Liquidity Management Application Setup
Oracle Banking Liquidity Management
Release 14.0.0.0.0
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ORACLE
FINANCIAL SERVICES

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1. Weblogic Domain Server Configuration

1.1 Introduction

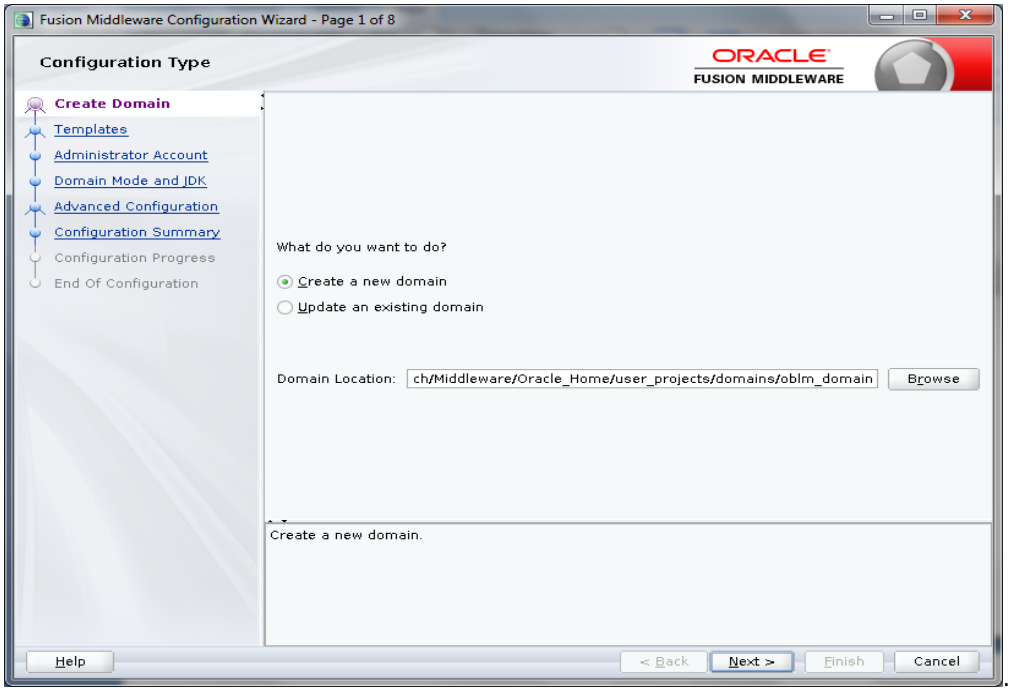
This chapter details out the configuration of Oracle Weblogic Domain server.

Prerequisite: Weblogic Server should be installed.

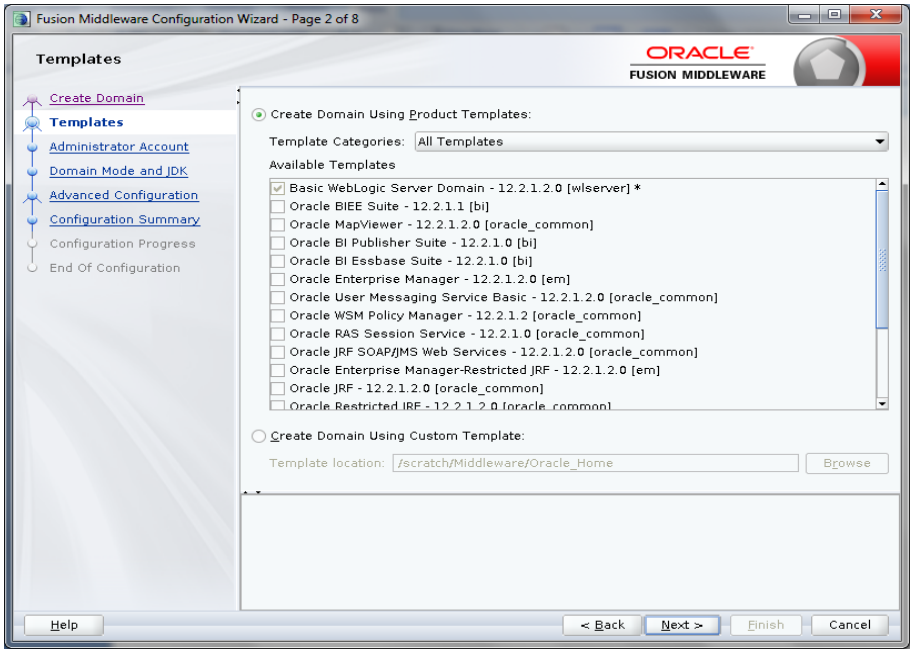
1.2 Steps to be followed for Weblogic Domain Server

To create a new domain

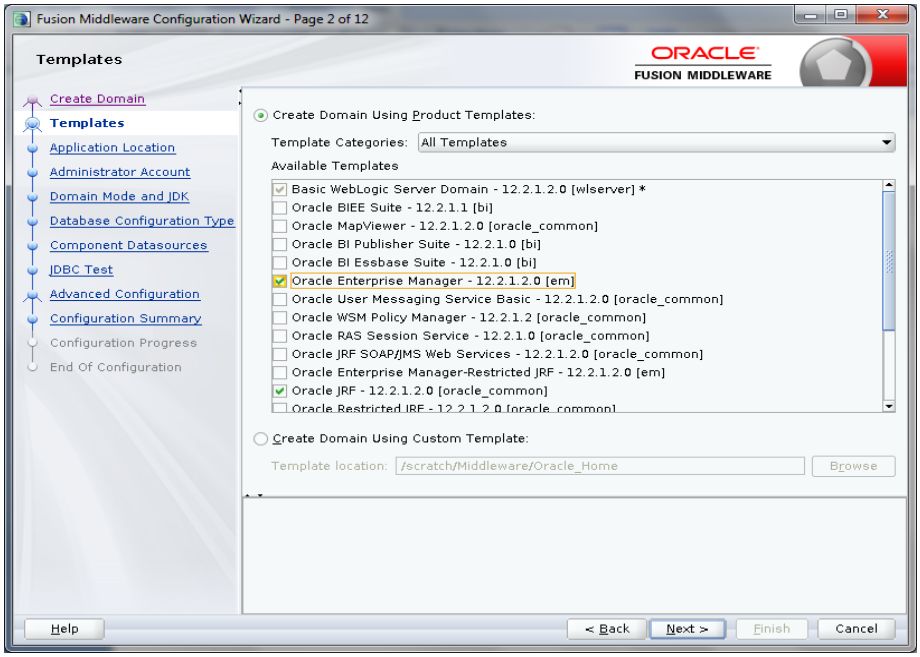
1. Open any Linux client e.g. Putty
2. Go to Oracle Home path where Weblogic server is installed Eg. /scratch/Middleware/Oracle_Home/oracle_common/common/bin
3. Now Execute config.sh,
4. Following Screen should appear, Click on **Create Domain** and select Create a new domain e.g.*oblm_domain* and Next.



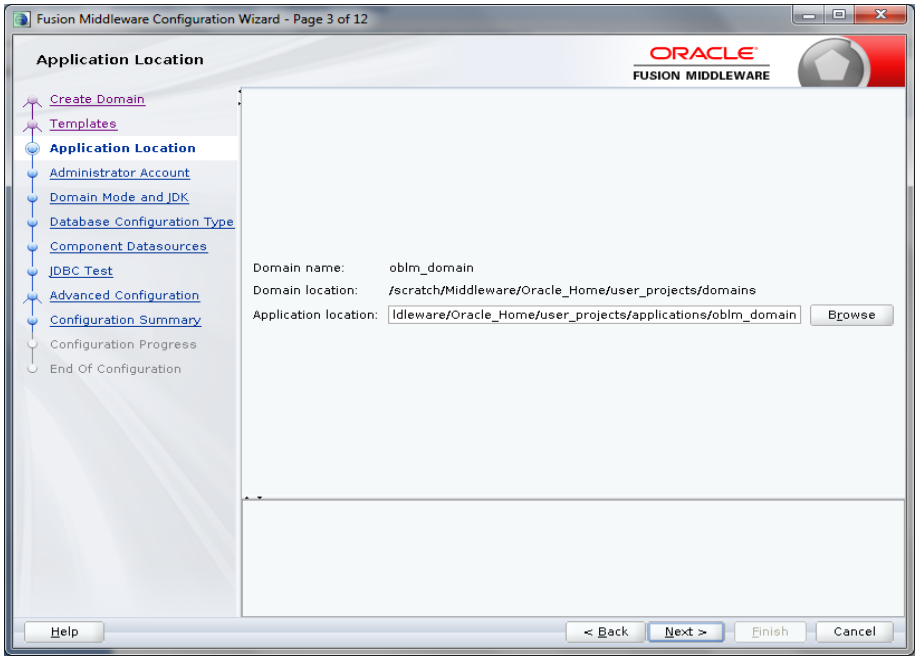
5. Below Screen will appear



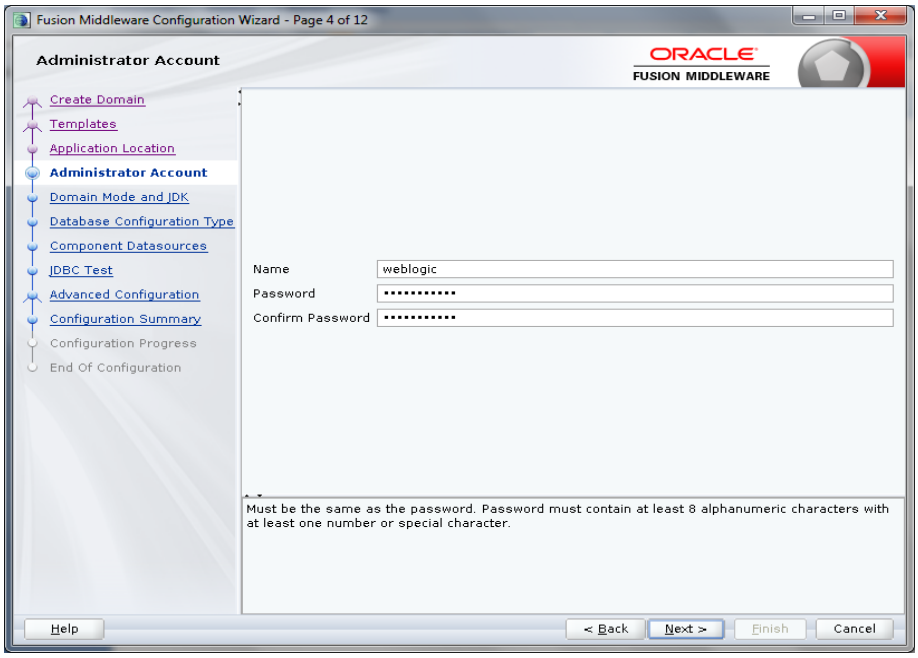
6. By default **Basic Weblogic Server Domain** are enabled. Additionally, Choose **Oracle Enterprise Manager - 12.2.1.2.0 [em]**, this in turn will choose **Oracle JRF - 12.2.1.2.0[oracle_common]** and **Weblogic Coherence Cluster Extension – 12.2.1.2.0 [wlserver]** and click **Next**.



7. Following Screen will appear, Review it and Click **Next**.

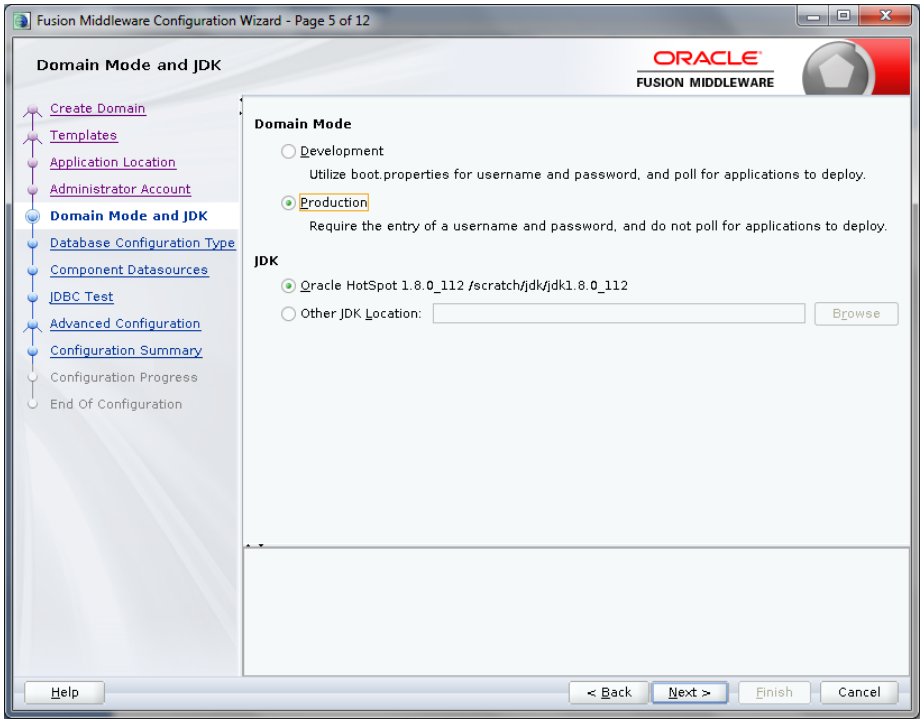


8. In Administrator Account screen enter ‘weblogic’ in Name box. Enter and confirm any suitable password and confirm password for Weblogic and click **Next**. **Please remember this User Name and Password as these will be used in many places**.

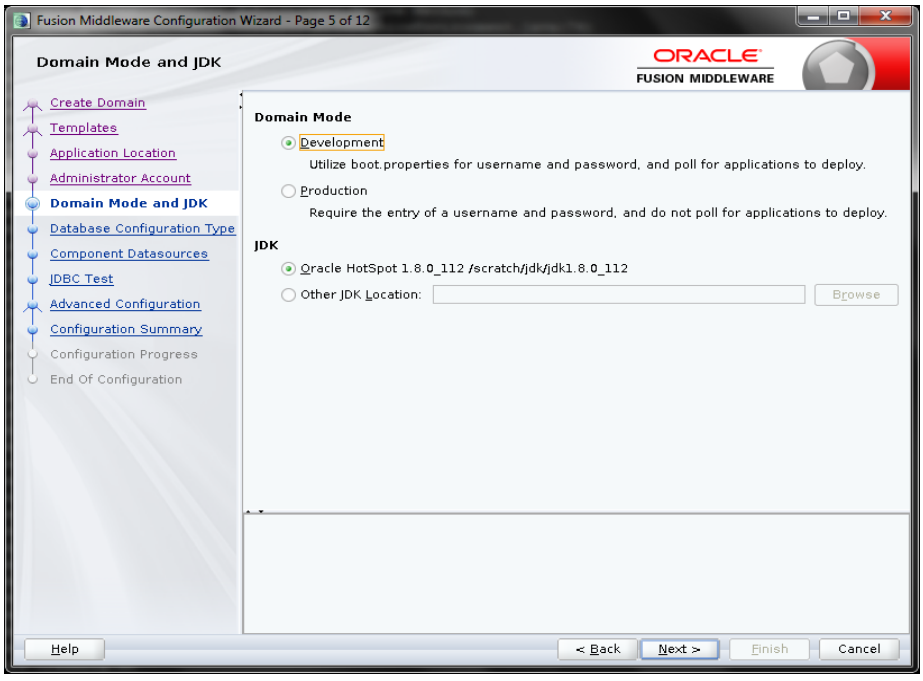


9. Domain Mode and JDK screen will appear, Now choose either the Development Mode or Production Mode.

   While choosing Production Mode, select production under **Domain Mode**



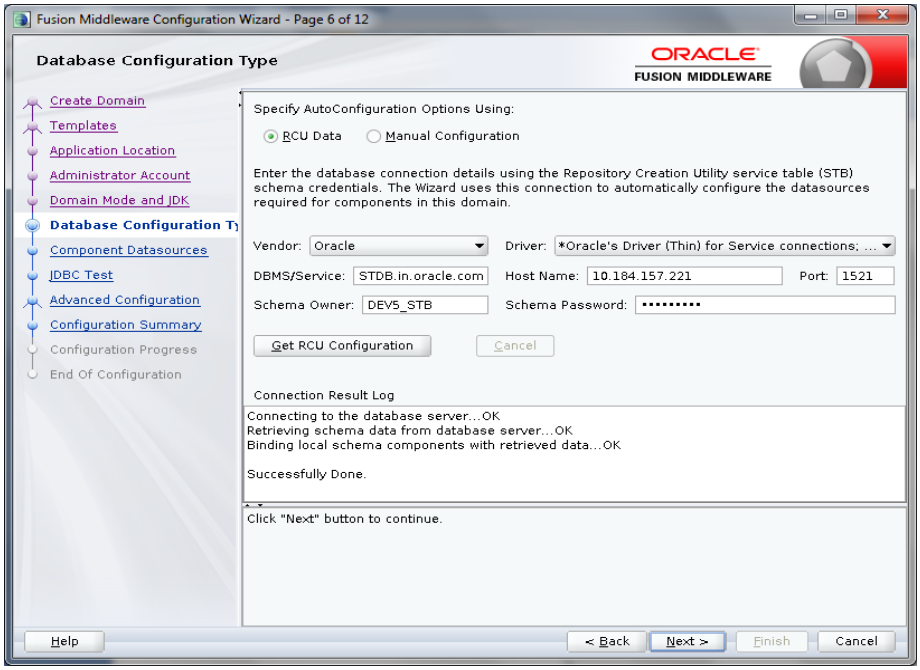
   While choosing Development Mode, select Development under **Domain Mode.**



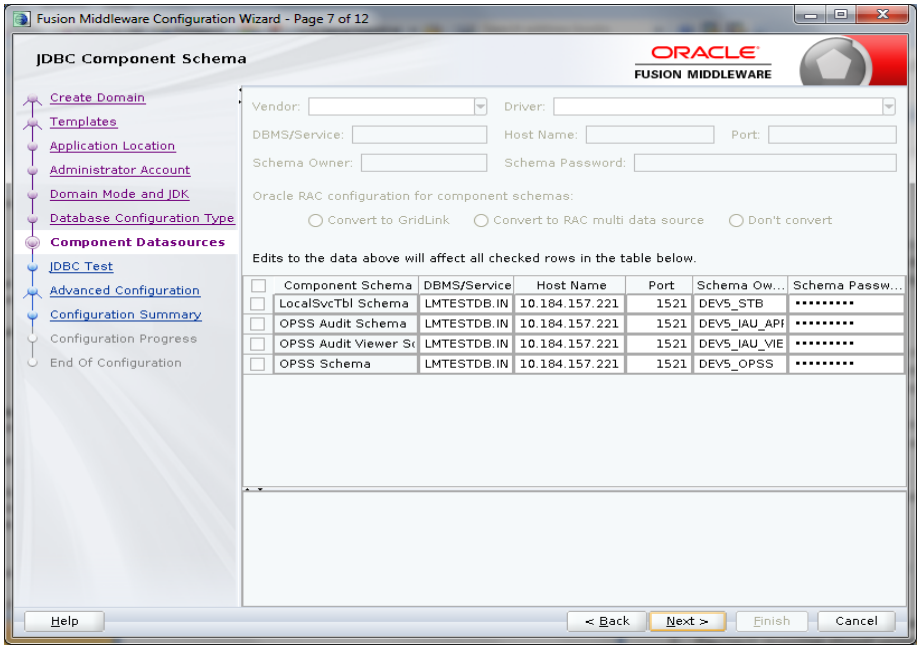
10. Database Configuration Type Screen will appear, Select **RCU Data**. Give the RCU (Repository Creation Utility) Details that you have created already**. If not created use the Repository Creation Utility Manual and Create a Schema Owner.** Enter the rest of the details as follows:

    - *Vendor:* Oracle
    - *Driver:* Oracle's Driver (Thin) for Service connections
    - *DBMS/Service:* Enter the Service Name of your DB
    - *Host Name:* Enter the IP address of the system where your DB is installed
    - *Port:* Enter the Port Number of your DB
    - *Schema Owner:* Enter the Schema Owner created while RCU setup with suffix _STB. Here DEV5 is the Schema Owner, suffix with _STB it will be DEV5_STB as Schema Owner
    - *Schema Password:* Enter the password as given while creating the RCU

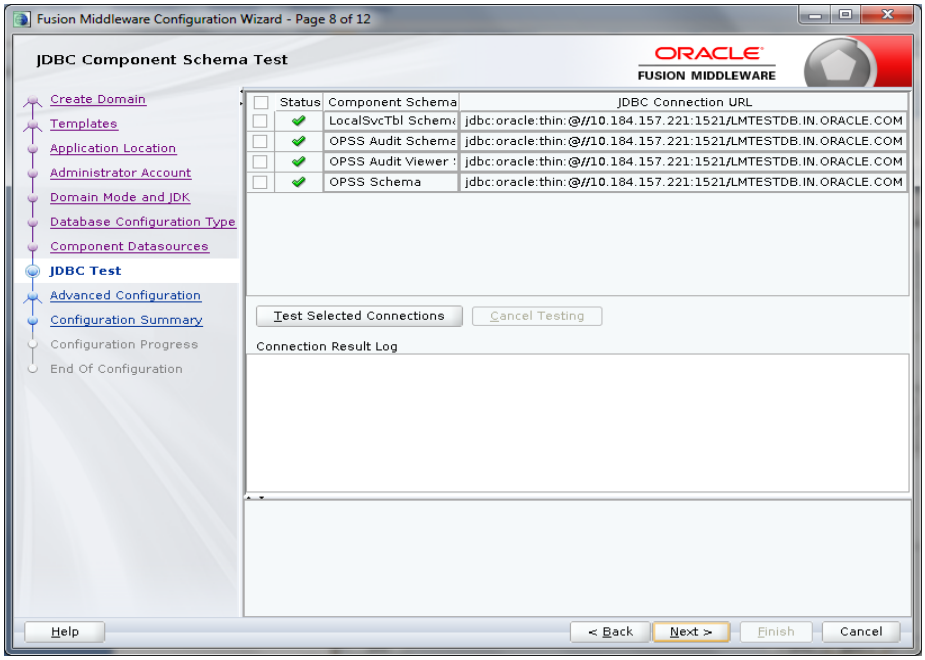
    Click on **Get RCU Configuration**, if successfully done move to **Next** Step.



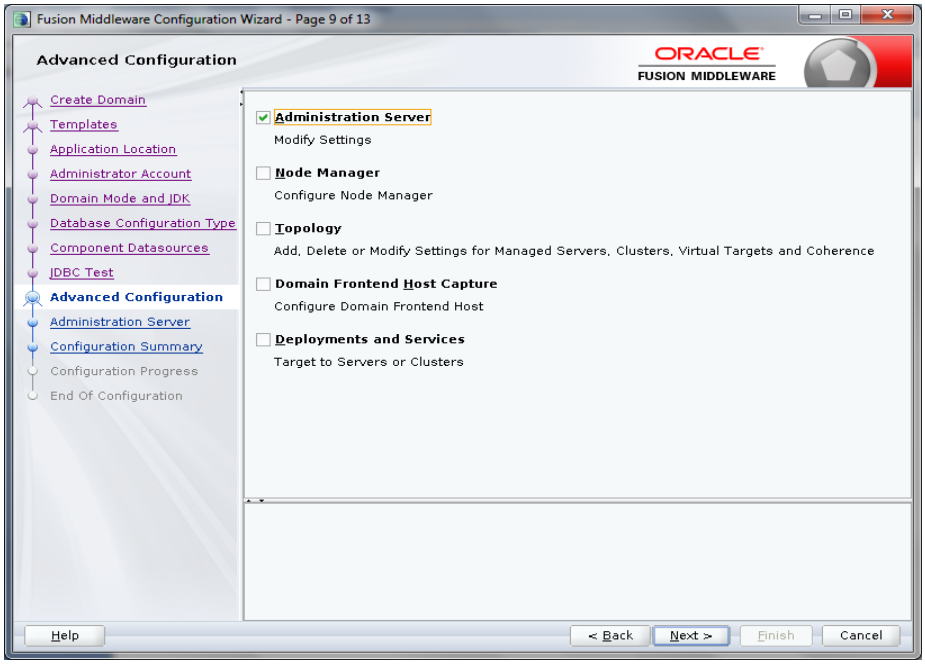
11. Now Component Data Sources screen will appear. Following data will appear on the screen. Following data will appear on the screen. Click **Next**.



12. JDBC Test screen will appear. Following data will appear on the screen, review it. Click **Next**.



13. Advanced Configuration screen will appear. Tick in front of Administration Server and click on **Next**.



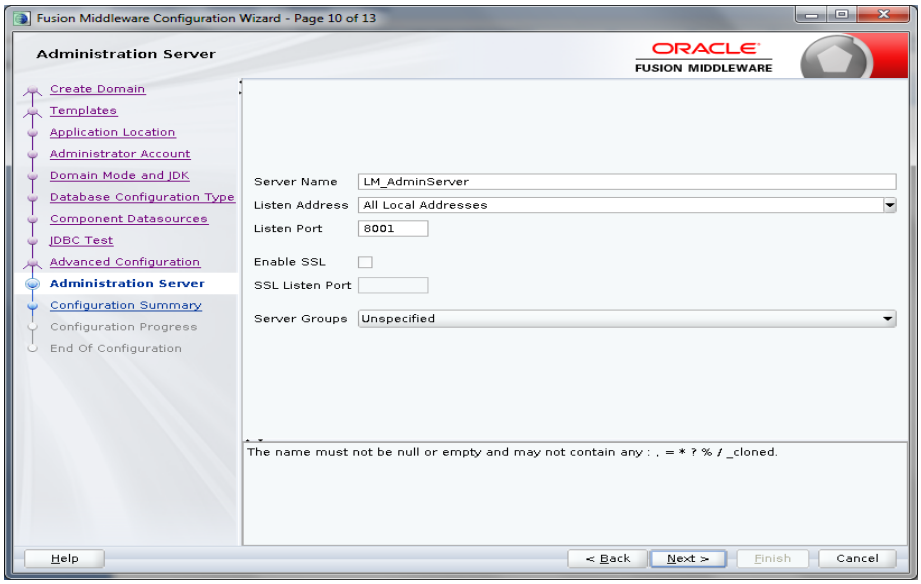
14. Administration Server screen will appear. Give the following details in the screen.

