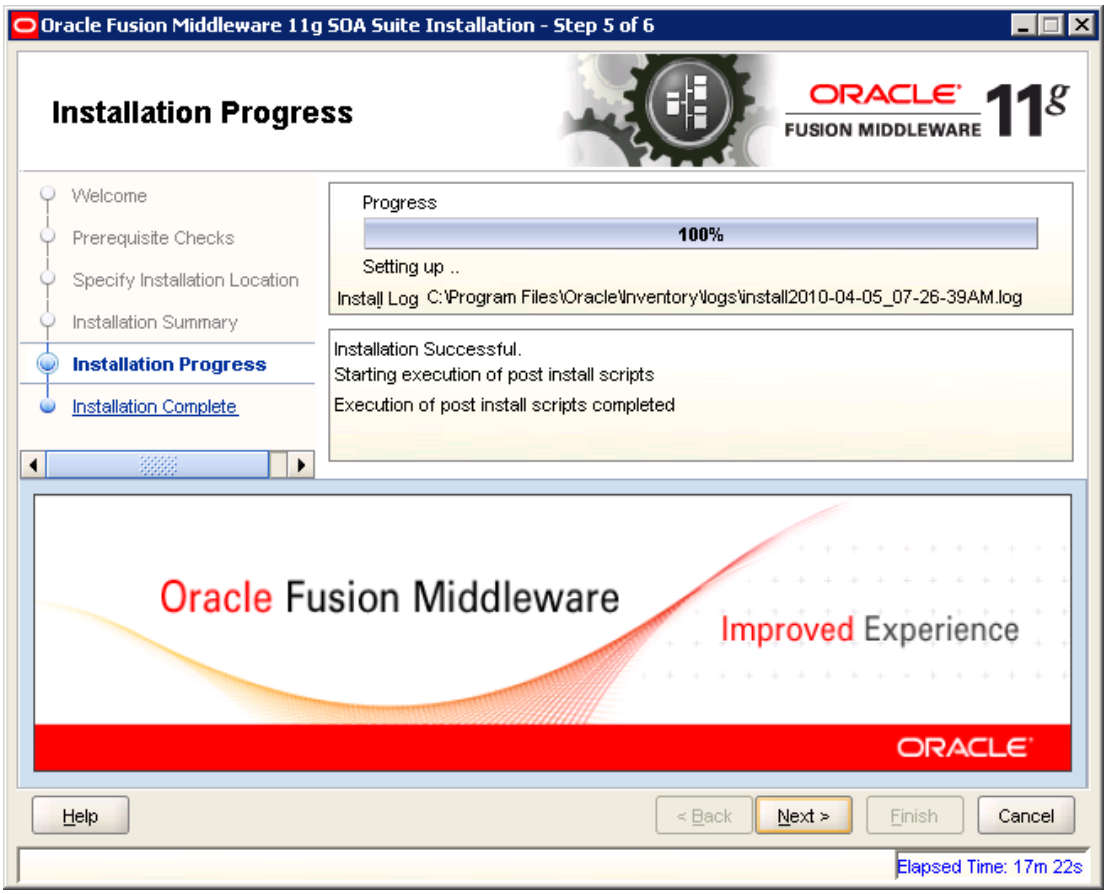
8. Specify the same middleware home that was used for Weblogic server.



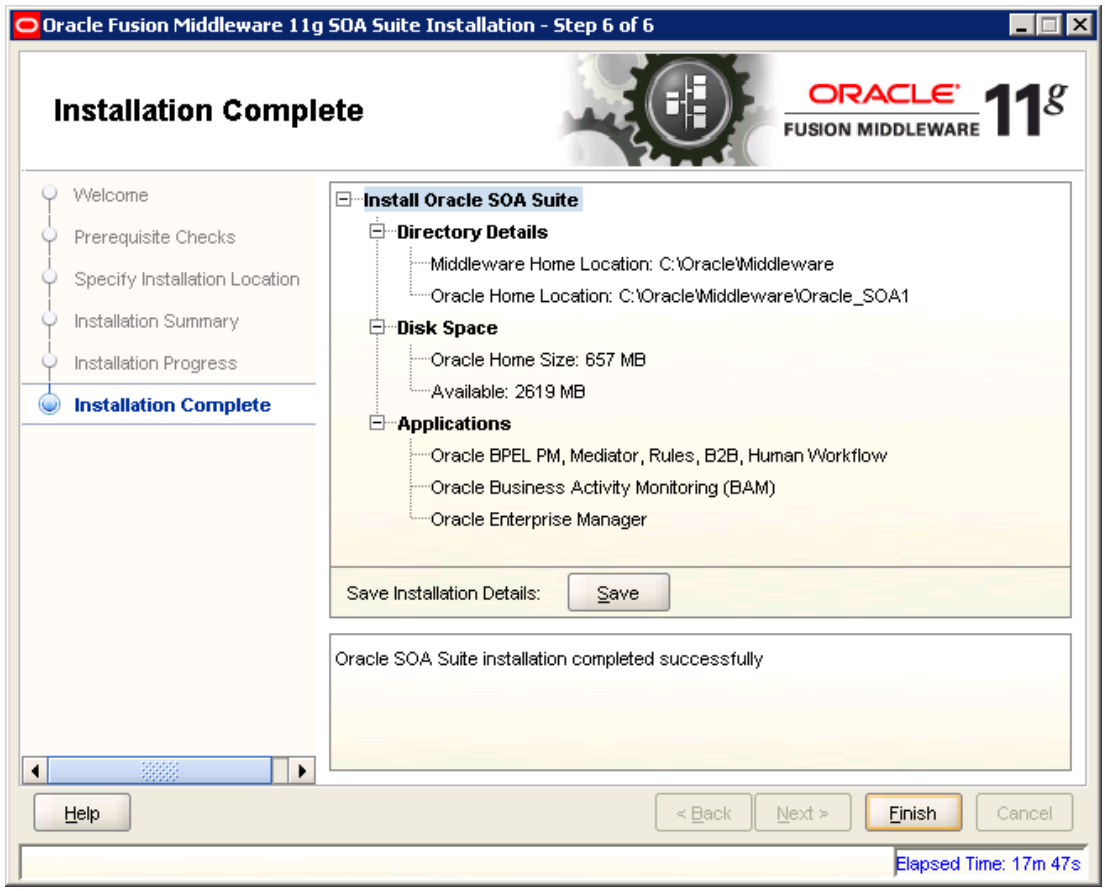
9. Click ‘Install’.


Oracle Fusion Middleware 11g SOA Suite Installation - Step 5 of 6
Installation Progress
ORACLE
FUSION MIDDLEWARE 11g
Welcome
Prerequisite Checks
Specify Installation Location
Installation Summary
Installation Progress
Installation Complete
Progress
1%
Copying Files ..
Install Log C:\Program Files\Oracle\Inventory\logs\install2010-04-05_07-26-39AM.log
Starting File Copy
Installing: Installer SDK Component 11.1.0.7.0
Oracle Fusion Middleware
More Flexibility
ORACLE
Help
< Back
Next >
Finish
Cancel
Elapsed Time: 6m 2s

ORACLE



10. Click ‘Next’.


Oracle Fusion Middleware 11g SOA Suite Installation - Step 6 of 6
Installation Complete
ORACLE
FUSION MIDDLEWARE 11g
Welcome
Prerequisite Checks
Specify Installation Location
Installation Summary
Installation Progress
Installation Complete
Install Oracle SOA Suite
Directory Details
Middleware Home Location: C:\Oracle\Middleware
Oracle Home Location: C:\Oracle\Middleware\Oracle_SOA1
Disk Space
Oracle Home Size: 657 MB
Available: 2619 MB
Applications
Oracle BPEL PM, Mediator, Rules, B2B, Human Workflow
Oracle Business Activity Monitoring (BAM)
Oracle Enterprise Manager
Save Installation Details:
Save
Oracle SOA Suite installation completed successfully
Help
< Back
Next >
Finish
Cancel
Elapsed Time: 17m 47s

ORACLE

5. Domain Configuration with Oracle SOA suite

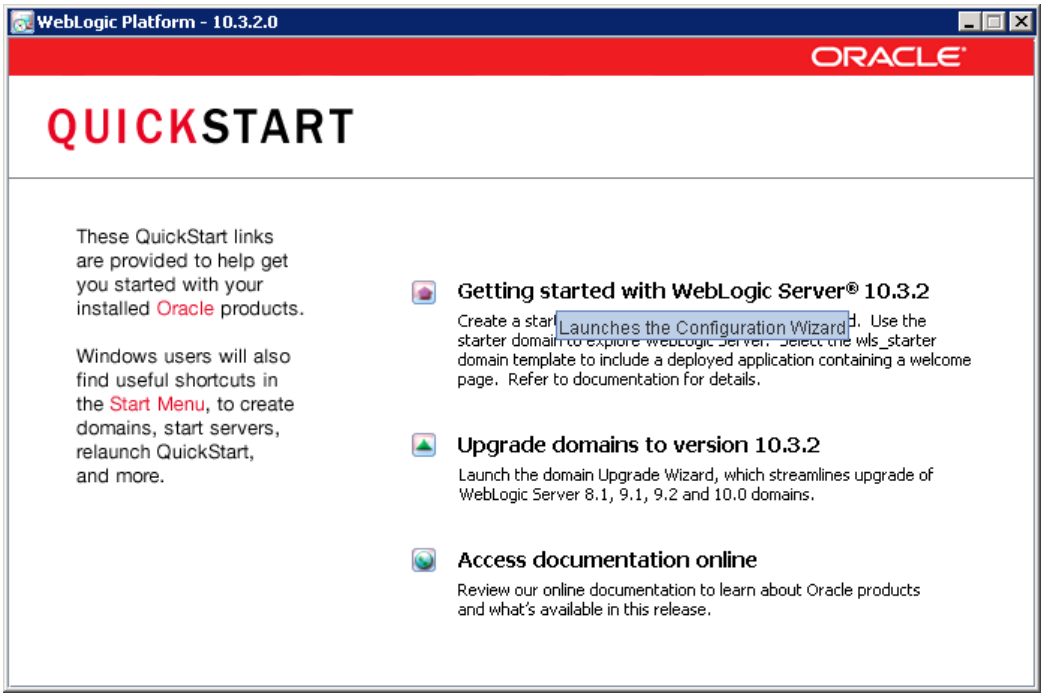
5.1 Introduction

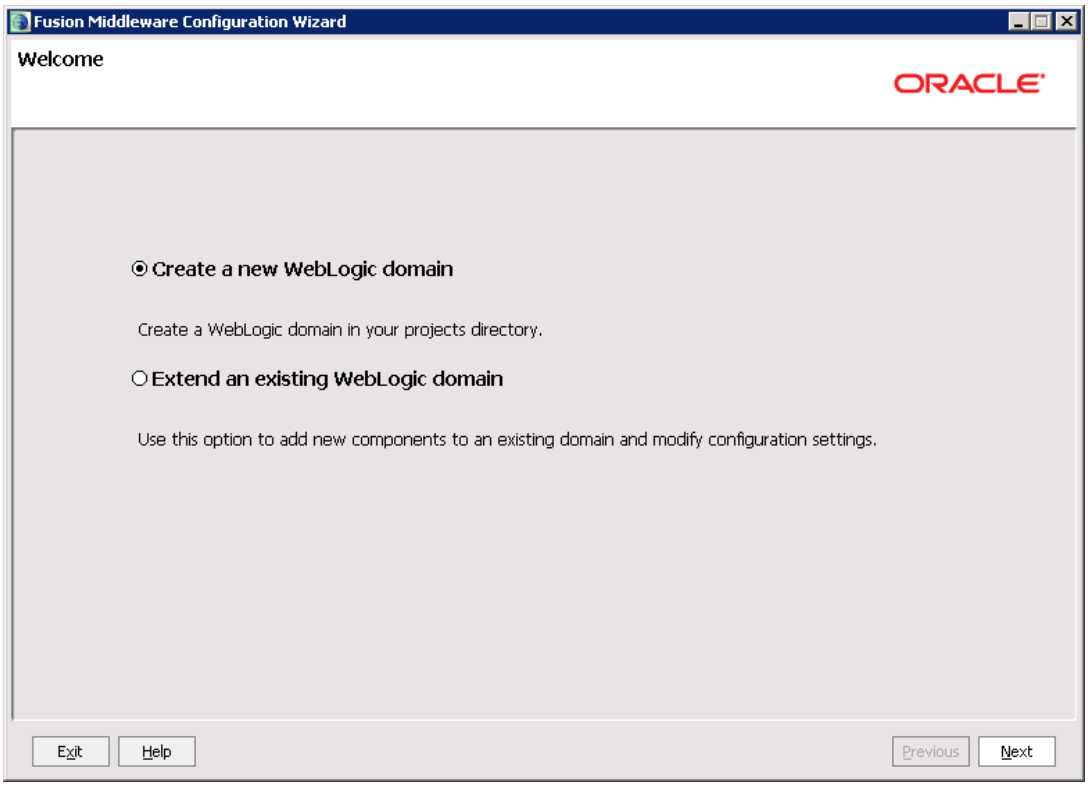
New domain can be configured or an existing domain can be extended with Oracle SOA suite components.

5.2 New Domain Configuration

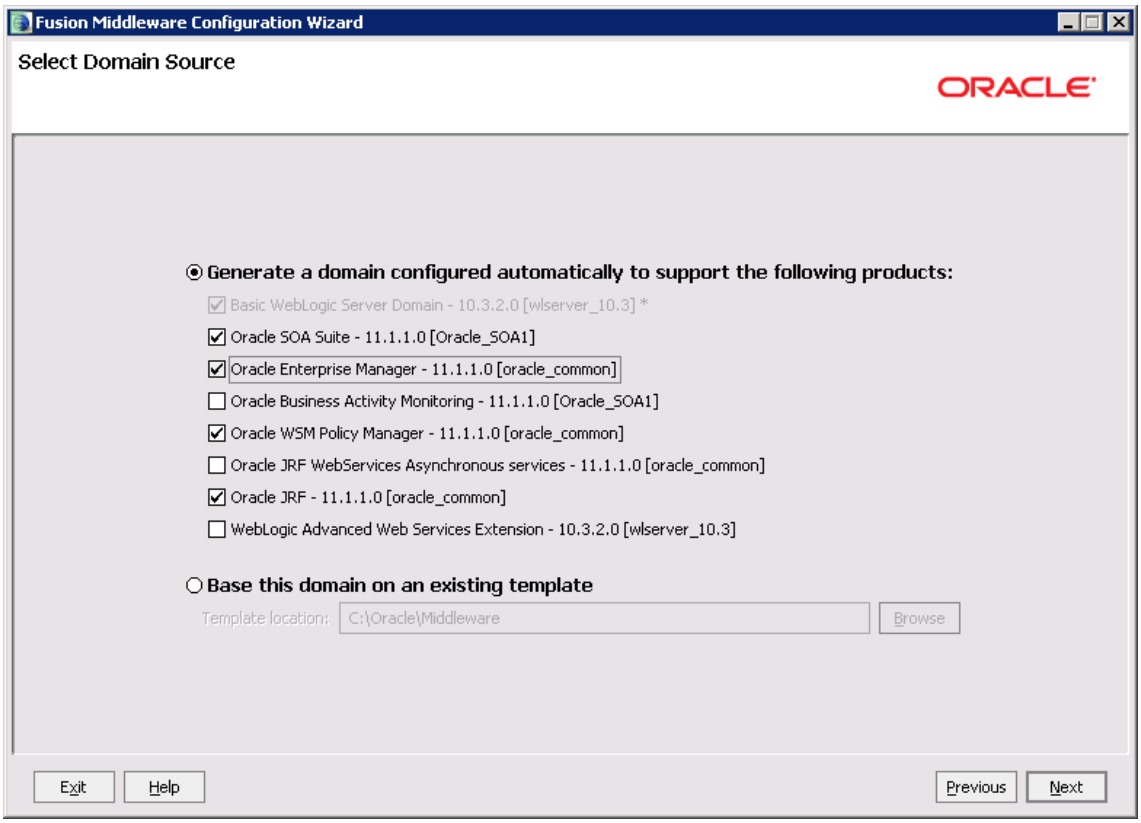
1. Run Config command

<middleware_home> wlserver_10.3\common\bin\config or
<middleware_home> \Oracle_SOA1\common\bin\config

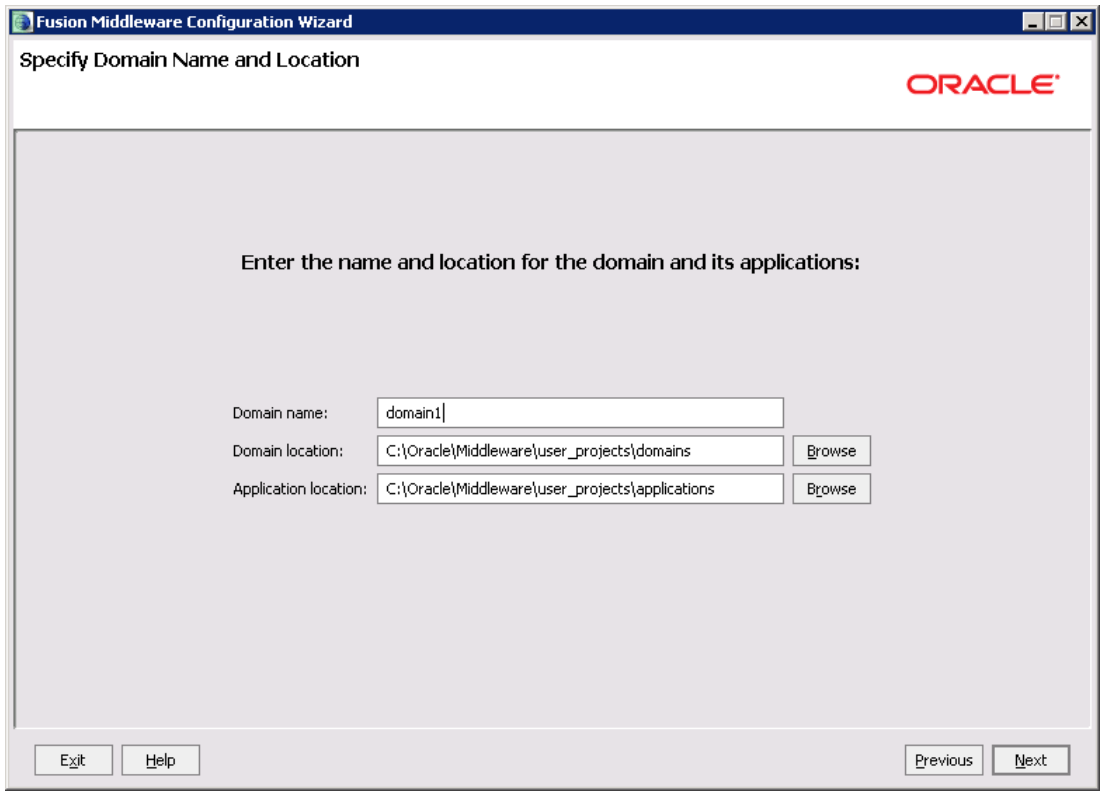




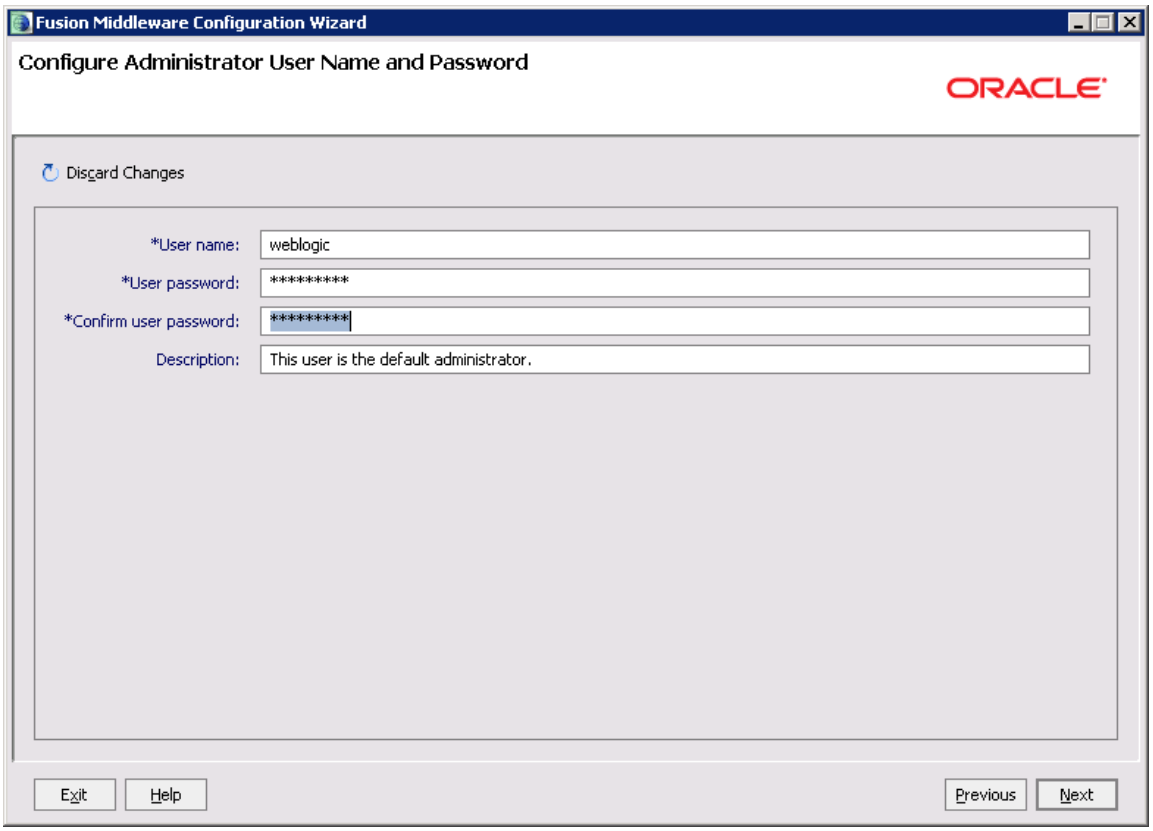
2. Create a new domain or extend an existing domain to include soa suite components.



