# SOA Suite Setup for BPEL Process Flow Oracle FLEXCUBE Universal Banking Release 14.0.0.0.0 [December] [2017]



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### 1. Preface

# 1.1 Background

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

Refer Oracle documentation for HA (<u>FCUBS Switch Interface Gateway High Availability Configuration.pdf</u>) and other configuration patterns.

# 1.2 Audience

The audience for this document will be the development groups of BPEL/BPM process flows FLEXCUBE Universal Banking.

### 1.3 **Organization**

This manual is organized as follows:

• The document helps in download and installation of Oracle SOA 12c.

### 1.4 Acronyms and Abbreviations

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



# 2. Installing the JDK, WebLogic, RCU, SOA and domain Creation

# 2.1 Introduction

The download of software can be done from the below oracle edelivery portal <a href="https://edelivery.oracle.com">https://edelivery.oracle.com</a>

Refer to the Oracle certification matrix for qualified databases.

### 2.2 List of downloaded files

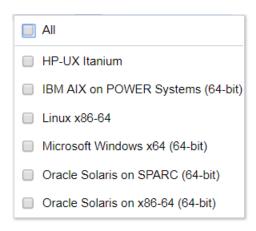
Search: Oracle JDK Latest JDK 1.8 Update 144 for Linux x86-64Search: Oracle Fusion Middleware 12c Infrastructure 12.2.1.2.0

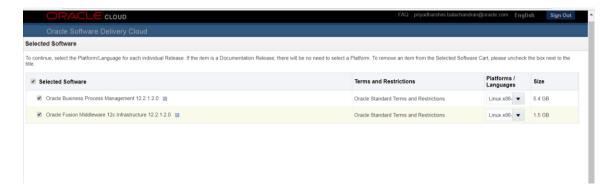
V779122-01.zip - Oracle Fusion Middleware 12c Infrastructure 12.2.1.2.0

Search: Oracle Business Process Management 12.2.1.2.0

V789369-01.zip - Oracle Fusion Middleware 12c (12.2.1.2.0) SOA Suite and Business Process Management

List of platform which can be selected based on the installation platform





**NOTE (Doc ID 1904280.1)**: As part of the new Release of SOA 12c, you need to get WebLogic 12c through the Oracle Fusion Middleware Infrastructure installation, which contains all required components for SOA. The standard WebLogic 12.2.1.0.0 Installer i.e. fmw\_12.2.1.0.0\_wls.jar, does not have the required JRF templates.

### 2.3 Install JDK

Login to WebLogic server host upload and install JDK package. Refer to the release certificate for the version of java JDK.

## 2.4 Installing WebLogic Server software

Installation of the software can be done from local machine or from the app server

- 1. Installation from the app server location:
- a) Login to the app server host and connect through putty
- b) Copy the zipped file into the app server in the location /scratch/app/<[app\_name]> eg: /scratch/app/bpm12212
- c) Unzip the file with the command "unzip V779122-01.zip"
- d) Once it is unzipped, fmw\_12.2.1.2.0\_soa.jar and fmw\_12212\_readme.htm will be extracted into the same path
- e) execute the jar file to launch the installer for 12c SOA installation with the below command

"java –jar fmw 12.2.1.2.0 infrastructure.jar"

```
[oracle@wls12c-node1 ~]$ cd /scratch/app/fmwTemp1221/
[oracle@wls12c-node1 fmwTemp1221]$ unzip V779122-01.zip
Archive: V779122-01.zip
inflating: fmw_12.2.1.2.0_infrastructure.jar
[oracle@wls12c-node1 fmwTemp1221]$ java -jar fmw_12.2.1.2.0_infrastructure.jar
```

- 2. Installation from the local path:
- a) open the command prompt in "Run as Adminstrator" mode and move to the location where the zip file is available using the command "cd" followed by the path
- eg: C:\Users\pribalac\Downloads
- b) Unzip the file with the command "unzip V779122-01.zip"
- c) Once it is unzipped, fmw\_12.2.1.2.0\_soa.jar and fmw\_12212\_readme.htm will be extracted into the same path
- d) execute the jar file to launch the installer for 12c SOA installation with the below command "java –jar fmw\_12.2.1.2.0\_soa.jar"

```
[C:\Users\pribalac\ ~]$ cd C:\Users\pribalac\Downloads\V779122-01
[C:\Users\pribalac\Downloads\V779122-01]$ unzip V779122-01.zip
Archive: V779122-01.zip
inflating: fmw 12.2.1.2.0 infrastructure.jar
[C:\Users\pribalac\Downloads\V779122-01]$ "C:\Program Files\Java\jdk1.8.0_144\bin\java" -jar
fmw_12.2.1.2.0_infrastructure.jar
```