    Server Name: LM_AdminServer

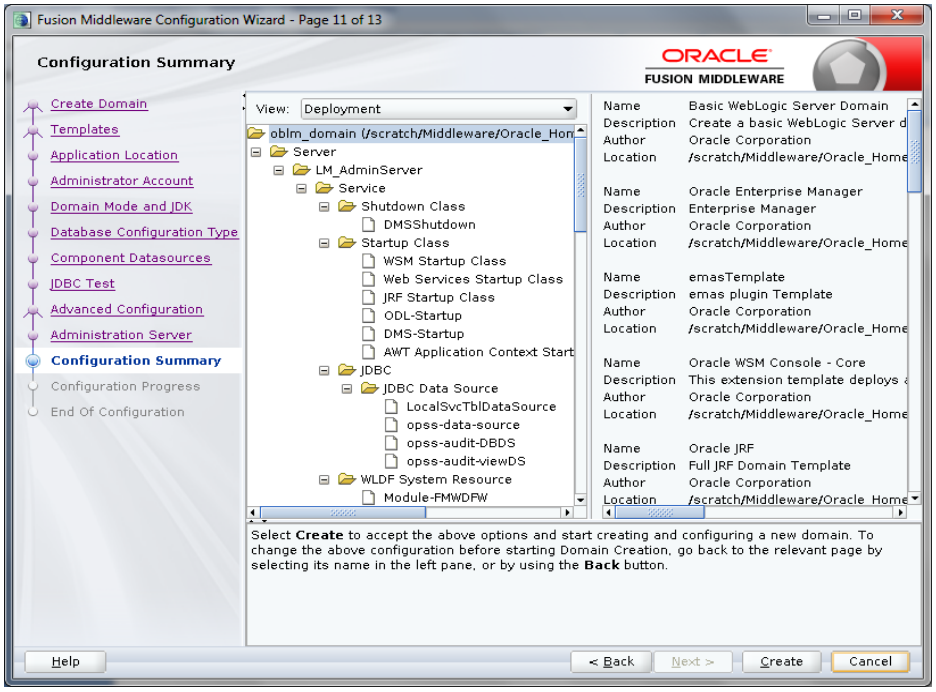
    Listen Address: Select ‘All Local Addresses’

    Listen Port: 8001

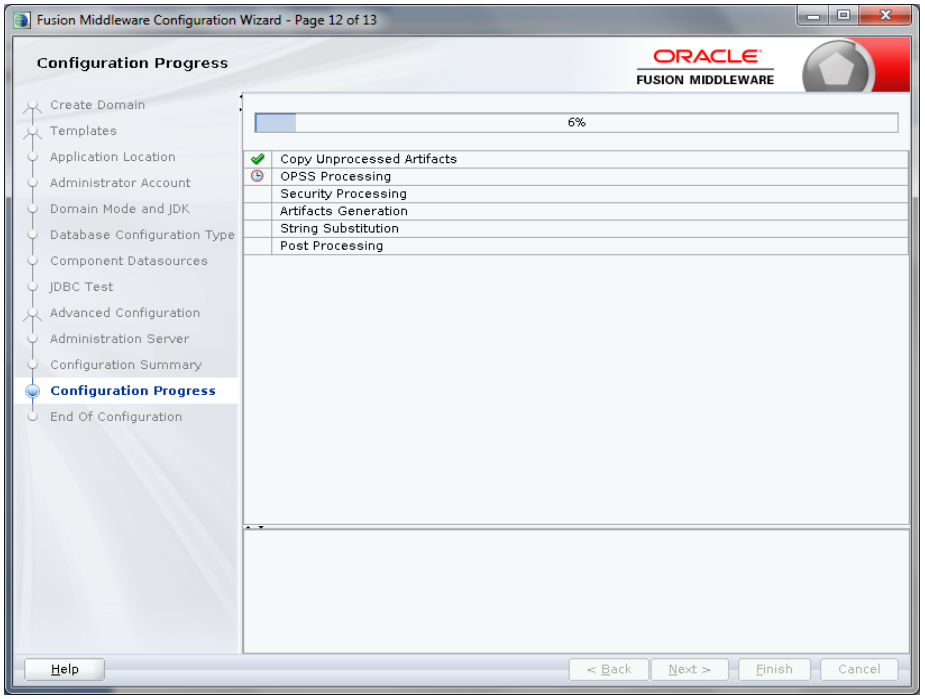
    Server Groups: unspecified

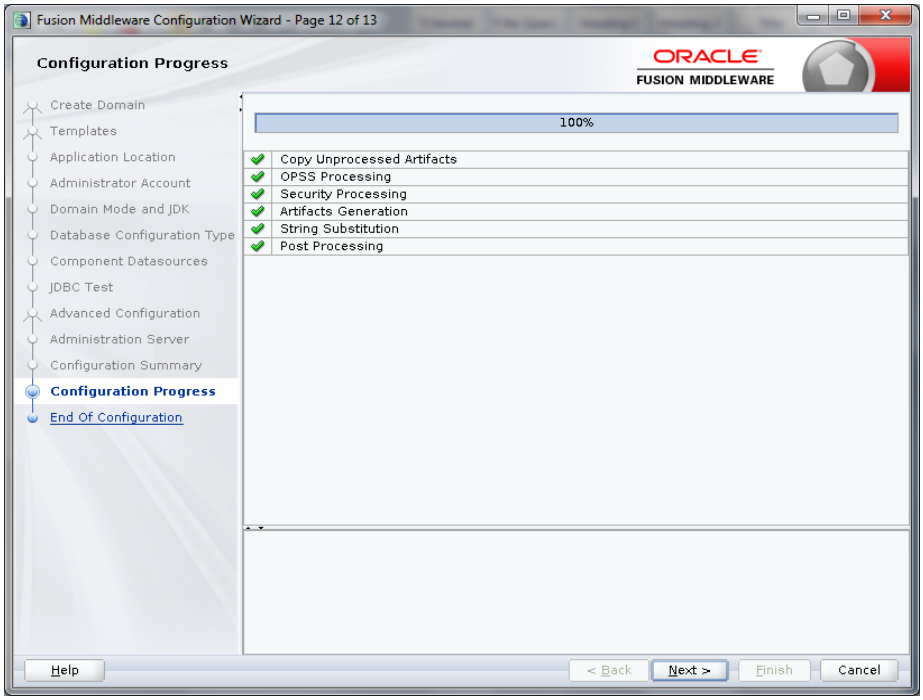


15. Configuration Summary screen will appear. Review and click **Create.**

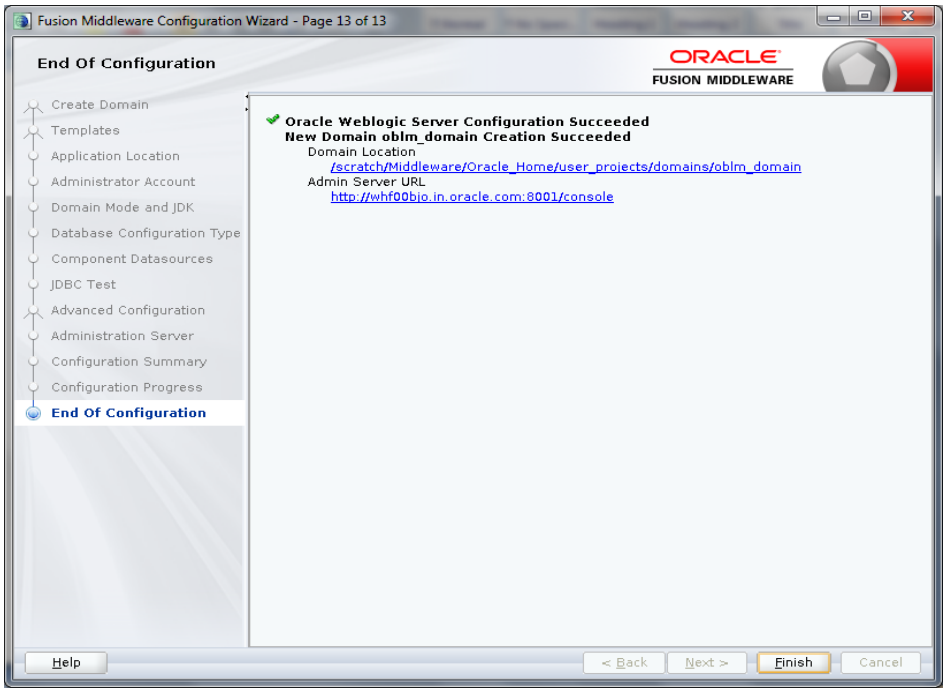


16. Now the following screens will come





17. End of configuration screen will come and click **finish**.



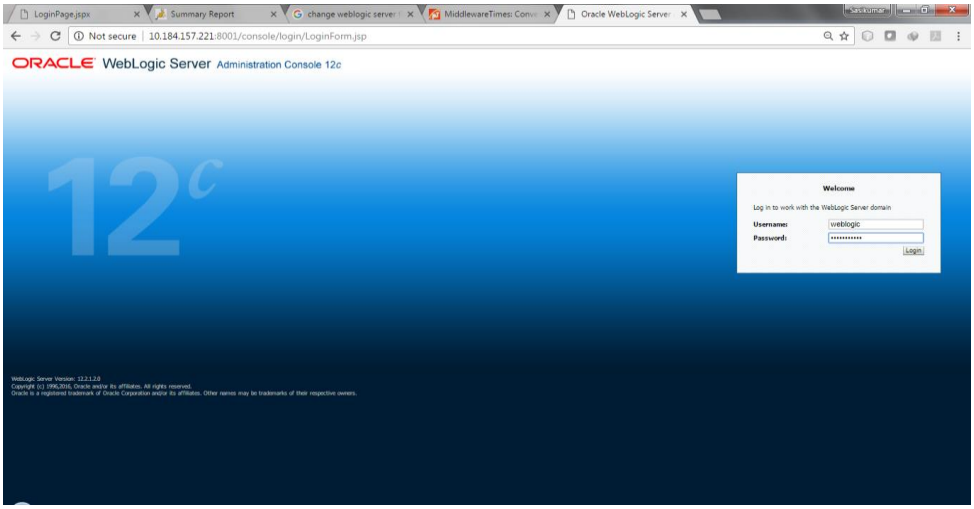
2. Liquidity Management Application Configuration

2.1 Introduction

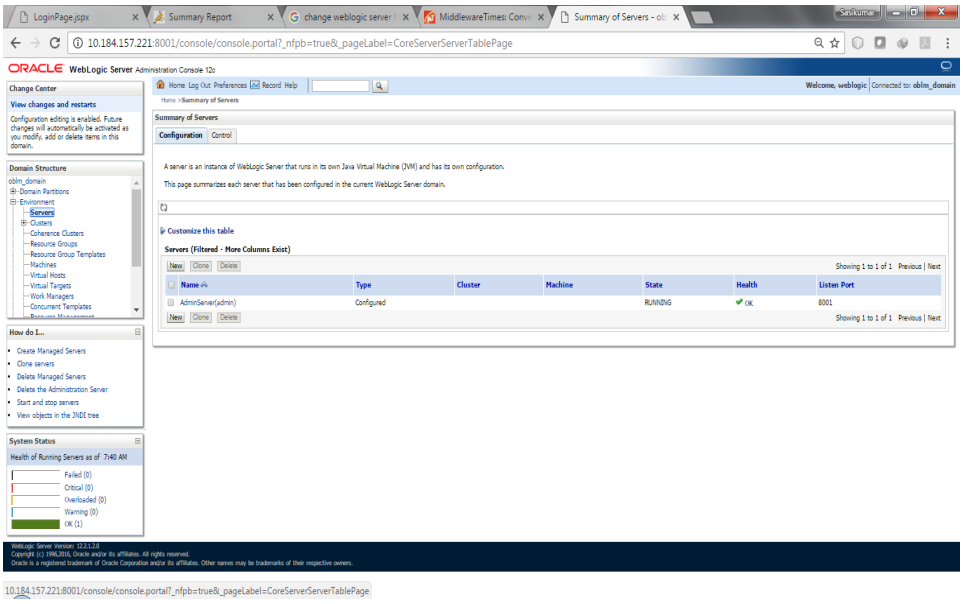
In this part basically, we will do configuration of Weblogic Administrative console.

2.2 Steps to be followed for configuration of Administrative console

1. Give the credential in the console page that you have set in Administrator Account screen.



2. Now we can see home screen. In home screen in the left side you will find Domain Structure column. Go to Environment and click on sever under that.



2.2.1 Create Managed Server

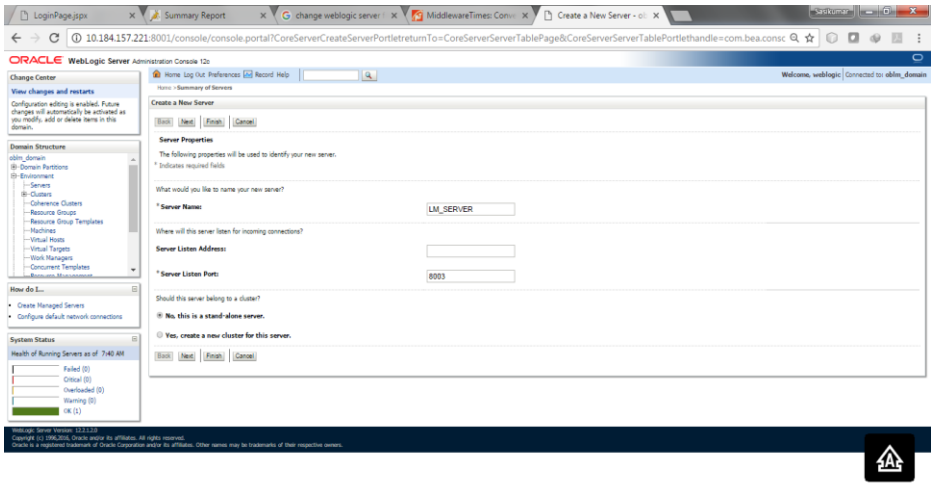
1. Click on **New** to create a new server.

   Enter the following details.

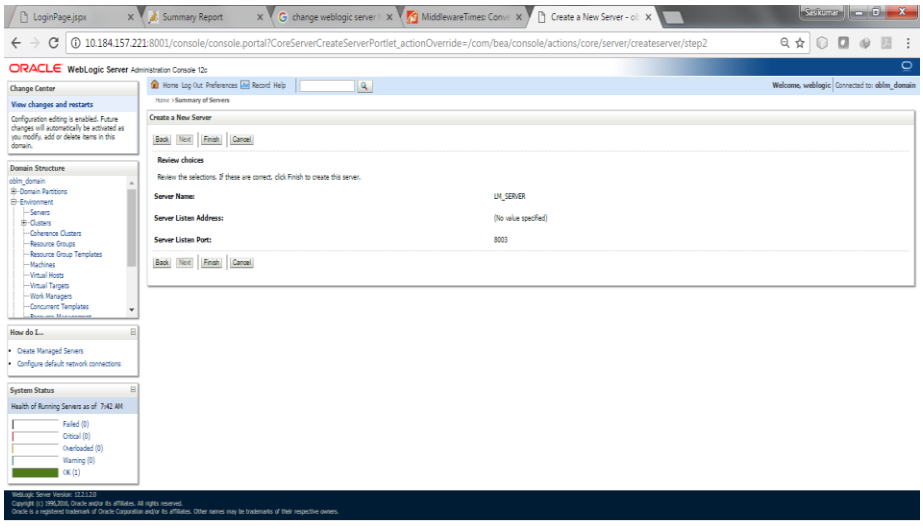
   Server Name : LM_SERVER

   Server Listen Port: 8003

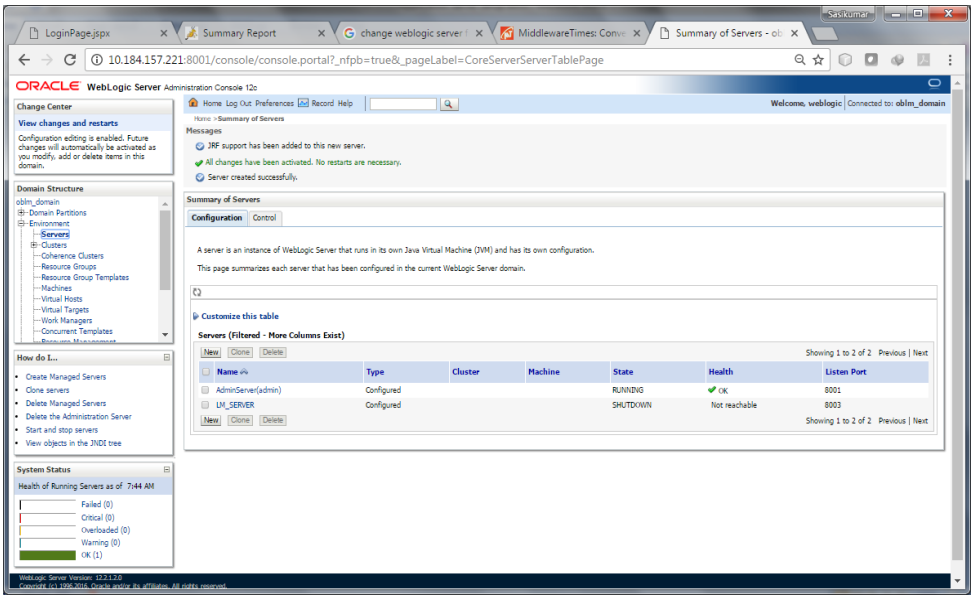
   Leave other fields as it is.



2. Click Next. The following screen will come.

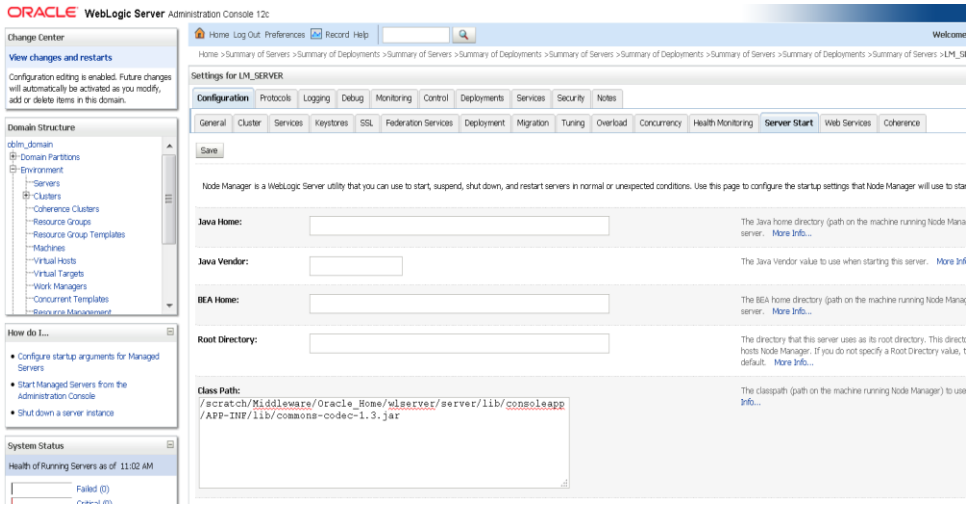


3. Click on **finish**. The following screen will come.



4. **Click** LM_SERVER, Under **Configuration** click the **Server Start** Menu,

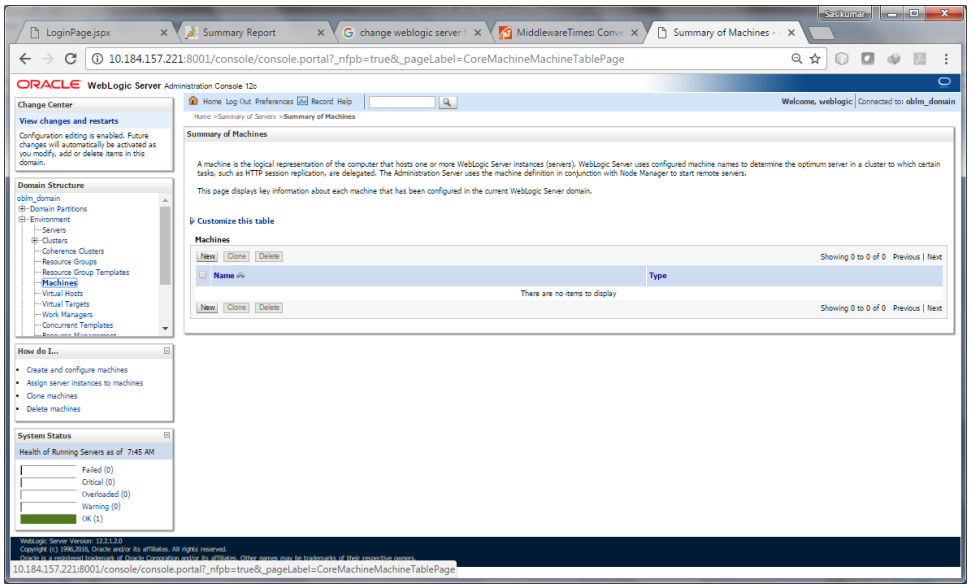
In **Class Path** field add the following Jar path **/<<weblogic home>>/wlserver/server/lib/consoleapp/APP-INF/lib/commons-codec-1.3.jar**



5. Click on **Save**.

2.2.2 Create Machine

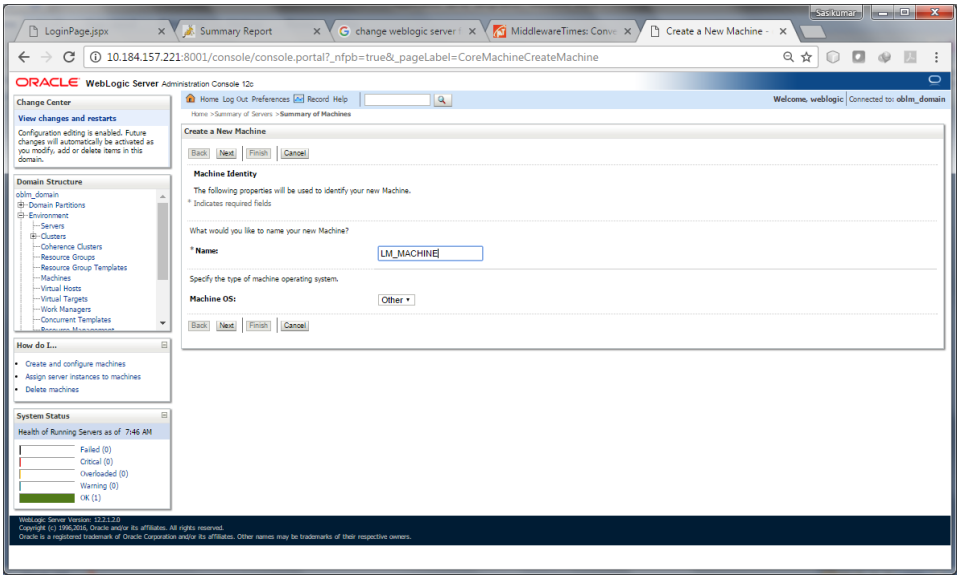
1. Under **Environment** click on **Machine** then following screen will come. Click on **New**.



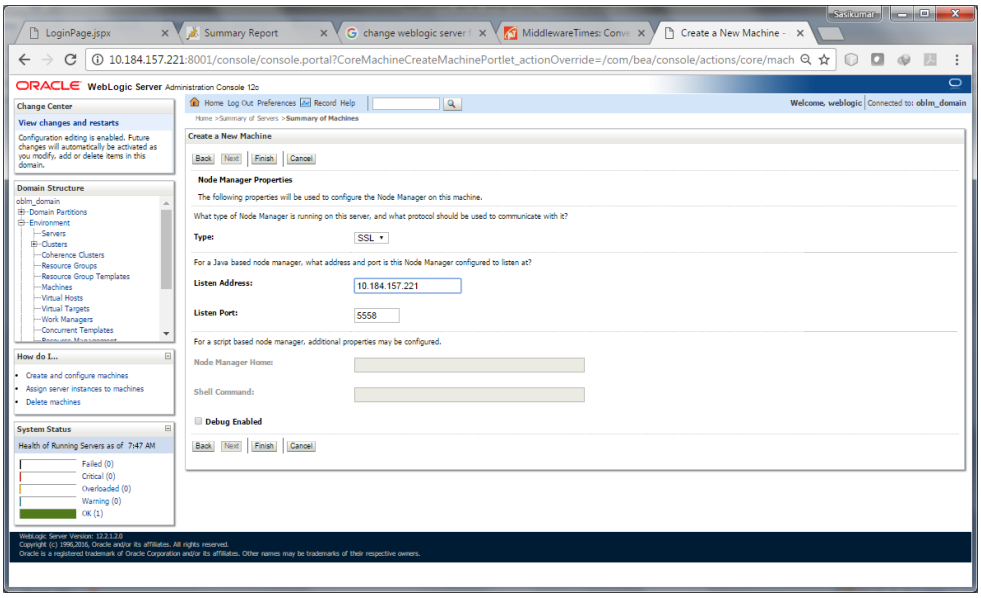
2. Give the following details.