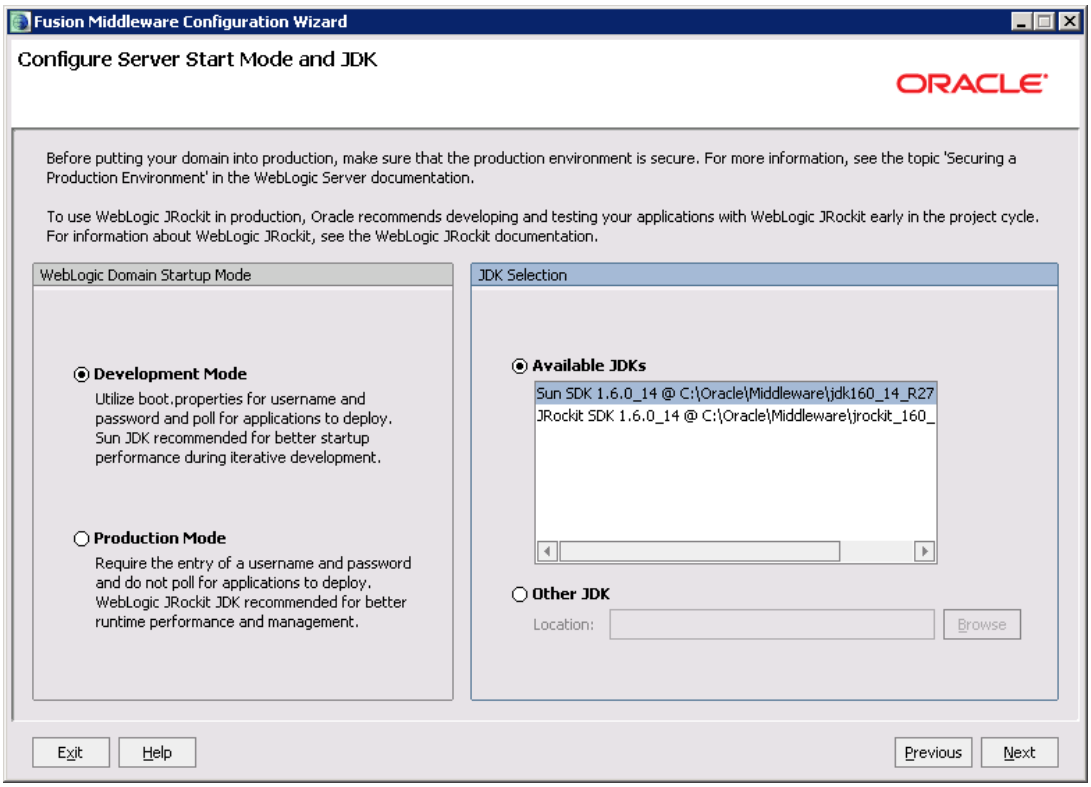
3. On selecting Oracle SOA suite it automatically selects Oracle WSM Policy Manager, Oracle JRF
4. Select Oracle Enterprise Manager for managing / monitoring BPEL processes


Fusion Middleware Configuration Wizard
Specify Domain Name and Location
ORACLE
Enter the name and location for the domain and its applications:
Domain name:
domain1
Domain location:
C:\Oracle\Middleware\user_projects\domains
Browse
Application location:
C:\Oracle\Middleware\user_projects\applications
Browse
Exit
Help
Previous
Next

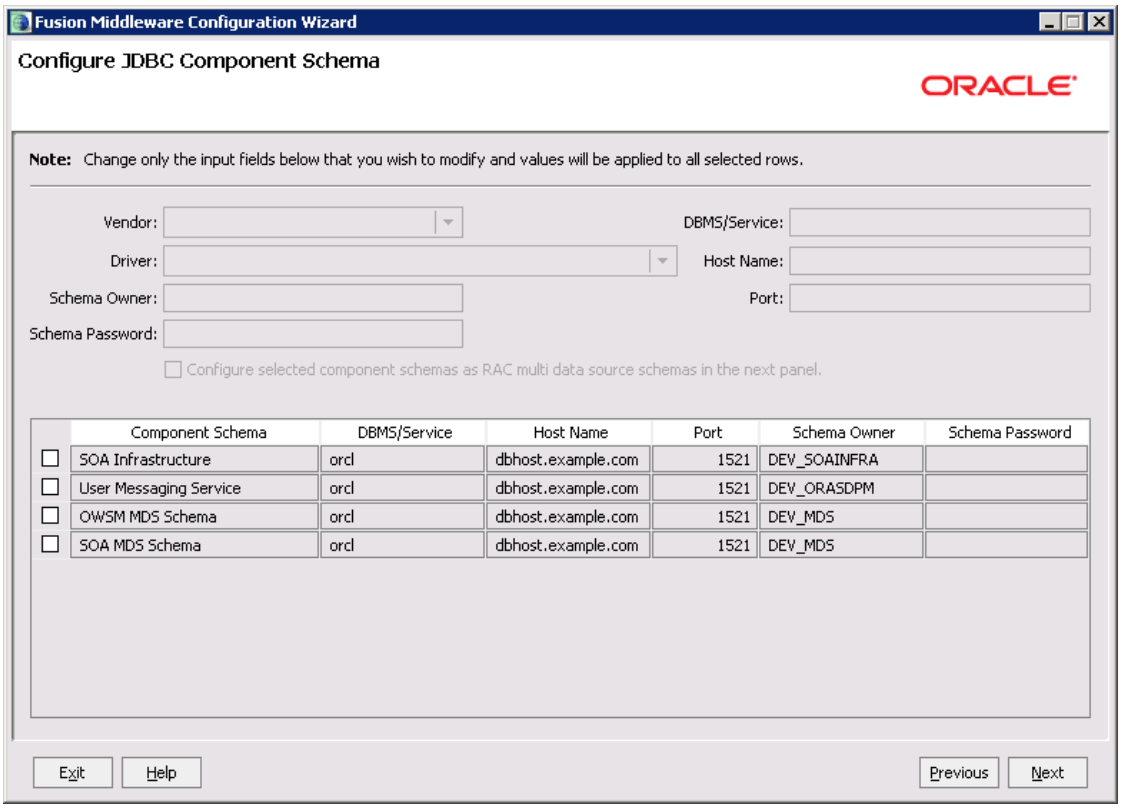
ORACLE



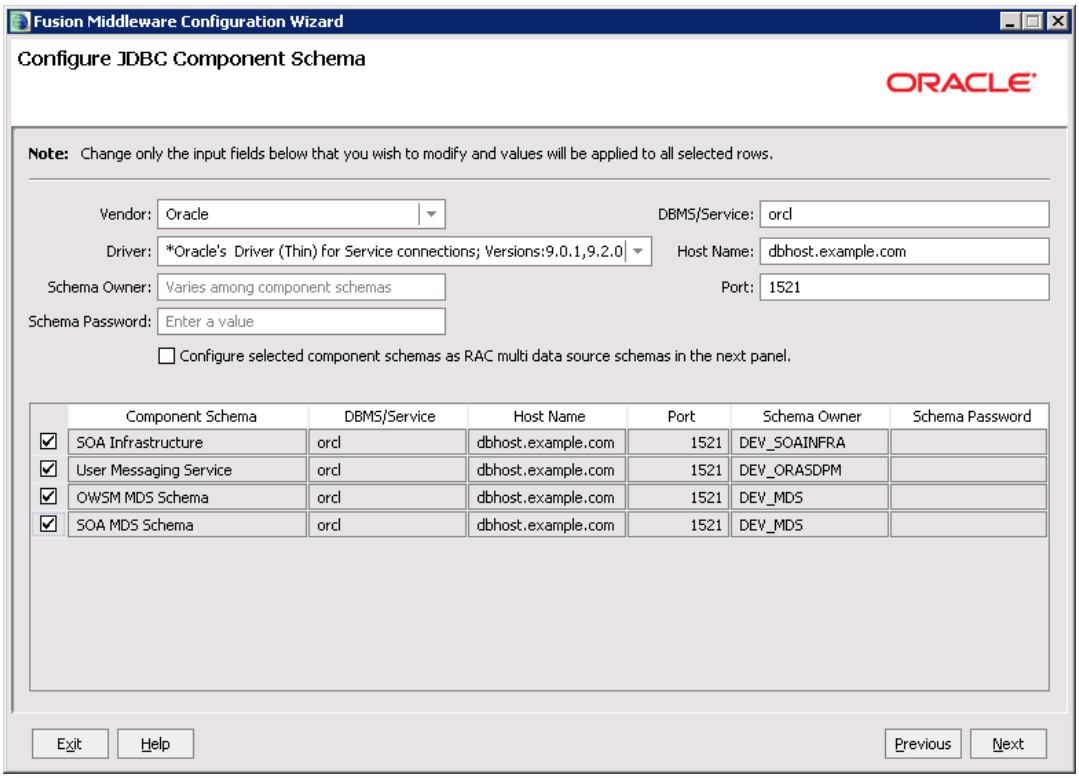
5. Configure Administrator user / password.



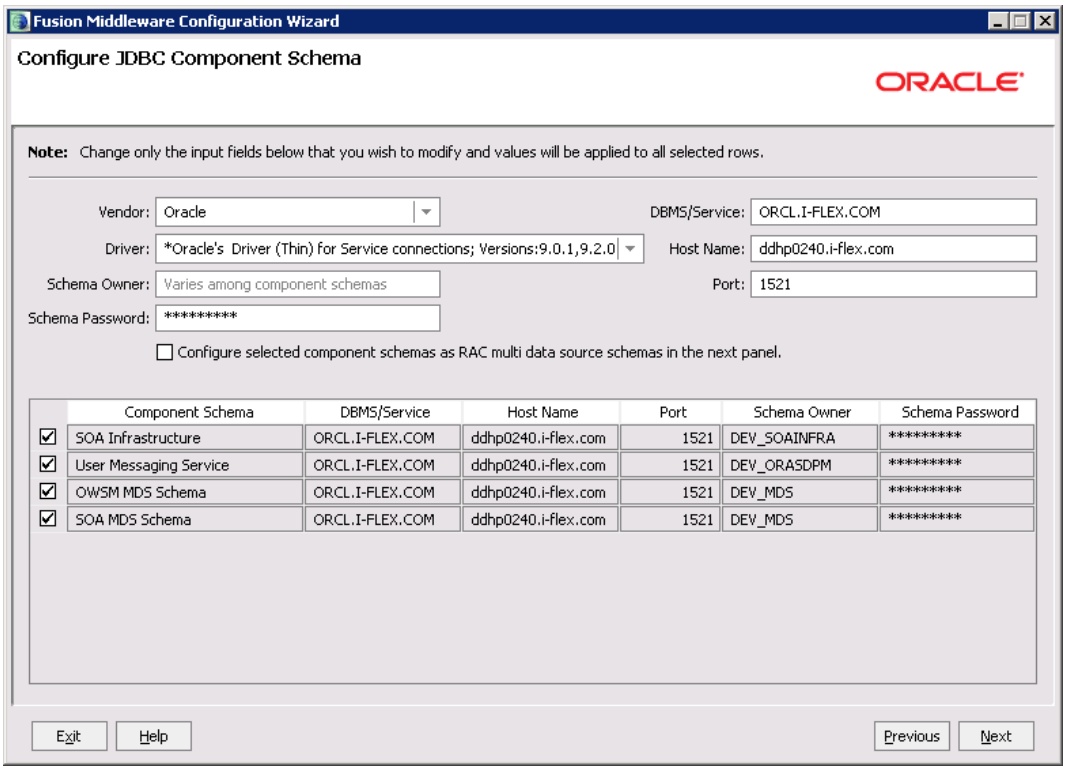
6. Select jdk depending on the startup mode.

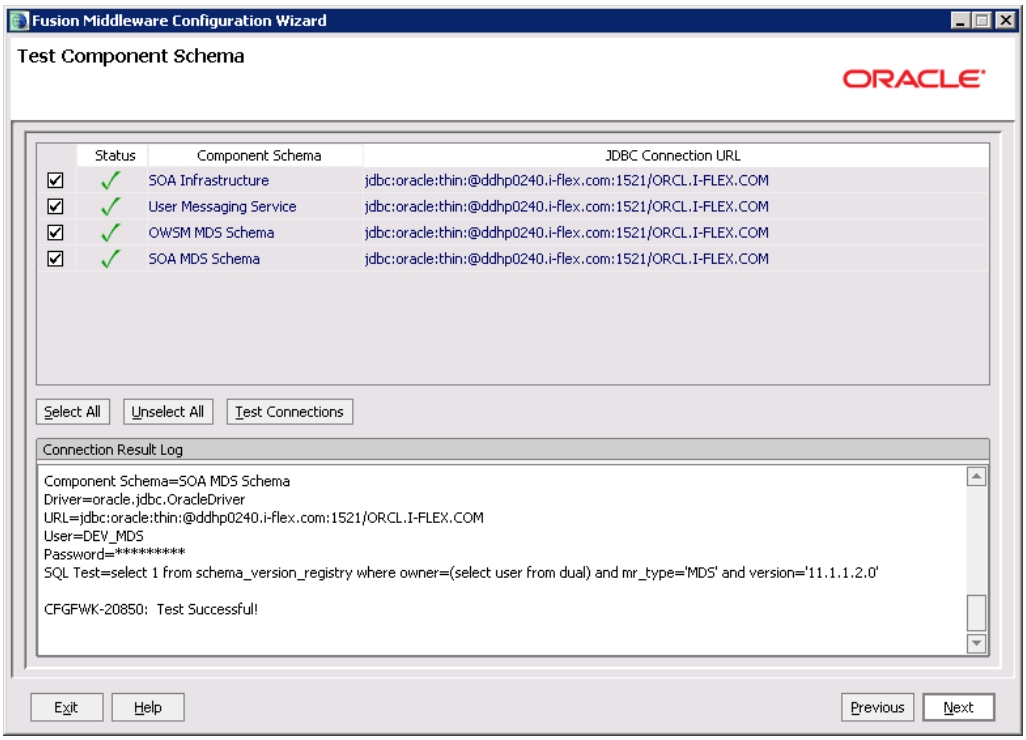


7. Configure schema components.
8. Select all the check boxes.

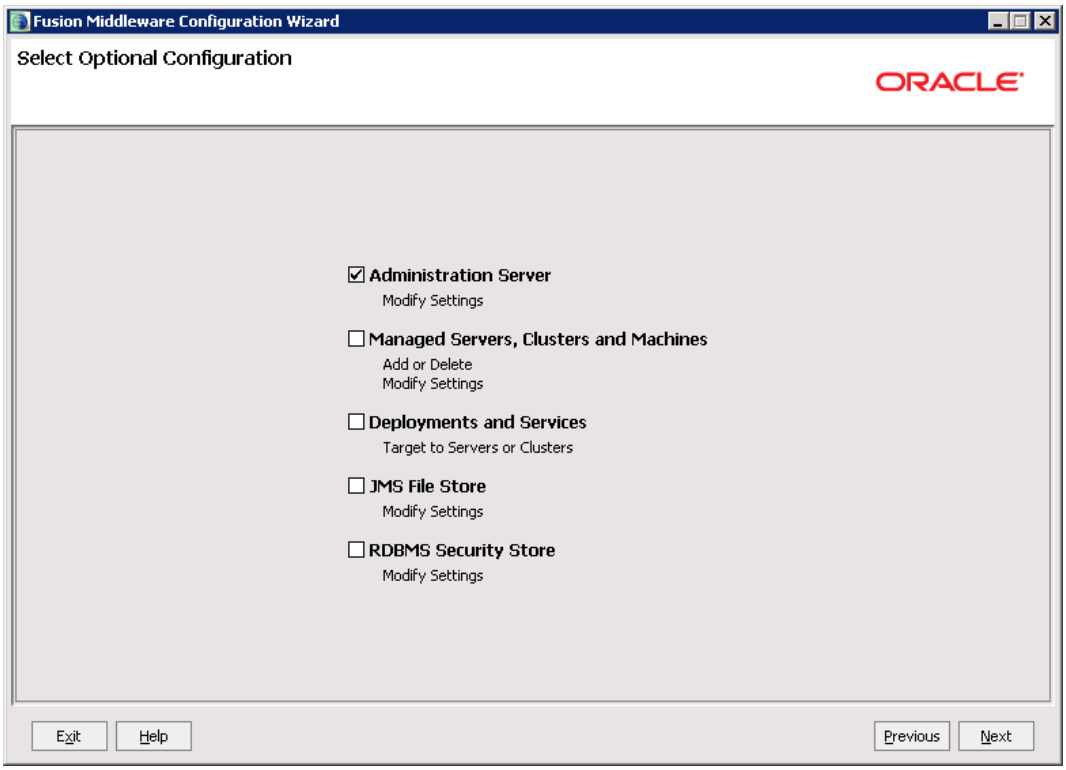


9. Provide the db parameters used during schema creation (RCU Utility)

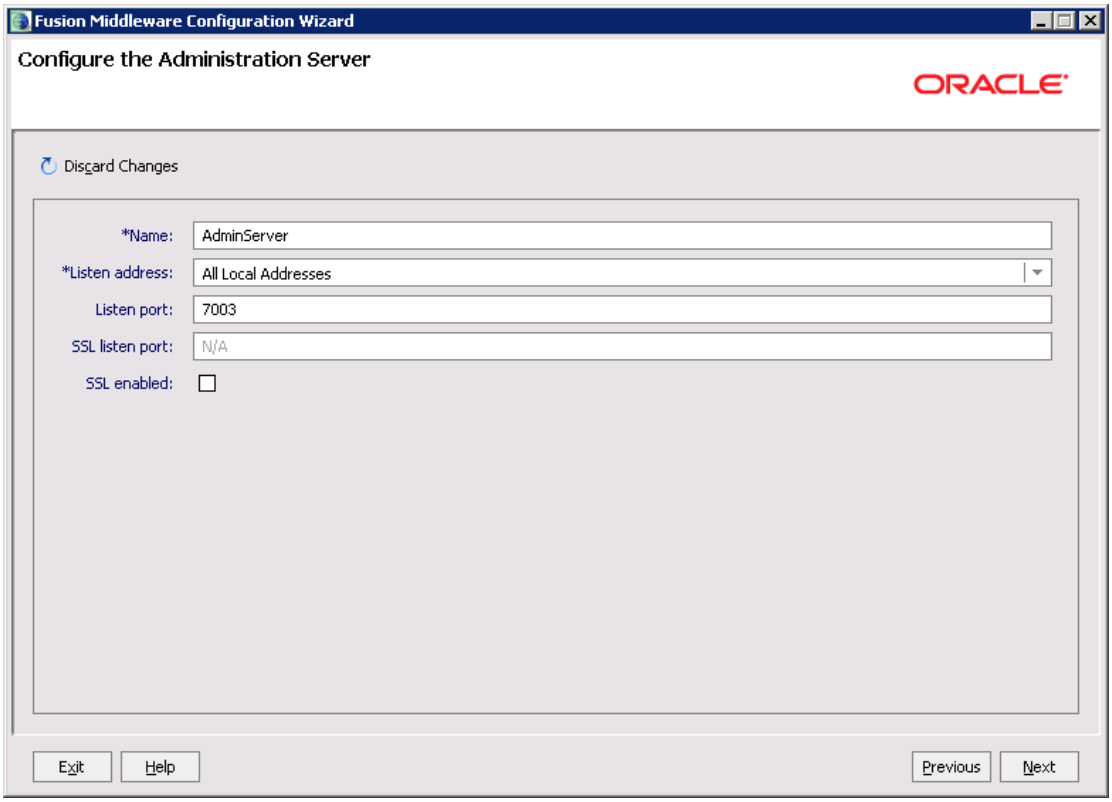

Fusion Middleware Configuration Wizard
Configure JDBC Component Schema
ORACLE
Note: Change only the input fields below that you wish to modify and values will be applied to all selected rows.
Vendor: Oracle
DBMS/Service: ORCL.I-FLEX.COM
Driver: *Oracle's Driver (Thin) for Service connections; Versions:9.0.1,9.2.0
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
SOA Infrastructure | ORCL.I-FLEX.COM | ddhp0240.i-flex.com | 1521 | DEV_SOAINFRA | *********
User Messaging Service | ORCL.I-FLEX.COM | ddhp0240.i-flex.com | 1521 | DEV_ORASDPM | *********
OWSM MDS Schema | ORCL.I-FLEX.COM | ddhp0240.i-flex.com | 1521 | DEV_MDS | *********
SOA MDS Schema | ORCL.I-FLEX.COM | ddhp0240.i-flex.com | 1521 | DEV_MDS | *********
Exit
Help
Previous
Next



10. Test the database connectivity

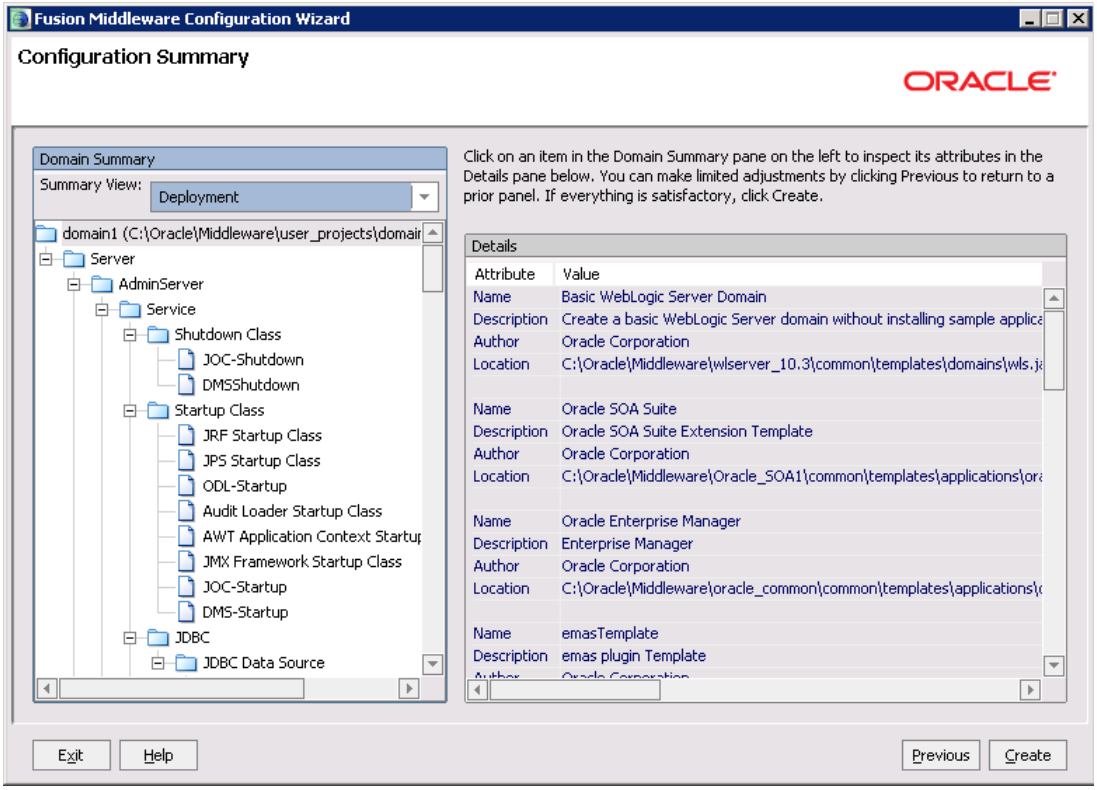


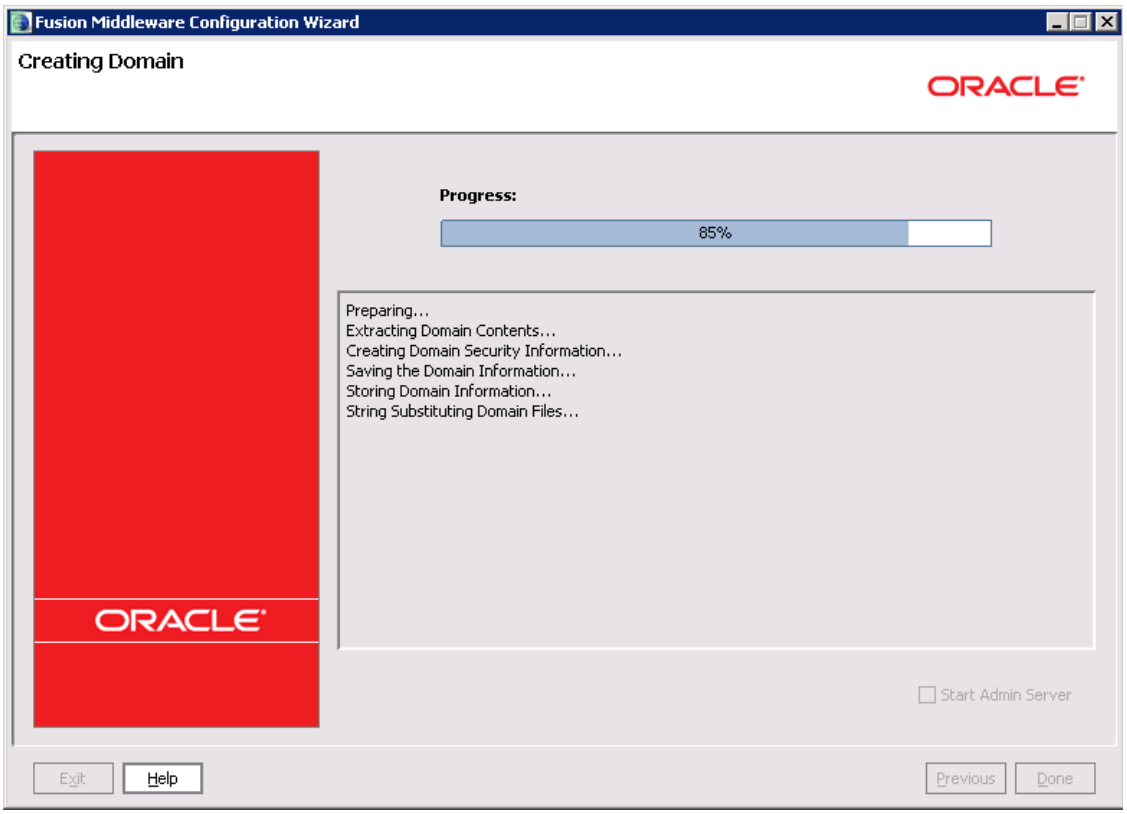
11. Select the Administration Server & Managed Server