#### Step 1:

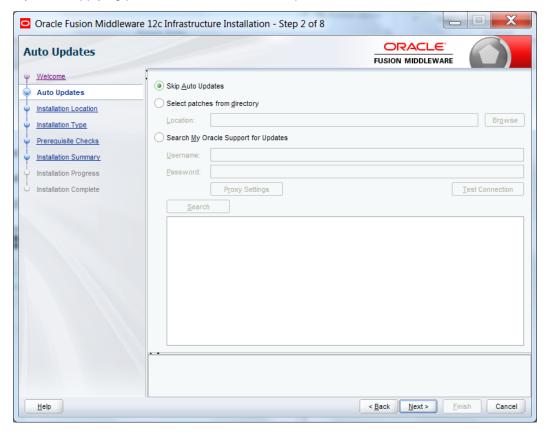


### Step 2:

Select the option based on the requirement:

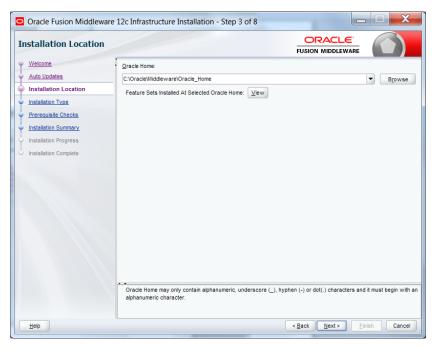
If you do not want the auto updates, select the first option.

If you are applying patches, select the second option.



### Step 3:

Define the oracle home path

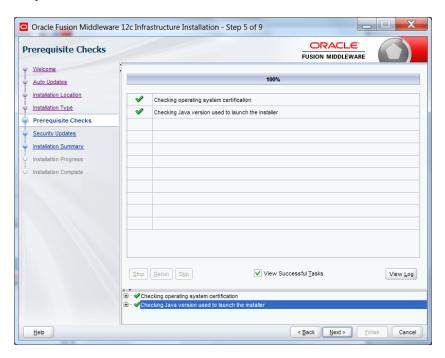


Step 4:

Select fusion middleware infrastructure



Step 5:

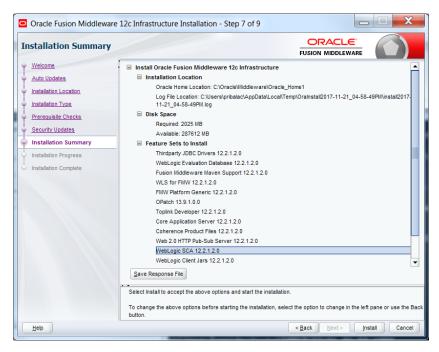


Step 6:

Optional based on installation requirement



### Step 7:



Step 8:



### Step 9:



# 2.5 <u>Installing Oracle Fusion Middleware 12c software.</u>

Installation of the software can be done from local machine or from the app server

- 1. Installation from the app server location:
- a) Login to the app server host and connect through putty
- b) Copy the zipped file into the app server in the location /scratch/app/<[app\_name]>eg: /scratch/app/bpm12212
- c) Unzip the file with the command "unzip V789369-01.zip"
- d) Once it is unzipped, fmw\_12.2.1.2.0\_soa.jar and fmw\_12212\_readme.htm will be extracted into the same path
- e) execute the jar file to launch the installer for 12c SOA installation with the below command "java –jar fmw\_12.2.1.2.0\_soa.jar"

```
[bpm12212@whf00anl:~]$ cd /scratch/app/bpm12212/
[bpm12212@whf00anl:/scratch/app/bpm12212]$ unzip V789369-01.zip
Archive: V789369-01.zip
inflating: fmw_12.2.1.2.0_soa.jar
[bpm12212@whf00anl:/scratch/app/bpm12212]$ java -jar fmw_12.2.1.2.0_soa.jar
```