Name: **LM_MACHINE**

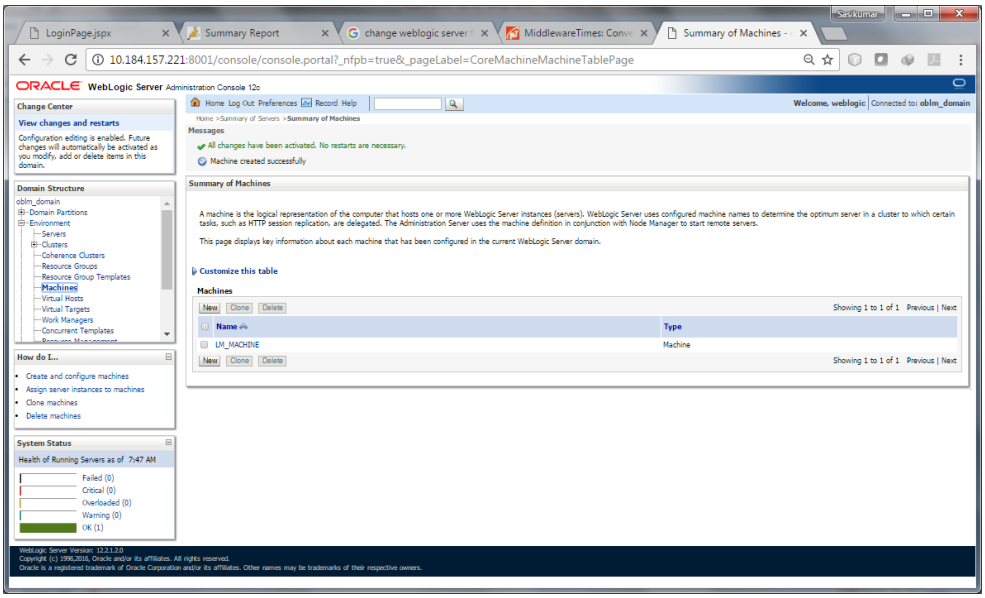
Machine OS: **others**



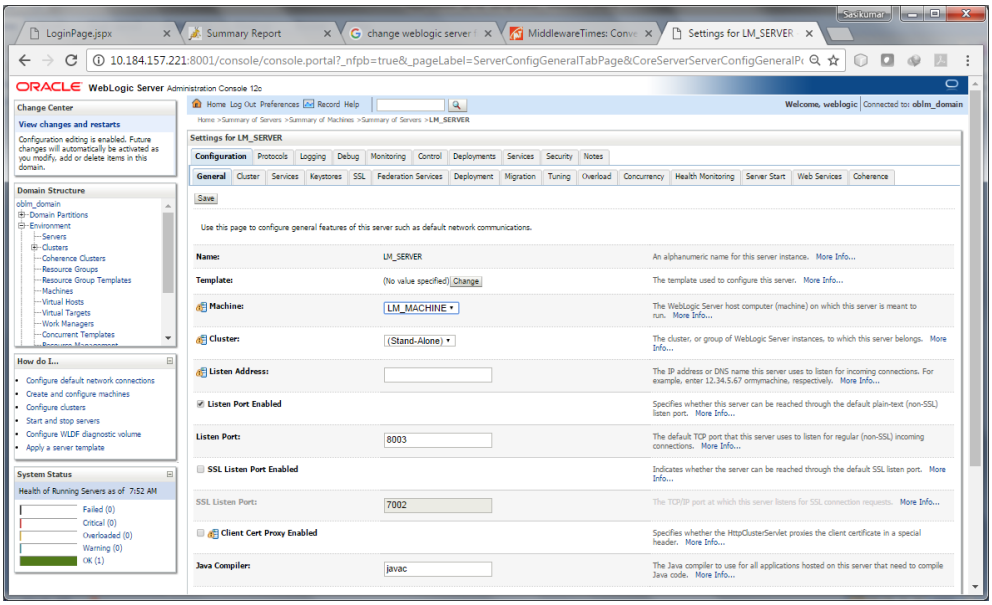
3. Click on **Next**. Enter "**localhost"** or the I.P. Address of the system as Listen **Address.** Click on **Finish.**



4. **LM_Machine** is created



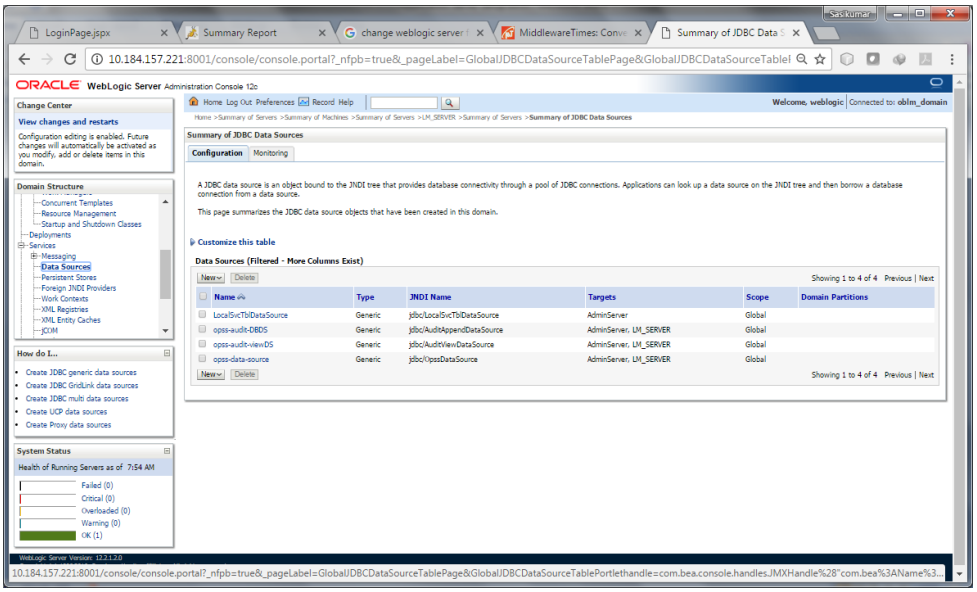
5. Map **LM_SERVER** to **LM_MACHINE**



2.2.3 Create Data Source

2.2.3.1 Create LM Data source

1. Click on the Data Sources under Services



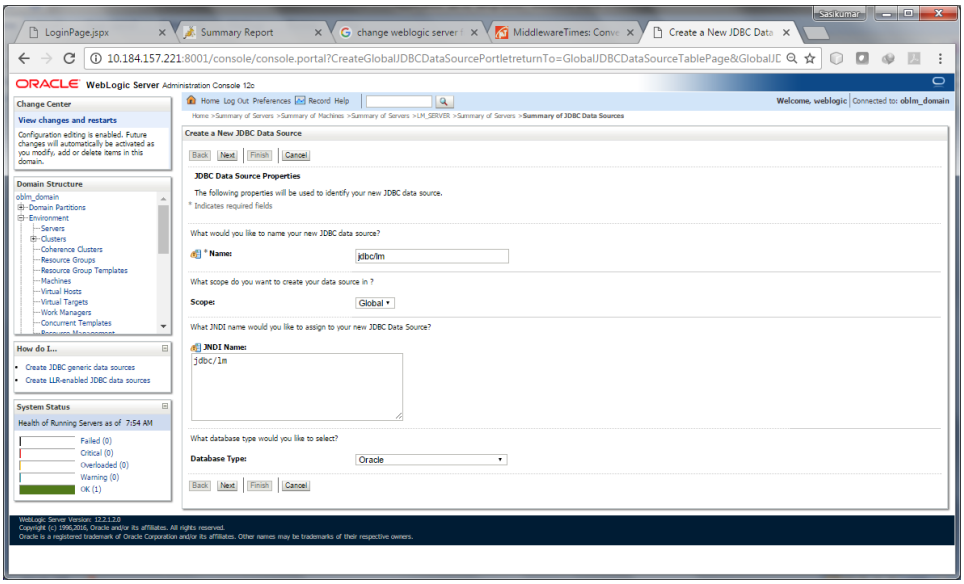
2. Click on **New** and select **Generic Data Source**

3. Give the below details:

   Give the JDBC Data Source Properties

   Name: jdbc/lm (Same name has to be maintained)
   Scope: Global
   JNDI Name: jdbc/lm (Same name has to be maintained)
   Database Type: Oracle

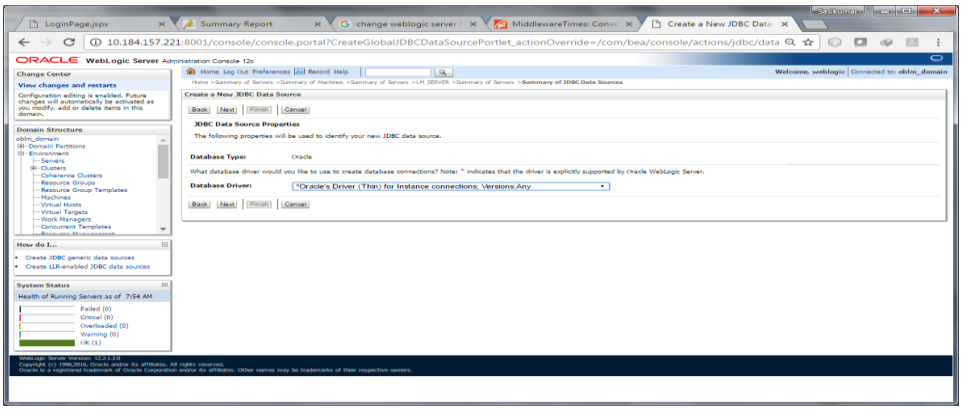
Note: Since all the **persistance.xml** and **fcubs.properties** files are referring to the above mentioned JNDI Name, It is recommended not to use any other JNDI Name.



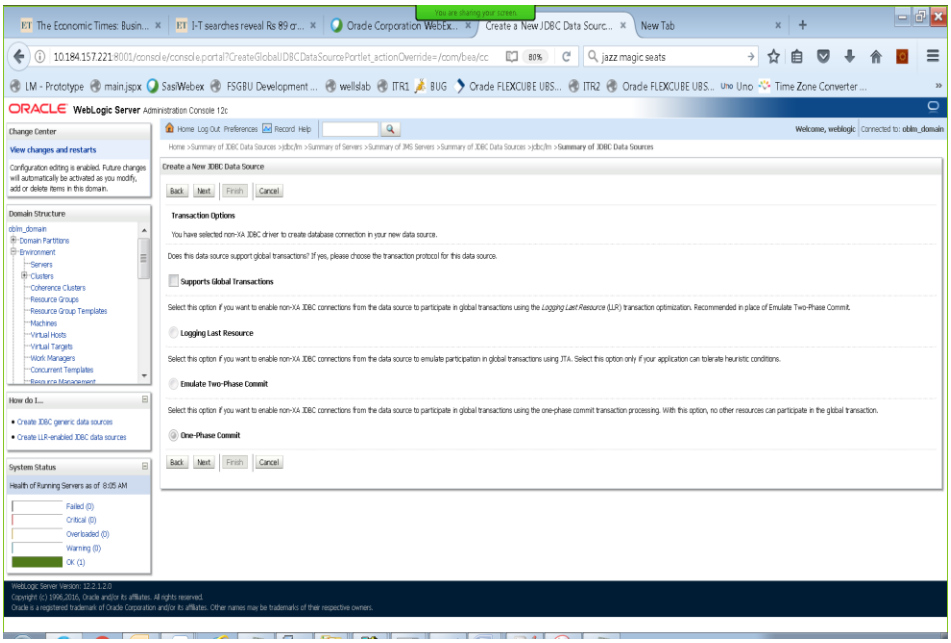
4. Choose Database Driver as Oracle's Driver (Thin) for instance Connections; Version: Any

   For Constant Databases(CDB) follow Step 3 – Step 7

   For Pluggable Database(PDB) follow Step 8 – Step 12

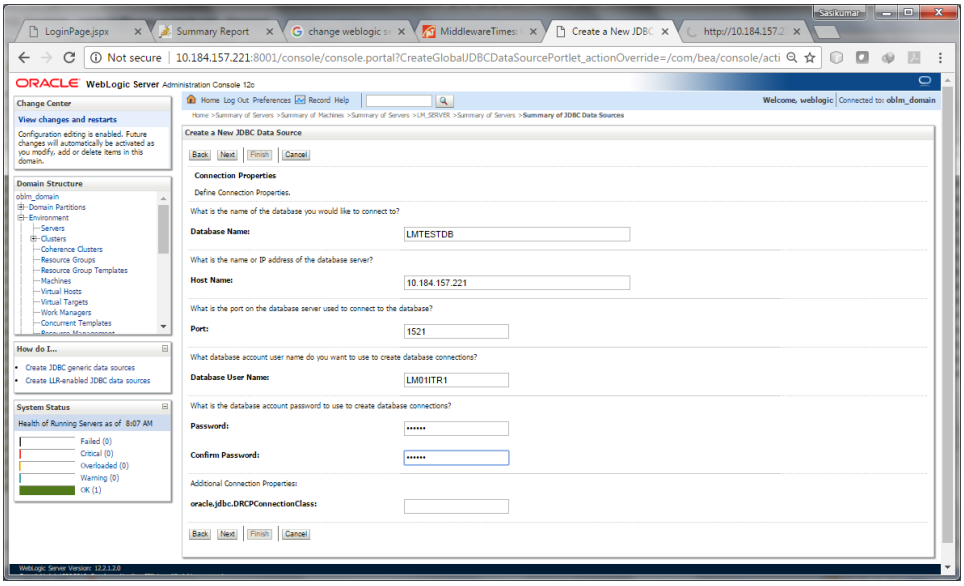


5. Un-check **Supports global transactions**

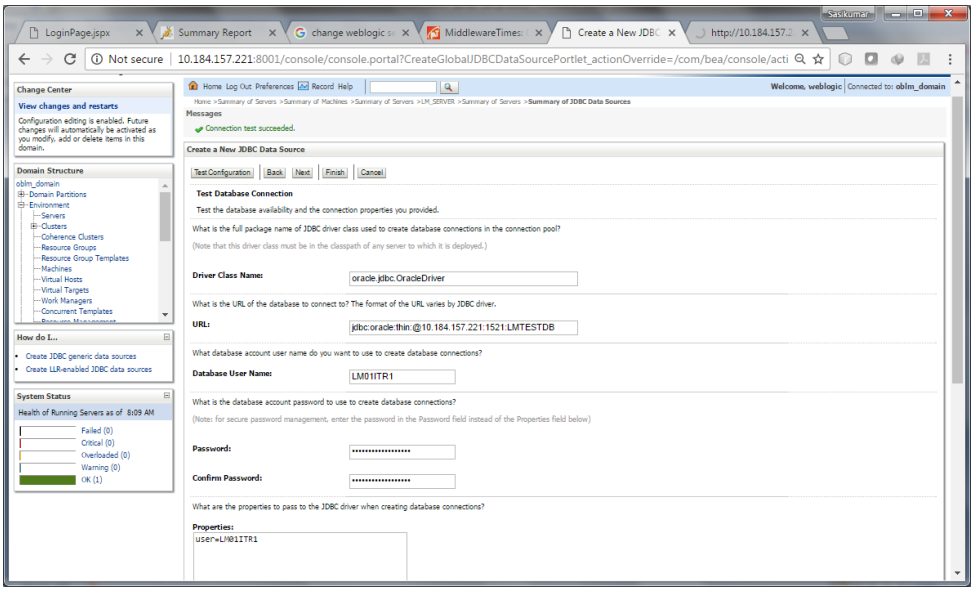


6. Give the **Connection Properties**, Example below

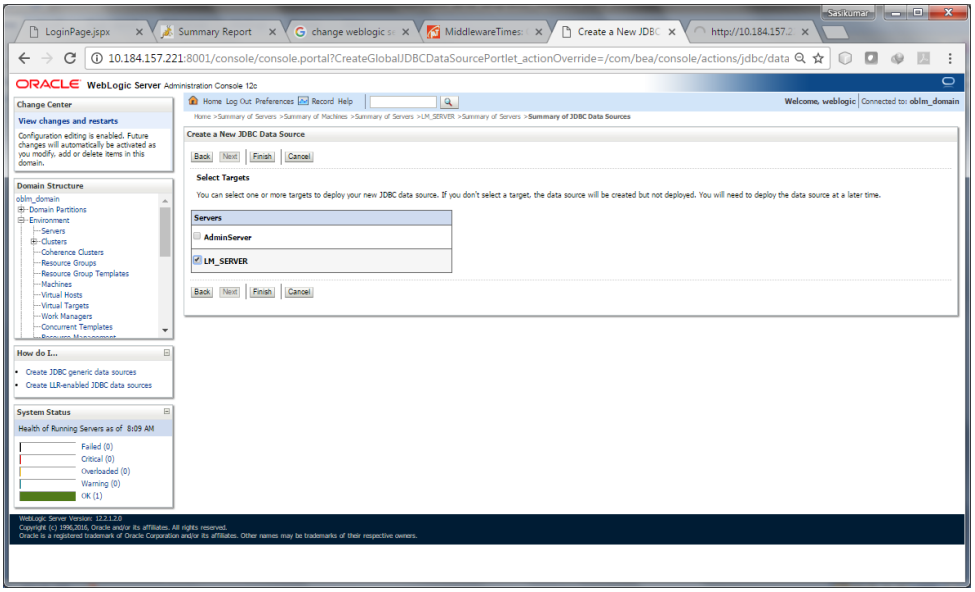
   Database Name: **LMTESTDB**
   Host Name: **10.184.157.221**
   Port: **1521**
   Database User Name: **LM01ITR1**
   Password: **LMDB**

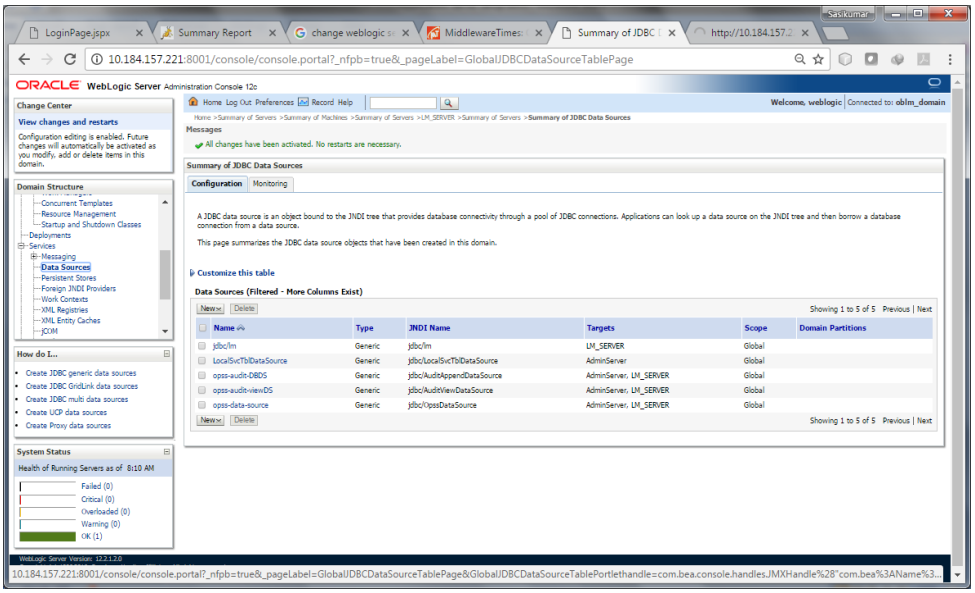


7. Test Database Connection by clicking the **Test Configuration** button.

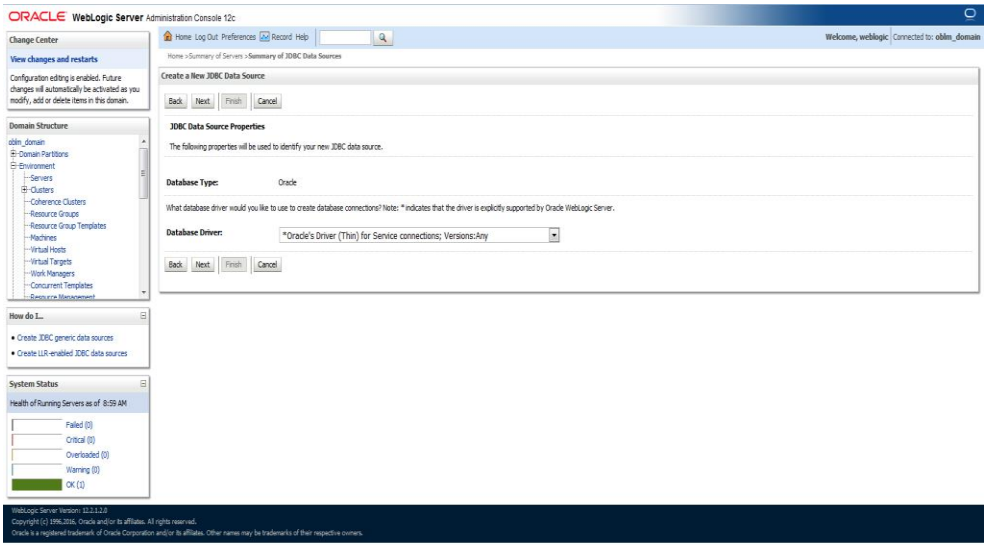


8. Click **Next** and Choose the **Target Server** and Click **Finish** button.

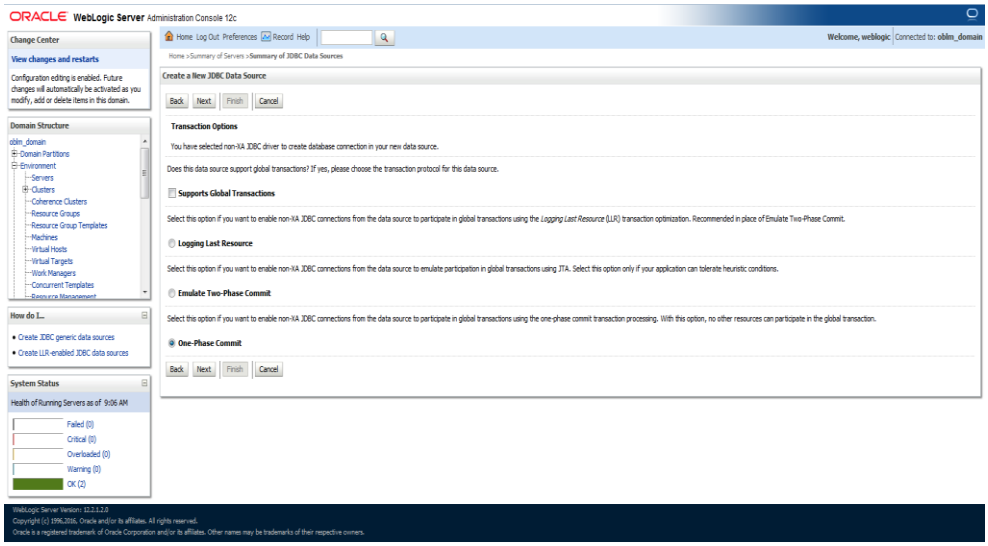




9. Choose Database Driver as Oracle's Driver (Thin) for service Connections; Version: Any

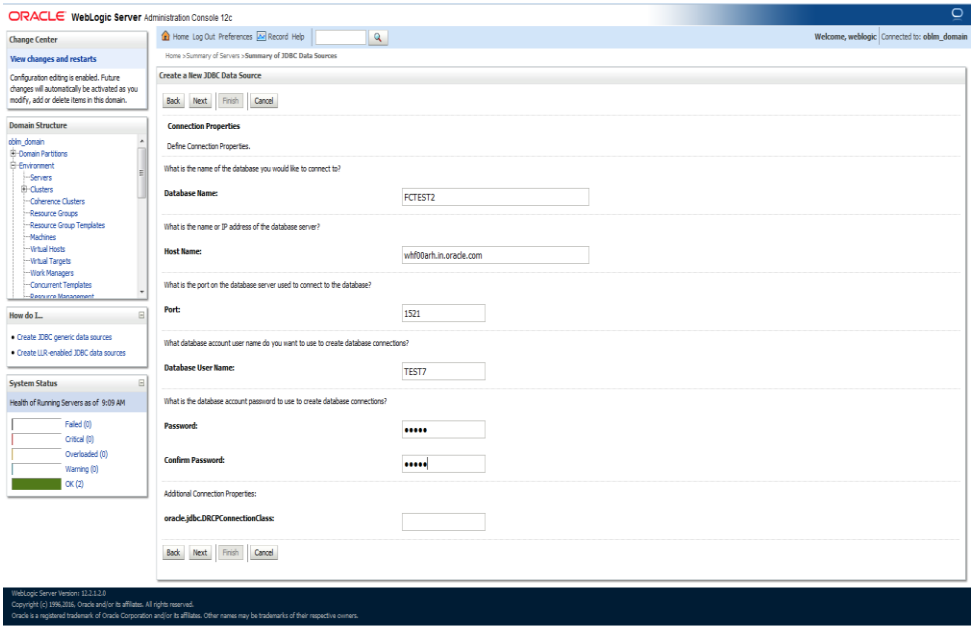

ORACLE WebLogic Server Administration Console 12c
Home Log Out Preferences Record Help
Welcome, weblogic Connected to: oblm_domain
Home >Summary of Servers >Summary of JDBC Data Sources
Change Center
View changes and restarts
Configuration editing is enabled. Future changes will automatically be activated as you modify, add or delete items in this domain.
Domain Structure
oblm_domain
Domain Partitions
Environment
Servers
Clusters
Coherence Clusters
Resource Groups
Resource Group Templates
Machines
Virtual Hosts
Virtual Targets
Work Managers
Concurrent Templates
How do I...
Create JDBC generic data sources
Create LLR-enabled JDBC data sources
System Status
Health of Running Servers as of 8:59 AM
Failed (0)
Critical (0)
Overloaded (0)
Warning (0)
OK (1)
Create a New JDBC Data Source
Back Next Finish Cancel
JDBC Data Source Properties
The following properties will be used to identify your new JDBC data source.
Database Type: Oracle
What database driver would you like to use to create database connections? Note: * indicates that the driver is explicitly supported by Oracle WebLogic Server.
Database Driver: *Oracle's Driver (Thin) for Service connections; Versions:Any
Back Next Finish Cancel
WebLogic Server Version: 12.2.1.2.0
Copyright (c) 1996,2016, Oracle and/or its affiliates. All rights reserved.
Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

10. Un-check **Supports global transactions**

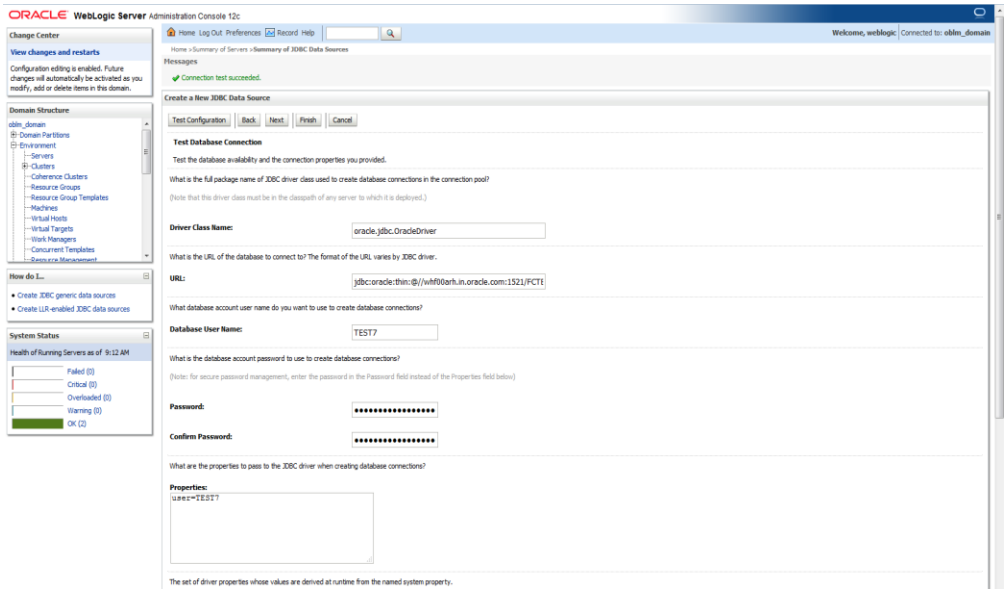


11. Give the **Connection Properties**, Example below

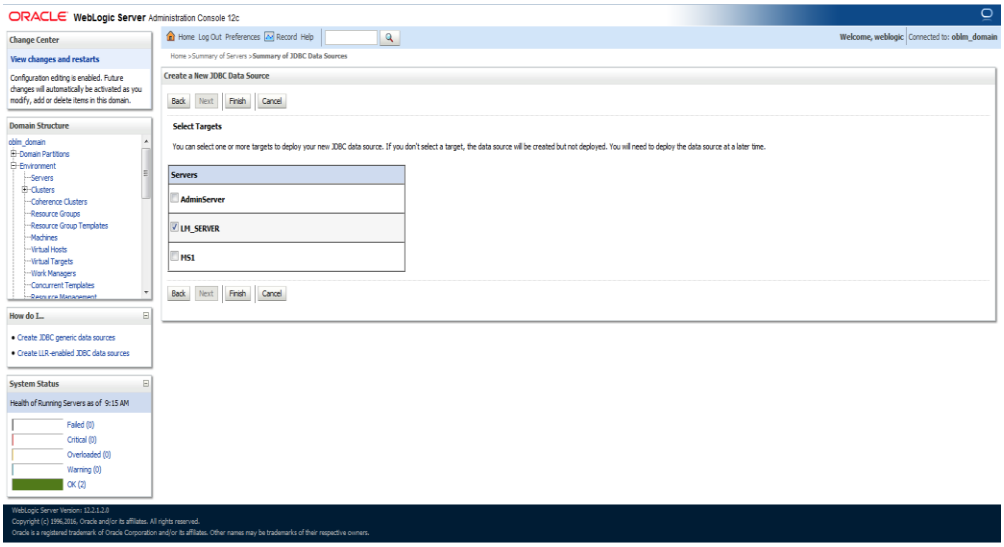
Database Name: **FCTEST2**
Host Name: **whf00arh.in.oracle.com**
Port: **1521**
Database User Name: **TEST7**
Password: **TEST7**

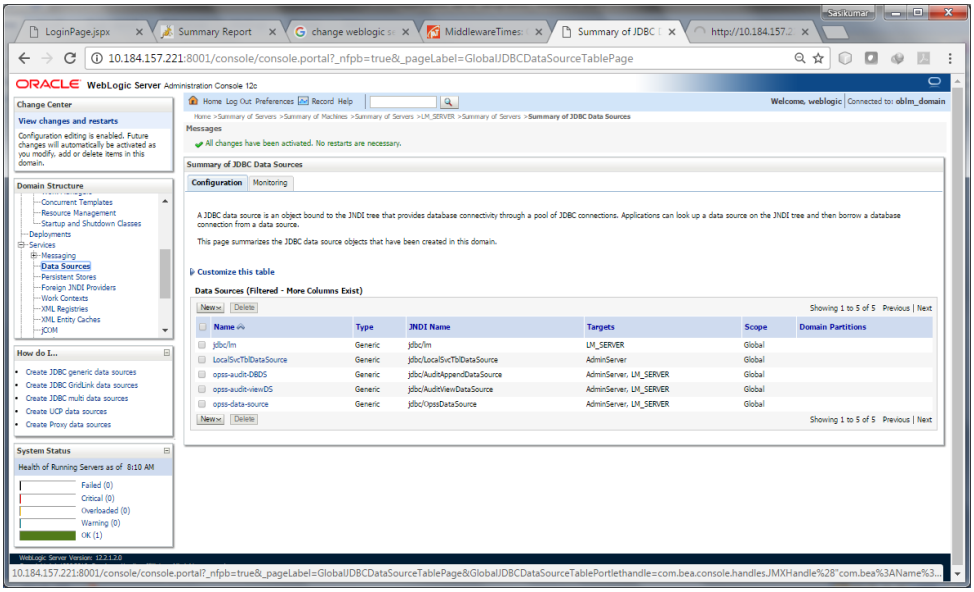


11. Test Database Connection by clicking the **Test Configuration** button.



12. Click **Next** and Choose the **Target Server** and Click **Finish** button.





Create FLEXCUBE DDA data source following the same steps mentioned above.