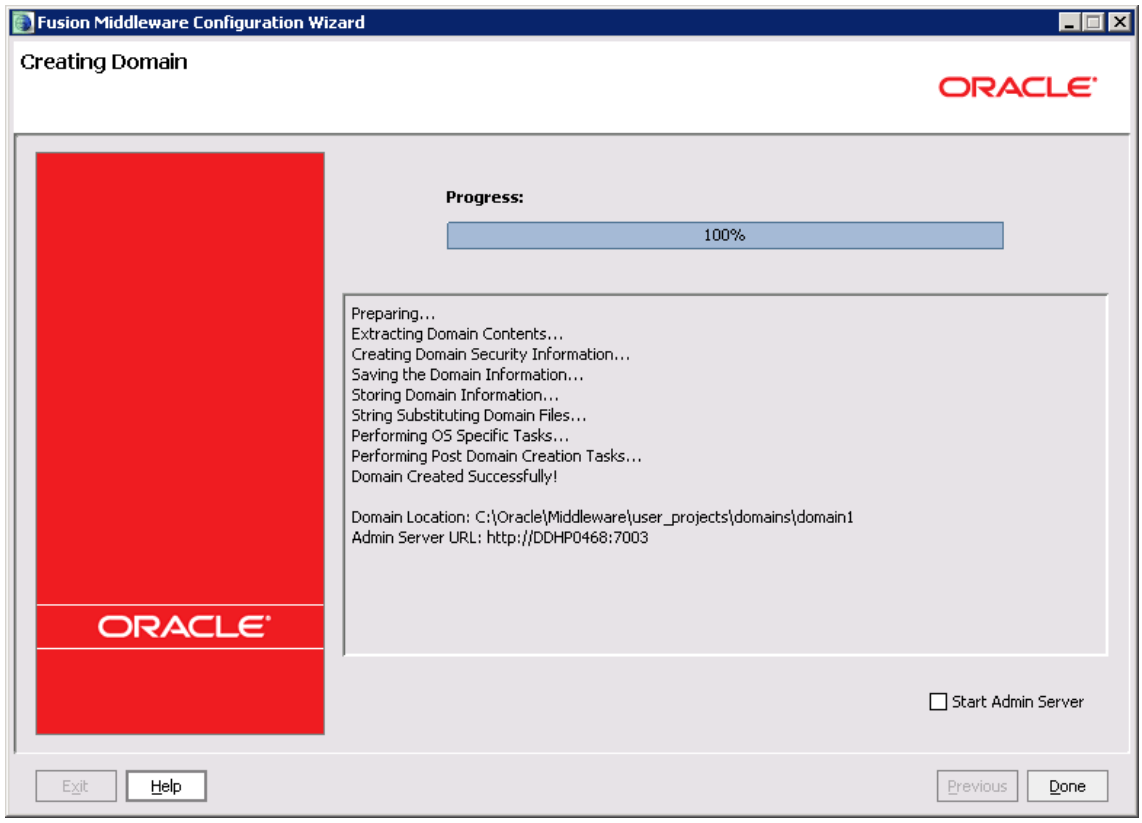


ORACLE

12. Configure the Administration Server & Managed Server.




Fusion Middleware Configuration Wizard
Creating Domain
ORACLE
Progress:
85%
Preparing...
Extracting Domain Contents...
Creating Domain Security Information...
Saving the Domain Information...
Storing Domain Information...
String Substituting Domain Files...
Start Admin Server
Exit
Help
Previous
Done


Fusion Middleware Configuration Wizard
Creating Domain
ORACLE
Progress:
100%
Preparing...
Extracting Domain Contents...
Creating Domain Security Information...
Saving the Domain Information...
Storing Domain Information...
String Substituting Domain Files...
Performing OS Specific Tasks...
Performing Post Domain Creation Tasks...
Domain Created Successfully!
Domain Location: C:\Oracle\Middleware\user_projects\domains\domain1
Admin Server URL: http://DDHP0468:7003
Start Admin Server
ORACLE
Exit
Help
Previous
Done

6. Oracle HTTP server Installation and 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 .

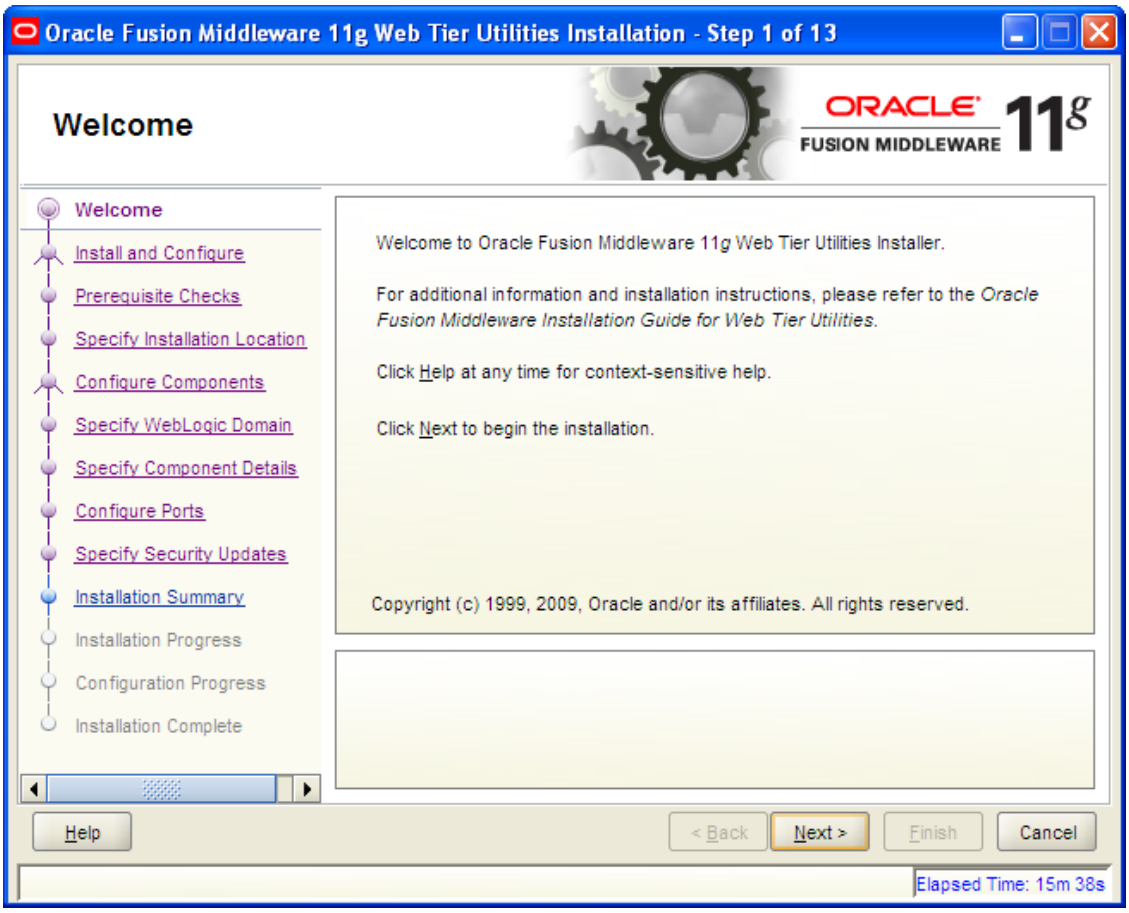
Download URL – Please check for appropriate version , The version depicted here is 11.1.1.7

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

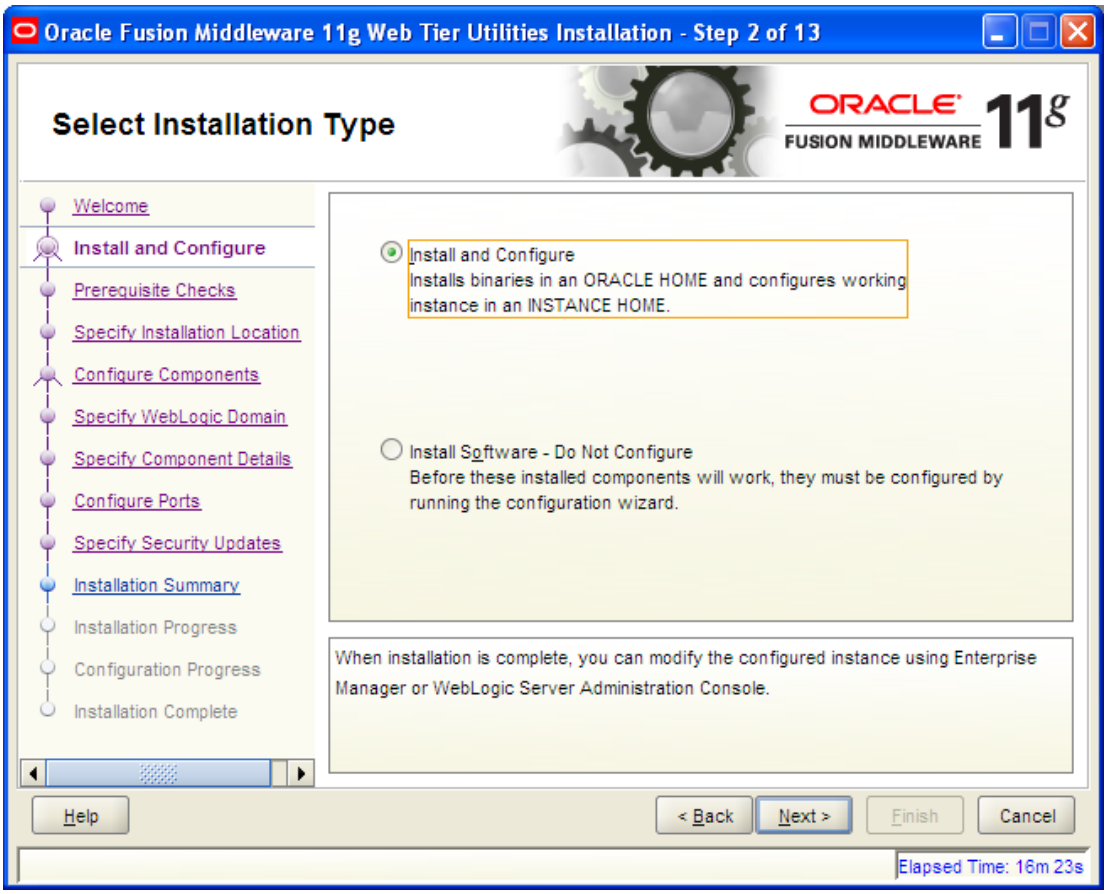
6.2 Installation & Configuration

1. Run setup.exe

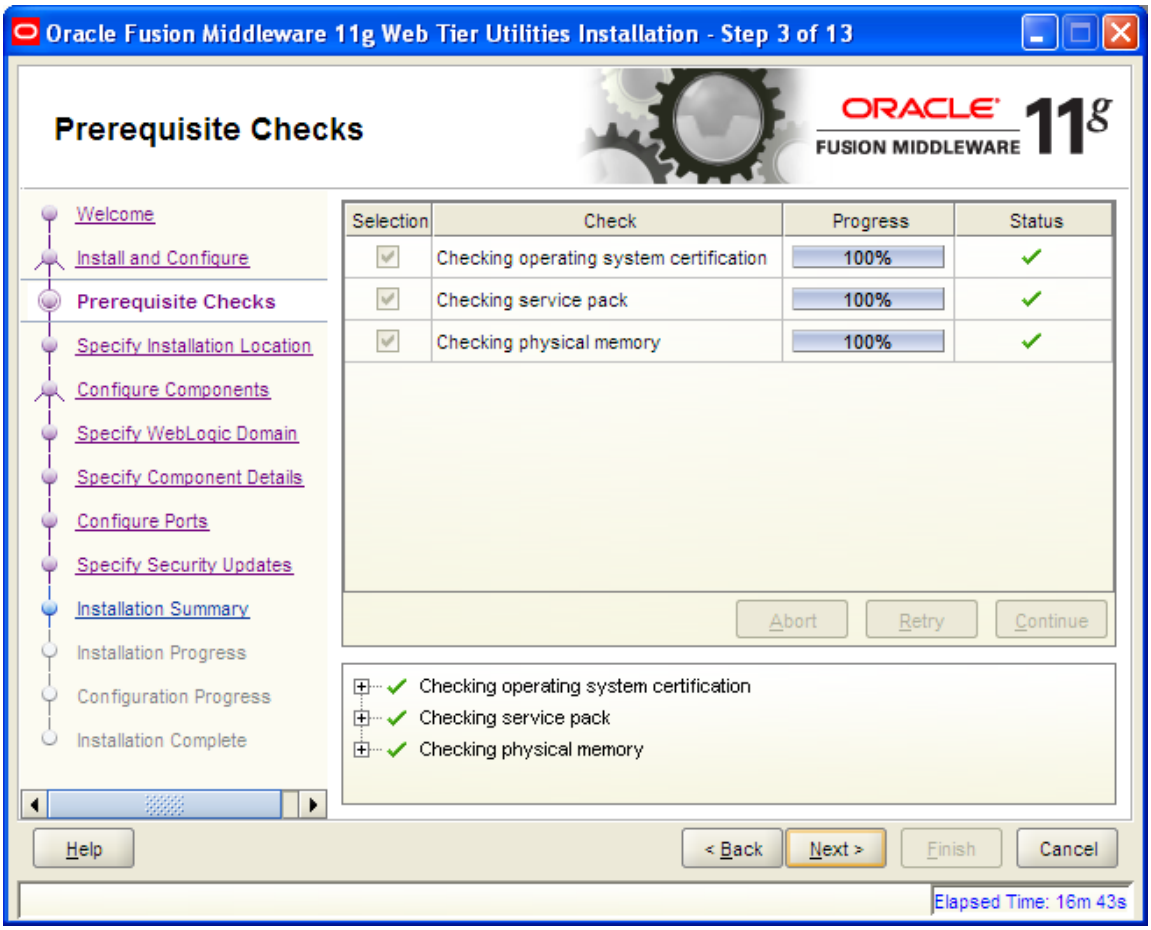
ORACLE



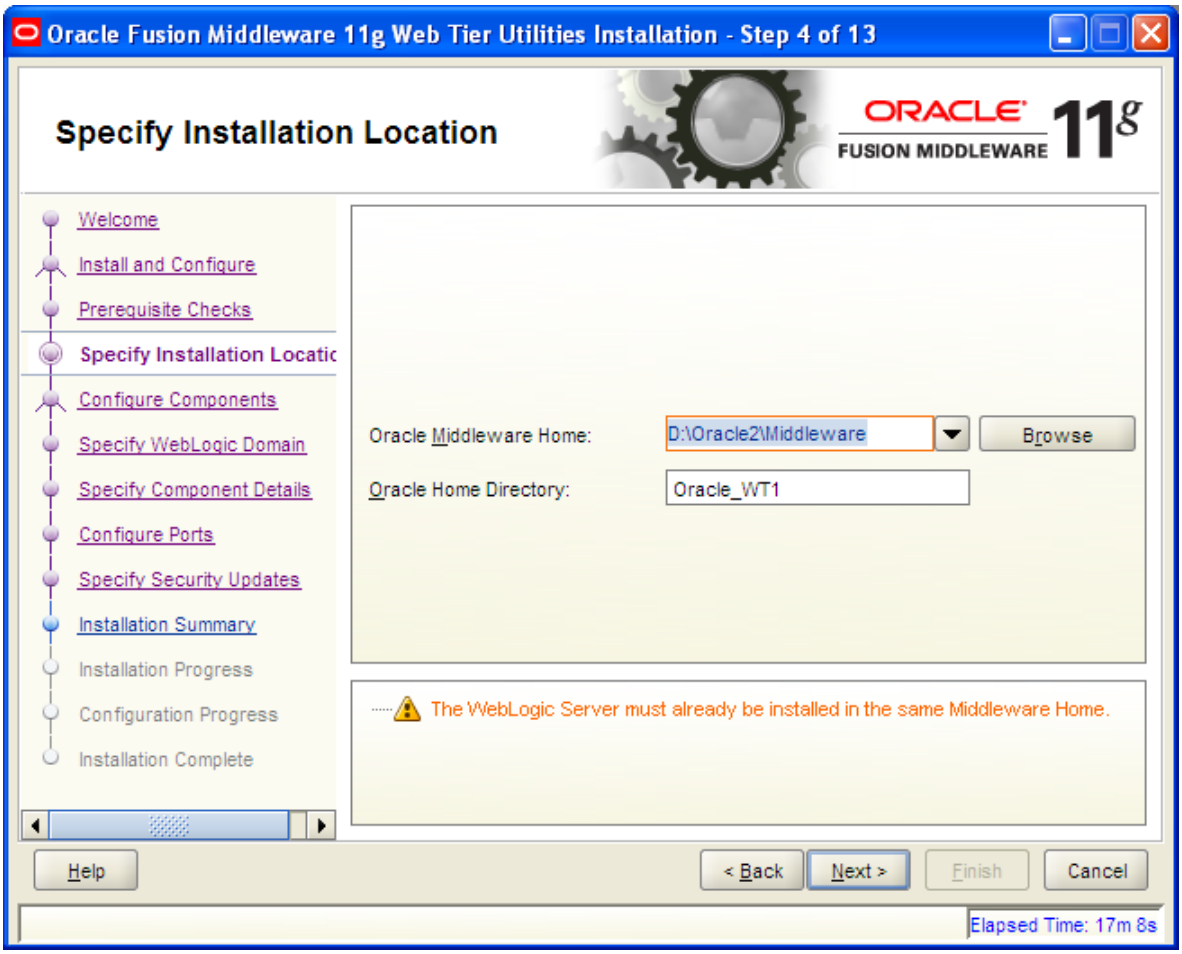
2. Select Install & Configure



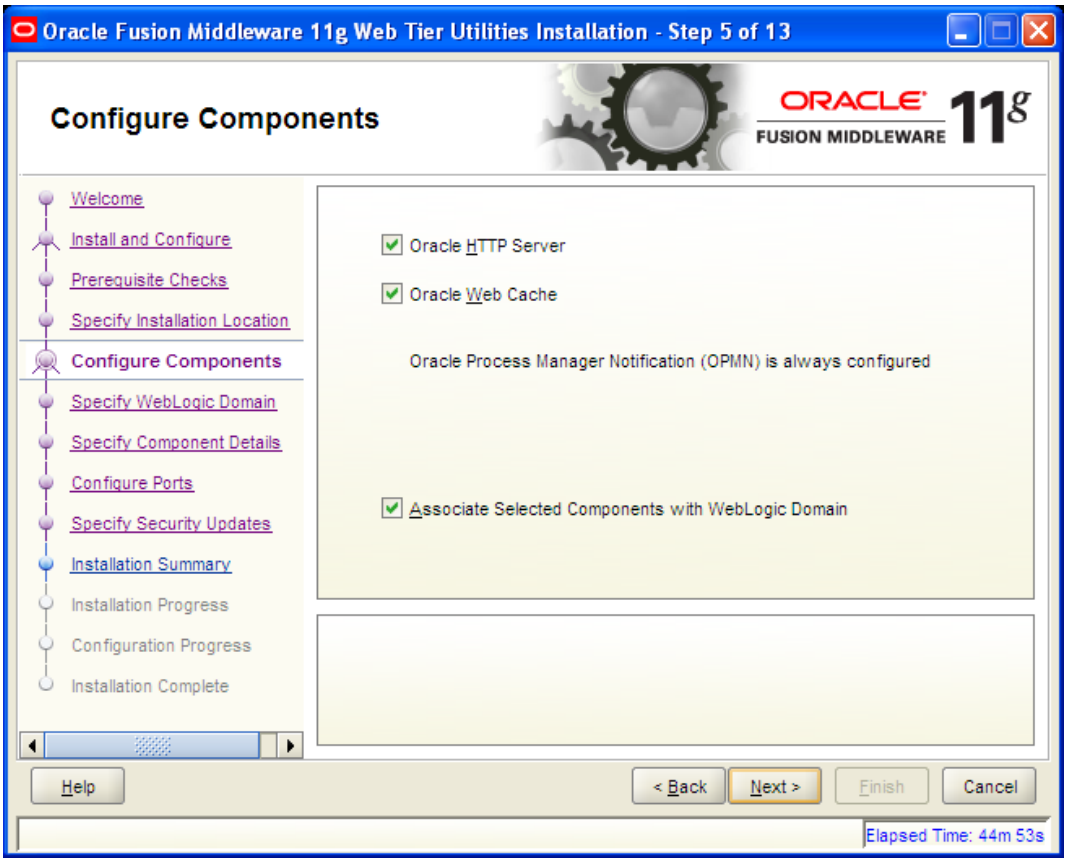
3. Check if prerequisite checks are passed.