#### 2. 1) Installation from the local path:

- a) open the command prompt in "Run as Adminstrator" mode and move to the location where the zip file is available using the command "cd" followed by the path
- eg: C:\Users\pribalac\Downloads
- b) Unzip the file with the command "unzip V789369-01.zip"
- c) Once it is unzipped, fmw\_12.2.1.2.0\_soa.jar and fmw\_12212\_readme.htm will be extracted into the same path
- d) execute the jar file to launch the installer for 12c SOA installation with the below command "java –jar fmw\_12.2.1.2.0\_soa.jar"

#### Step 1:



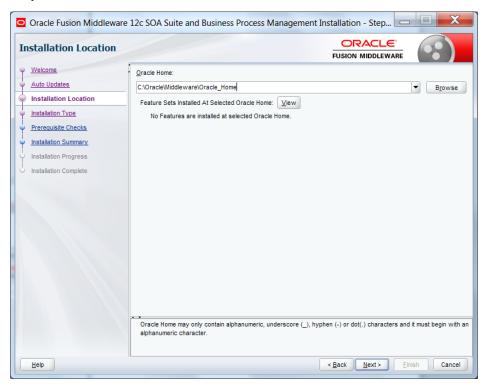
Step 2:

Option need to be selected based on the requirement :

- If you don't want the auto updates, select the first option.
- If you are applying patches, select the second option.

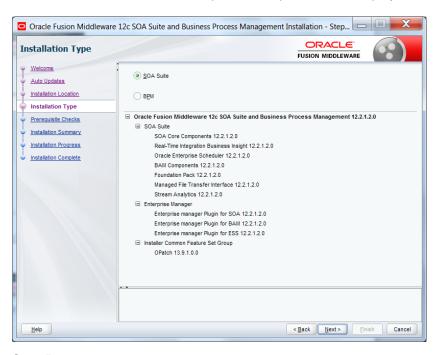
Please select the below option based on the requirement:

### Step 3:

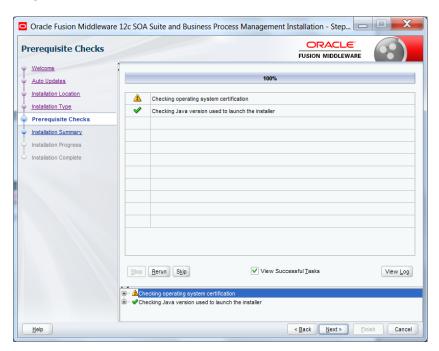


### Step 4:

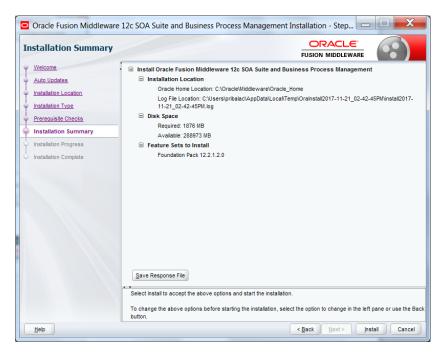
Select BPM if the environment requires BPM process flow deployment



### Step 5:



### Step 6:



### Step 7:



### Step 8:



# 2.6 Creating product schemas in Oracle database

The Repository Creation Utility (RCU) is the tool used to create schemas in a database. This tool is available once we've installed the Oracle Fusion Middleware Infrastructure software (Point 2).

Refer to <u>Oracle Fusion Middleware Creating Schemas with the Repository Creation Utility</u> for more information about the Repository Creation Utility.