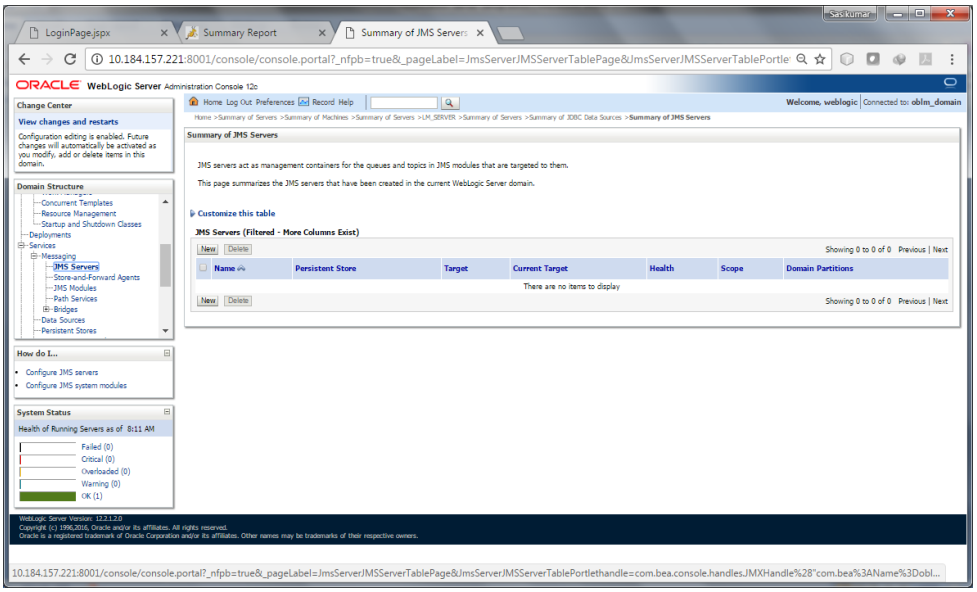
1. Create a new Data Source as mentioned in above section using below details.

   Give the JDBC Data Source Properties

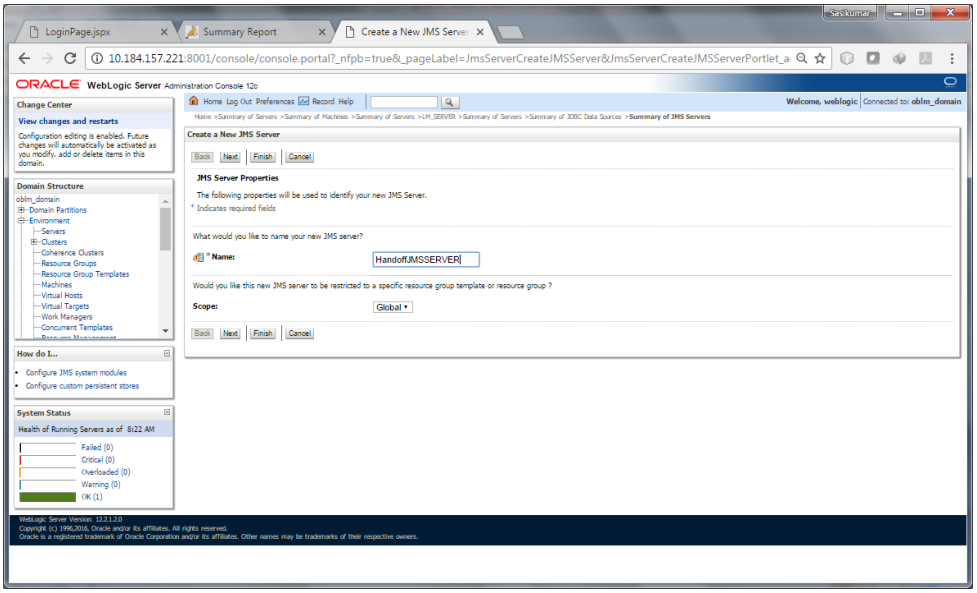
   Name: **jdbc/fcjdevDS**
   Scope: **Global**
   JNDI Name: **jdbc/fcjdevDS**
   Database Type: **Oracle**

2.2.4 Create JMS Server

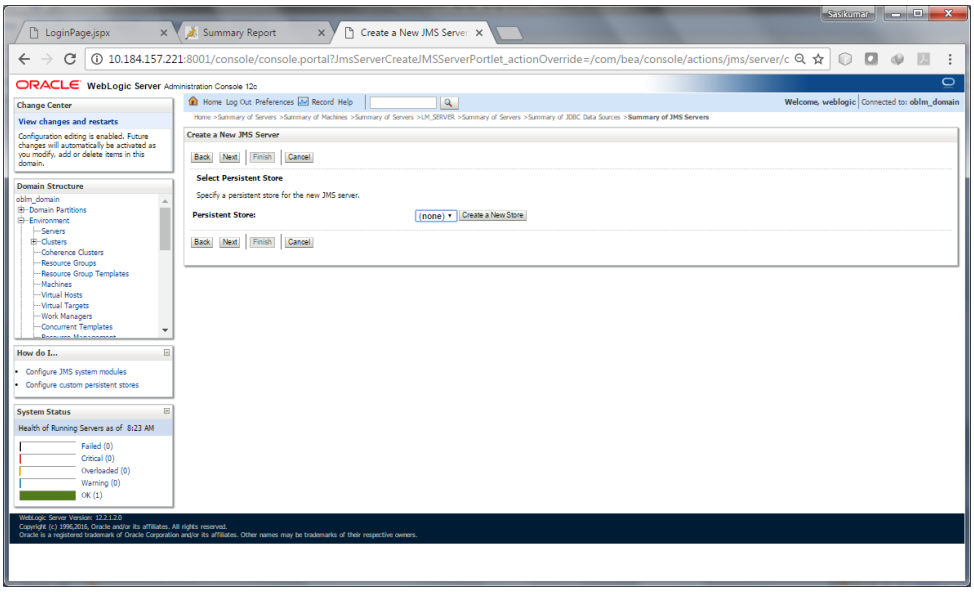
1. Create a **New JMS Server**



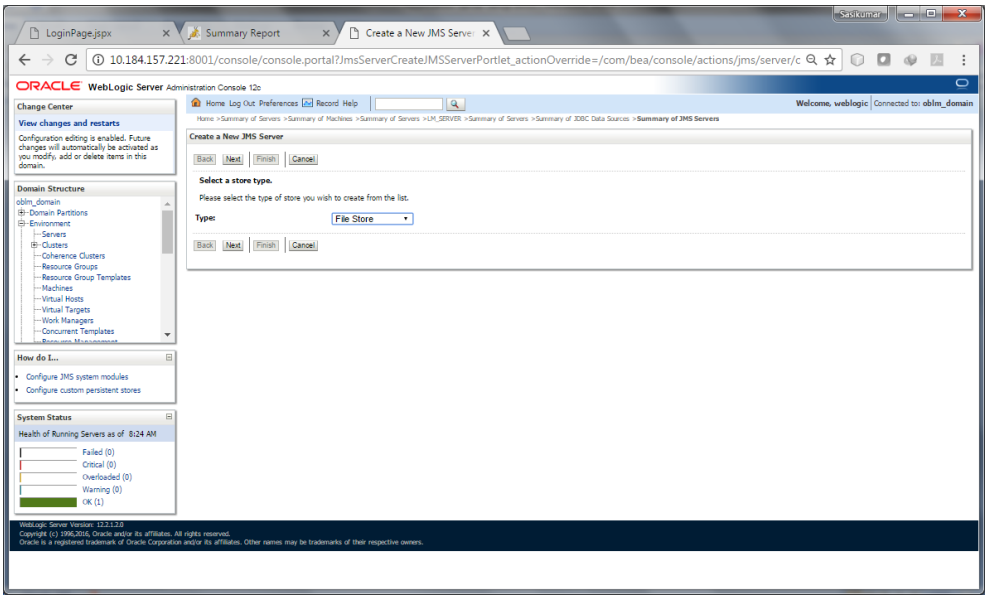
2. Give the **JMS Server Properties** as below



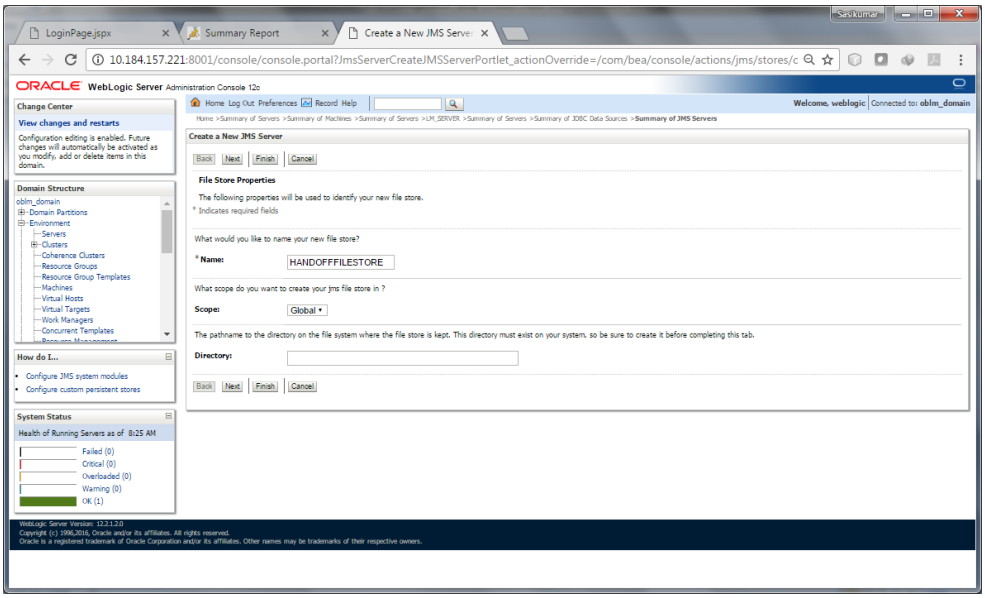
3. Create a **New Persistent Store**



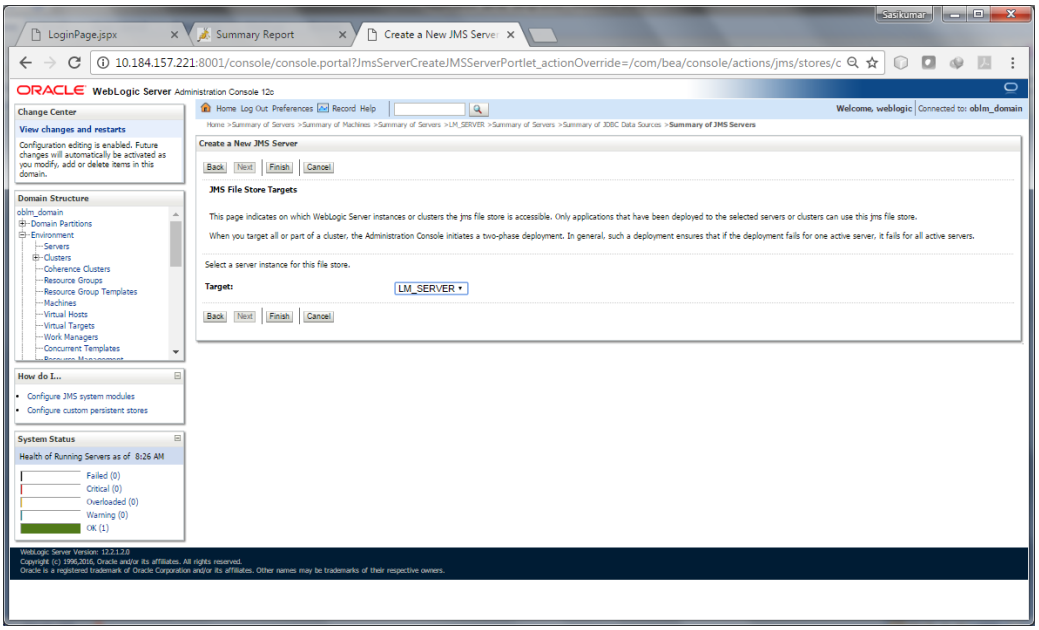
4. Choose **File Store** from the list



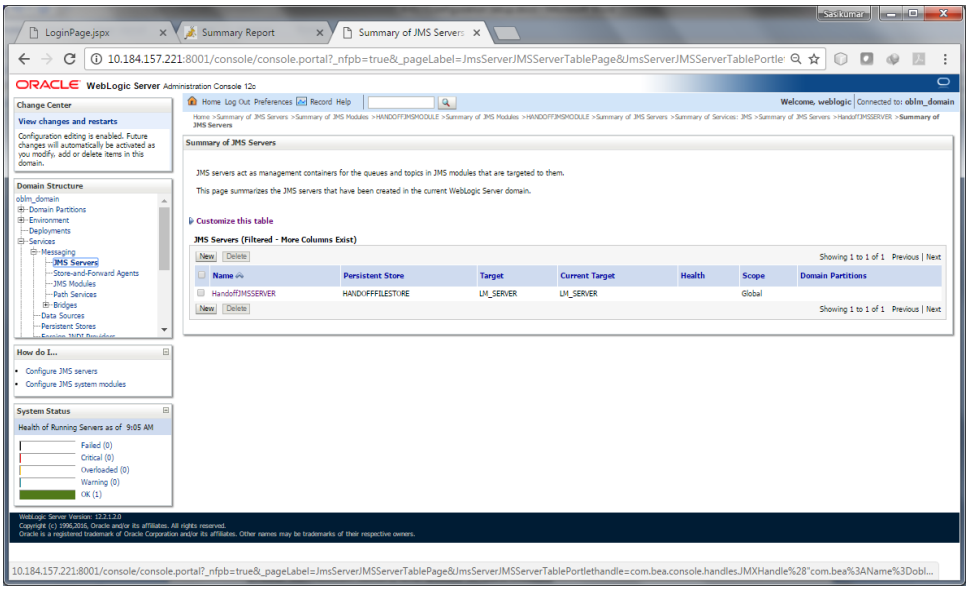
5. Set the **File Store Properties** as below



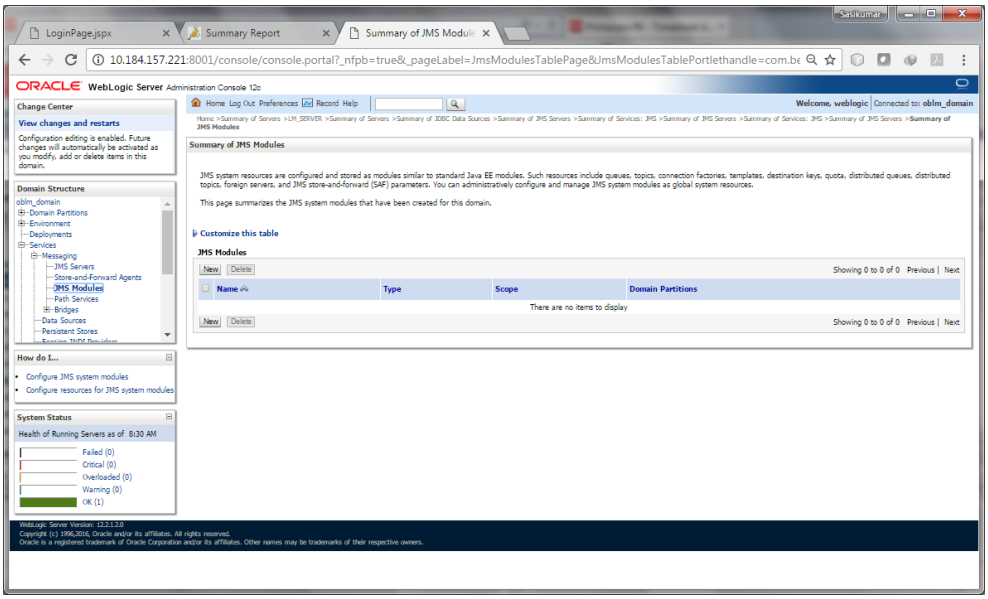
6. Choose the **Target** as the Server that we have created, Example: **LM_SERVER** and Click **Finish**



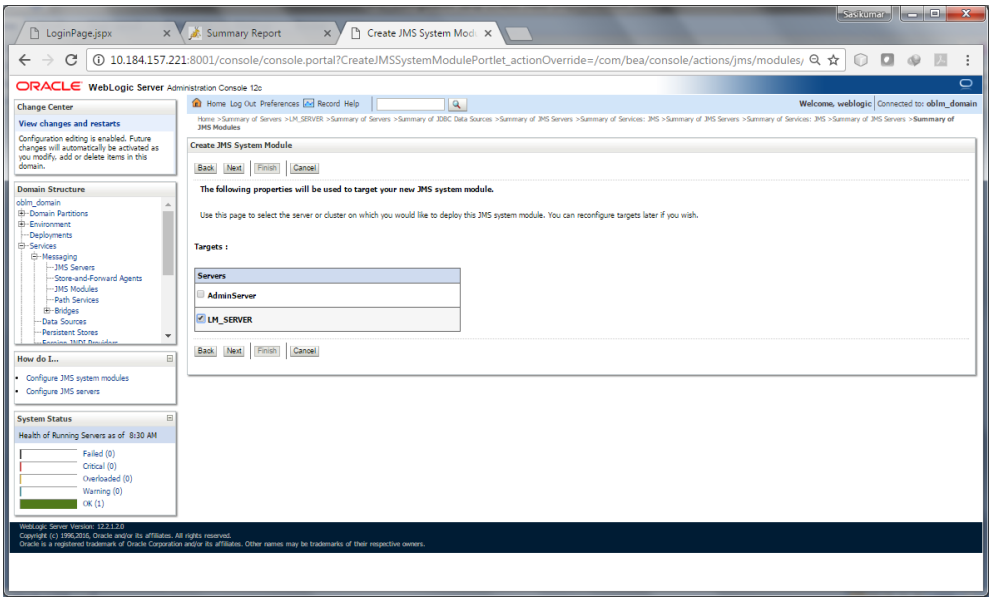
7. **JMS Server** is created



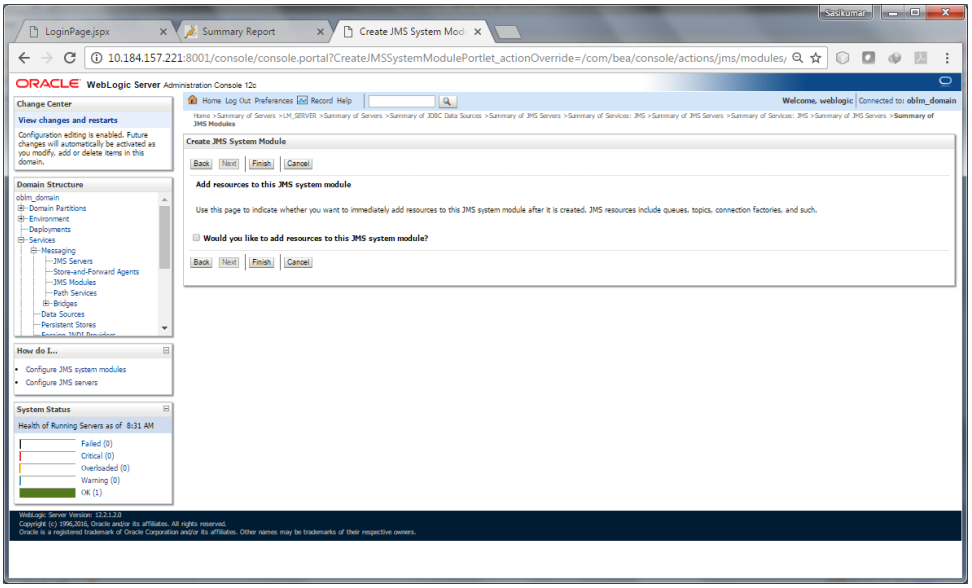
8. Create a New **JMS Module**



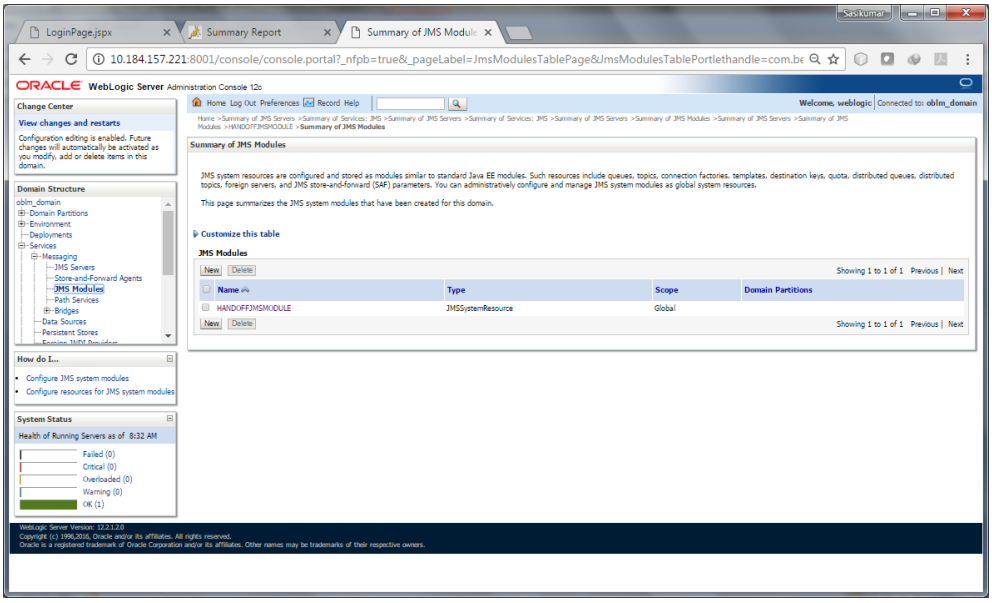
9. Choose the **Target** Server, Example: **LM_SERVER** and Click **Next**