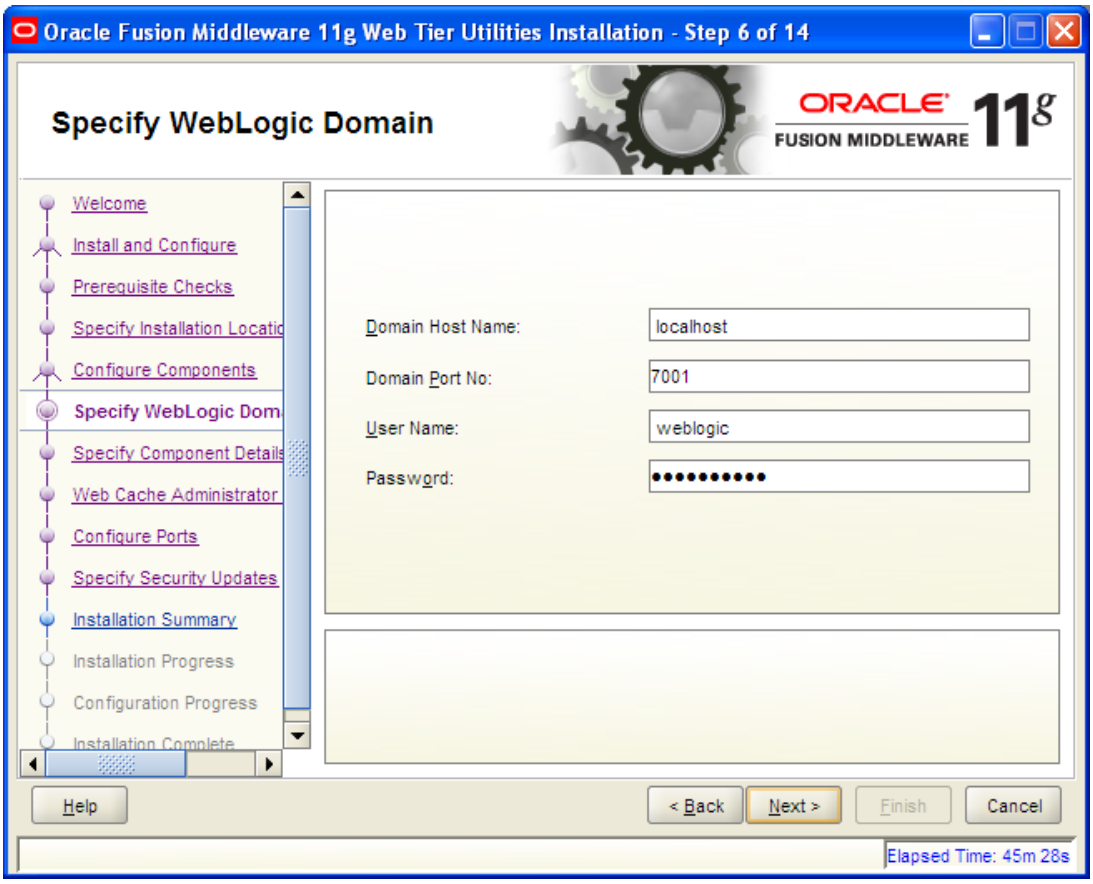
4. Select the middleware home where weblogic server is already installed.



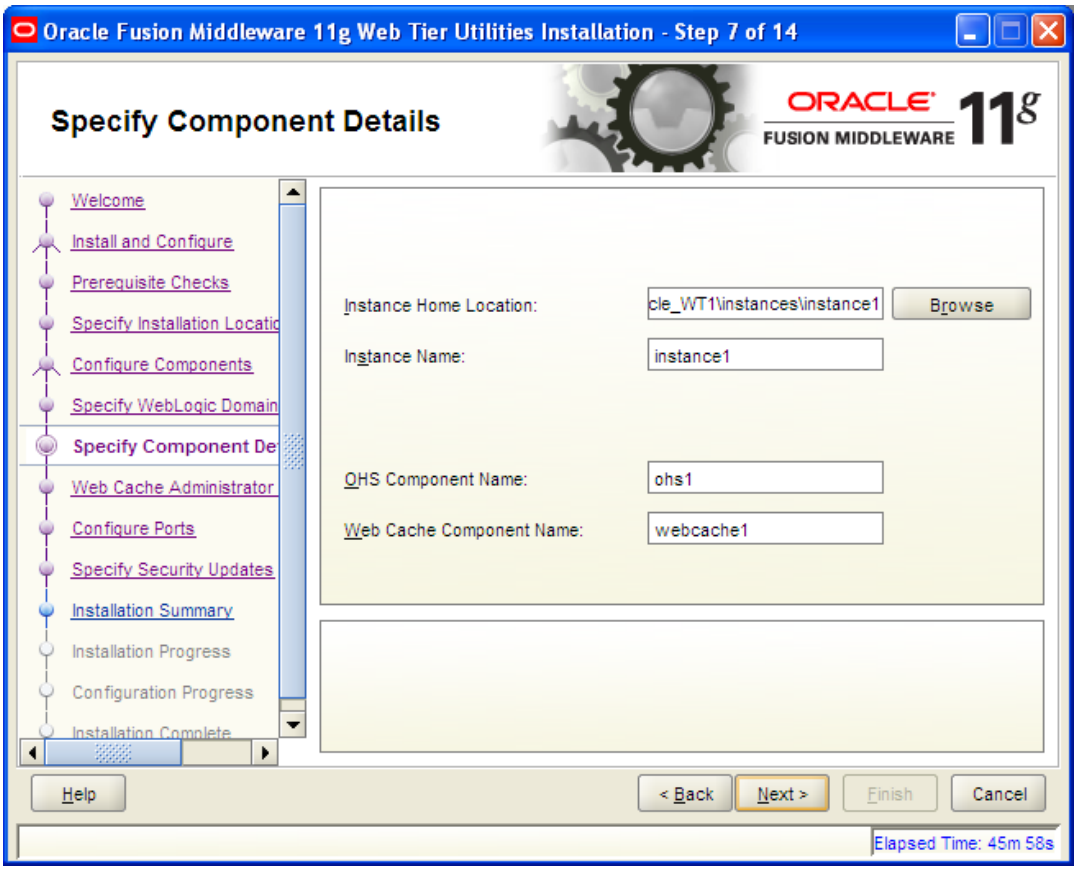
5. Choose components Oracle HTTP Server / Oracle Webcache.



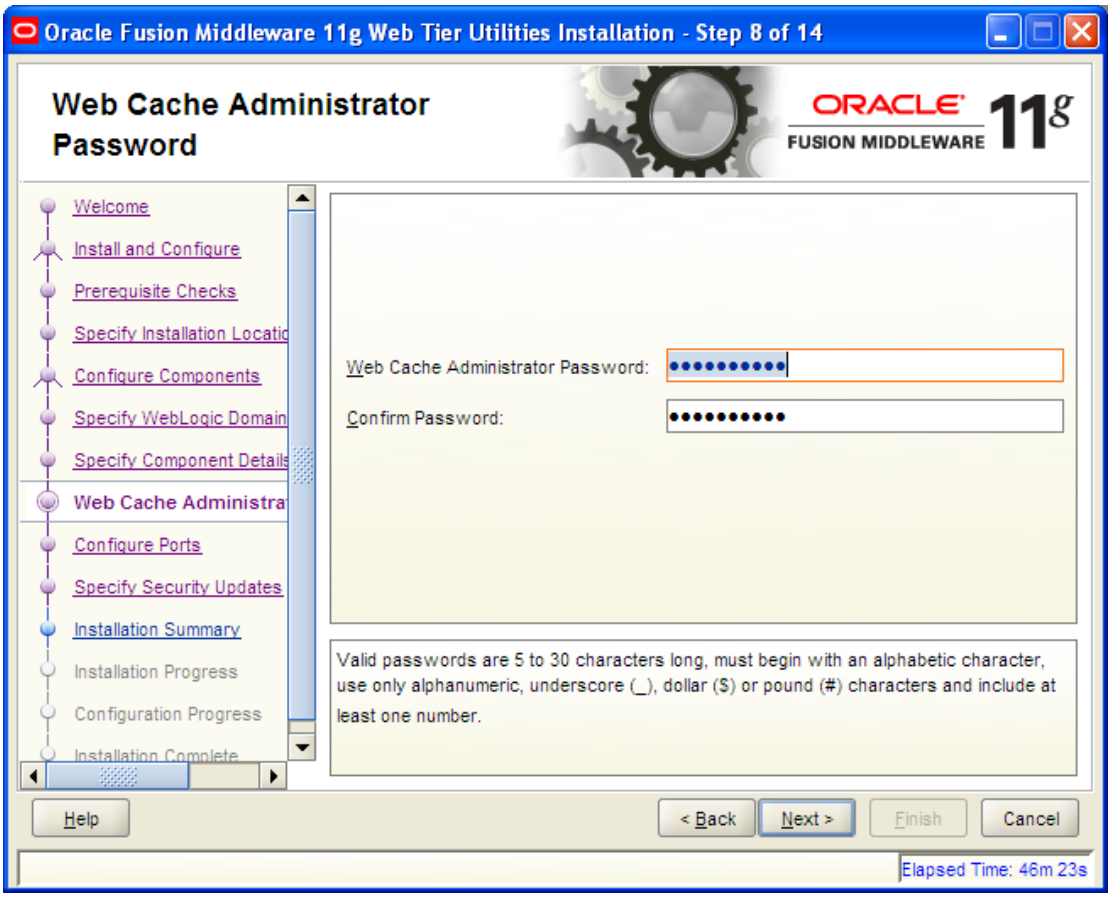
6. Specify weblogic domain details.



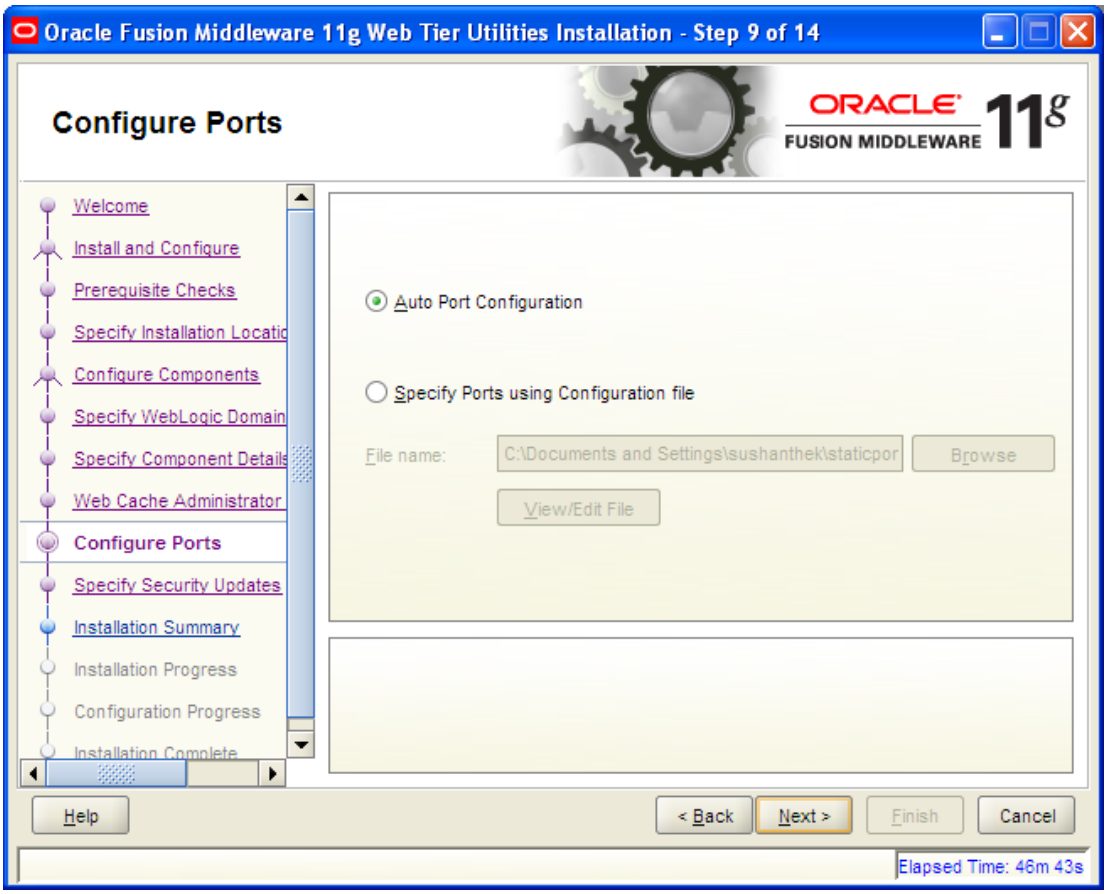
7. Location where components to be installed.



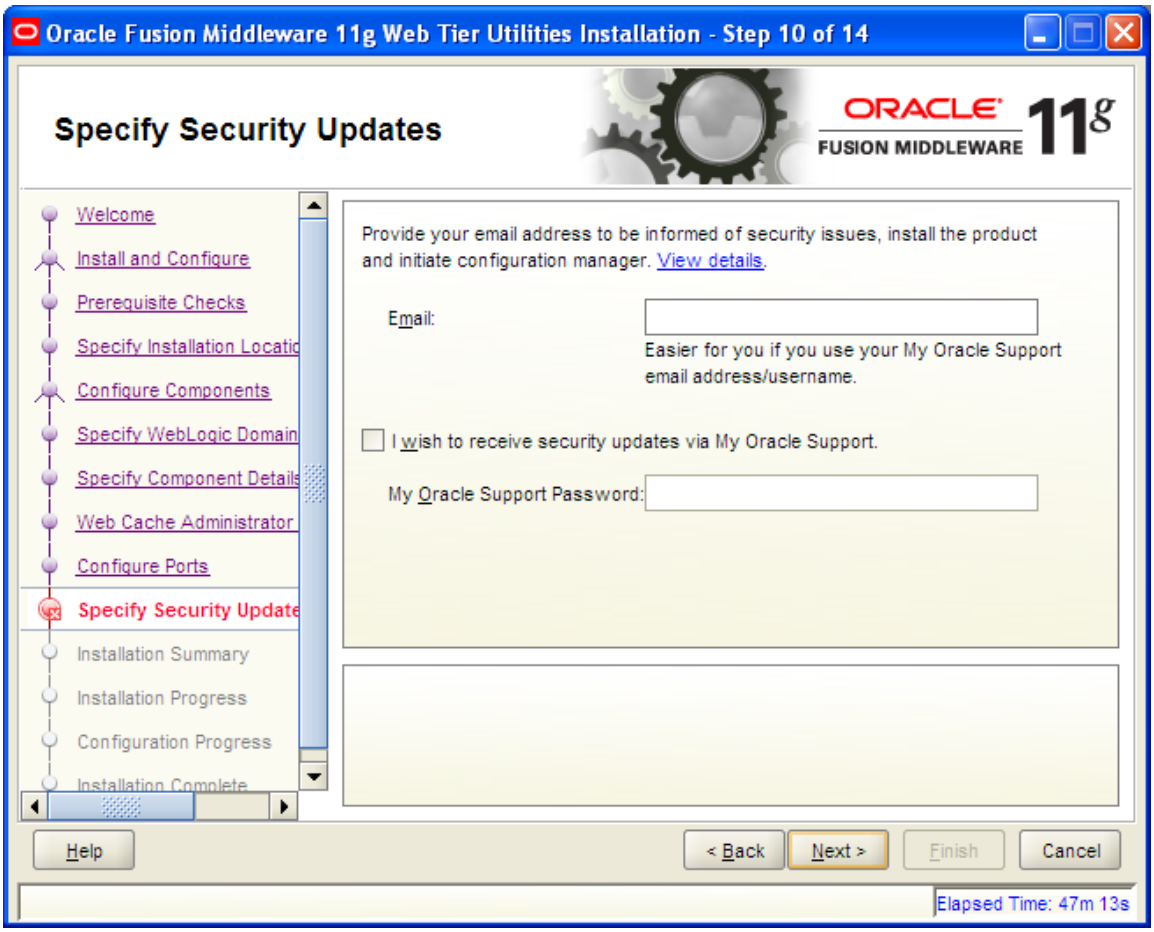
8. Credentials for web cache administrator.



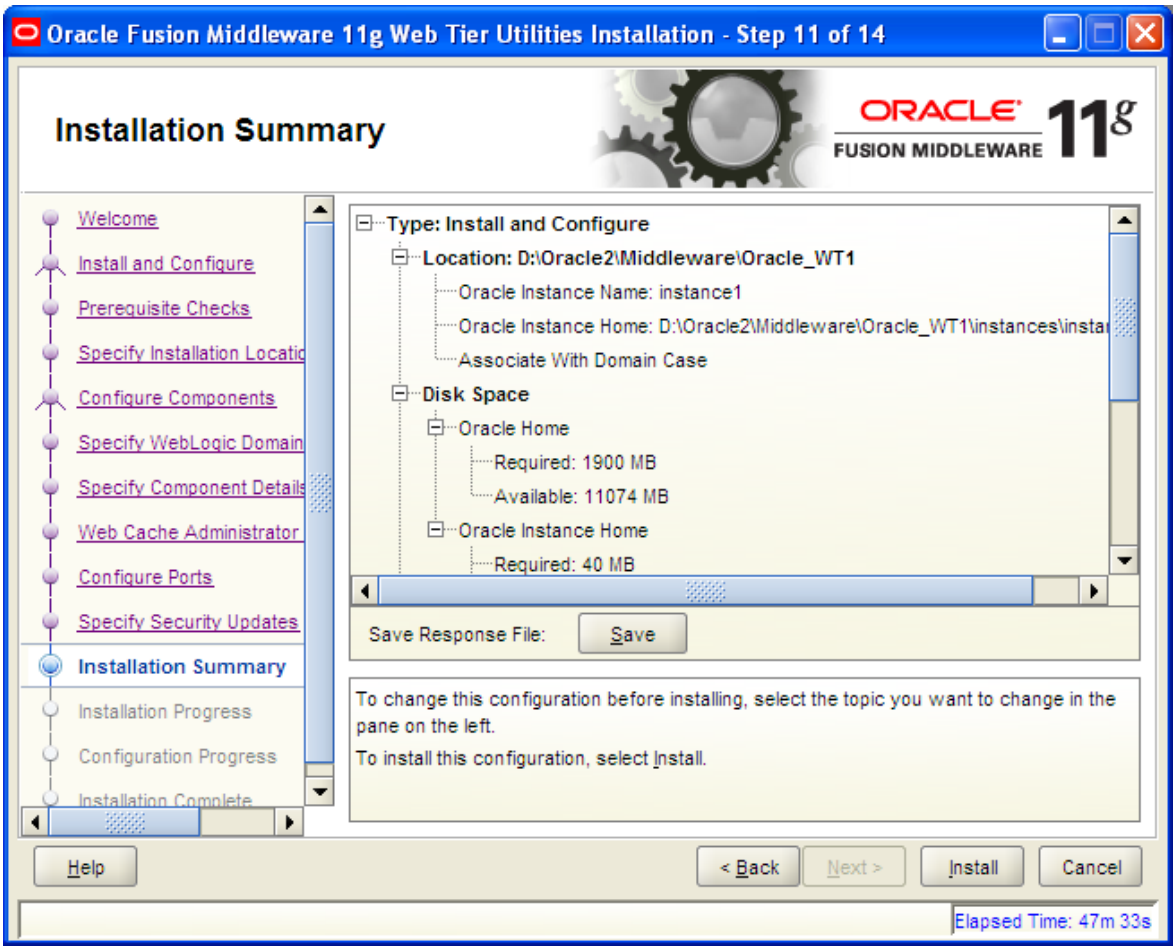
9. Port configuration – Use specify port if custom ports are to be configured for various services.



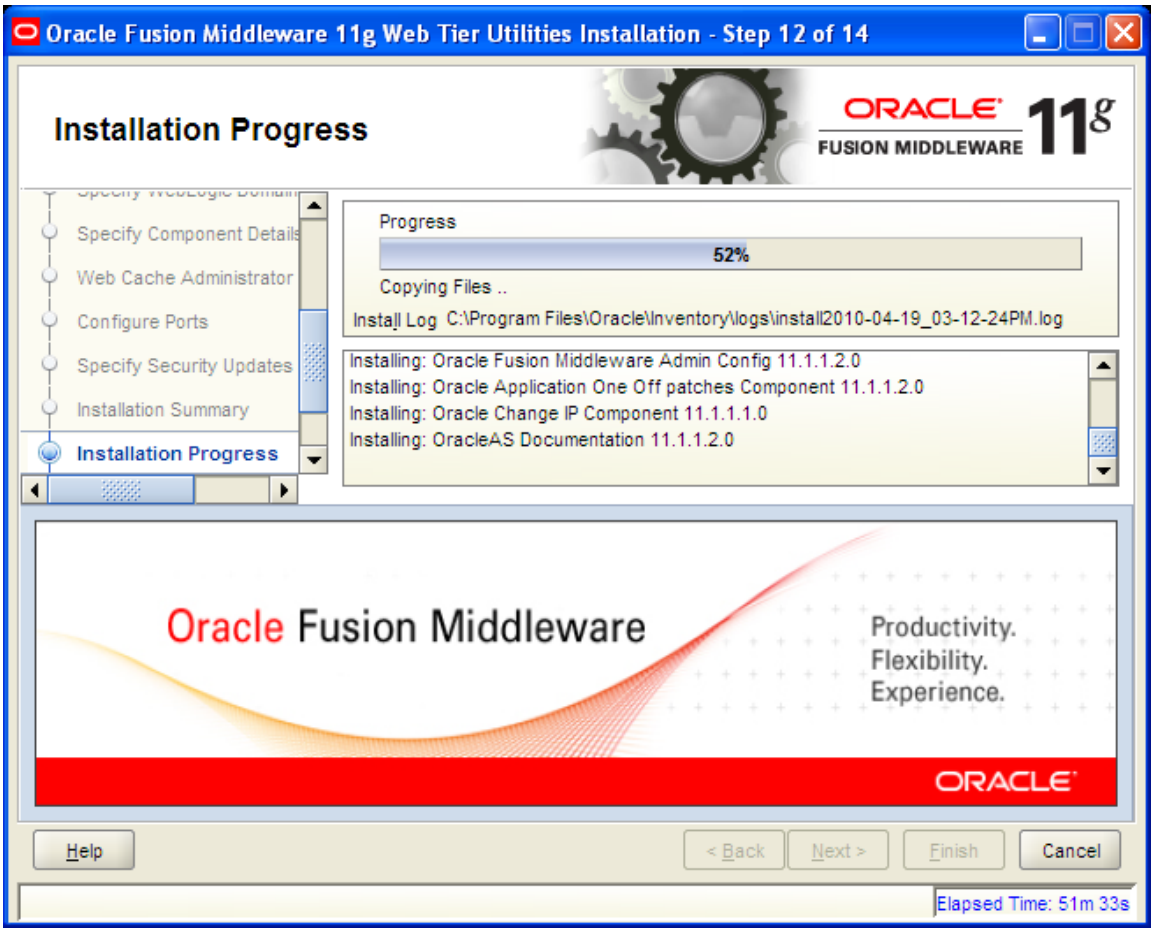
10. If you are an administrator and require security updates from oracle , provide details and subscribe.