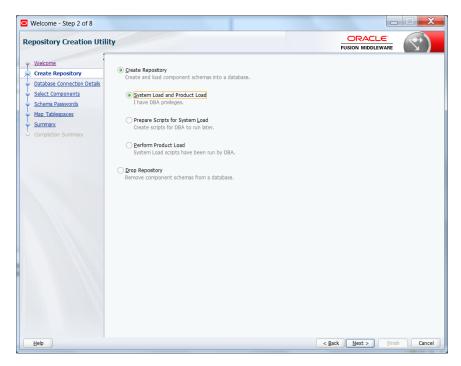
- [oracle@wls12c-node1 fmwTemp1221]\$ cd /scratch/app/fmwTemp1221/Oracle/Middleware/Oracle\_Home/bin/
- [oracle@wls12c-node1 bin]\$ ./rcu

### Step 1:



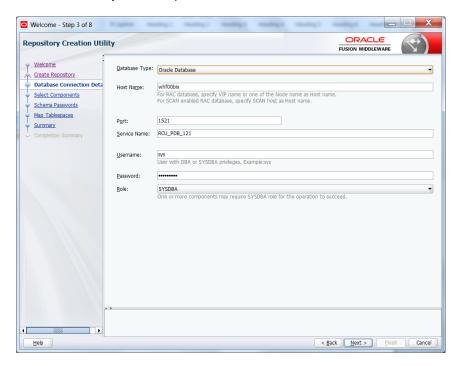
Step 2:

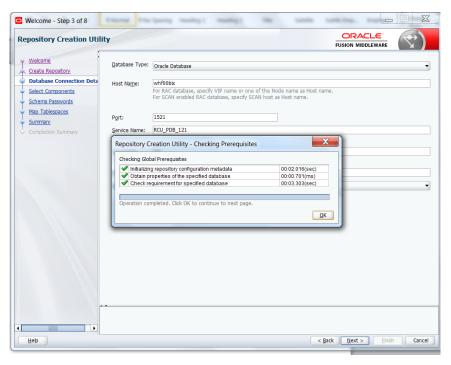
Select the option as System Load and Product Load and click on Next



### Step 3:

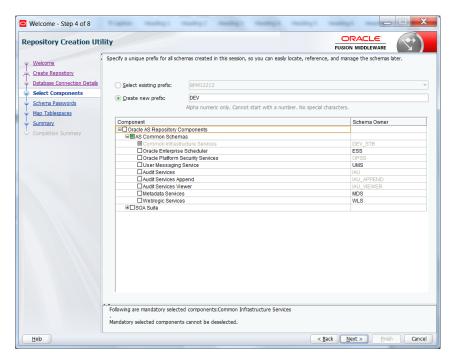
Define the host name port username and password for creating the RCU schemas in the database. The sys user required to create the rcu schemas.

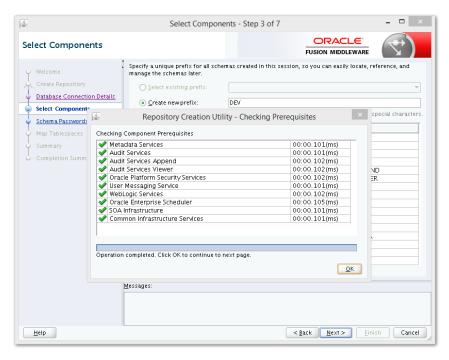




### Step 4:

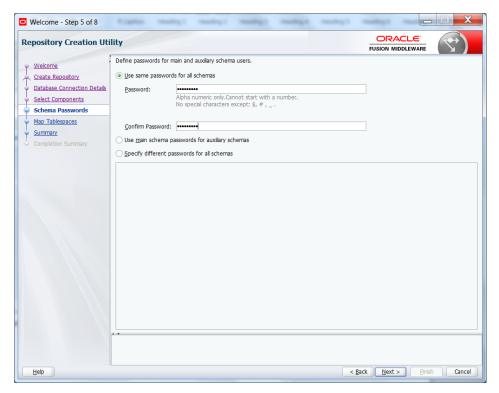
Define the prefix to be used for the schemas





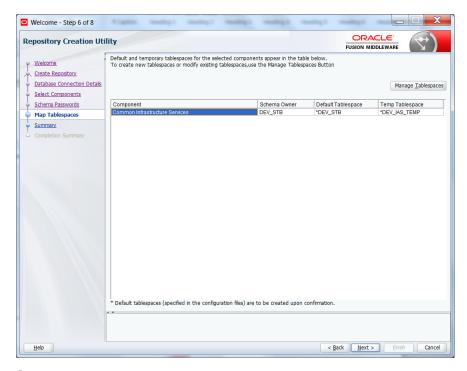
Step 5:

Define the password for the schemas.