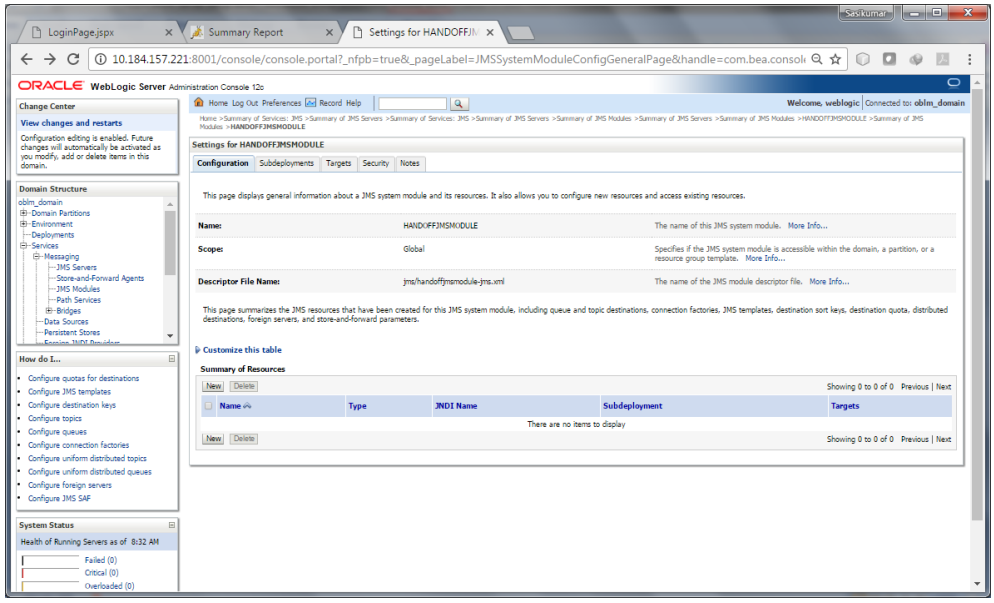
10. Click **Finish**



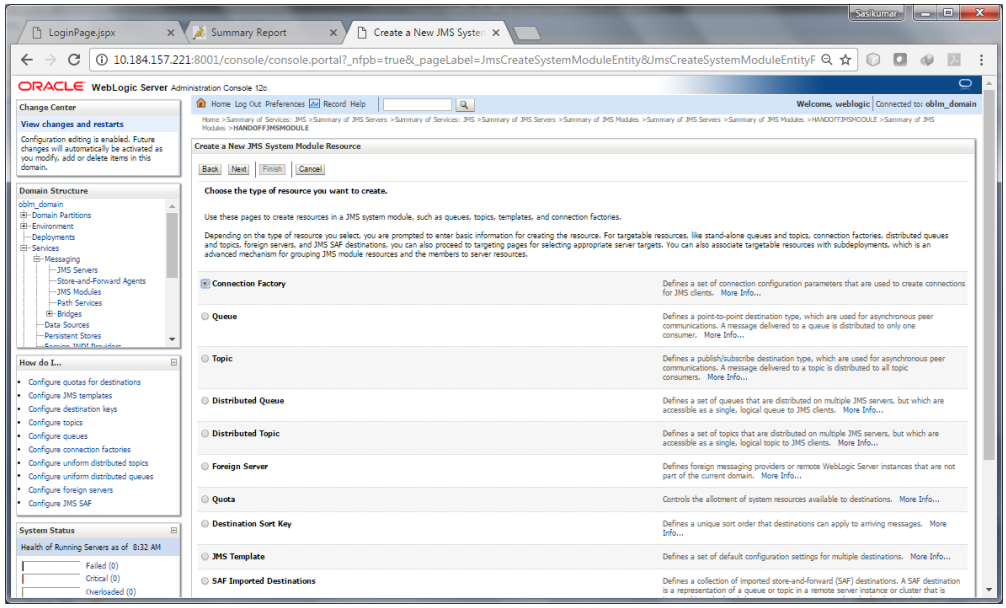
11. Click the **JMS Module** that we created just now



12. Create a **New Resource**



13. Create a **Connection Factory**

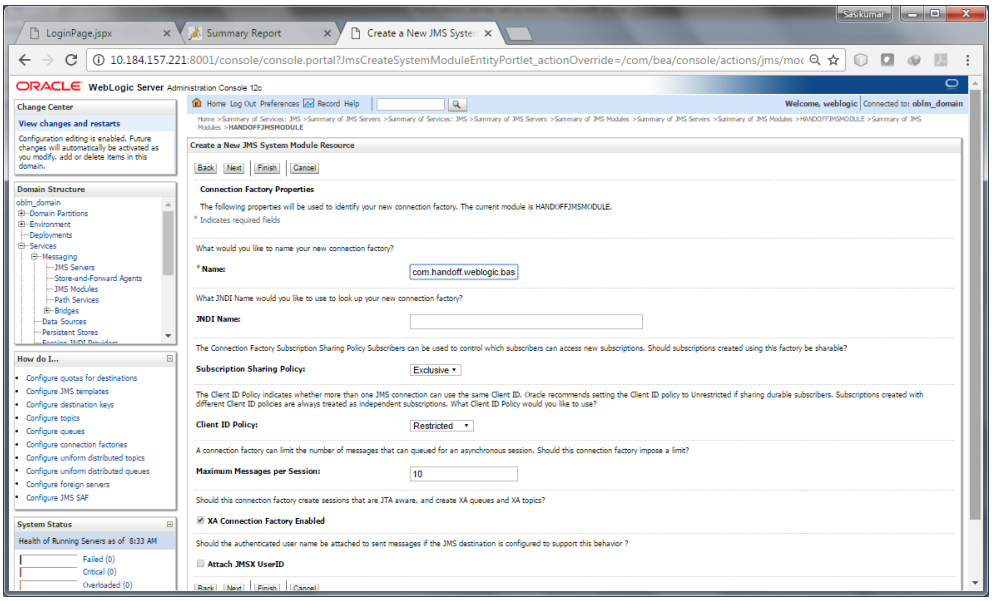


14. Set the Connection Factory Properties as Below

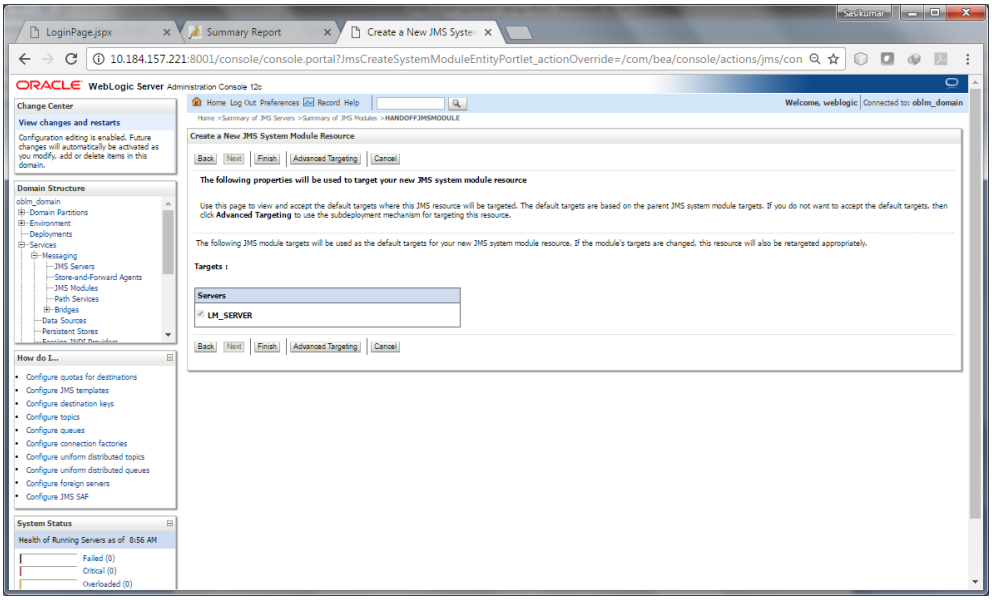
    Name: **com.handoff.weblogic.base.cf**

JNDI Name: **com.handoff.weblogic.base.cf**

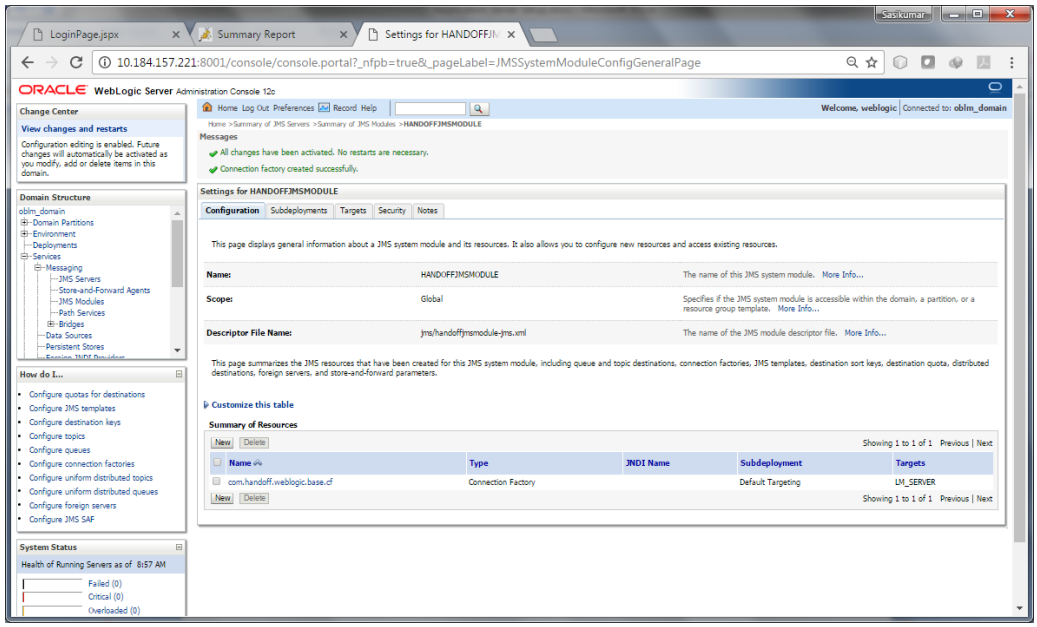
Remaining details give as below and Click **Next**



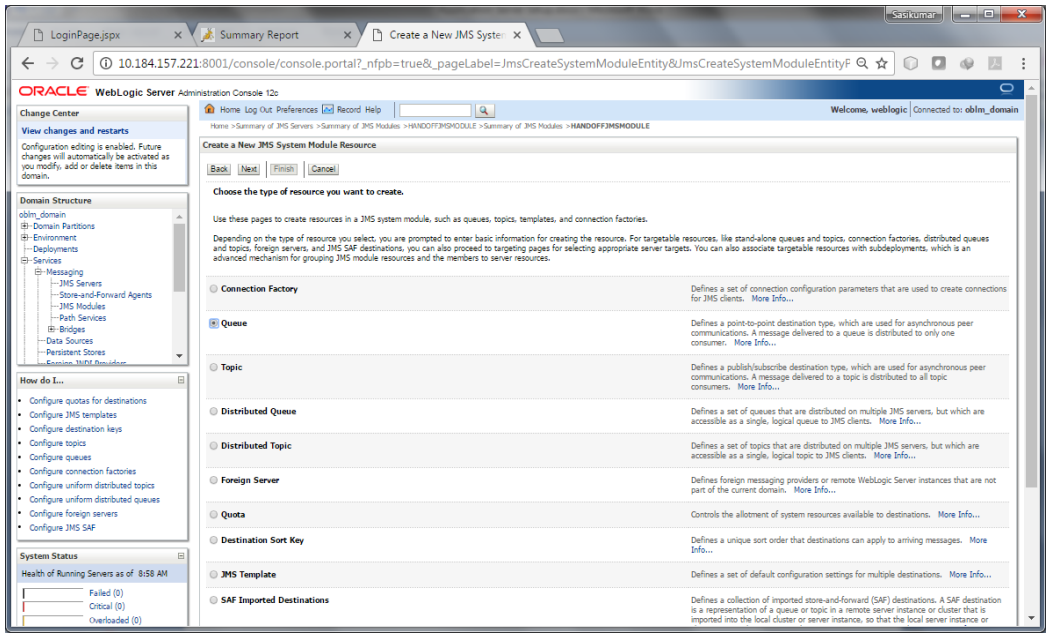
15. Choose the **Target Server**, Example: **LM_SERVER** and Click **Finish**



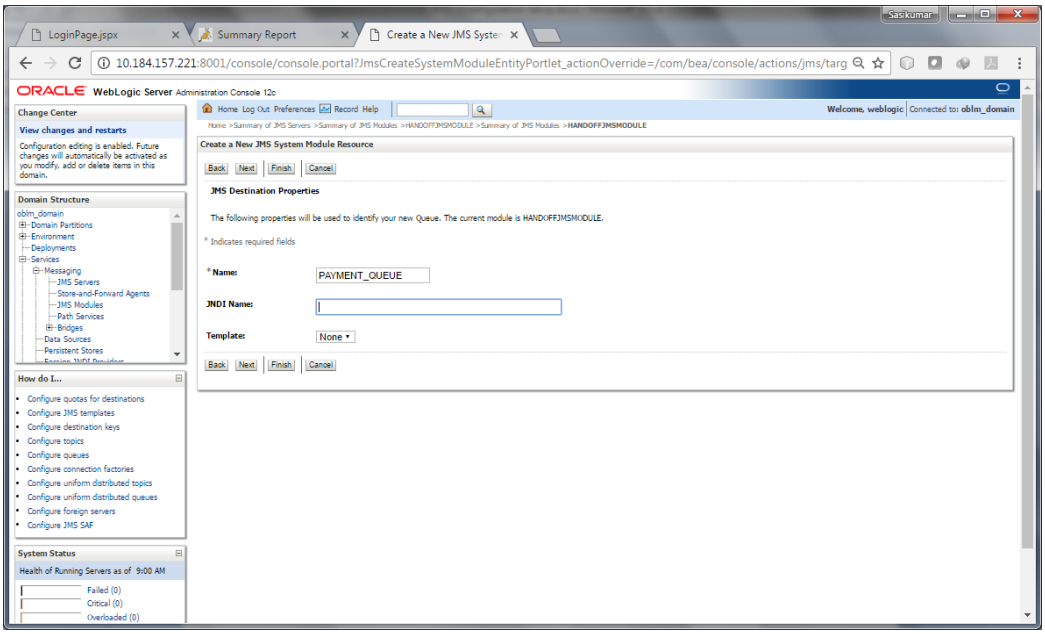
16. We can see the **Connection Factory** Created.



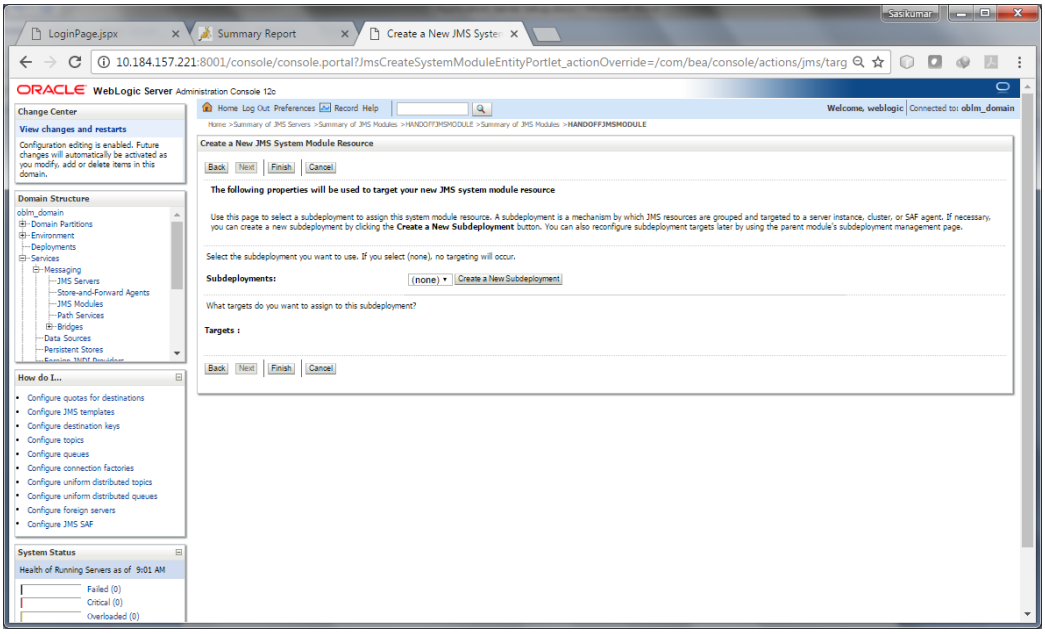
17. Create a **New Queue**, Click **New** and Choose **Queue**



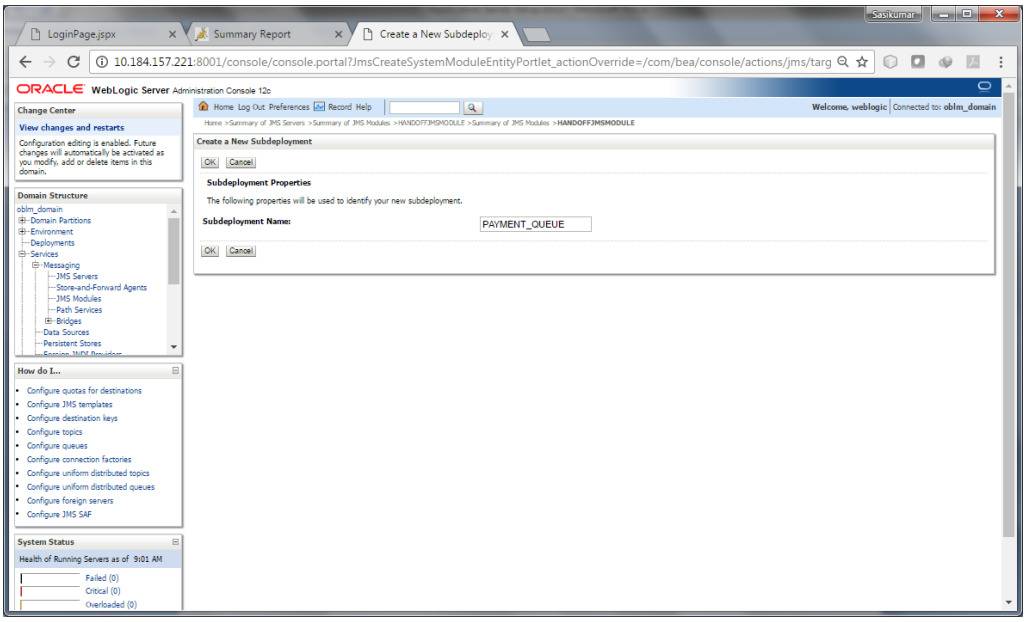
18. Give the Name as **PAYMENT_QUEUE**



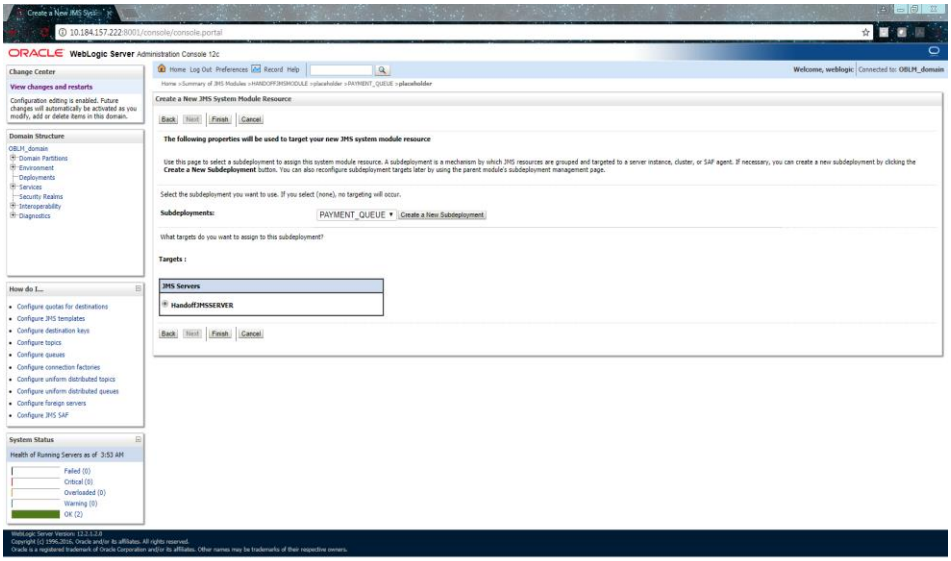
19. Create a **New Sub-deployment**



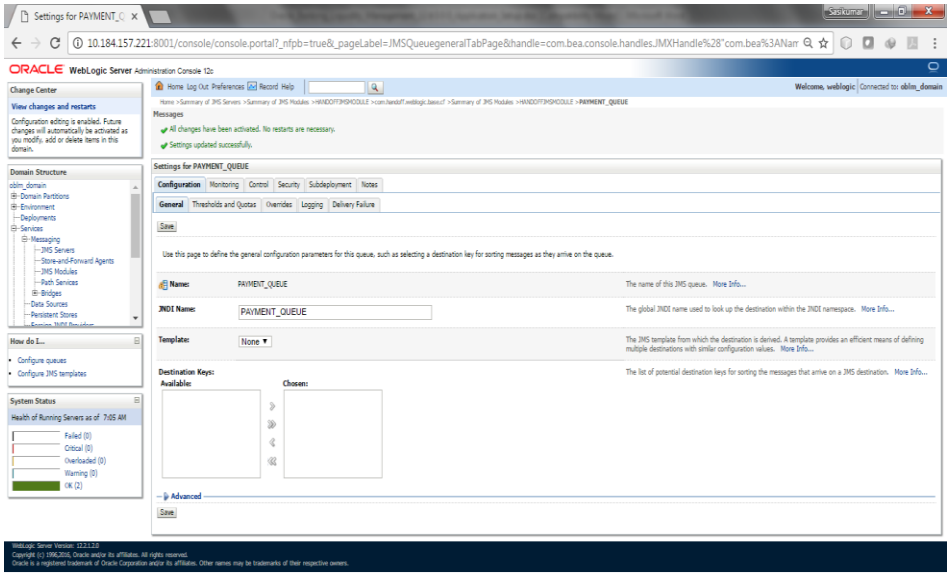
20. Set the **Sub-deployment Properties** as below and Click **Ok**



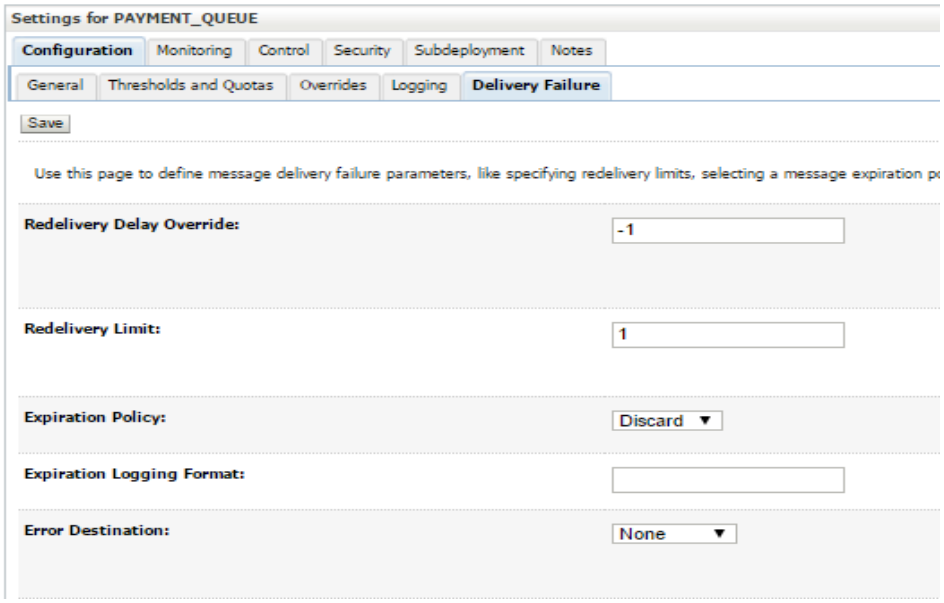
21. Choose the **Sub-deployment** and Select the **HandoffJMSSERVER** as Target and Click **Finish**



22. Set JNDI Name for the PAYMENT_QUEUE as **PAYMENT_QUEUE**



23. Set **Redelivery Limit to 1** under Delivery Failure tab of PAYMENT_QUEUE



2.2.5 Build Liquidity Managements Executable Files

1. Edit **HostConfig.properties** file

   Go to the below folder *("…\HostWorkspace\host12.2.1\Common\com.ofss.glm.config\src\com\ofss\glm\config\properties")* of the OSDC Package and Open **HostConfig.properties** and edit the below values:

   Protocol = http or https based on the protocol setting of the server

   Host = Host Name or IP of the Server that is Listening Address

   Port = Listening Port of the managed server (LM_SERVER)

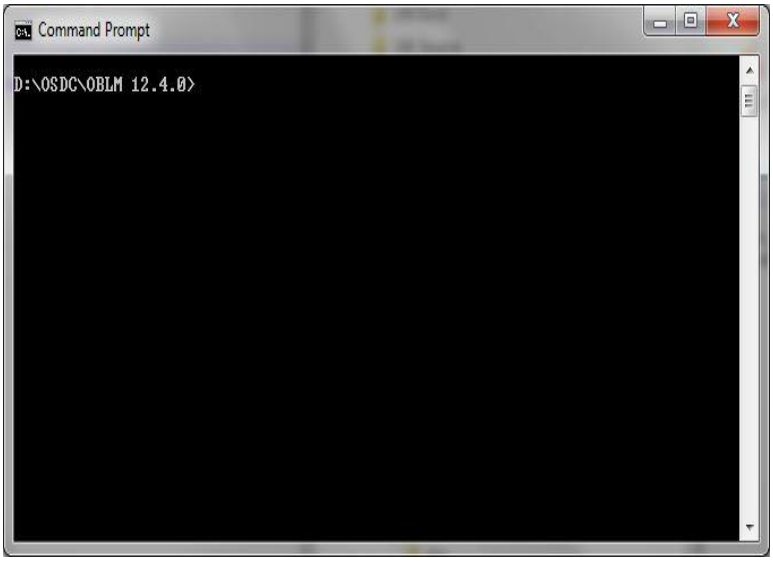
   ****Note:** Create folder as mentioned in **LOG_PATH** variable

```
Folder:
D:\OSDC\OBLM 12.4\HostWorkspace\host12.2.1\Common\com.ofss.glm.config\src\com\ofss\glm\config\properties


File Name: HostConfig.properties

protocol=https
host = 10.184.157.222
port = 7004
appurl = /GLMServices/Proxies
DEBUG = Y
LOG_PATH=/scratch/oracle/LM_LOG/LMLog.log
crcsetup_create = /CountrySetupApplicationServiceProxy/create
crcsetup_read = /CountrySetupApplicationServiceProxy/fetch
crcsetup_update = /CountrySetupApplicationServiceProxy/update
crcsetup_delete = /CountrySetupApplicationServiceProxy/delete
crcsetup_bulkupload = /CountrySetupApplicationServiceProxy/bulkUpload
crcsetup_countrylist = /CountrySetupApplicationServiceProxy/fetchAllCountries
crcsetup_regionlist = /CountrySetupApplicationServiceProxy/fetchAllRegions
crcsetup_lmcountrylist = /CountrySetupApplicationServiceProxy/fetchCountriesCode
crossbordersetup_create = /CrossBorderSetupApplicationServiceProxy/create
crossbordersetup_read = /CrossBorderSetupApplicationServiceProxy/fetch
crossbordersetup_update = /CrossBorderSetupApplicationServiceProxy/update
crossbordersetup_delete = /CrossBorderSetupApplicationServiceProxy/delete
```