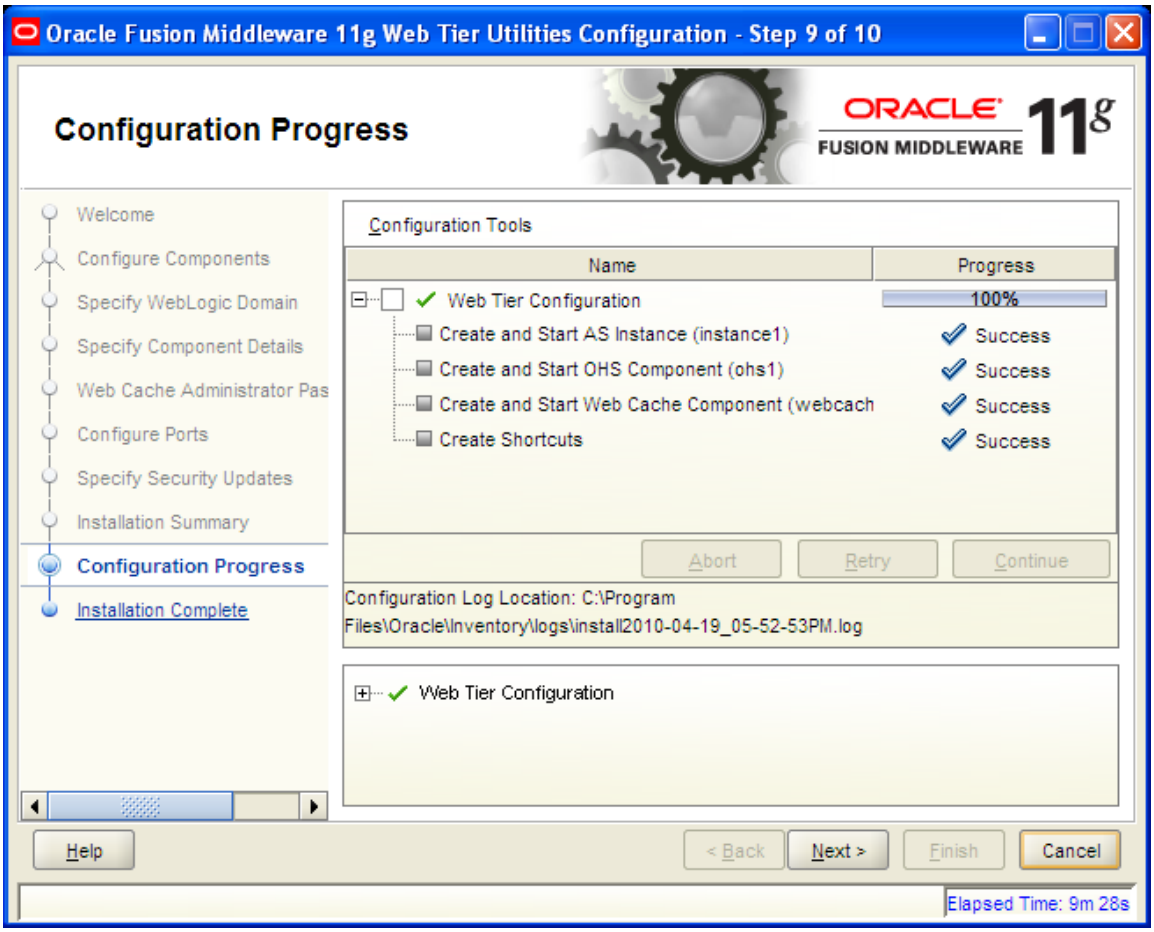
11. Review installation summary.



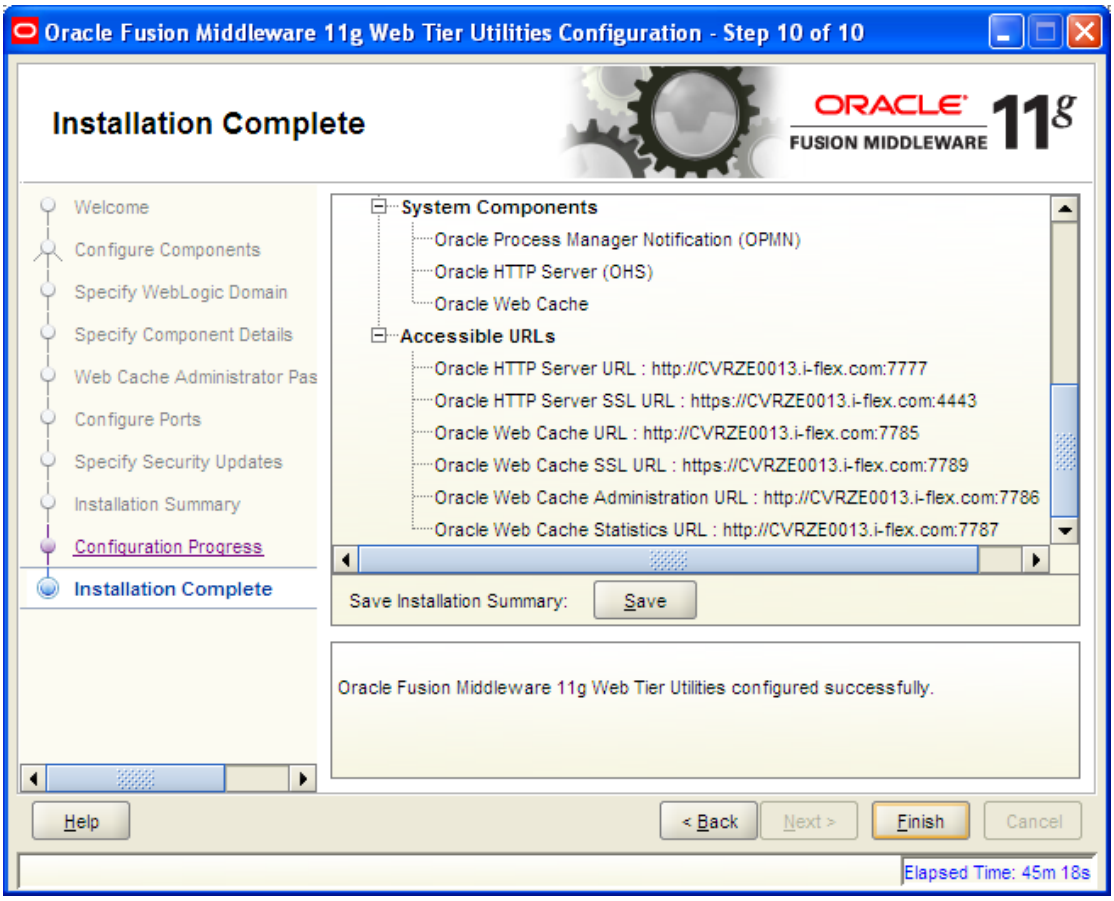
12. Review installation progress.



13. Review configuration progress.



14. Installation complete.


Oracle Fusion Middleware 11g Web Tier Utilities Configuration - Step 10 of 10
Installation Complete
ORACLE
FUSION MIDDLEWARE
11g
Welcome
Configure Components
Specify WebLogic Domain
Specify Component Details
Web Cache Administrator Pas
Configure Ports
Specify Security Updates
Installation Summary
Configuration Progress
Installation Complete
System Components
Oracle Process Manager Notification (OPMN)
Oracle HTTP Server (OHS)
Oracle Web Cache
Accessible URLs
Oracle HTTP Server URL : http://CVRZE0013.i-flex.com:7777
Oracle HTTP Server SSL URL : https://CVRZE0013.i-flex.com:4443
Oracle Web Cache URL : http://CVRZE0013.i-flex.com:7785
Oracle Web Cache SSL URL : https://CVRZE0013.i-flex.com:7789
Oracle Web Cache Administration URL : http://CVRZE0013.i-flex.com:7786
Oracle Web Cache Statistics URL : http://CVRZE0013.i-flex.com:7787
Save Installation Summary:
Save
Oracle Fusion Middleware 11g Web Tier Utilities configured successfully.
Help
< Back
Next >
Finish
Cancel
Elapsed Time: 45m 18s

7. Generating Self Signed Certificate and 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 and Self Signed Certificate

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

1. Orapki Utility

With

- Oracle Client < bin>
- WLS <<middleware>/oracle_common/bin

2. Wallet creation

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

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

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>

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.coonf

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

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.

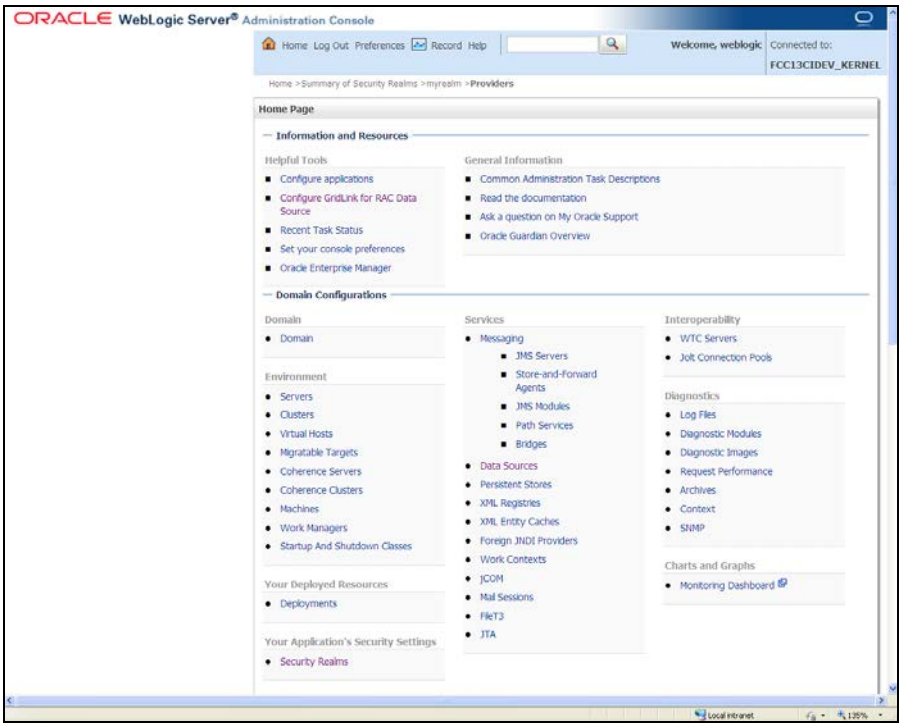
8.1 FCIS and BPEL Integration

If the EAR has been created with BPEL as a PlugIn then along with FCIS EAR file, Installer creates two JAR files named as FCBPELCIS.jar and FCUBSAuthenticationProvider.jar. Before deploying FCIS EAR file following tasks should be completed.

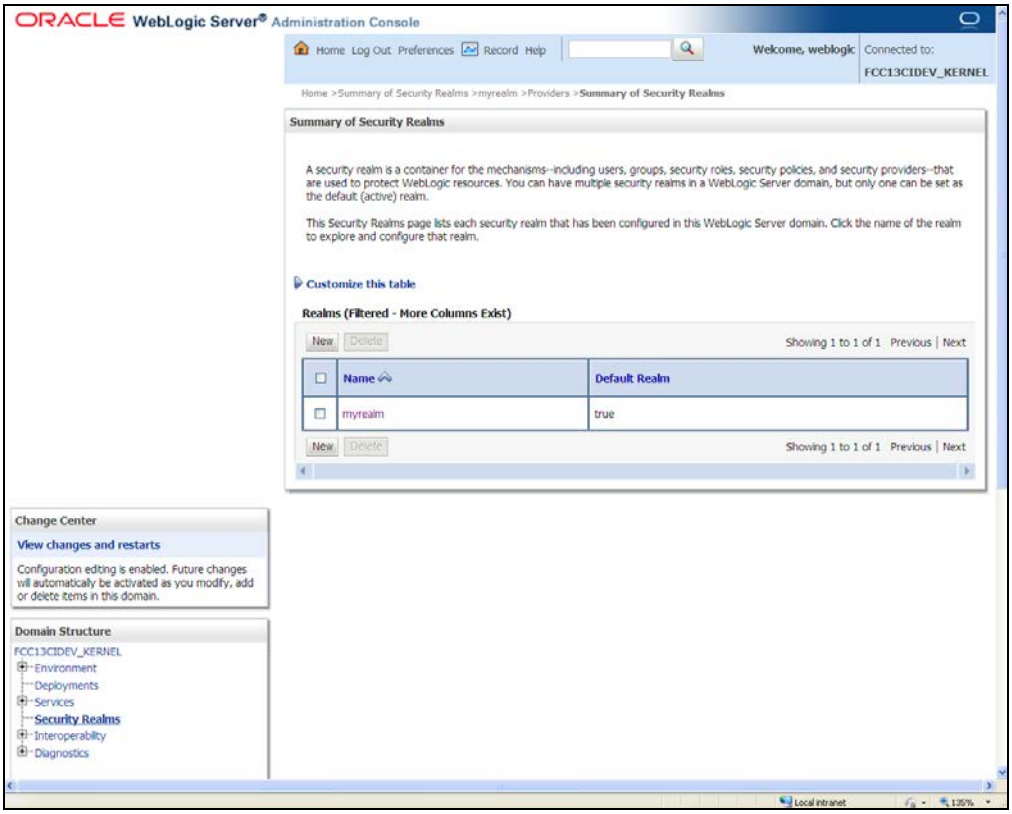
8.1.1 Custom Provider Configuration

Custom Provider configuration has to be done from the weblogic console of SOA or manually update the config.xml of the soa domain.

1. Along with FCIS Ear file, Installer creates FCUBSAuthenticationProvider.jar file. Copy this files to <MIDDLEWARE_HOME>\ wlserver_10.3\server\lib\mbeantypes
2. Restart the Admin Server
3. Login to the Console
4. Click on Security Realms.

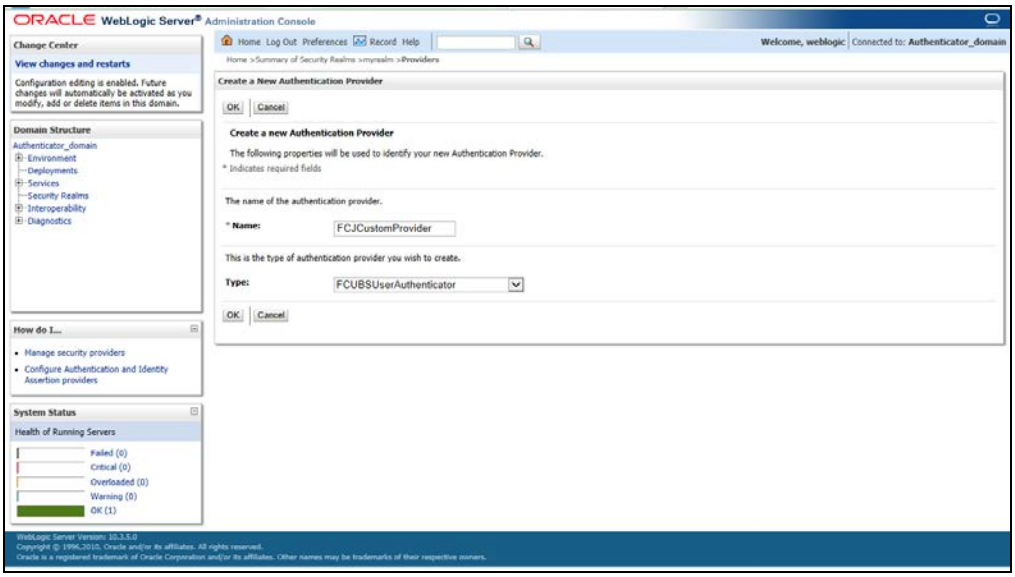


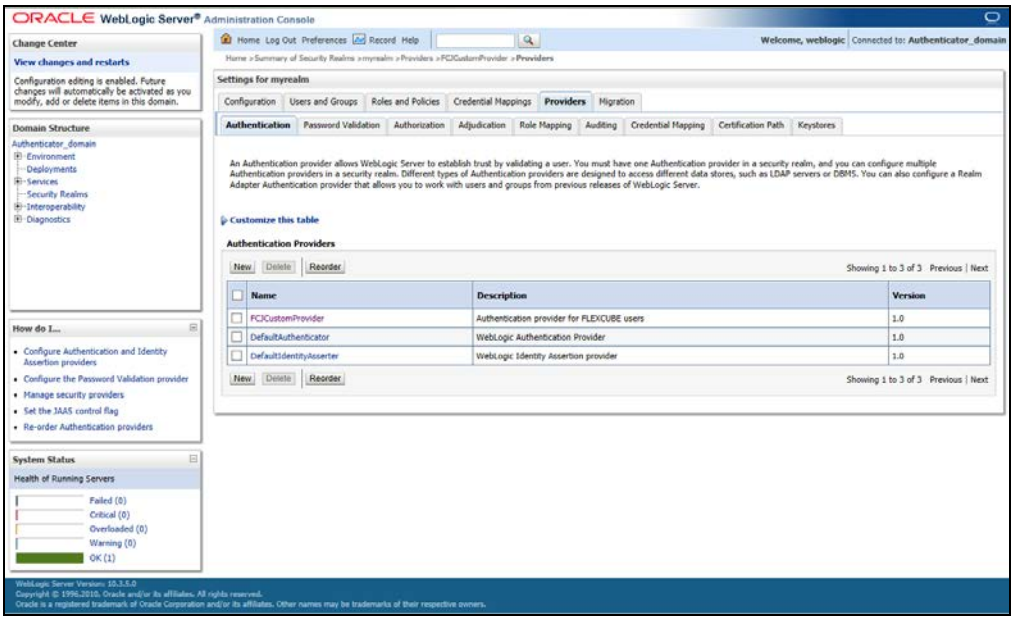
5. Click on myrealm.



6. Click on Providers tab and click on new button to create new authentication provider.

7. Give Provider name as FCJCustomProvider and type as FCUBSUserAuthenticator.

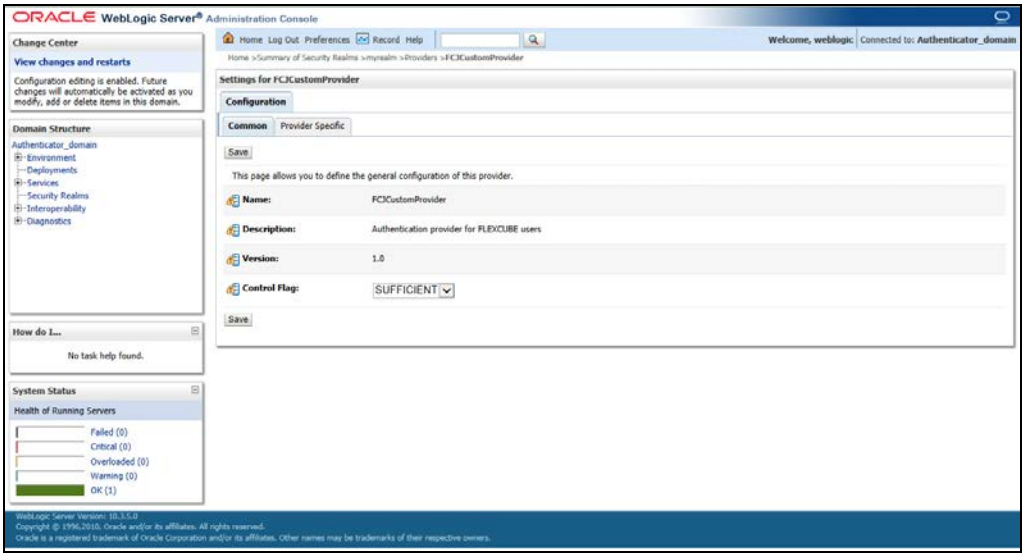




(Click Reorder to bring provider to first of all providers)

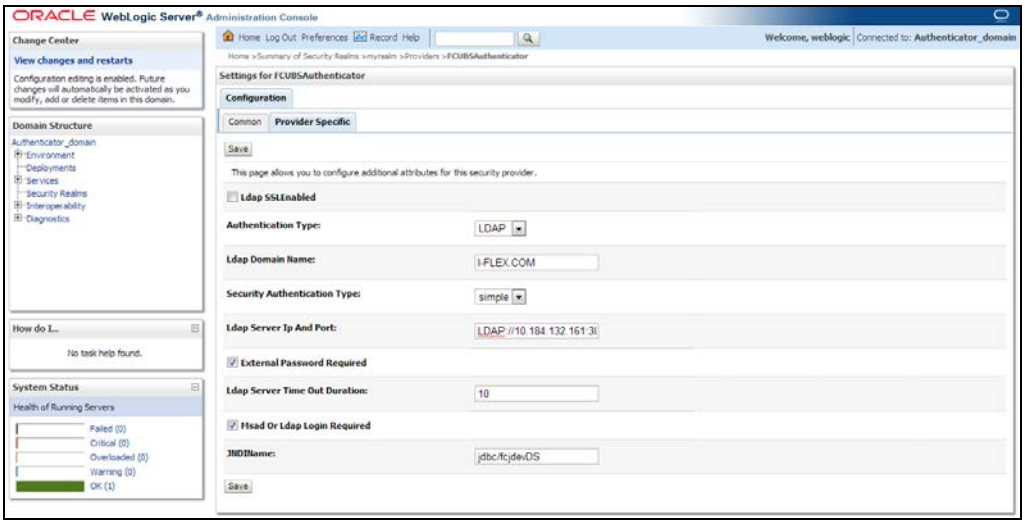
8. Click on FCJCustomProvider.

9. In Common tab change the control flag to “SUFFICIENT”



10. In Provider Specific tab

- Set JNDIName as Flexcube JNDI Name.
- If external authentications used in FCIS then Fill the Ldap/MSAD related fields.



11. For manually editing the config.xml go to <ORACLE_HOME>\Middleware\user_projects\domains\base_domain\config\ path. Open config.xml file. The following codes need to be added at proper locations in the config.xml.

- search for < realm> tag and add the following code between <realm> and </ realm> tags.This should be the first child of the realm Node.

<sec:authentication-provider xmlns:n1="http://fcubs.ofss.com/security" xsi:type="n1:fcubs-user-authenticatorType">

<sec:name>FCJCustomProvider</sec:name>

<sec:control-flag>SUFFICIENT</sec:control-flag>

<n1:msad-or-ldap-login-required>true</n1:msad-or-ldap-login-required>

<n1:external-password-required>true</n1:external-password-required>

<n1:authentication-type>MSAD</n1:authentication-type>

<n1:ldap-server-ip-and-port>LDAP://localhost:389</n1:ldap-server-ip-and-port>

<n1:ldap-ssl-enabled>true</n1:ldap-ssl-enabled>

<n1:security-authentication-type>simple</n1:security-authentication-type>

<n1:ldap-domain-name>I-FLEX.COM</n1:ldap-domain-name>

<n1:ldap-server-time-out-duration>0</n1:ldap-server-time-out-duration>

</sec:authentication-provider>

- Make sure tag values matches the value given during Property file creation.