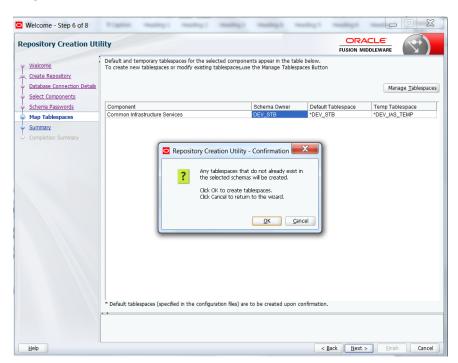


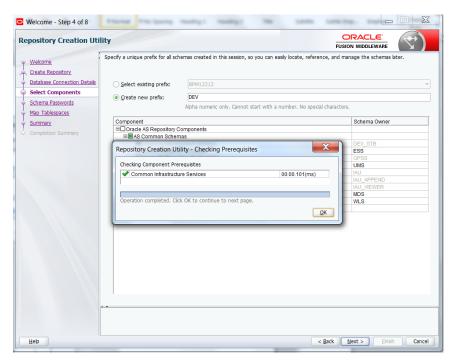
Note: It is important to remember the password or passwords that you enter during the process.

### Step 6:

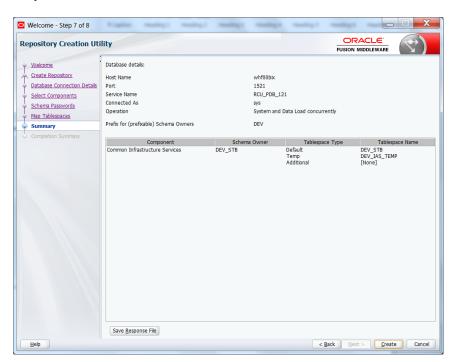


### Step 7:



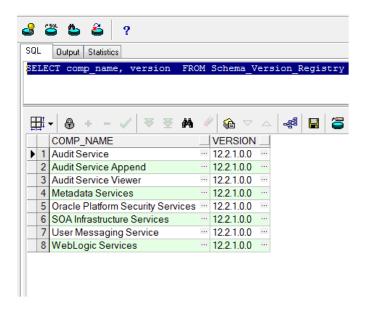


### Step 7:



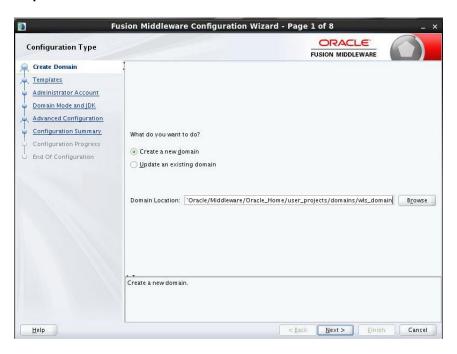
Note: Verifying Schema Version Numbers in the database where RCU is executed

SQL> select comp\_name, version from schema\_version\_registry;



# 2.7 <u>WebLogic Server Domain Configuration</u>

### Step 1:

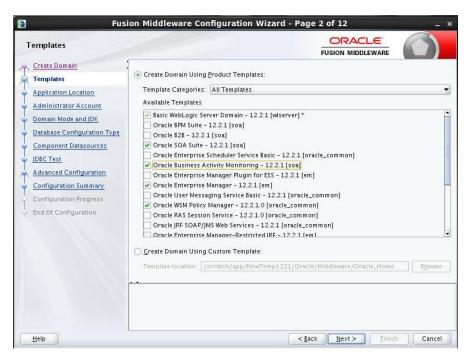


### Step 2:

Domain creation template

For BPEL only domain

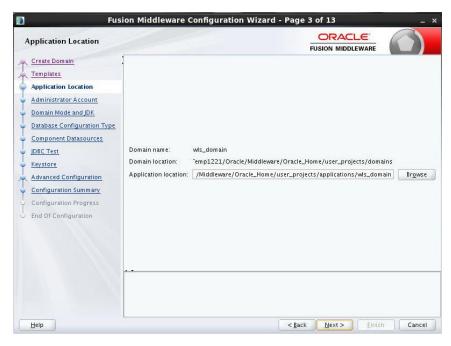
Based on the requirement select the Oracle Business Activity Monitoring (BAM) check box.