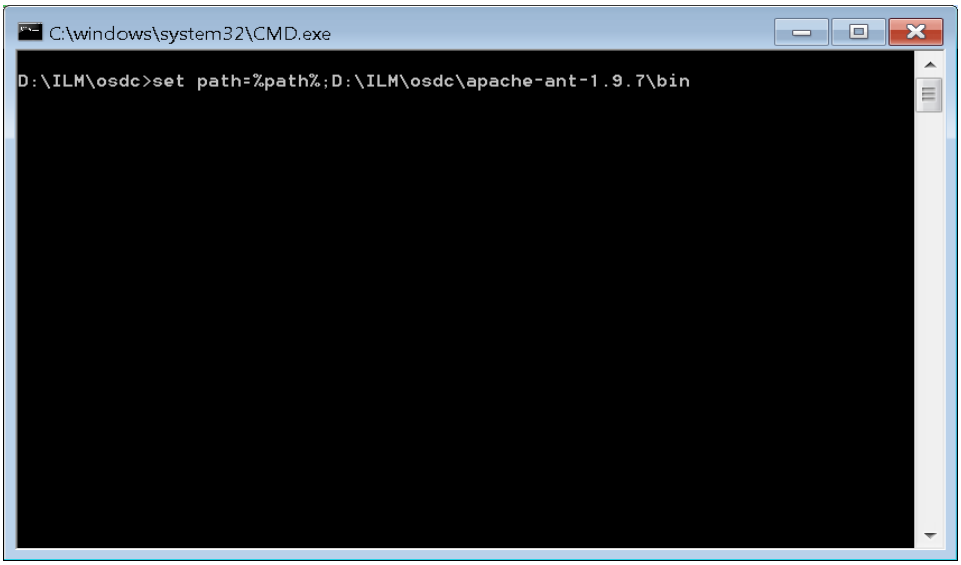
2. Open the Command prompt and Point it to the OSDC package location

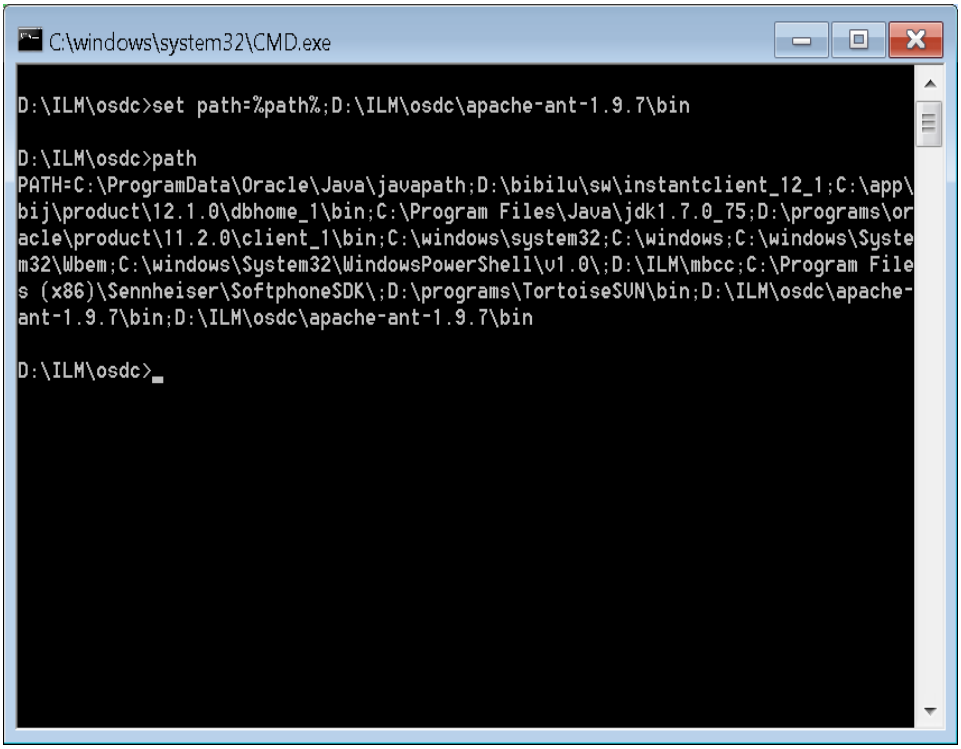


3. Add Path

Set the Ant path using the following Commands

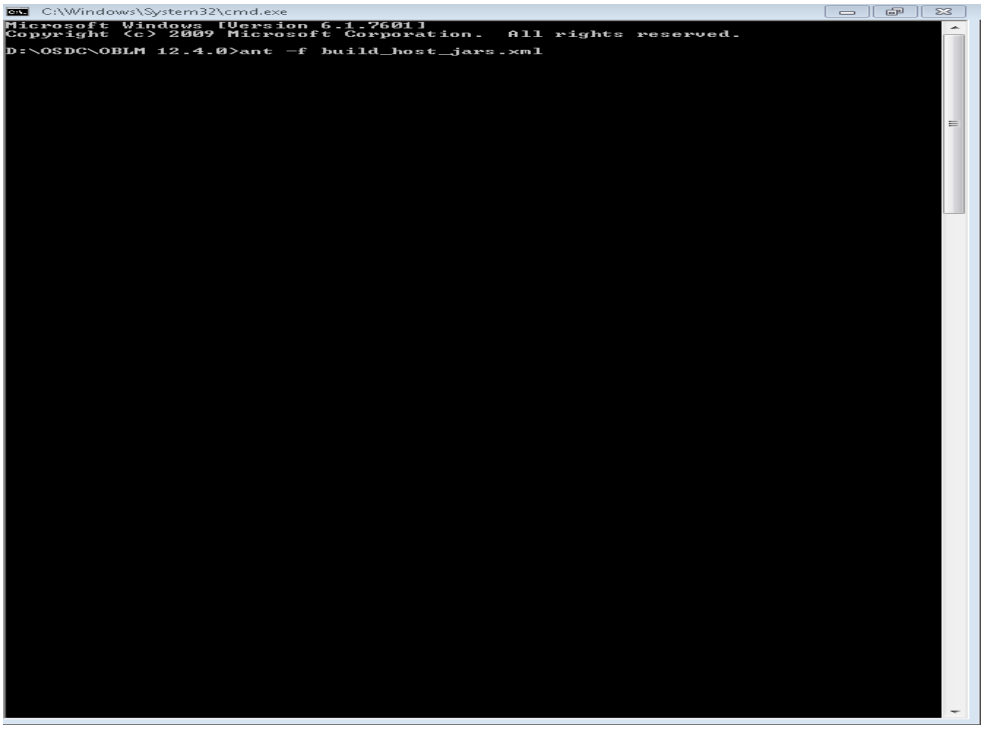
set path=%path%;D:\ILM\osdc\apache-ant-1.9.7\bin

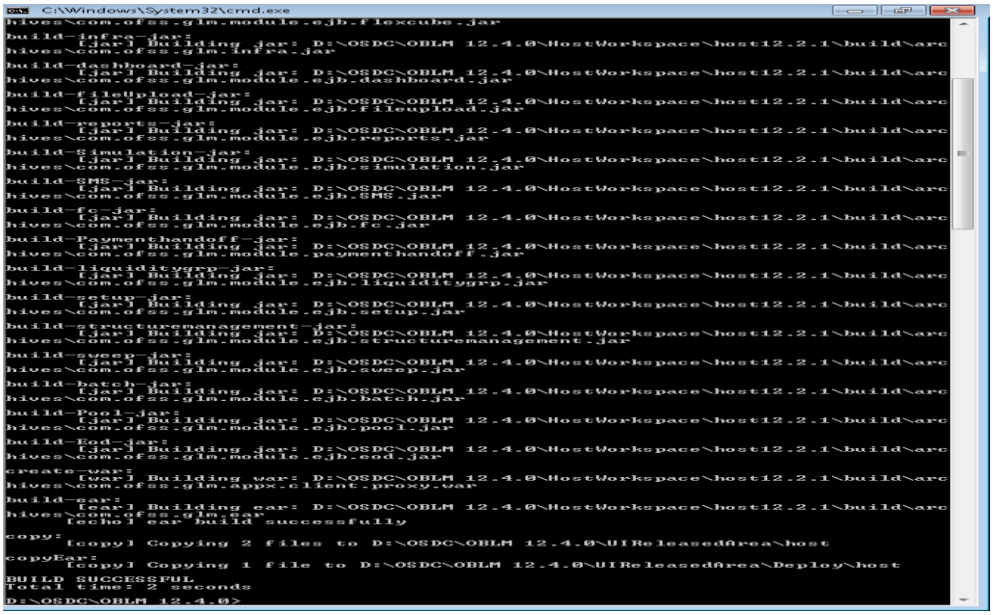




4. Enter the following command to build the Host side class files.

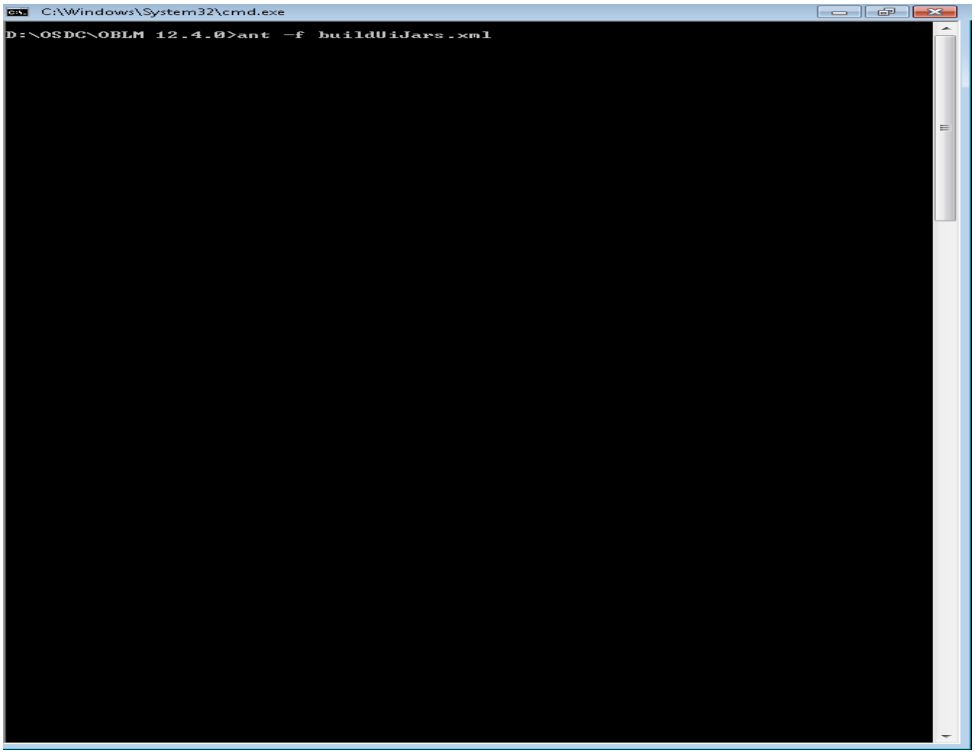
"**ant -f build_host_jars.xml"** and press **"Enter"**

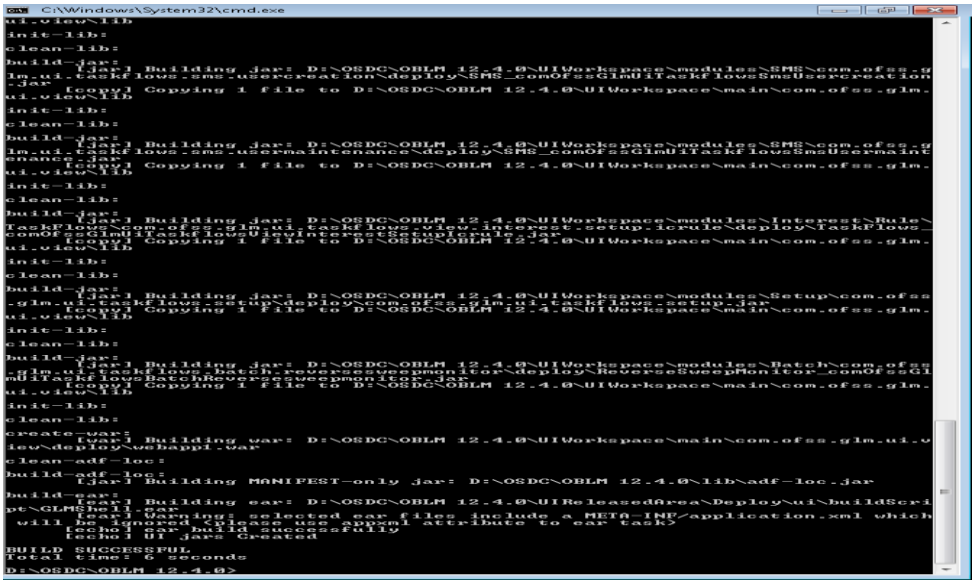




5. Enter the following command to build the UI side class files.

"**ant -f buildUiJars.xml"** and press **"Enter"**





2.2.6 Deploy Liquidity Management Executable Files

NOTE : If Oracle Fusion Middleware 12c Infrastructure (Example: Weblogic Server) is installed and any domain is available in local system, deployment can be done using the script see section 2.2.6.1 else Manual Deployment can be done see section 2.2.6.2.

2.2.6.1 Deployment using Scripts

1. Change the Following values in **Build.properties** file under the OSDC source

```
#Wed Apr 08 12:14:57 IST 2017

install.dir=C\:\\Oracle\\Middleware\\Oracle_Home
domain.path=\\scratch\\Middleware\\Oracle_Home\\user_projects\\domains\\oblm_domain
domain.name=OBLM_domain
host=10.184.157.221
port=8005

wls.ui.url=t3://10.184.157.221:8001
wls.ui.server.name=LM_SERVER
wls.ui.deploy.name=AAGLMShell-1
wls.ui.userName=weblogic
wls.ui.password=weblogic123
wls.ui.deploy.source=UIReleasedArea/Deploy/ui/buildScript/GLMShell.ear

wls.host.url=t3://10.184.157.221:8001
wls.host.server.name=LM_SERVER
wls.host.deploy.name=com.ofss.glm-1
wls.host.userName=weblogic
wls.host.password=weblogic123
wls.host.deploy.source=UIReleasedArea/Deploy/host/com.ofss.glm.ear


```

Use the following details:

i. **install.dir**= Point to it to the weblogic home folder in the local system. For Example: "*C:\Oracle\Middleware\Oracle_Home*". (Change it to the format as shown in the figure)

ii. **domain.path**= Point it to the weblogic domain folder created for the application (*i.e. oblm_domain*). (Change it to the format as shown in the figure)

iii. **domain.name**= Enter the name of weblogic domain created in the local system. Leave it blank if no domain exists.

iv. **wls.ui.url**= Enter URL of the Weblogic Console in the following format **t3://<ip_address>:<admin_server_port_no>**

v. **wls.ui.username**= Enter the username of the Weblogic Console

vi. **wls.ui.password**= Enter the password of the Weblogic Console

vii. **wls.host.url**= Same as wls.ui.url

viii. **wls.host.username**= Same as wls.ui.username

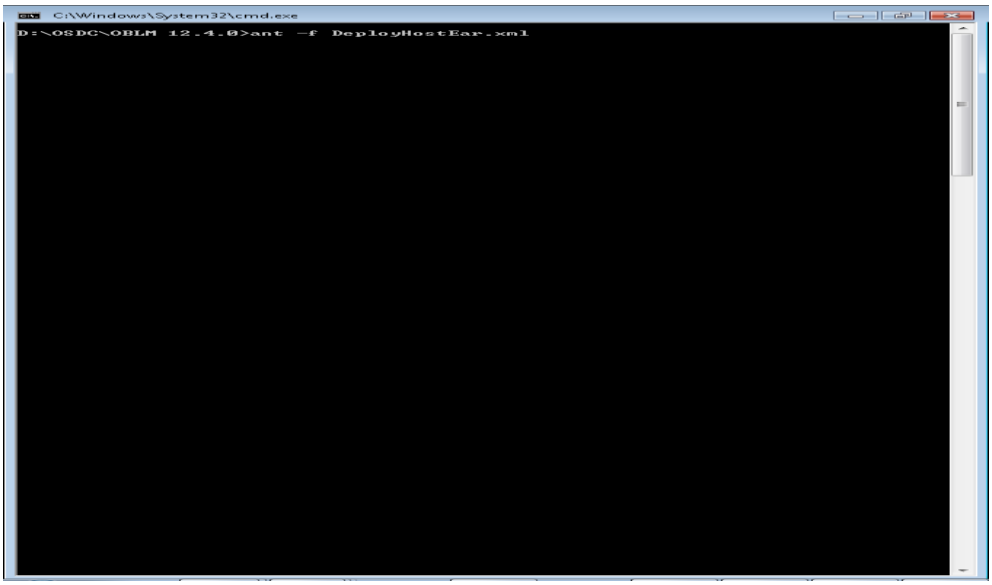
ix. **wls.host.password**= Same as wls.ui.password

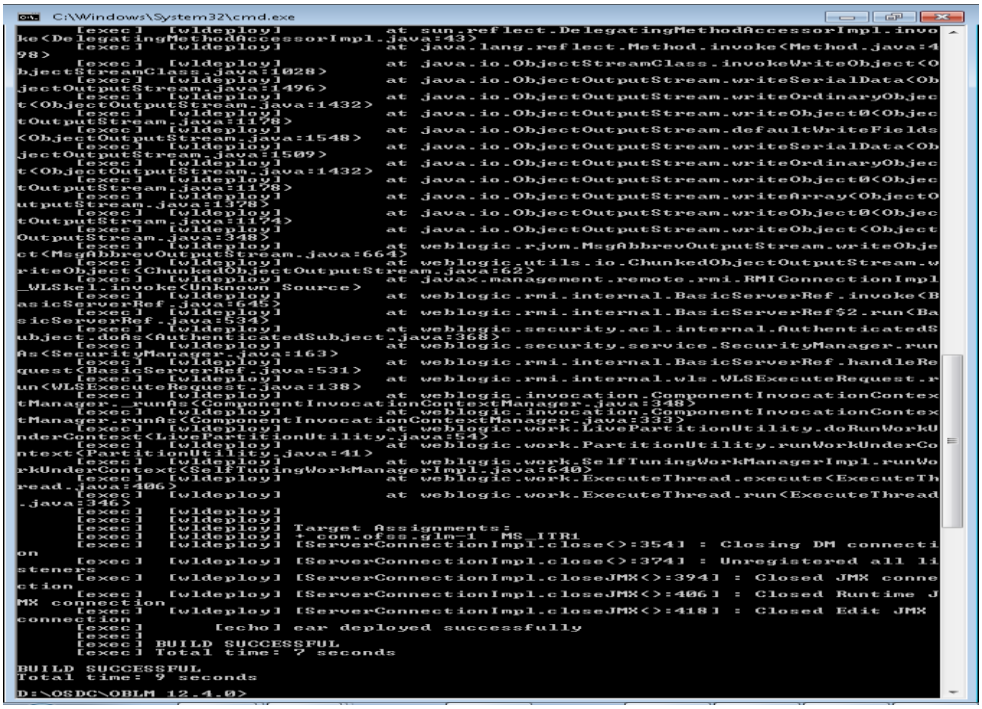
Define remaining properties as mentioned in above screen shot.

2. Open the Command prompt and Point it to the OSDC package location

3. Enter the following command to deploy the Host EAR file.

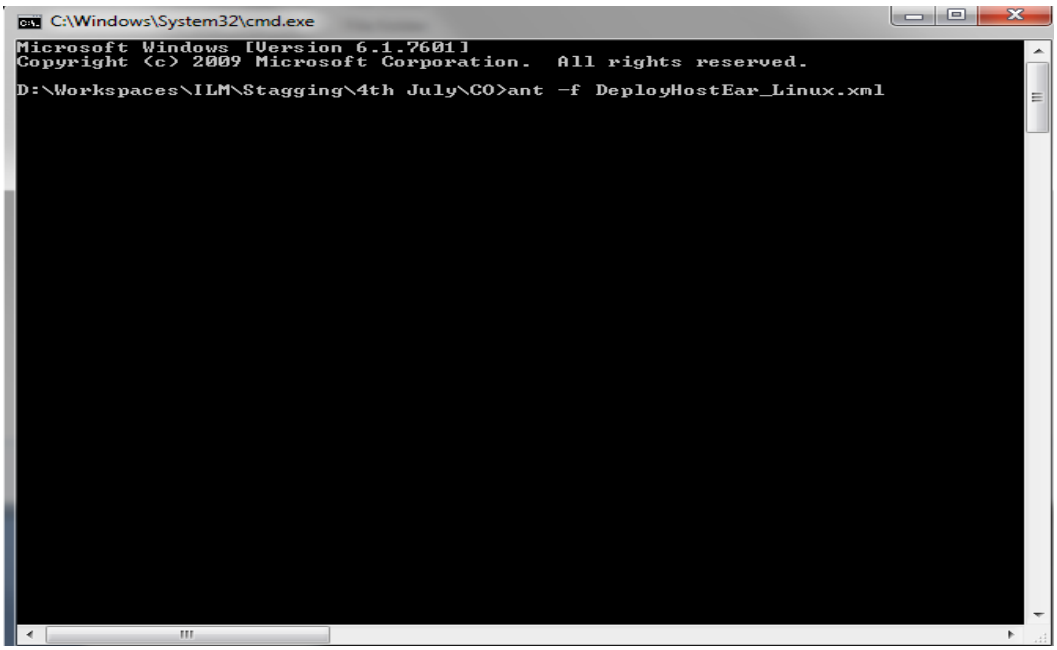
"**ant -f DeployhostEar.xml**" and press **"Enter" (Windows System)**





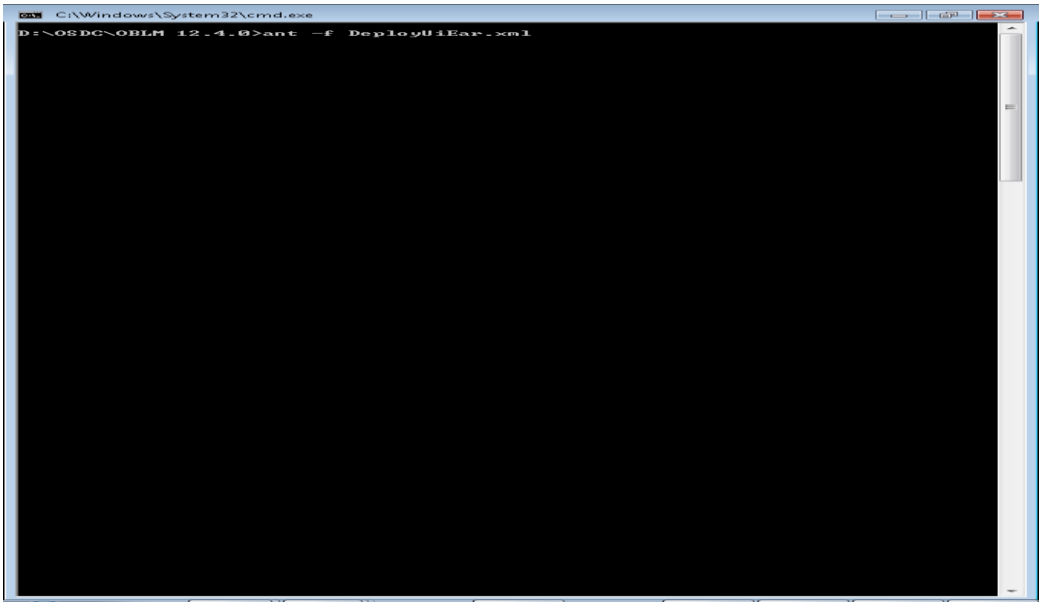
[Note: If user is having Linux system use the following command]

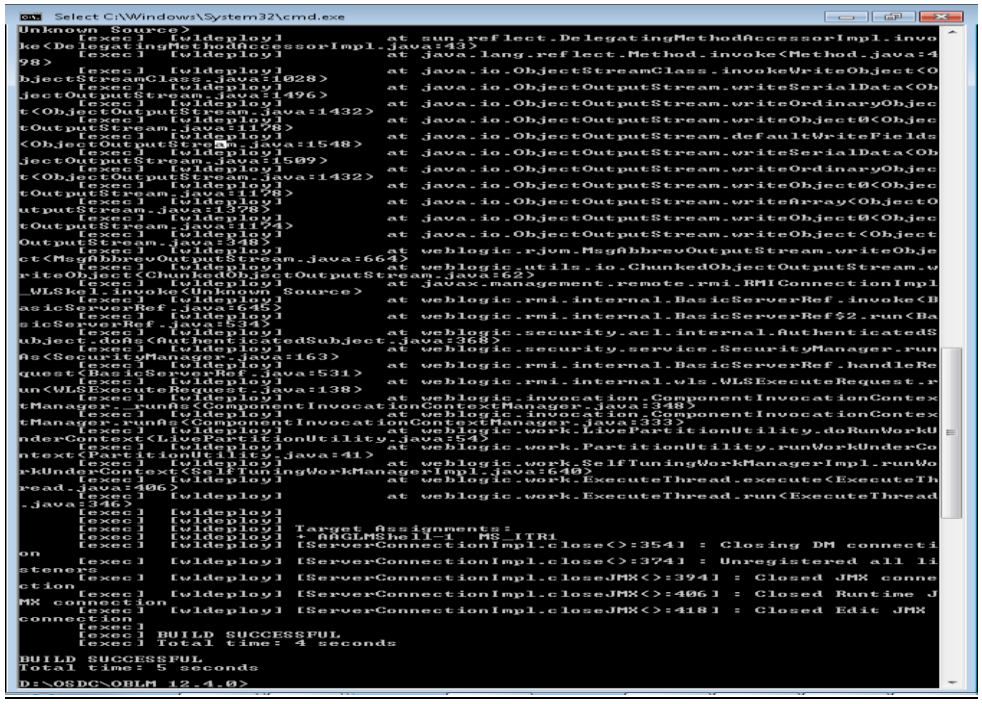
"**ant -f DeployHostEar_Linux.xml**" and press **"Enter" (Linux System)**