8.1.2 JPS Configuration

Go to <ORACLE_HOME>\Middleware\user_projects\domains\base_domain\config\fmwconfig path. Open jps-config.xml file. The following codes need to be added at proper locations in the jps-config.xml.

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

```
<serviceProvider type="IDENTITY_STORE" name="custom.provider"
class="oracle.security.jps.internal.idstore.generic.GenericIdentityStoreProvide
r">

<description>DB IdentityStore Provider</description>

</serviceProvider>
```

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/fcjdevDS"/>

</serviceInstance>
```

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

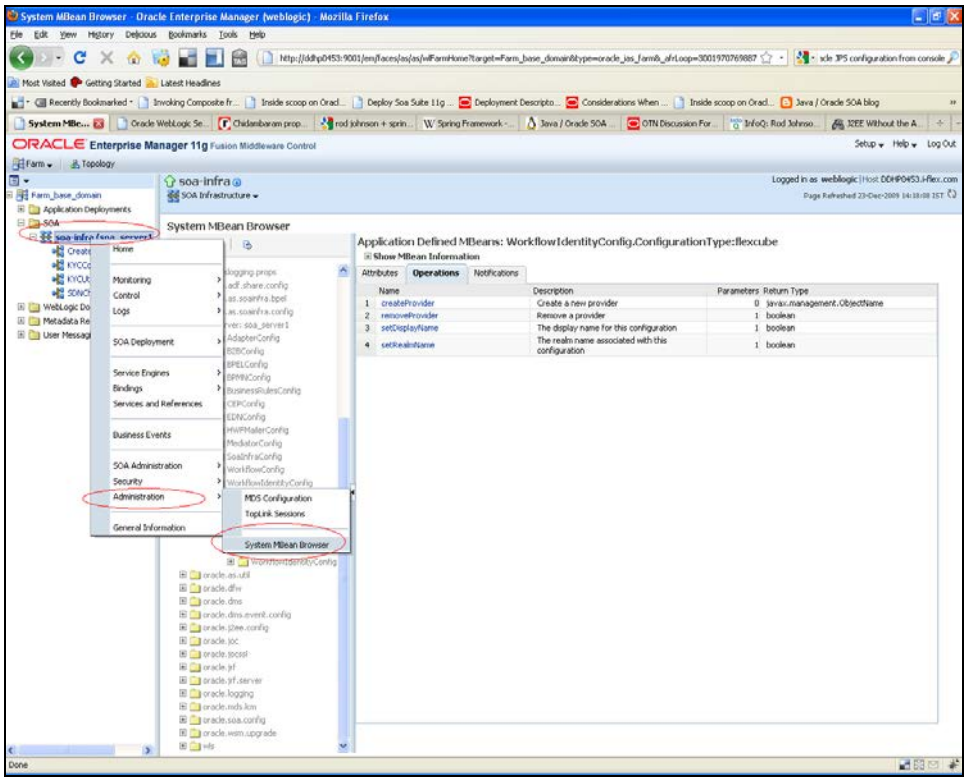
Search for `<jpsContexts default="default">` tag and make the following changes in the code between `<jpsContexts default="default">` and `</jpsContexts>` as highlighted below.