For BPM enabled domain  $(\_If BPM process flows deployment is required then we have to select the Oracle BPM Suite <math>-$  12.2.1 )

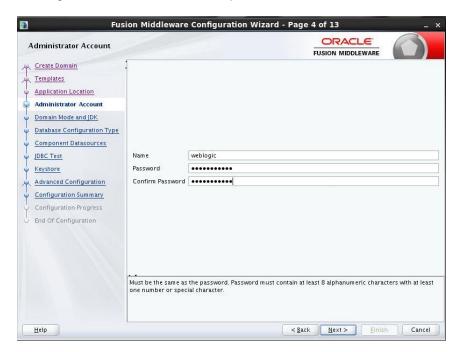


### Step 3:



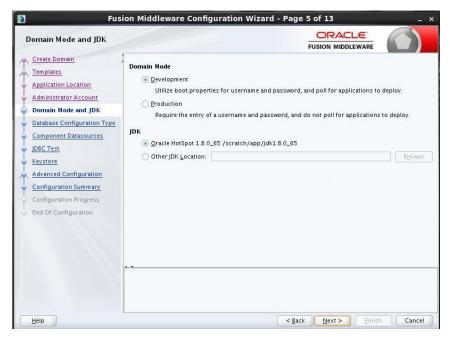
### Step 4:

Defining the domain user name and password



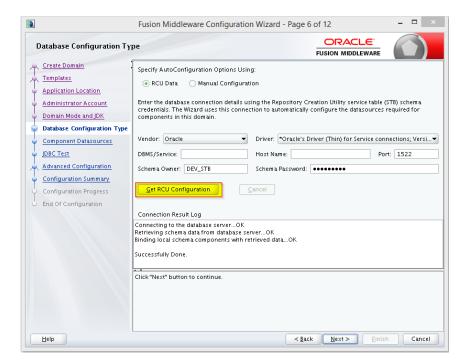
### Step 5:

Domain mode needs to be production for all installations.

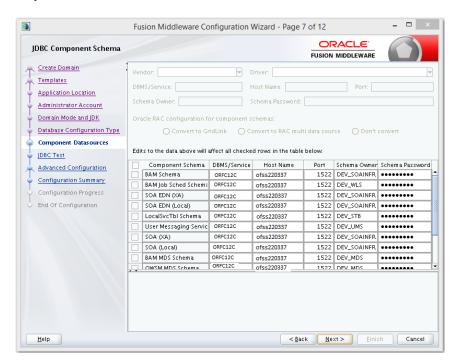


### Step 6:

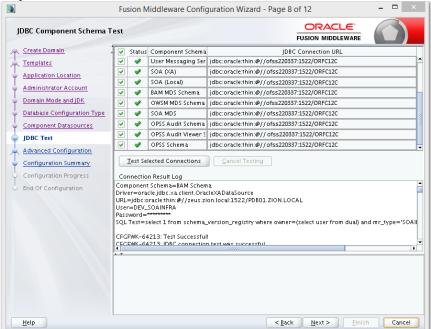
Define the RCU schema details and the TNS connection details



### Step 7:

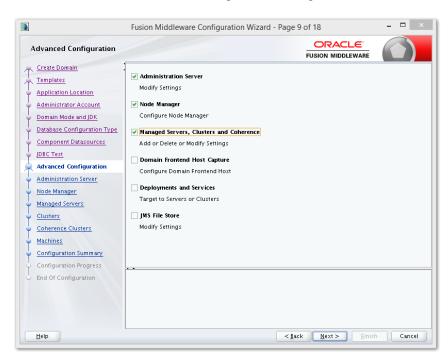


Step 8:



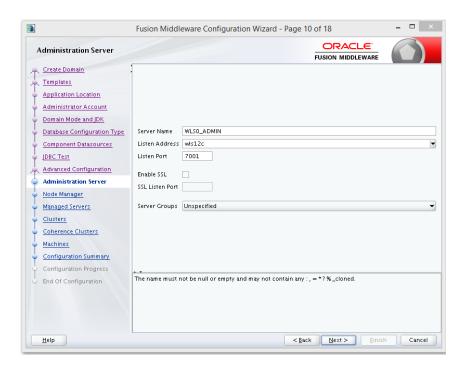
### Step 9:

Select the admin server, node manager and managed servers.