4. Enter the following command to deploy the UI EAR file.

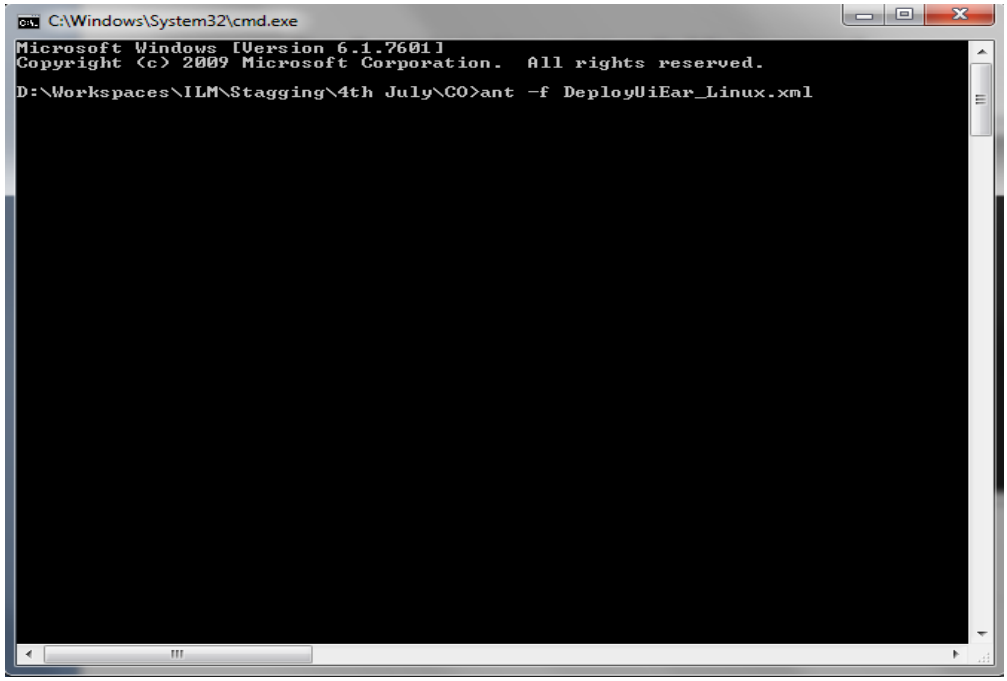
"**ant -f DeployUIEar.xml"** and press **"Enter" (Windows System)**





[Note: If user is having Linux system use the following command]

"**ant -f DeployUiEar_Linux.xml**" and press **"Enter" (Linux System)**

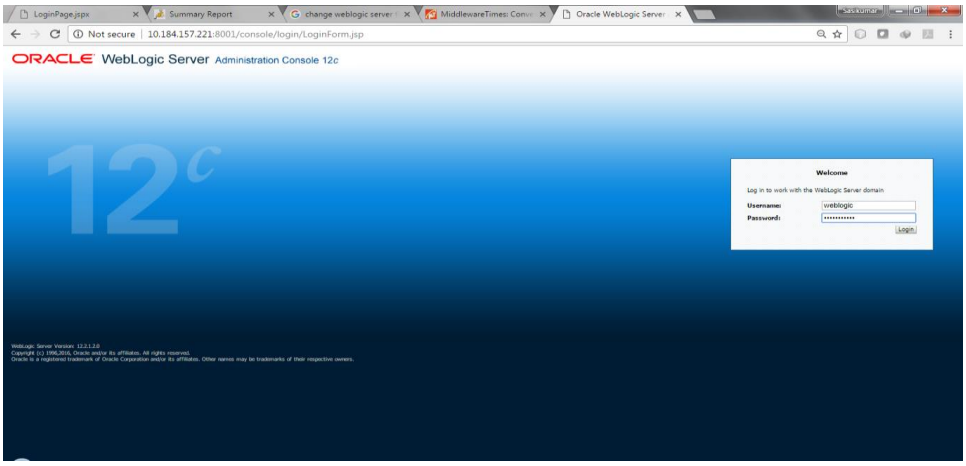


2.2.6.2 Manual Deployment:

For Manual Deployment, Ear (Enterprise Application aRchive) file can be deployed either from Local Machine or from server where Weblogic Server is installed, In case if deployment needs to be done from server then use FTP/SFTP client for Windows in order to move the Ear file to the server and do the deployment as given below. Suggested Software for FTP/SFTP client for Windows: **Winscp**

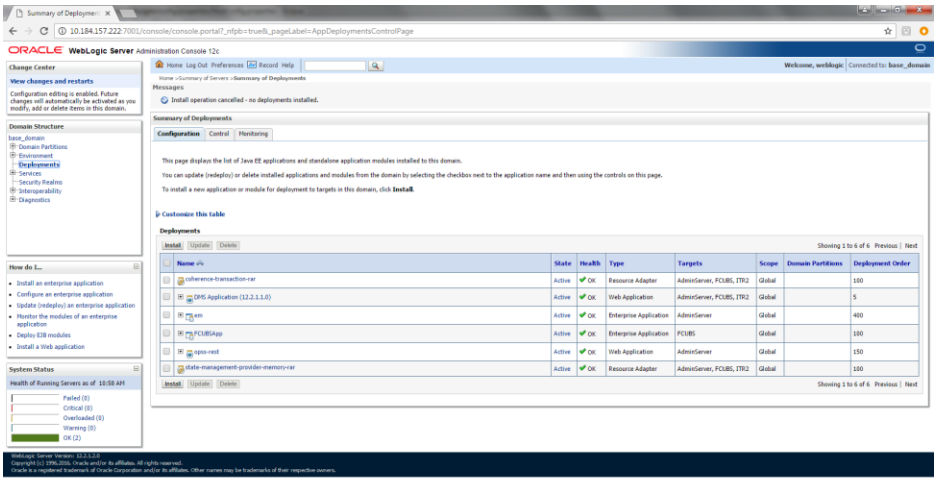
2.2.6.2.1 UI EAR Deployment

1. Give the credential in the console page that you have set in Administrator Account screen.

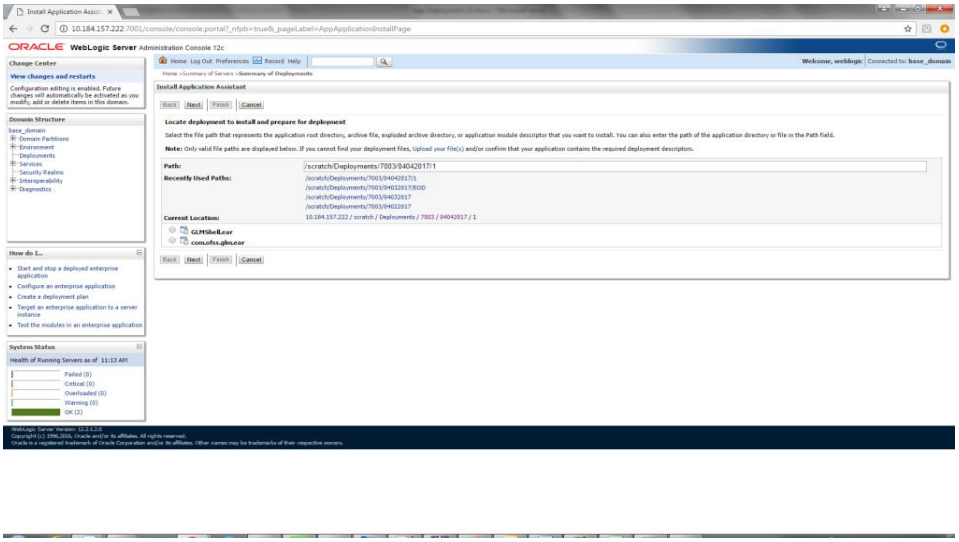


2. Now we can see home screen. In home screen in the left side you will find Domain Structure column.

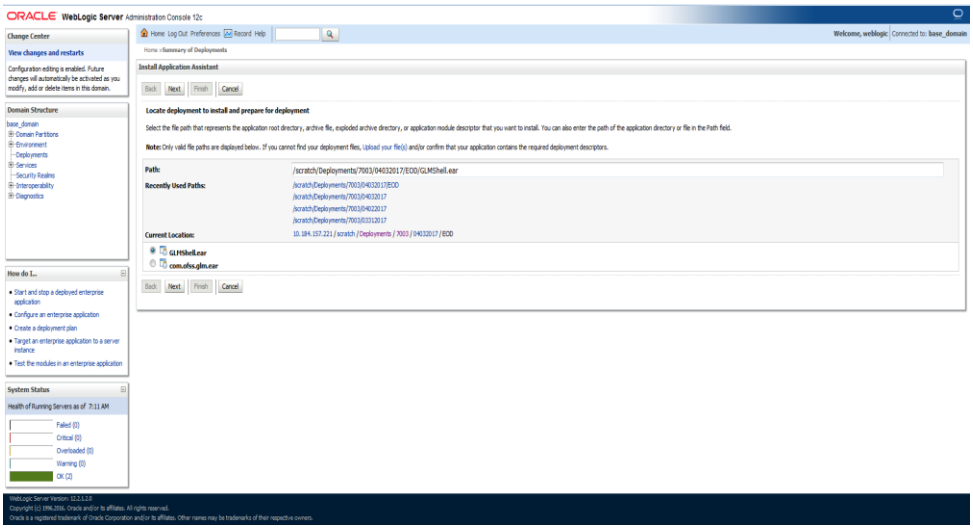
   Click on **Deployments**.



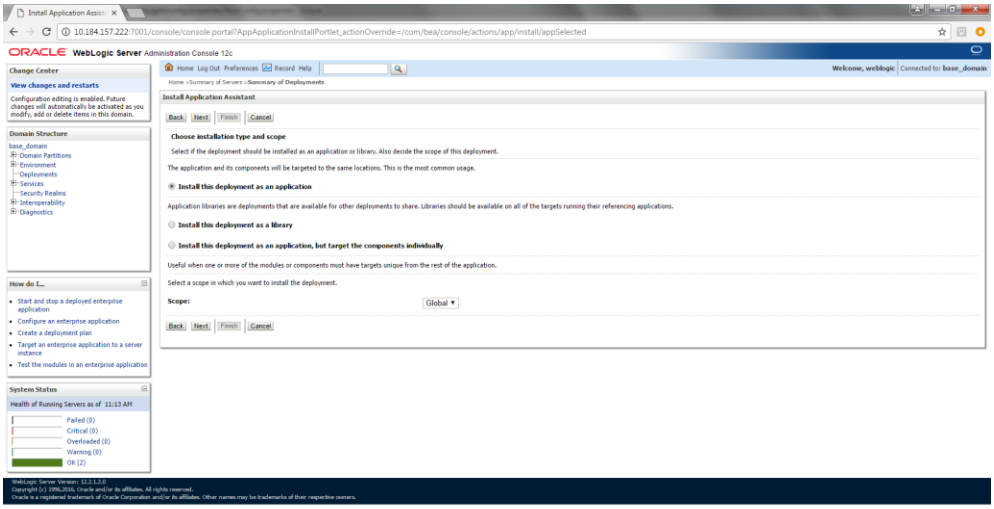
3. Click on **Install** and go o the Drive Location where the EAR files are kept.



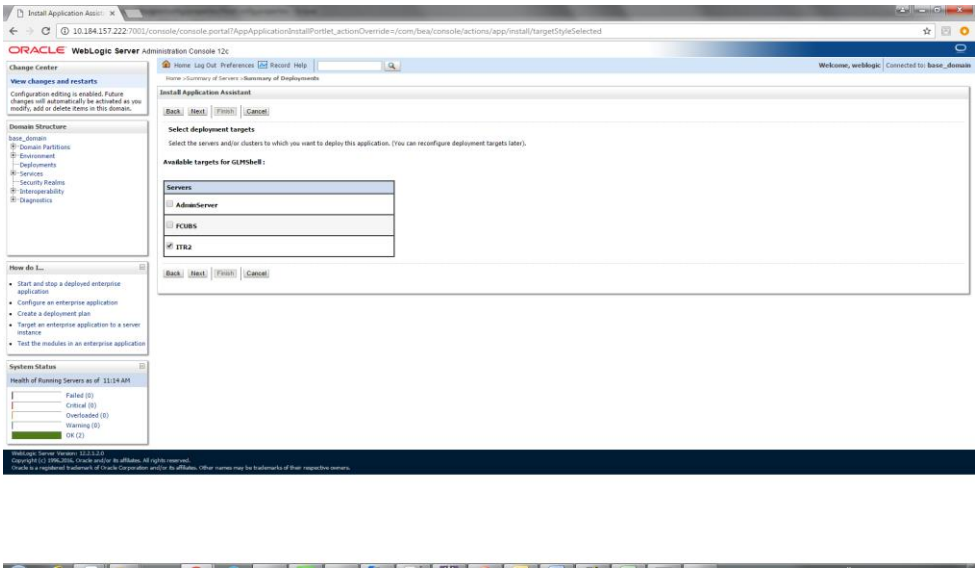
4. Select the UI EAR File **GLMShell.ear** and click on Next



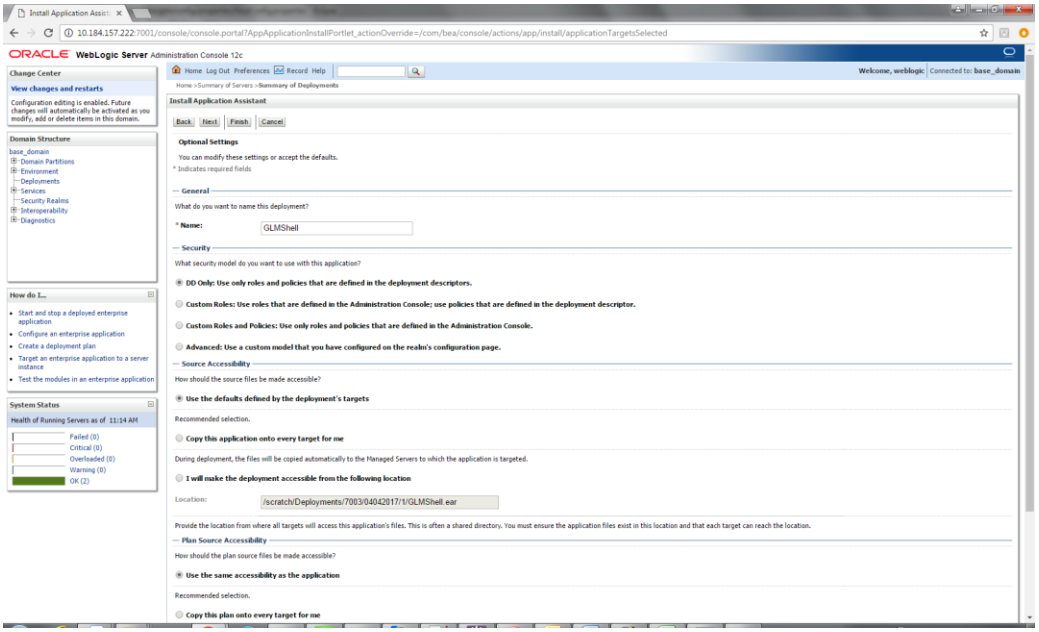
5. Click on **Next**



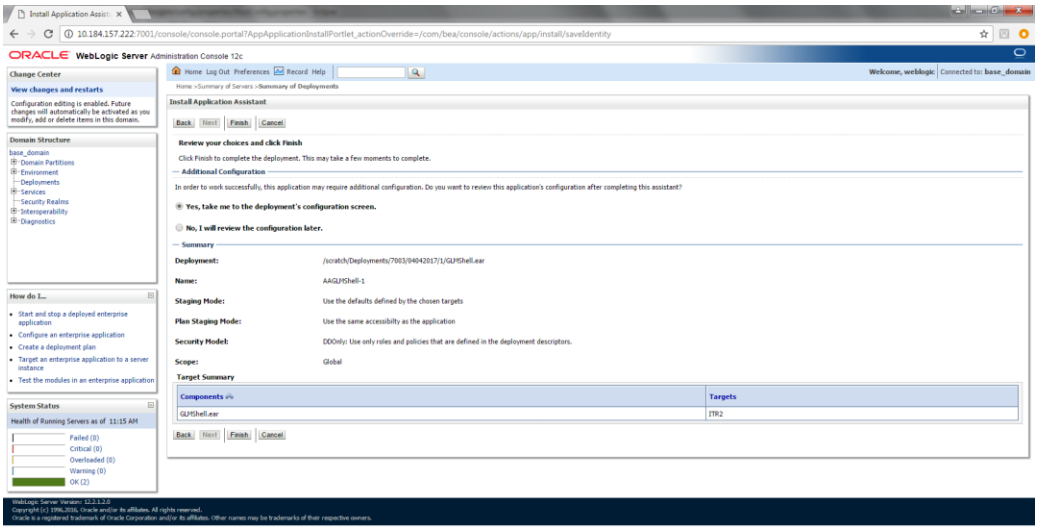
6. Select the **target Server** For example: ITR2



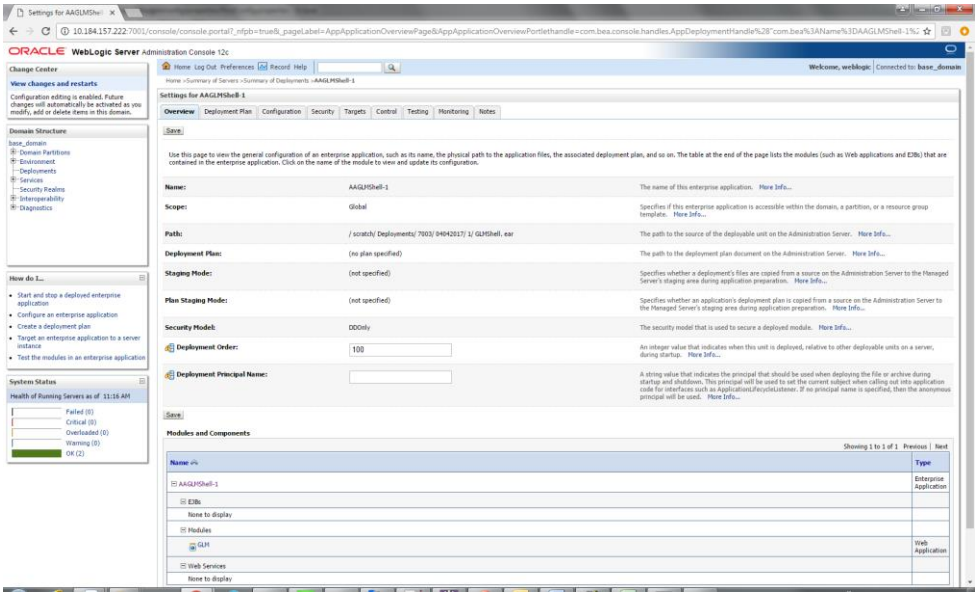
7. Select Name for the deployment file For Example: “GLMShell” and click on **Next**



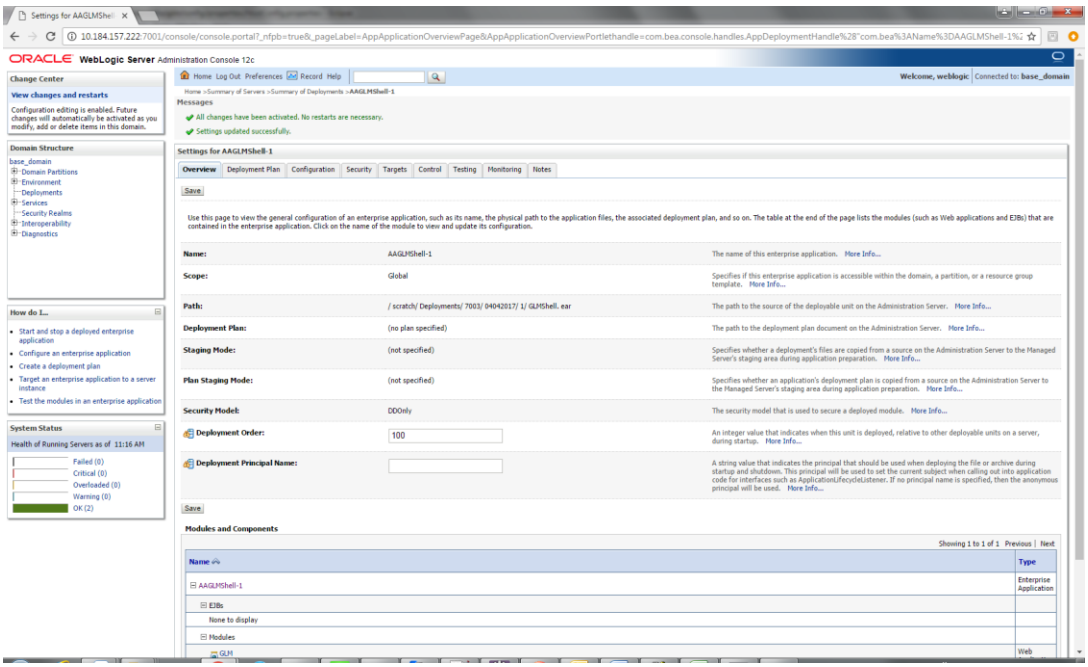
8. Click on **Finish**.



9. Click on **Save**

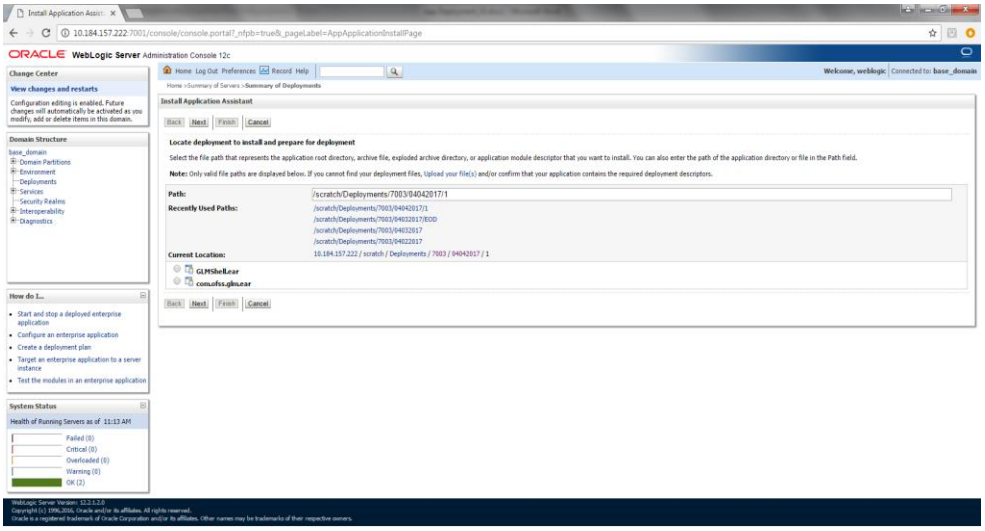


10. After Clicking **Save** the Follwing Screen should appear.

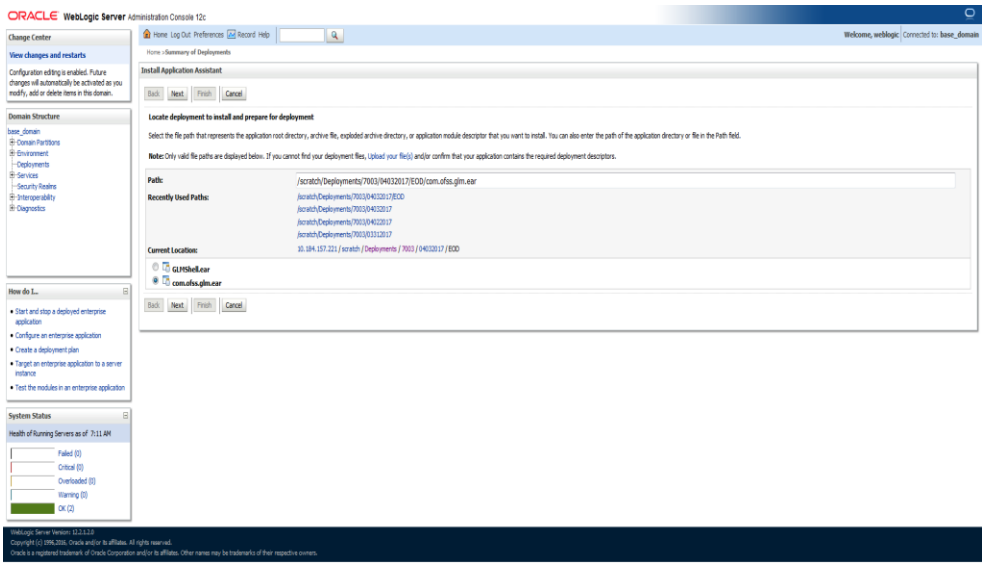


2.2.6.2.2 HOST EAR Deployment

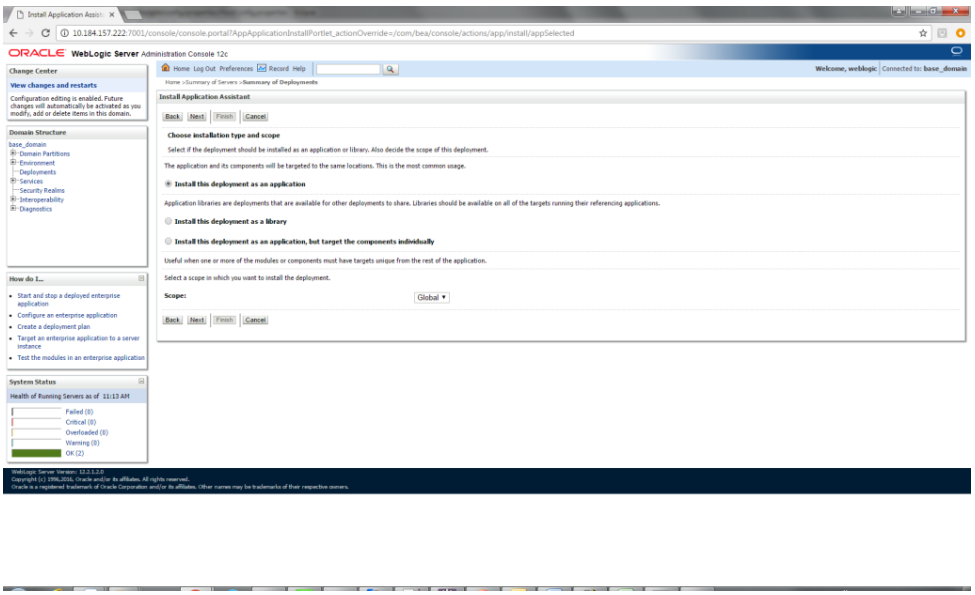
1. Click on **Install** and go o the Drive Location where the EAR files are kept.