```
<jpsContext name="flex">

<serviceInstanceRef ref="credstore"/>

<serviceInstanceRef ref="keystore"/>

<serviceInstanceRef ref="policystore.xml"/>

<serviceInstanceRef ref="audit"/>

<serviceInstanceRef ref="idstore.custom"/>

</jpsContext>
```

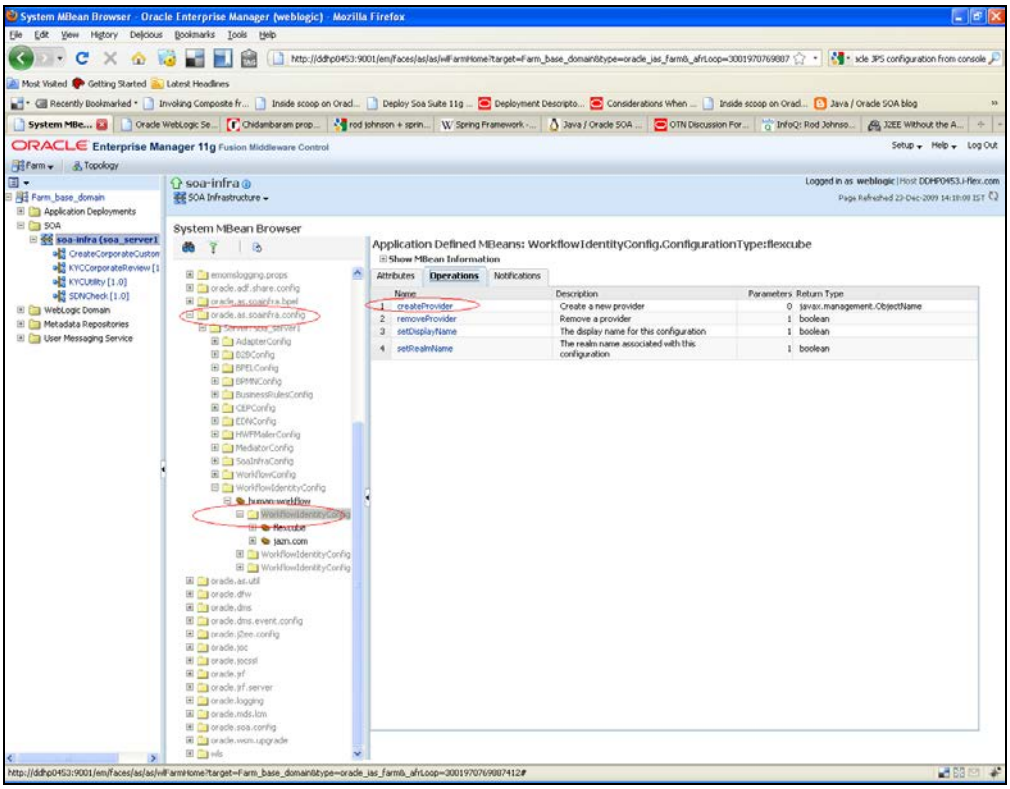
8.1.3 WorkFlow Identity Configuration

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

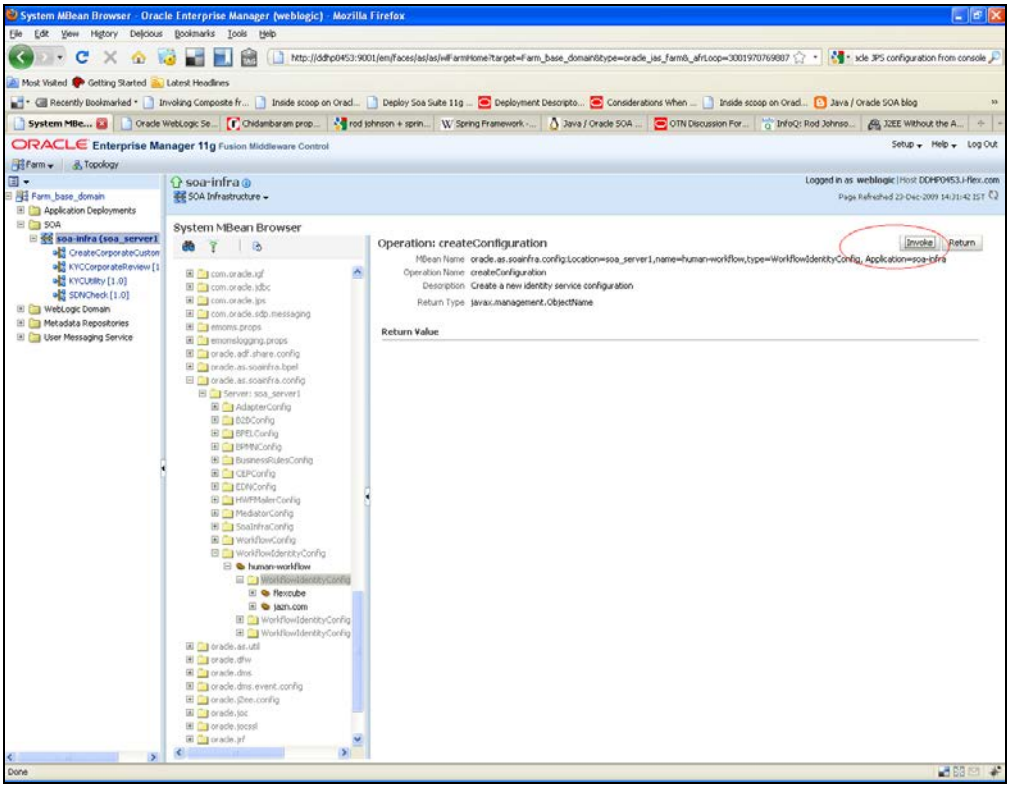
1. Login to EM Console
2. Expand SOA and right click on soa-infra(soa-server1). Go to Adminsitration and click on System MBean Browser.



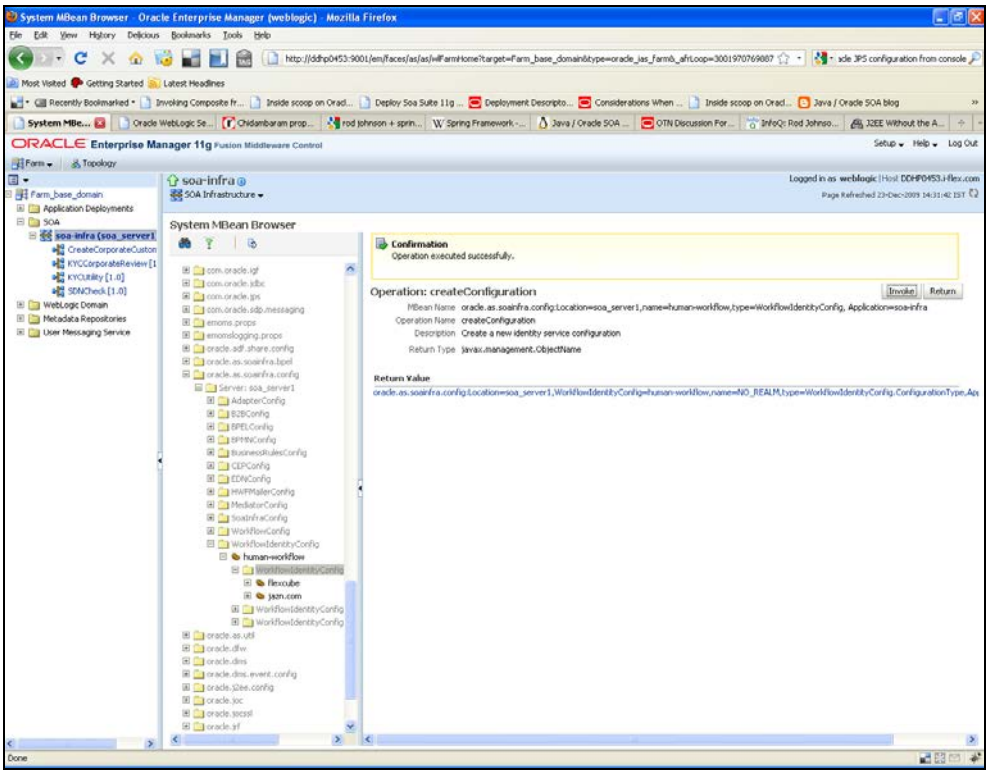
3. Expand oracle.as.soainfra.config > Server : soa_server1(Managed Server Name) > WorkflowIdentityConfig. And Click on **human-workflow** and select **Operation** tab from right side and select **createConfiguration** option.



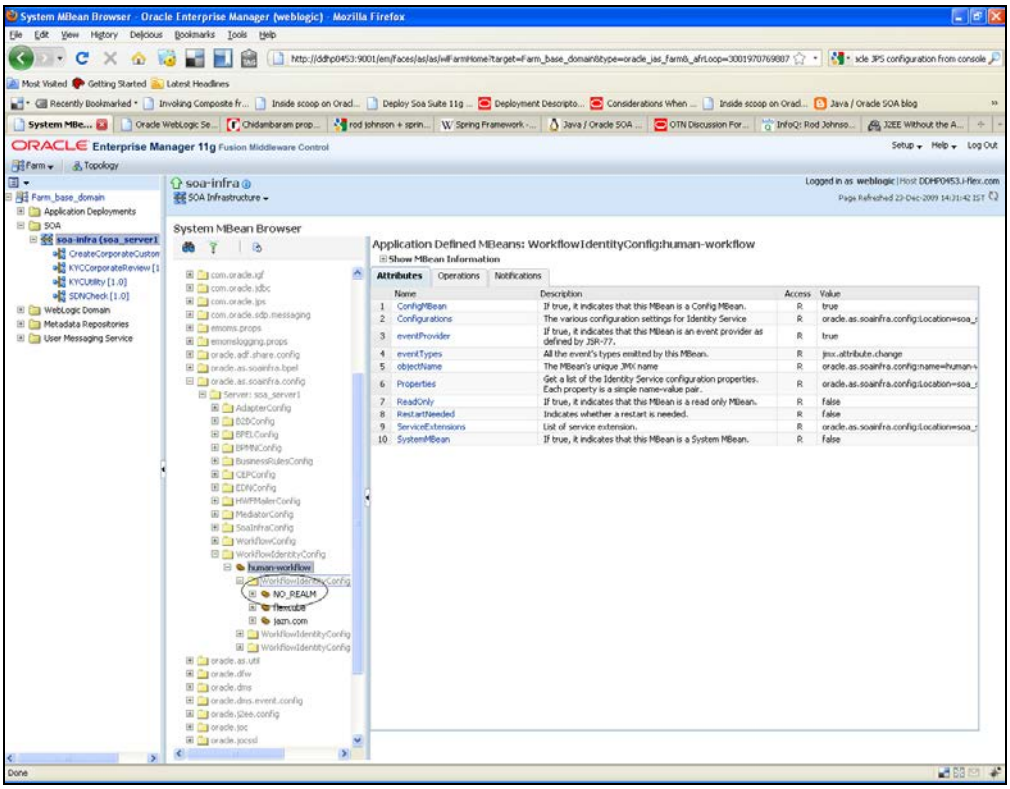
4. Click on **Invoke** option.



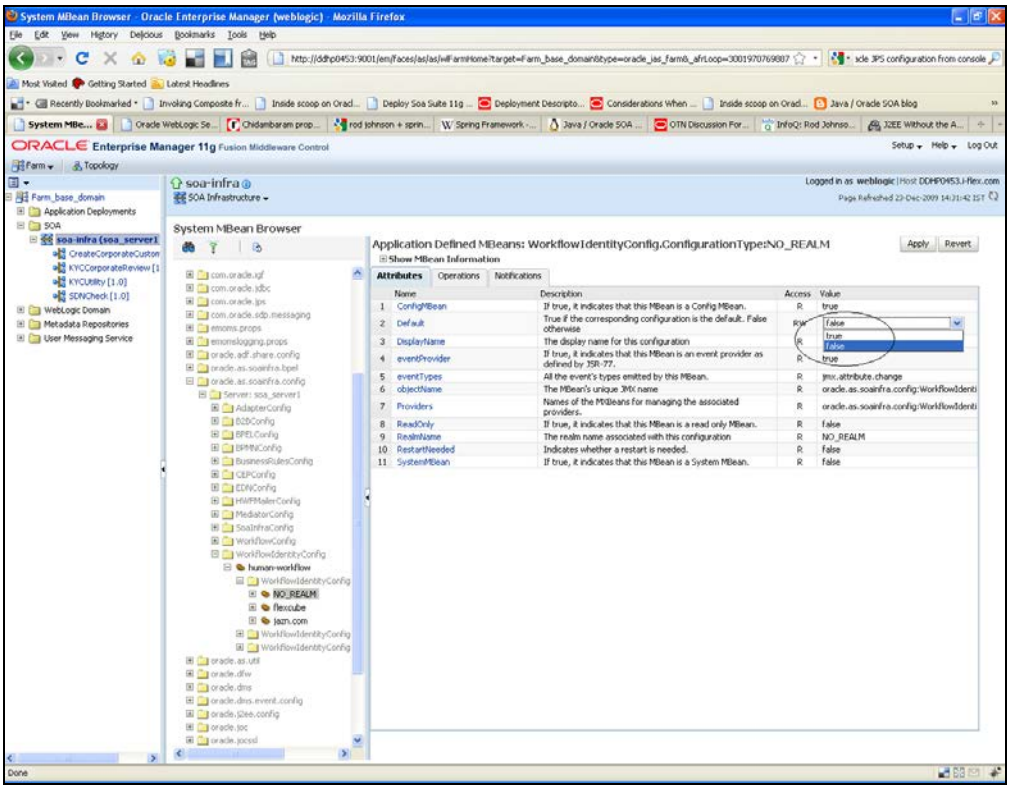
5. The following Confirm message will be displayed.



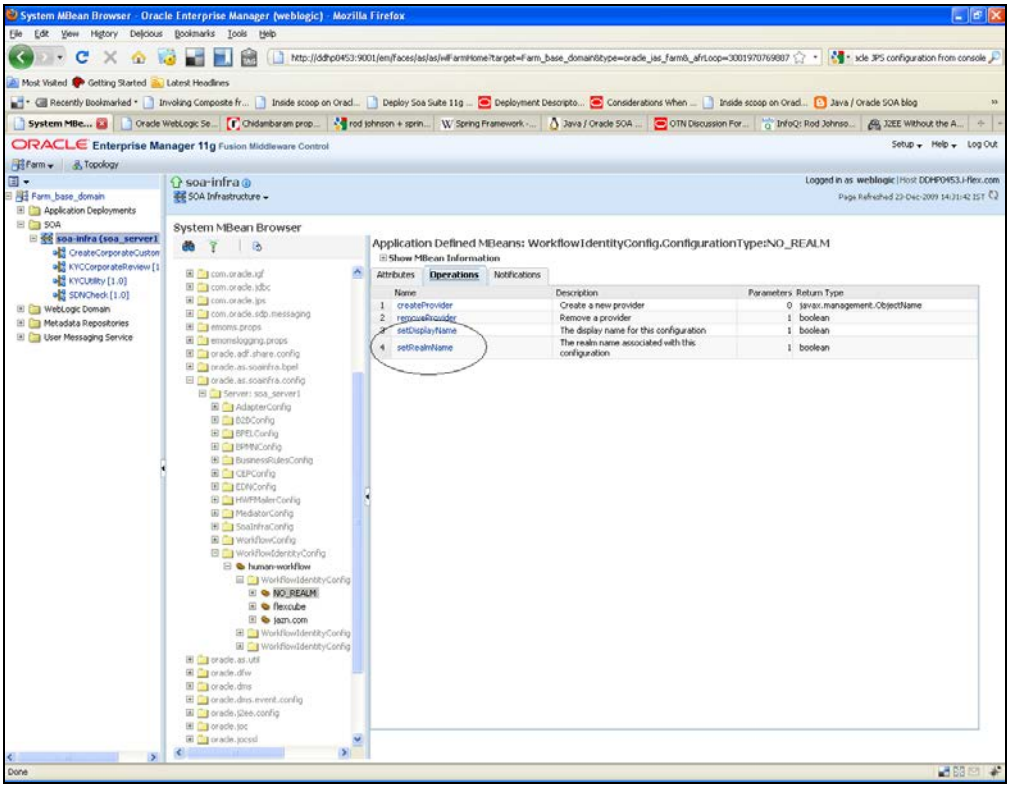
6. Refresh the MBean Browser and expand **WorkflowIdentityConfig.ConfigurationType**. New Configuration will be available with name **NO_REALM**.



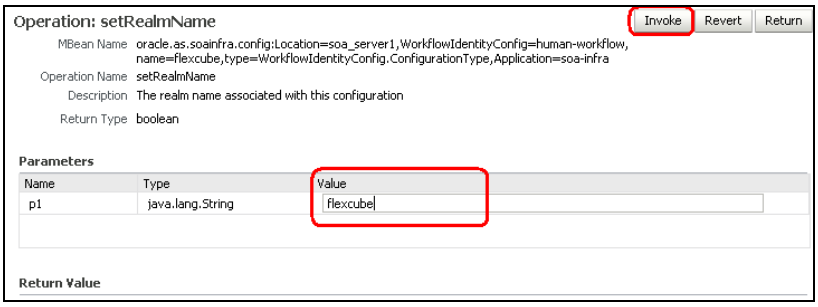
7. Click **on NO_REALM**. And Click on **Attributes** tab. Change default attribute of NO_REALM to true from false.



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

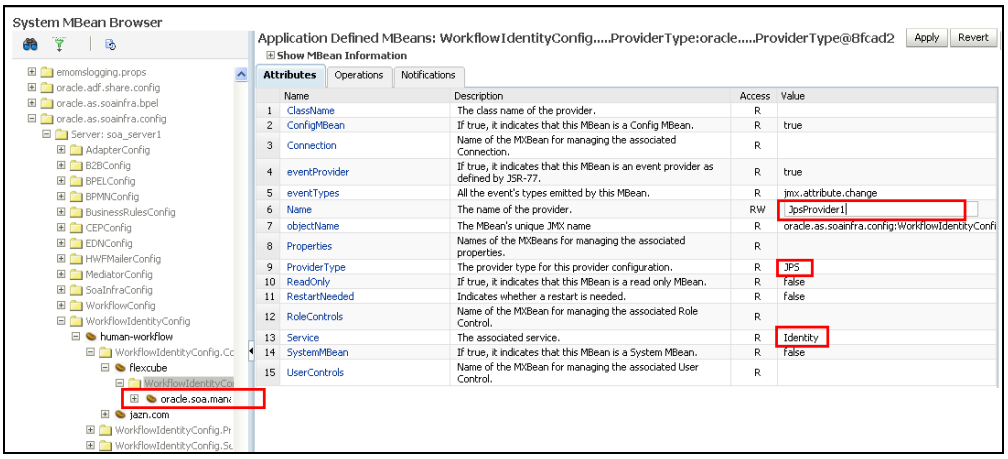


9. Enter the value as ‘flexcube’ or ‘flexcube1’. and Click on **invoke**.

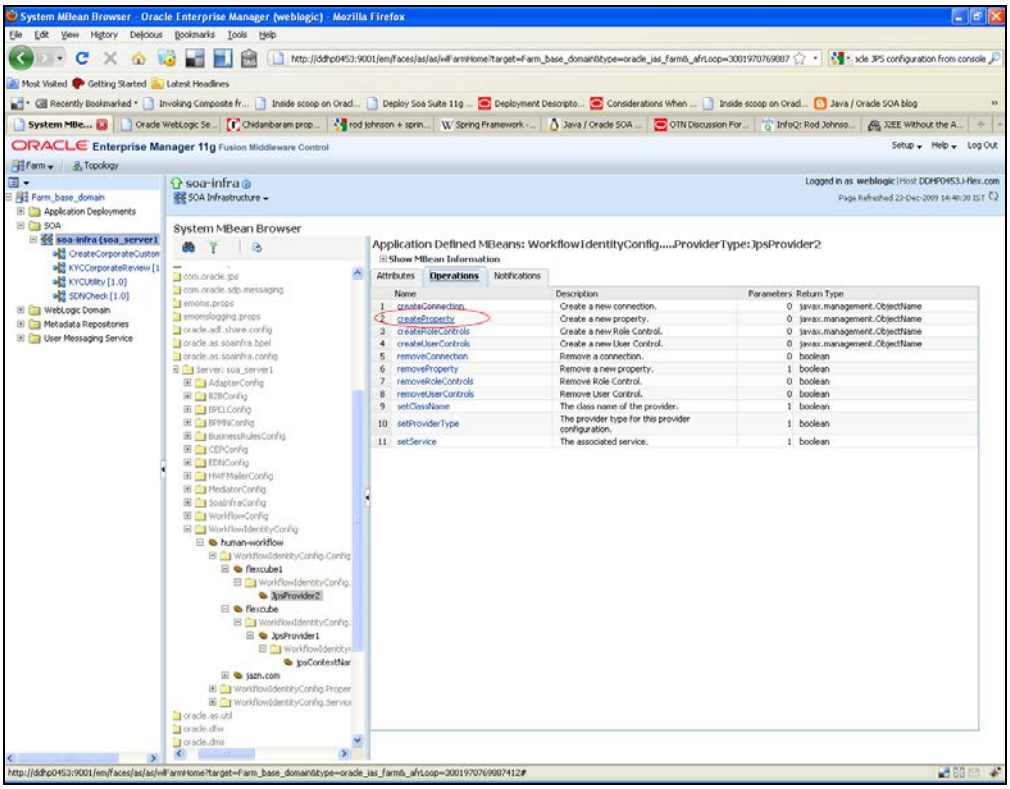


10. Refresh the MBean Browser. Expand **flexcube** ☐ **WorkflowIdentityConfig.ConfigurationType.ProviderType** and Click on **oracle.soa.management.config.identity.ProviderType@....** Click on **Attributes** tab. And provide the following values.

    - Change Name to JspProvider1 or JspProvider2.
    - Verify value of PropertyType and Service. PropertyType should be **JPS** and Service should be **Identity**.

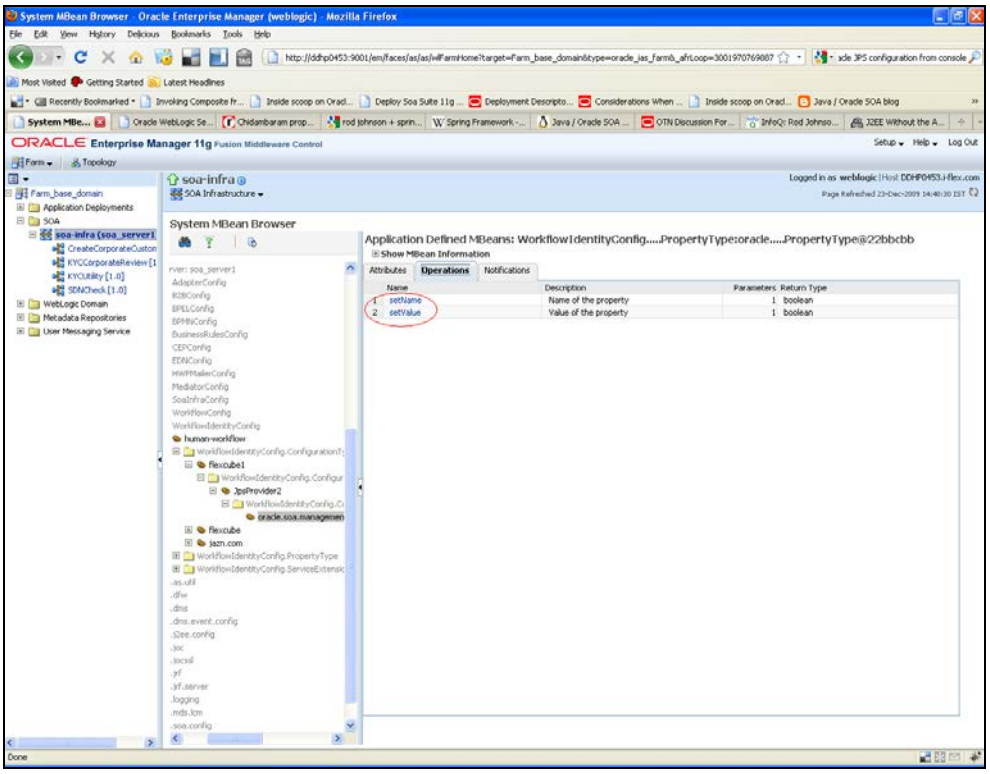


11. Select createProperty option from **Operations** tab and click on **Invoke**. It will create new Property under JspProvider1

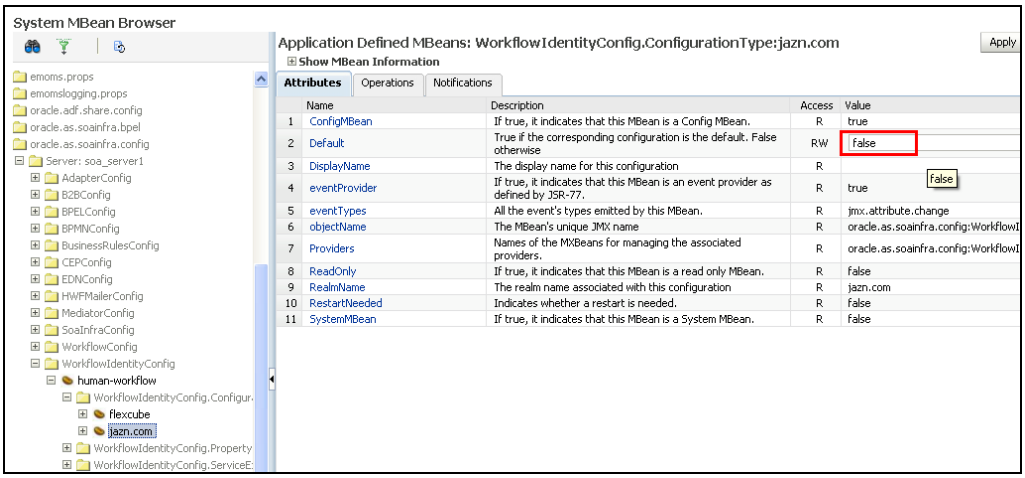


12. Select the newly create property and change the Name and Value using **setName** and **setValue** option from **Operation** tab.
    - Name should be **jpsContextName**
    - Value should be **flex**.

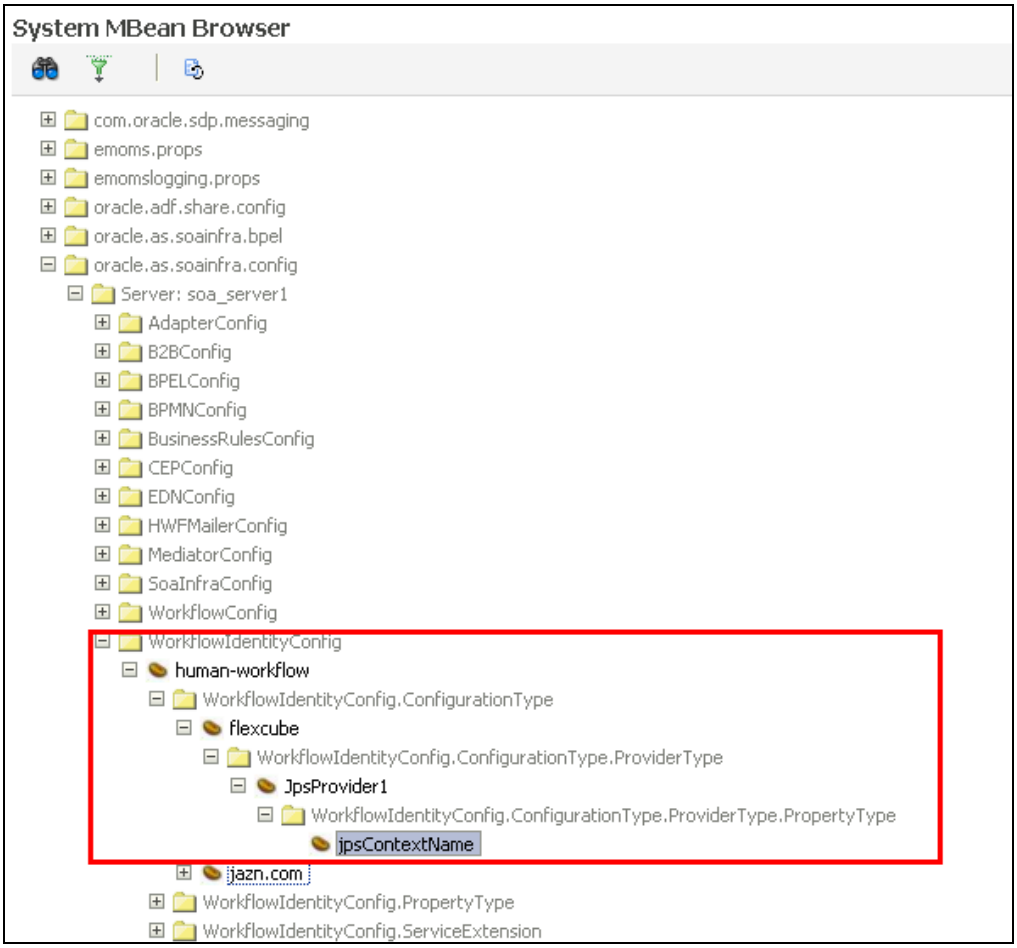
NOTE: the value **flex** given above should be same as the value given for jpsContext in section JPS Configuration earlier in this document.



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

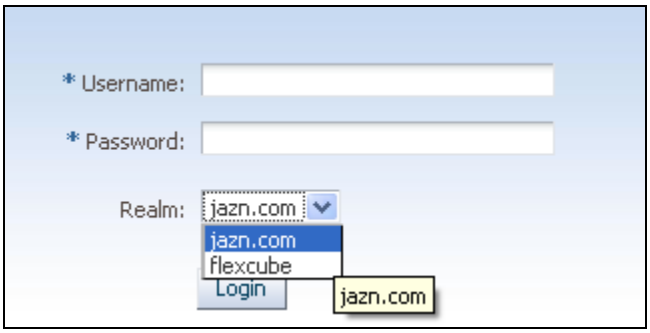


14. Restart both Weblogic and SOA Server. After restart of the server verify the details. Final structure should be similar to attached screen.



15. Launch the SOA worklist app using URL

    http://(IP_Address):(port_no)/integration/worklistapp and verify the List for Realm. flexcube and jazn.com should be available.

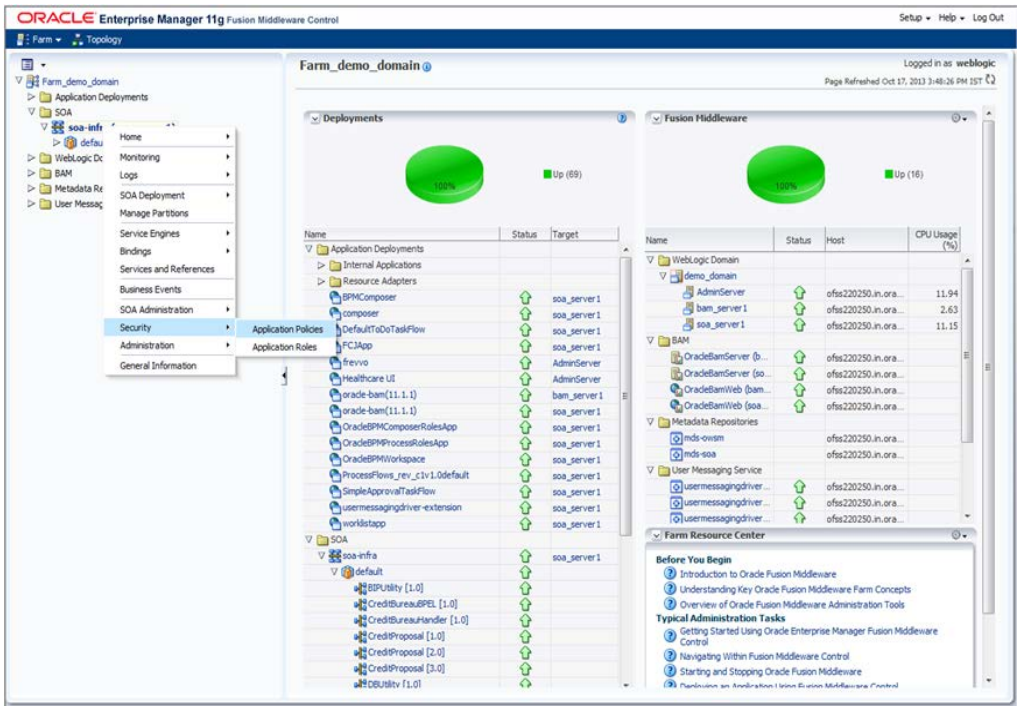


8.1.4 Security Policy Configuration

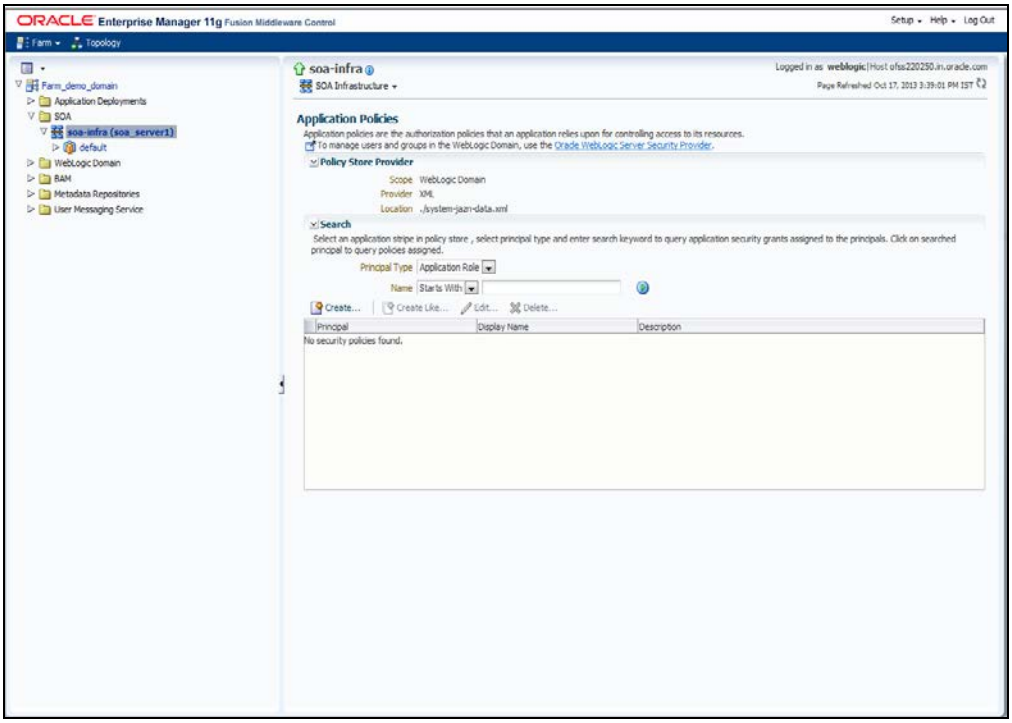
Security Policy Configuration needs to be done from the Enterprise Manager console of the SOA.

1. Login to Enterprise Manager Console.

2. Right click on soa-infra and select security ☐ Application Policies



3. Click on Create and to create a new Application Grant.



4. Create a super user BPELADMIN by clicking Add Button in Grantee Tab.

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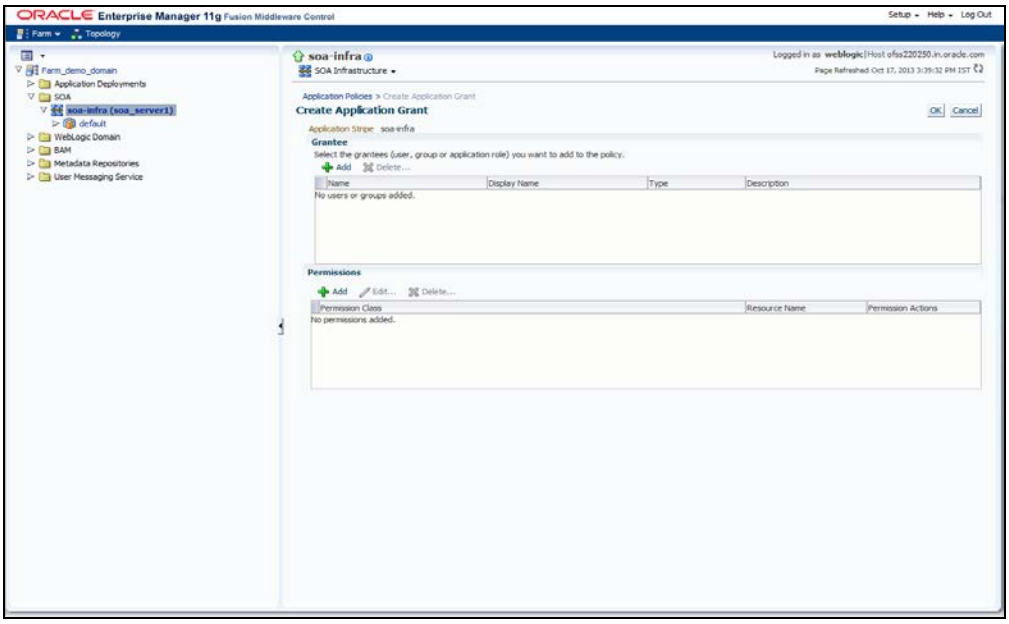
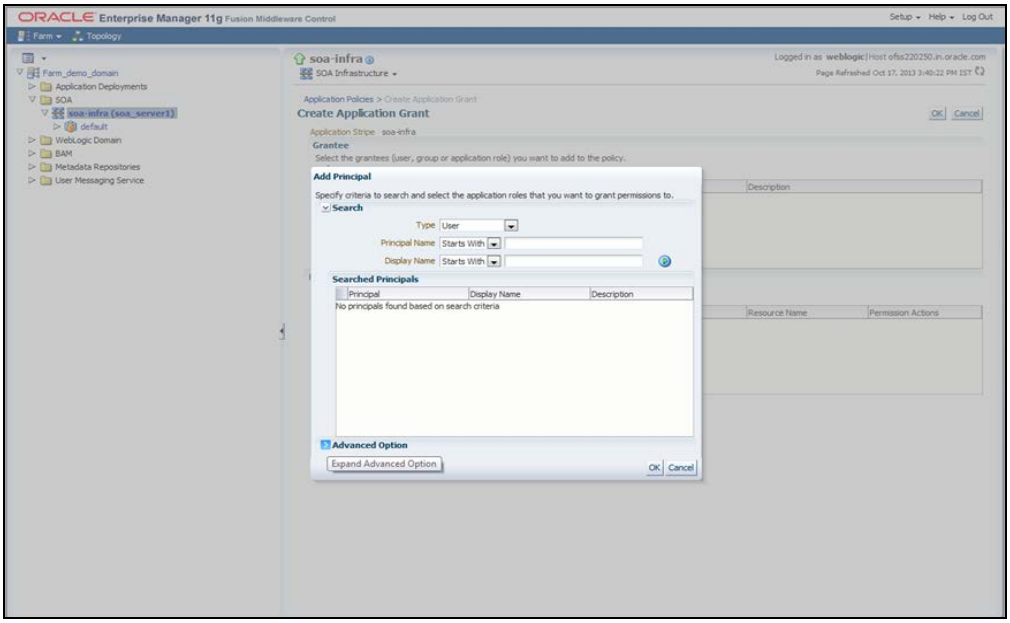
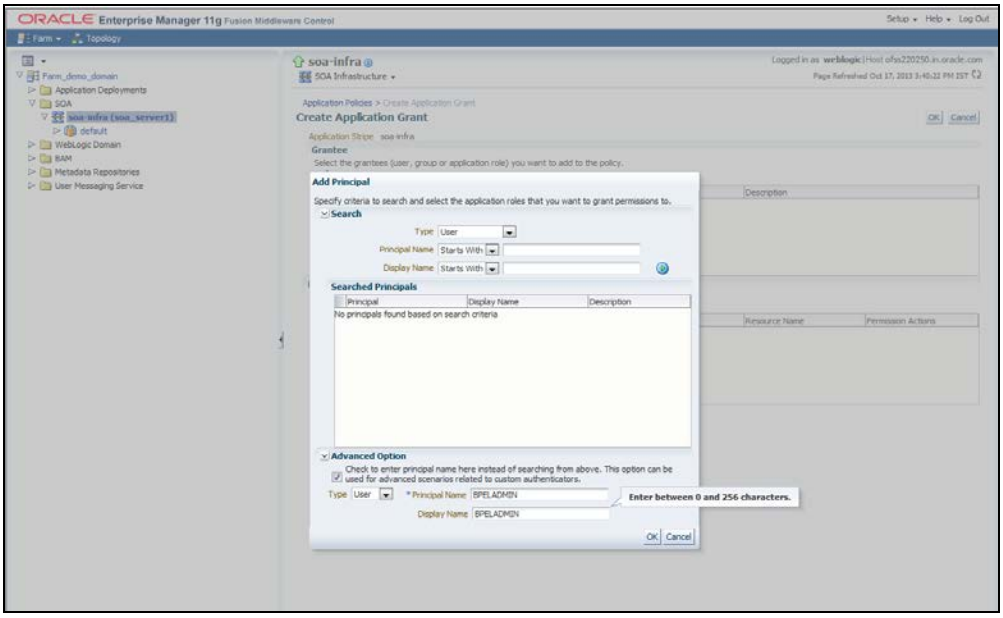
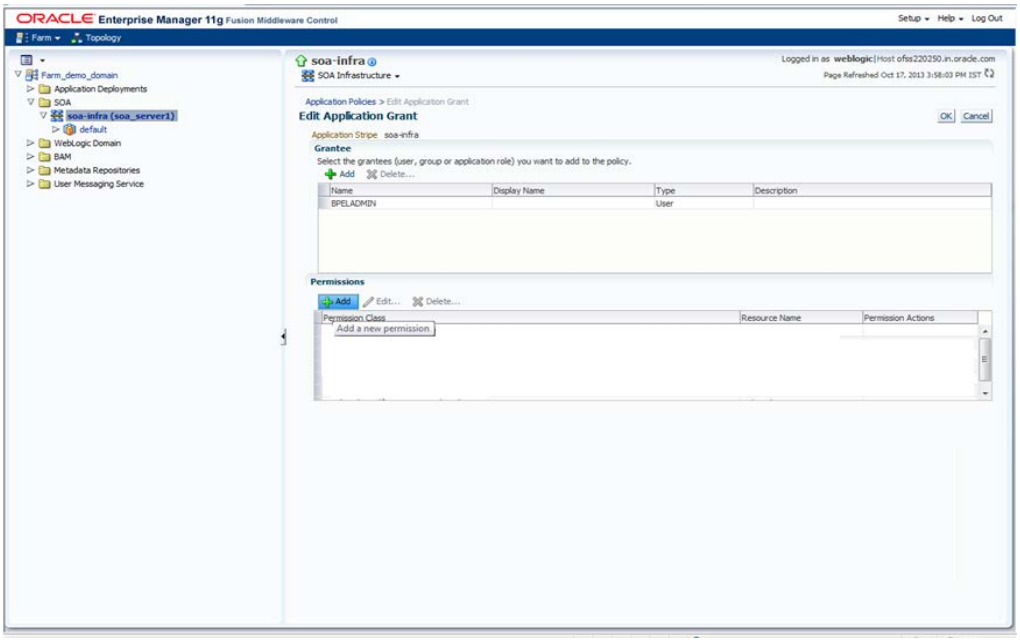
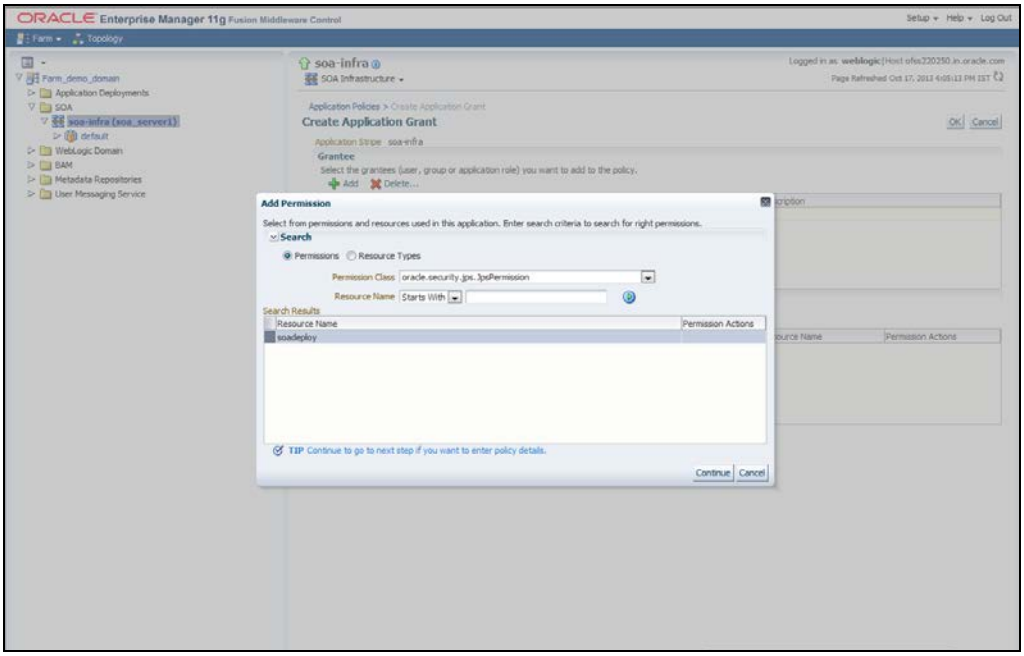

ORACLE Enterprise Manager 11g Fusion Middleware Control
Setup Help Log Out
Farm Topology
Farm_demo_domain
Application Deployments
SOA
soa-infra (soa_server1)
default
WebLogic Domain
BAM
Metadata Repositories
User Messaging Service
soa-infra
SOA Infrastructure
Logged in as weblogic | Host ofss220250.in.oracle.com
Page Refreshed Oct 17, 2013 3:39:32 PM IST
Application Policies > Create Application Grant
Create Application Grant
OK Cancel
Application Stripe soa-infra
Grantee
Select the grantees (user, group or application role) you want to add to the policy.
Add Delete...
Name Display Name Type Description
No users or groups added.
Permissions
Add Edit... Delete...
Permission Class Resource Name Permission Actions
No permissions added.

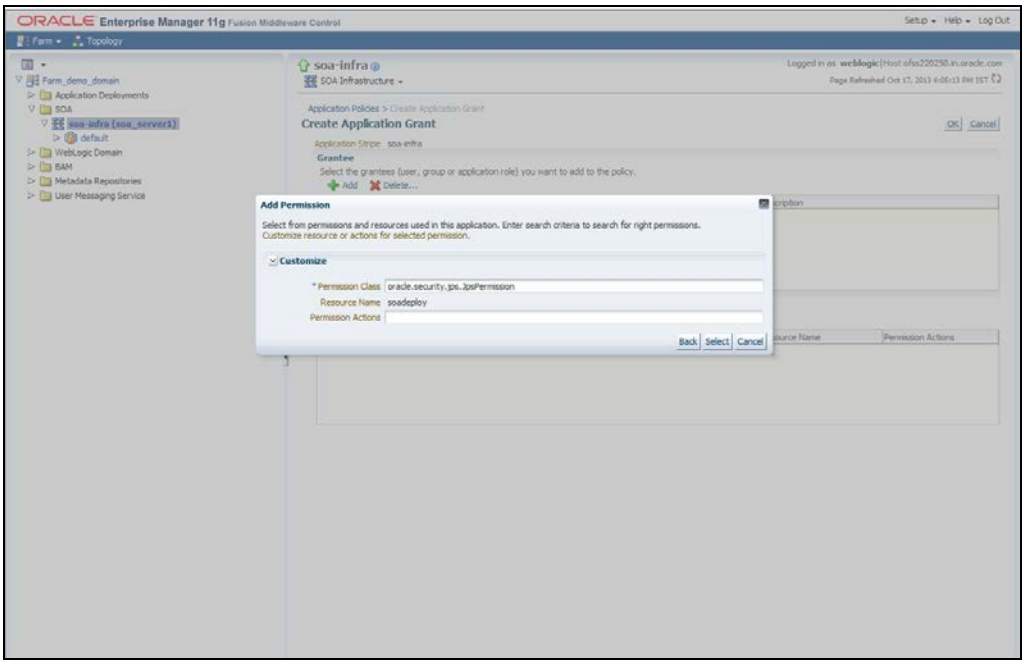

ORACLE Enterprise Manager 11g Fusion Middleware Control
Setup Help Log Out
Farm Topology
Farm_demo_domain
Application Deployments
SOA
soa-infra (soa_server1)
default
WebLogic Domain
BAM
Metadata Repositories
User Messaging Service
soa-infra
SOA Infrastructure
Logged in as weblogic | Host ofss220250.in.oracle.com
Page Refreshed Oct 17, 2013 3:40:22 PM IST
Application Policies > Create Application Grant
Create Application Grant
OK Cancel
Application Stripe soa-infra
Grantee
Select the grantees (user, group or application role) you want to add to the policy.
Add Principal
Specify criteria to search and select the application roles that you want to grant permissions to.
Search
Type User
Principal Name Starts With
Display Name Starts With
Searched Principals
Principal Display Name Description
No principals found based on search criteria
Advanced Option
Expand Advanced Option
OK Cancel
Description
Resource Name Permission Actions



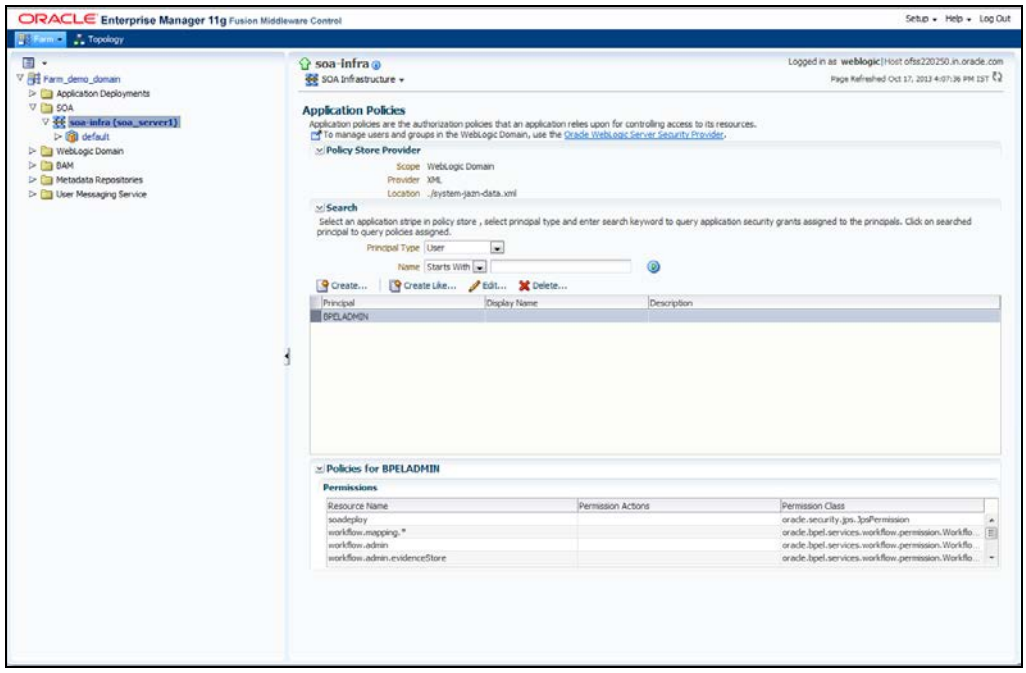
5. Now Click on add button under Permission to add privileges for the user and select from permission and search to get permission and resource name.







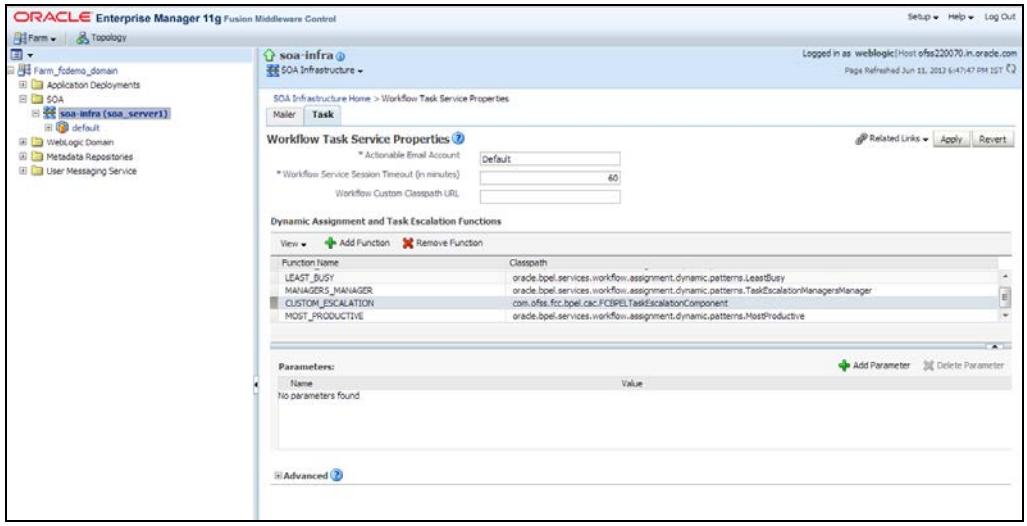
6. Click on required permissions and click ok to set permission for the user.
7. Similarly select all other permissions available and add.
8. Click OK to apply permission to the user. It should look like below



8.1.5 Custom Escalation Configuration

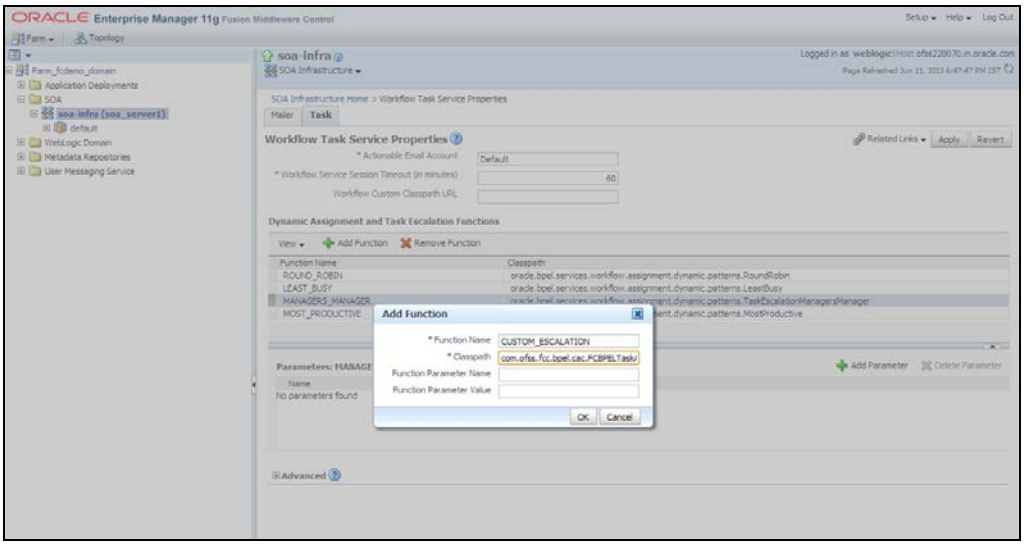
Security Policy Configuration needs to be done from the Enterprise Manager console of the SOA.

1. Login to Enterprise Manager Console.
2. Right click on soa-infra and select SOA Administration □ Workflow Config.
3. Click on Task TAB.



4. Click on Add Function and Enter the below details
   - Function Name : CUSTOM_ESCALATION
   - Classpath : com.ofss.fcc.bpel.cac.FCBPELTaskAssignmentComponent

5. Click on OK,then click on Apply.



8.1.6 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 fodler**.
   - set the **JNDI.name** value to the JNDI name given during Property file creation.
   - open *classes folder* from

     <MIDDLEWARE_HOME>Oracle_SOA1\soa\modules\oracle.soa.ext_11.1.x. and

     extract FCBPELCAC.jar contents to classes folder.Make sure the classes folder

     contains the folder structure like com\ofss\fcc\bpel\cac and

     under that, files

     CISProperties.properties,

     FCBPELTaskAssignmentComponent.class,

FCBPELTaskAssignmentComponent$1.class

- Now copy FCBPELCIS.jar from cis folder to <MIDDLEWARE_HOME>/user_projects/domains/<DOMAIN_NAME>/lib
- Add grants jazn-policy for BPELADMIN user for application soa-infra in system-jazn-data.xml as attached(Search for bpeladmin and BPELADMIN)

system-jazn-data.xml

Like