### **Step 10:**

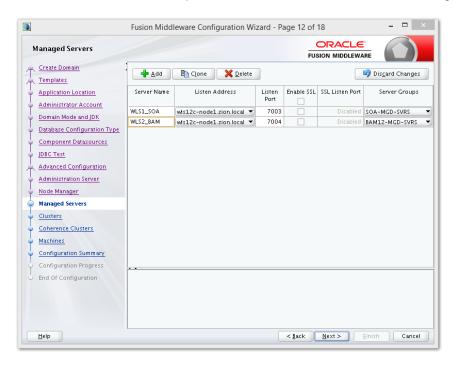
Specify the server name as AdminServer and listener address as hostname. Based on the installation requirement SSL need to be enabled.



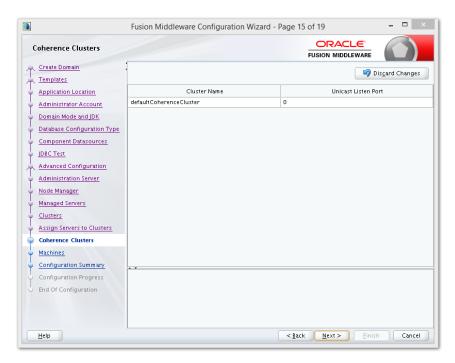
### Step 11:

Specify the server name as soa\_server1 and bam\_server1 for the managed servers.

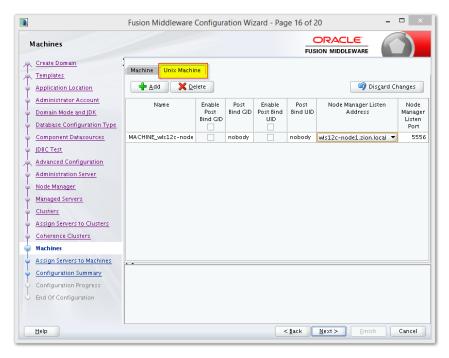
Based on the installation requirement SSL need to be enabled for managed servers



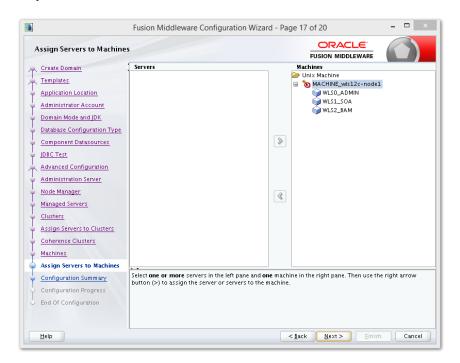
### **Step 12:**



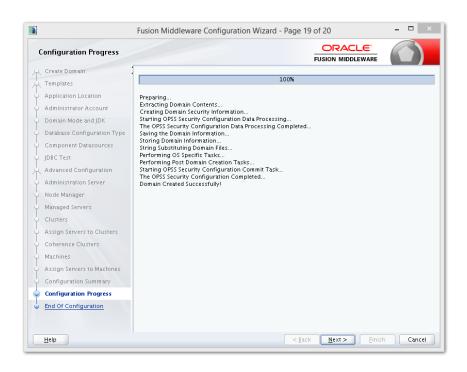
### **Step 13:**

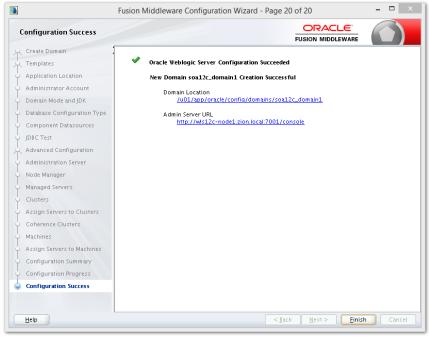


### Step 14:



Step 15:





# 2.8 Remote Setup Configuration:

Remote setup means SOA is installed in different machine and EAR is running in different machine.

Configuring Flexcube Application to point to remote BPEL instances.