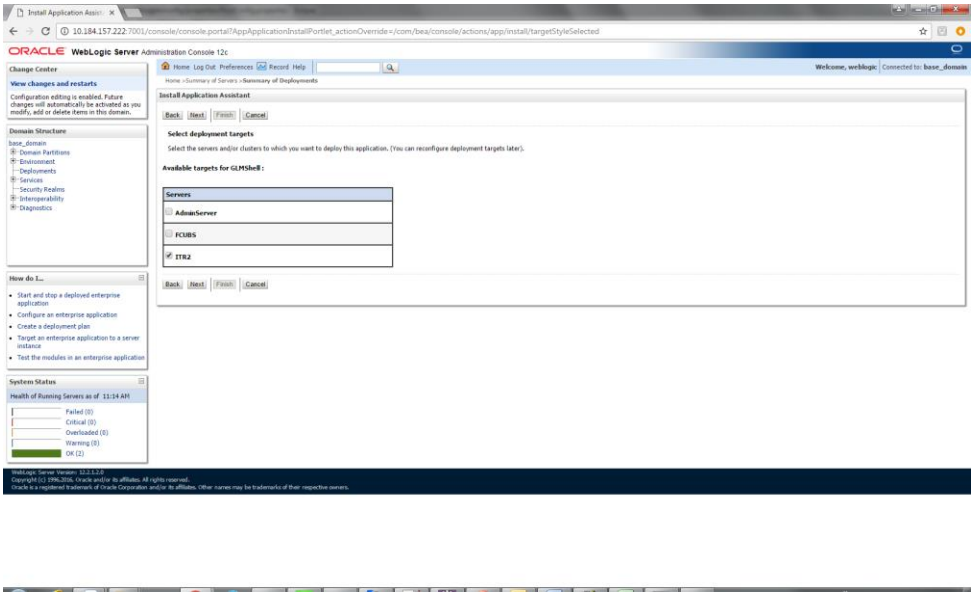
2. Select the Host EAR File **com.ofss.glm.ear** and click on **Next**



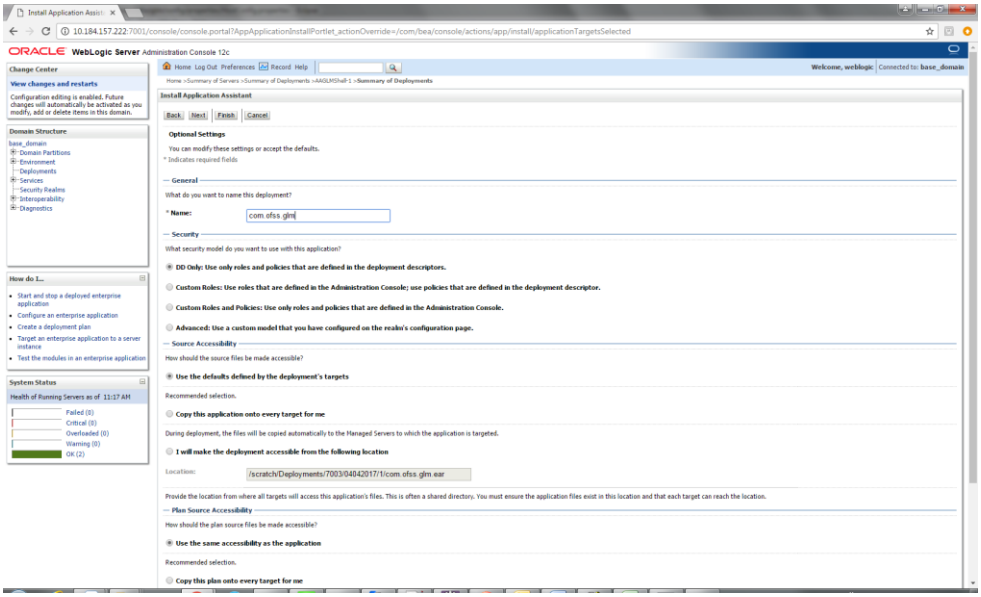
3. Click on **Next**



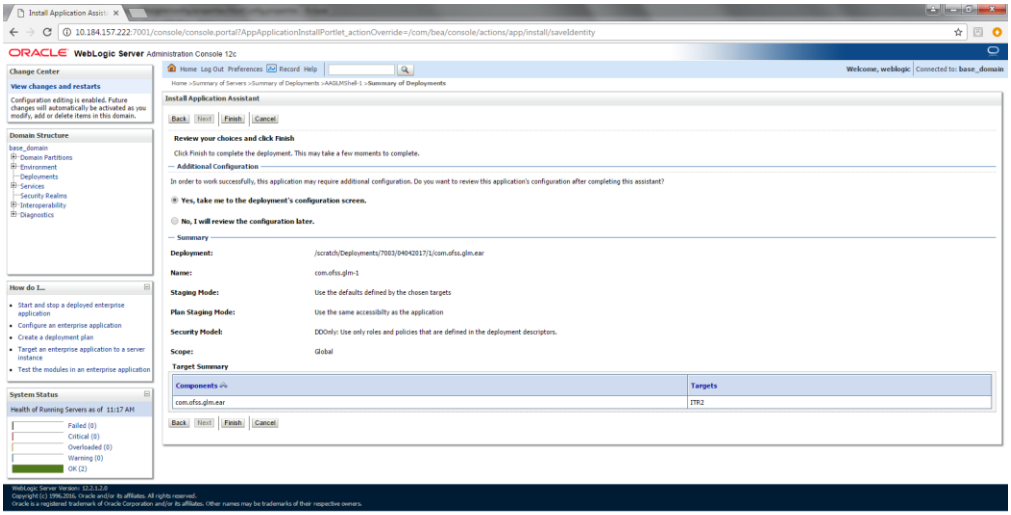
4. Select the target Server For example: **ITR2**



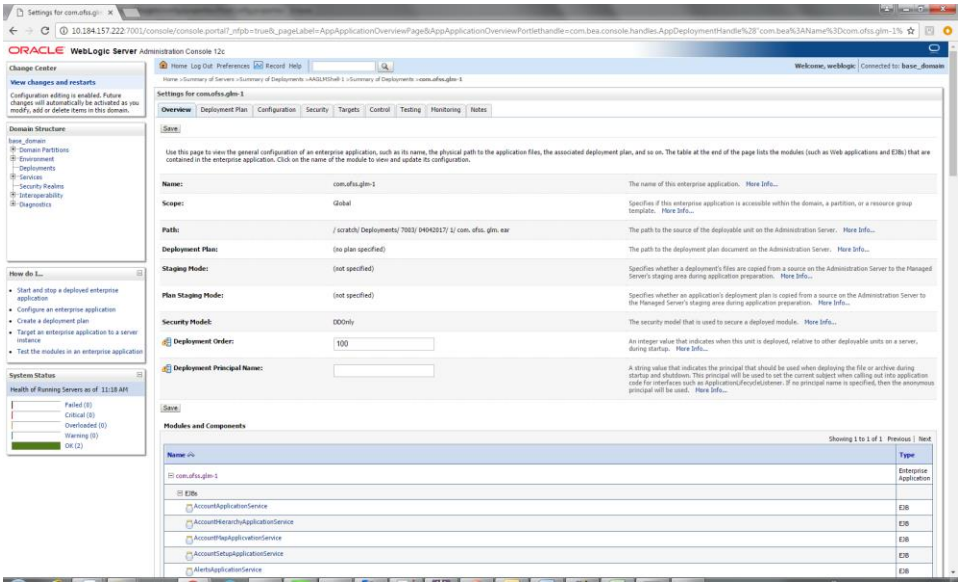
5. Select Name for the deployment file For Example: "**com.ofss.glm**" and click on **Next**



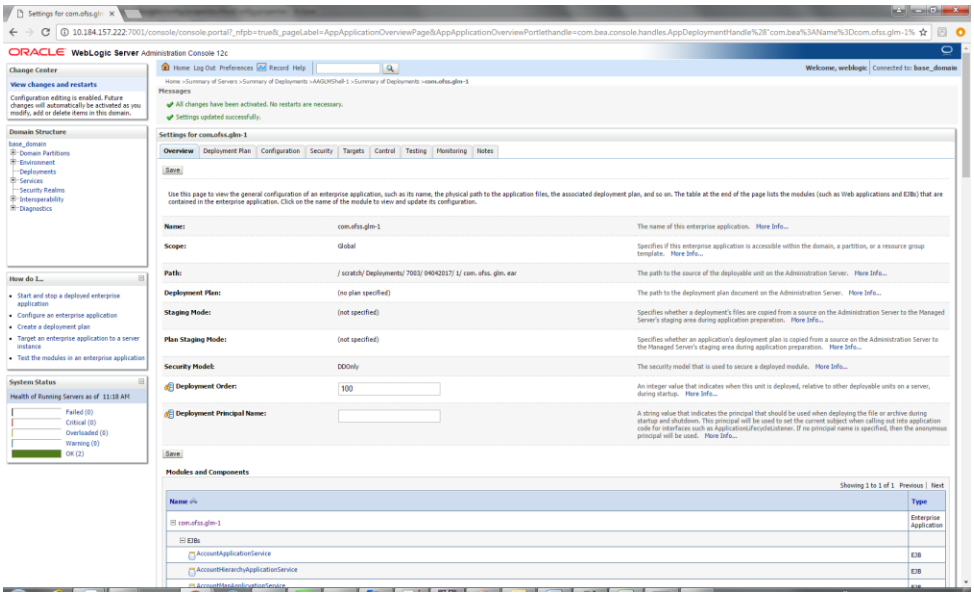
6. Click on **Finish**.



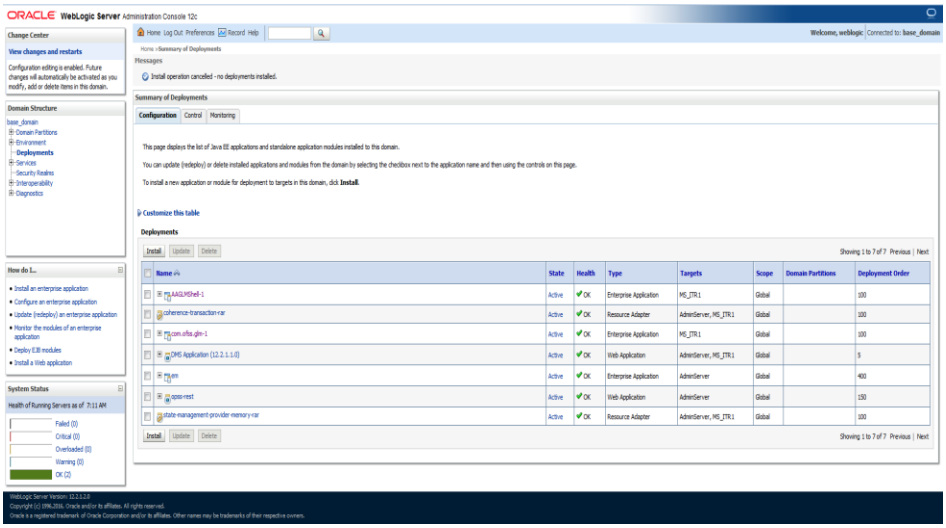
7. Click on **Save**



8. After Clicking Save the Follwing Screen should appear.

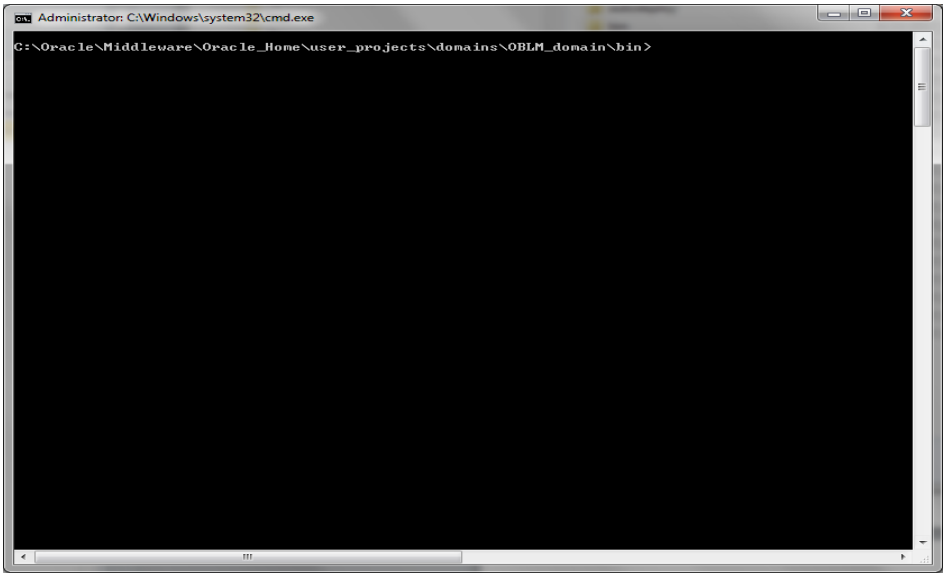


9. Click on Deployment and check the two newly installed EAR's are available and Health column should have the OK status for the EAR's

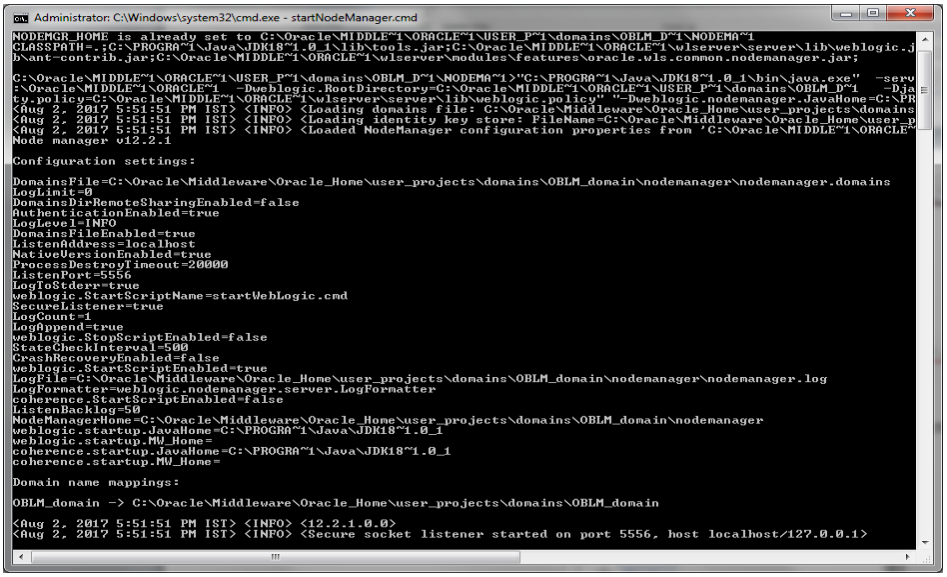


2.2.7 Start The Server

1. Go to the domain path of oblm_domain, (e.g. …\Middleware\Oracle_Home\user_projects\domains\OBLM_domain\). Right click on **bin** folder and Select the "**CMD Prompt Here as Administrator**" to open the Command Prompt.

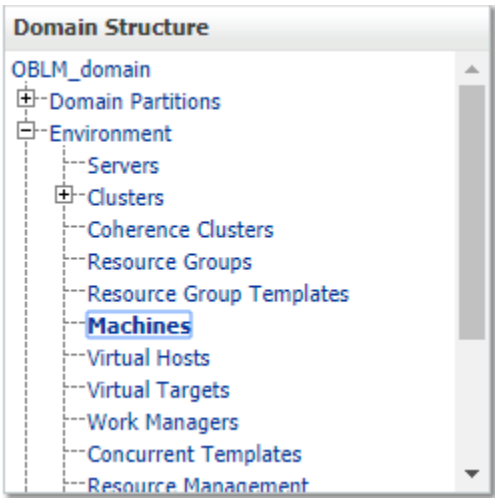


2. Run the **startNodeManager.cmd** file

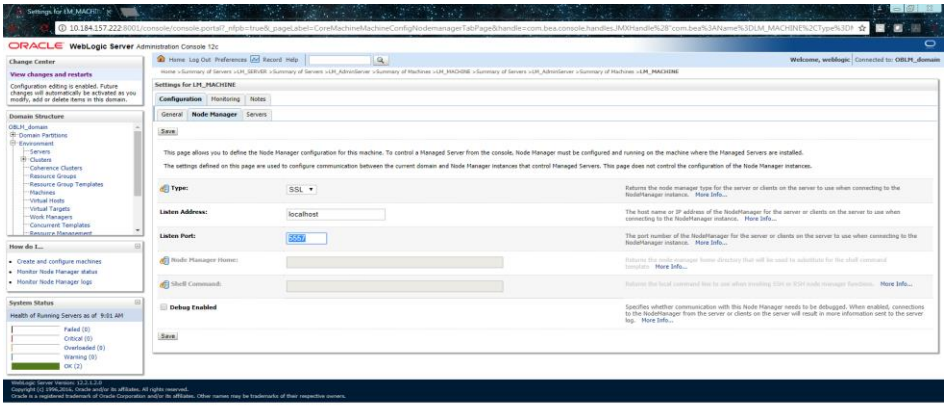


Note: If you get an error stating "5556 port is already in use" then follow the below steps before starting the node manager.

i. Go to Weblogic Console and click on **Machines** under the **Environment** tab in **Domain Structure** section



ii. Click on **LM_MACHINE** and then go to **Node Manager** tab



iii. Change the **Listen Port** to 5557 and click on **Save**

iv. Go to …/ Oracle/Middleware/Oracle_Home/user_projects/domains/oblm_domain/nodemanager path and edit **nodemanager.properties** file as follows,

ListenPort=5557

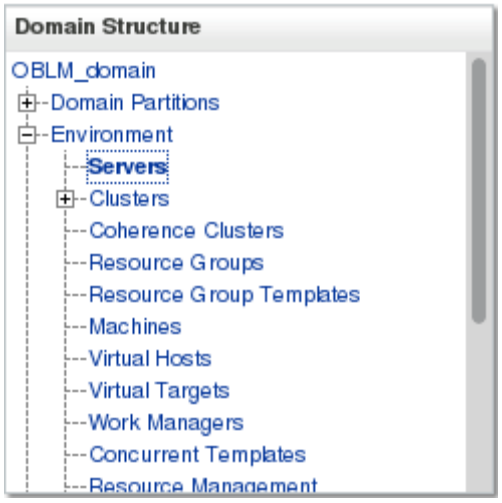
Leave the rest of the properties as it was.

```
#Tue Jul 18 05:12:27 EDT 2017
#Node manager properties
#Tue Jul 18 04:13:25 EDT 2017
DomainsFile=/scratch/oraofss/Oracle/Middleware/Oracle_Home/user_projects/domains/oblm_domain/nodemanager/nodemanager.domains
LogLimit=0
PropertiesVersion=12.2.1.2.0
AuthenticationEnabled=true
NodeManagerHome=/scratch/oraofss/Oracle/Middleware/Oracle_Home/user_projects/domains/oblm_domain/nodemanager
JavaHome=/scratch/jdk/jdk1.8.0_112
LogLevel=INFO
DomainsFileEnabled=true
ListenAddress=localhost
NativeVersionEnabled=true
ListenPort=5556
LogToStderr=true
weblogic.StartScriptName=startWebLogic.sh
SecureListener=true
LogCount=1
QuitEnabled=false
LogAppend=true
weblogic.StopScriptEnabled=false
StateCheckInterval=500
CrashRecoveryEnabled=false
weblogic.StartScriptEnabled=true
LogFile=/scratch/oraofss/Oracle/Middleware/Oracle_Home/user_projects/domains/oblm_domain/nodemanager/nodemanager.log
LogFormatter=weblogic.nodemanager.server.LogFormatter
ListenBacklog=50
```

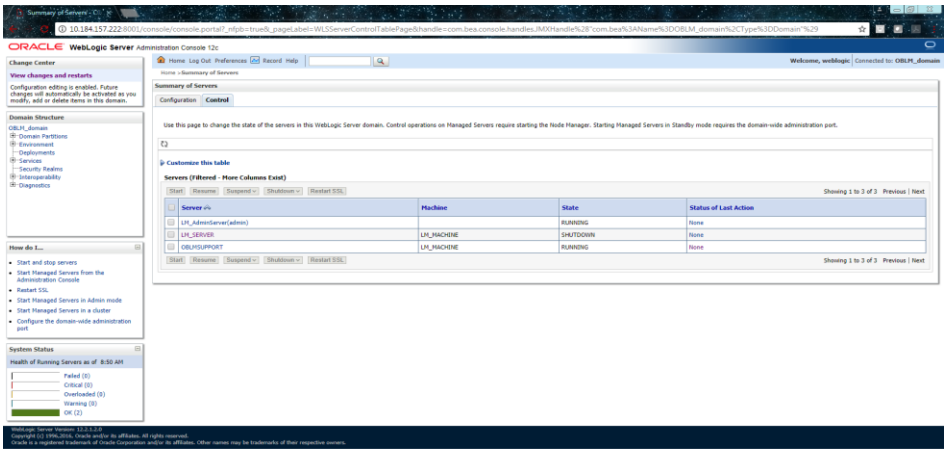
v. Save the file

vi. Now, repeat the steps of Section 2.2.7

3. Go to Weblogic console and click on **Server** under the **Environment** tab in **Domain Structure** section



4. You should see the **Summery of Servers** page. Click on **Control** tab



5. Select **LM_SERVER** and click **Start** button

6. Wait till the Server State change to **RUNNING**

2.2.8 Application User Creation

Please refer to User creation utility instruction manual –
(**Oracle_Banking_Liquidity_Management_12 4 0 0 0_Create_User_Utility_Setup.pdf**)

2.2.9 Configure SSL

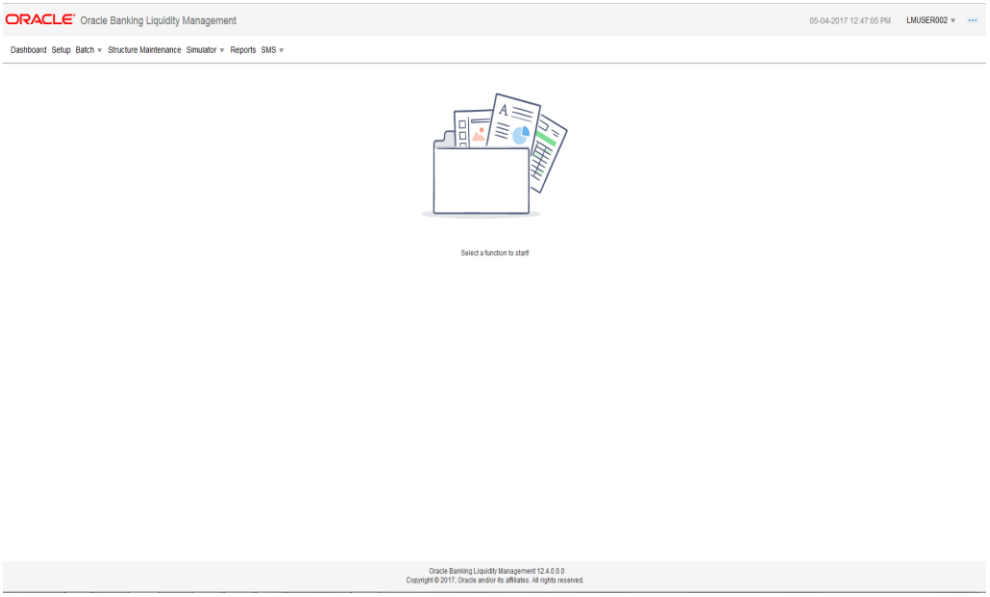
To Configure SSL, Please refer to the SSL Configuration Manual
(**Oracle_Banking_Liquidity_Management_12 4 0 0 0_SSL_Configuration.pdf**)

2.2.10 Test Liquidity Management Application

1. Open the Application in a New Tab in the Browser. The Following Screen should appear.

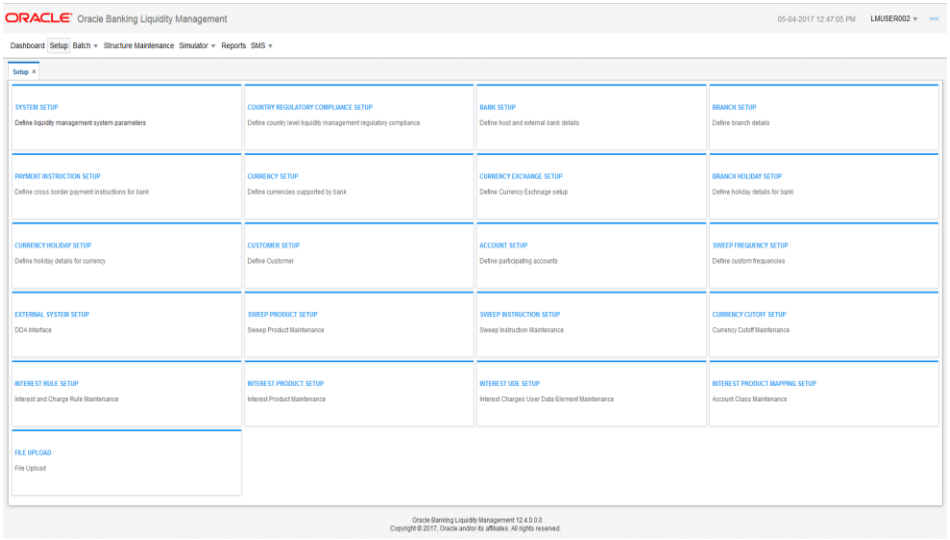
2. Enter the user credentials and click on Login

3. After Logging into the application the following screen should appear.



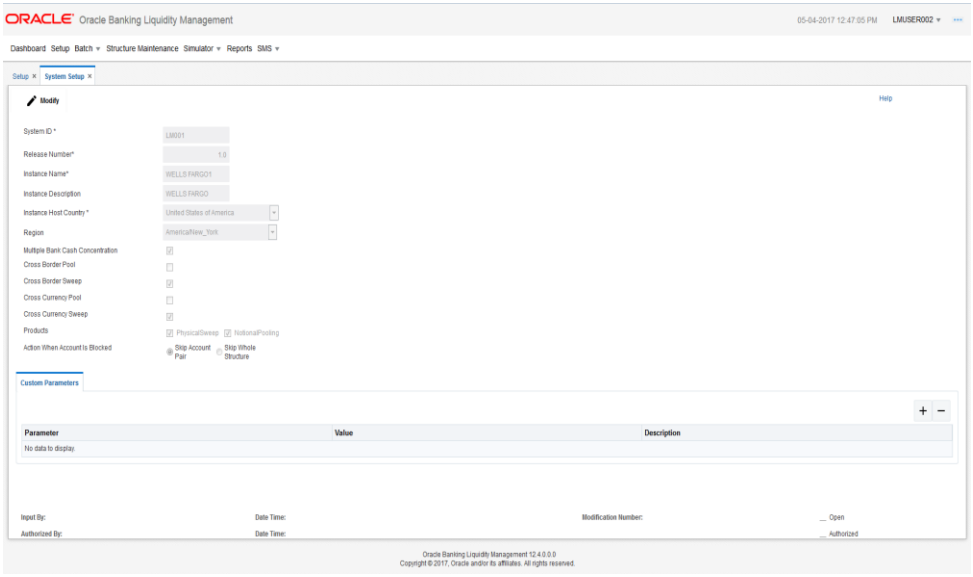
4. Click on any of the Menu Items. For Example: Click on **Setup** menu

   The following screen should appear.



5. Select any of the items under **Setup** menu and do the necessary operations.

   For Example select **System Setup.** The following screen should appear.



Liquidity Management Application Setup
Oracle Banking Liquidity Management
Version 14.0.0.0.0
[November] [2017]

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