```
<grant>
        <grantee>
          <principals>
            <principal>
              <class>weblogic.security.principal.WLSUserImpl</class>
              <name>bpeladmin</name>
            </principal>
          </principals>
        </grantee>
        <permissions>
          <permission>
<class>oracle.bpel.services.workflow.permission.WorkflowPermission</class>
              <name>workflow.admin</name>
          </permission>
          <permission>
<class>oracle.bpel.services.workflow.permission.WorkflowPermission</class>
              <name>workflow.admin.evidenceStore</name>
          </permission>
          <permission>
```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```
                <class>oracle.security.jps.JpsPermission</class>
                <name>soadeploy</name>
            </permission>
            <permission>
<class>oracle.bpel.services.workflow.permission.WorkflowPermission</class>
                <name>workflow.mapping.publicFlexField</name>
            </permission>
            <permission>
<class>oracle.bpel.services.workflow.permission.WorkflowPermission</class>
                <name>workflow.admin.activityGuide</name>
            </permission>
            <permission>
<class>oracle.bpel.services.workflow.permission.WorkflowPermission</class>
                <name>workflow.mapping.*</name>
            </permission>
            <permission>
                <class>oracle.rules.adf.permission.RulesEditorPermission</class>
                <name>RulesEditorPermission</name>
                <actions>access</actions>
            </permission>
        </permissions>
    </grant>
    <grant>
        <grantee>
            <principals>
```

```
                <principal>
                    <class>weblogic.security.principal.WLSUserImpl</class>
                    <name>BPELADMIN</name>
                </principal>
            </principals>
        </grantee>
        <permissions>
            <permission>
<class>oracle.bpel.services.workflow.permission.WorkflowPermission</class>
                <name>workflow.admin</name>
            </permission>
            <permission>
<class>oracle.bpel.services.workflow.permission.WorkflowPermission</class>
                <name>workflow.admin.evidenceStore</name>
            </permission>
            <permission>
                <class>oracle.security.jps.JpsPermission</class>
                <name>soadeploy</name>
            </permission>
            <permission>
<class>oracle.bpel.services.workflow.permission.WorkflowPermission</class>
                <name>workflow.mapping.publicFlexField</name>
            </permission>
            <permission>
<class>oracle.bpel.services.workflow.permission.WorkflowPermission</class>
```

<name>workflow.admin.activityGuide</name>

</permission>

<permission>

<class>oracle.bpel.services.workflow.permission.WorkflowPermission</class>

<name>workflow.mapping.*</name>

</permission>

<permission>

<class>oracle.rules.adf.permission.RulesEditorPermission</class>

<name>RulesEditorPermission</name>

<actions>access</actions>

</permission>

</permissions>

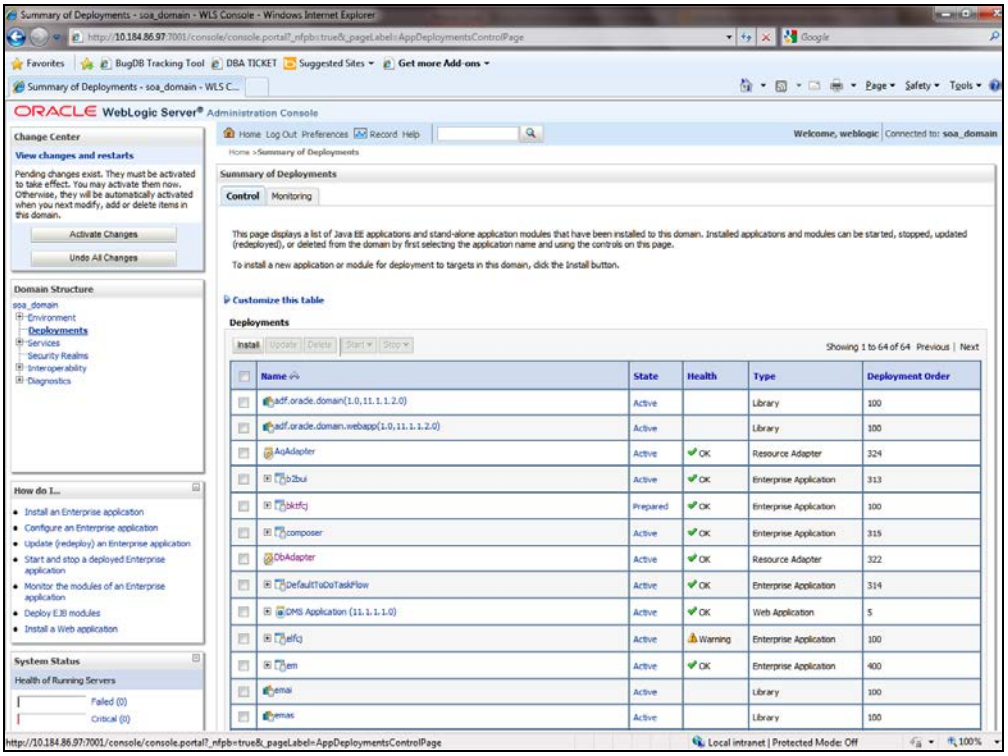
</grant>

Restart the Server.

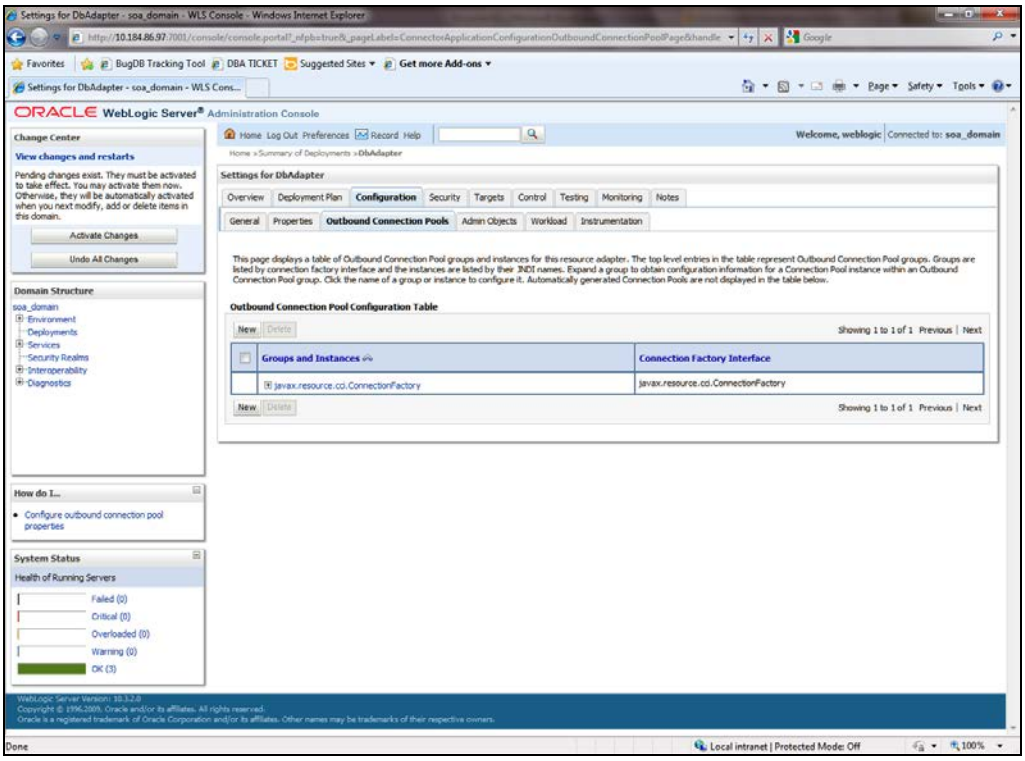
8.1.7 Configuring DBAdapter

In order to configure DBAdapter, follow the steps given below.

1. Log in to ‘Weblogic Console’ and click ‘Deployment’ under ‘Domain Structure’.



In the Deployments table, select ‘DbAdapter’. You will be navigated to ‘Settings for DbAdapter’.



2. Click ‘Configuration’ tab and select ‘Outbound Connection Pools’ under it.

3. Under ‘Groups and Instances’, click and expand ‘javax.resource.cci.ConnectionFactory’.
4. Click ‘New’ and select ‘javax.resource.cci.ConnectionFactory' in Outbound Connection Group.
5. Define ‘JNDI Name’ as ‘eis/DB/FCCDEV’ and click on ‘Finish’.

Note: The ‘jndi name’ should be the same as the one in ‘Dbutility sub-process’.

6. Click on ‘DbAdapter’ again. The new JNDI name is listed.
7. Click on the hyperlink ‘eis/DB/FCCDEV’.
8. Click the ‘Property Value’ field for the ‘DataSourceName’ and update the application JNDI reference (given in ‘fcubs.properties’ file) and then press ‘Enter’ key.
9. Save and restart the Adminserver.

SOA Suite Setup for BPEL Process Flow
[October] [2015]
Version 12.1.0.0.0

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