1. Following Jars has to be copied to <Weblogic\_home>\<domain>\lib

Jar to be copied	Path where the jar is available in SOA Middleware
bpm-services.jar	%Middleware Home%/soa/soa/modules/oracle.soa.workflow_ 11.1.1
fabric-runtime.jar	%Middleware Home%/soa/soa/modules/oracle.soa.fabric_11. 1.1
tracking-fabric.jar	
tracking-api.jar	
jrf-api.jar	%Middleware Home%/oracle_common/modules/oracle.jrf
orabpel-common.jar	%Middleware Home%/soa/soa/modules/oracle.soa.bpel_11.1. 1
orabpel-thirdparty.jar	
orabpel.jar	
soa-infra-mgmt.jar	%Middleware Home%/soa/soa/modules/oracle.soa.mgmt_11. 1.1
xml.jar	%Middleware Home%/oracle_common/modules/oracle.xdk
xmlparserv2.jar	
mdsrt.jar	%Middleware Home%/oracle_common/modules/oracle.mds
com.oracle.webservices.fmw.wsclient-rt-impl.jar	%Middleware Home%/oracle_common/modules

### 2. Additionally if BPMN enabled

Jar to be copied	Path where the jar is available in SOA Middleware
------------------	---

oracle.bpm.bpm-services.client.jar	%Middleware Home%/soa/soa/modules/oracle.bpm.client_11.1.1	
oracle.bpm.bpm-services.interface.jar		
oracle.bpm.project.draw.jar	%Middleware Home%/soa/soa/modules/oracle.bpm.project_11.1.1	
oracle.bpm.project.model.jar	Tiome 70/300a/300a/modules/ordole.spm.project_11.1.1	
oracle.bpm.core.jar	%Middleware Home%/soa/soa/modules/oracle.bpm.runtime_11.1.1	
oracle.bpm.ui.jar	%Middleware Home%/soa/soa/modules/oracle.bpm.workspace_11.1 .1	
oracle.bpm.casemgmt.interface.jar	%Middleware Home%/soa/soa/modules/oracle.bpm.runtime_11.1.1	

3. The jars copied have to be from same soa-suite version where BPEL processflows deployed. Ie, We cannot have jars from soa12.1.3.0.0 and BPEL deployed in soa12.2.1.0.0 It should be consistent.

4. The properties file fcubs.properties should read as below

WORKFLOW\_CLIENT\_TYPE =REMOTE

java.naming.provider.url =t3://10.184.74.143:8001/?partitionName=DOMAIN (Remote

soa server provider url)

java.naming.security.principal =weblogic (Remote bpel server userid)

java.naming.security.credentials=RF2MRTP/MG8TB1T5QG6lnQ== (Remote soa server

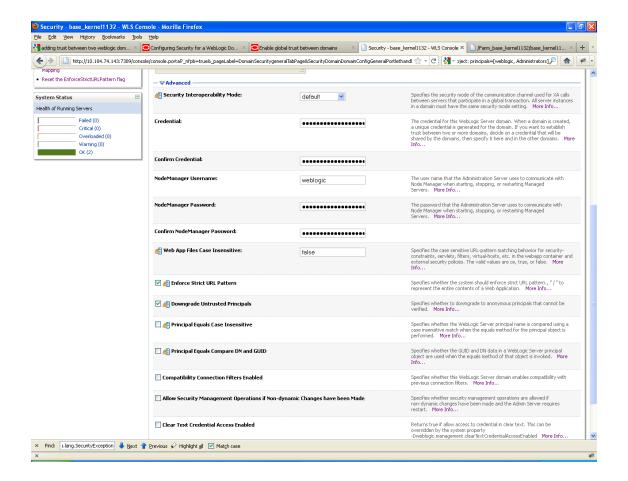
password)

dedicated.connection =true

domain.name =default (Remote soa server partition)
domain.pwd =RF2MRTP/MG8TB1T5QG6InQ==

(Remote soa server password)

5. Configure domain password same as for both fcj ear domain and remote BPEL domain and DowngradeUntrusted Principals has to be checked





SOA Suite Setup for BPEL Process Flow [December] [2017] Version 14.0.0.0.0

Oracle Financial Services Software Limited Oracle Park Off Western Express Highway Goregaon (East) Mumbai, Maharashtra 400 063 India

Worldwide Inquiries: Phone: +91 22 6718 3000 Fax: +91 22 6718 3001

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