Oracle FLEXCUBE Direct Banking

Installation Manual On

Weblogic Application Server

Release 12.0.3.0.0

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ORACLE

Installation Manual On Weblogic Application Server

April 2014

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Contents

1.Preface

1.1. Intended Audience

This document is primarily targeted at

- Oracle FLEXCUBE Direct Banking Development Teams
- Oracle FLEXCUBE Direct Banking Implementation Teams
- Oracle FLEXCUBE Direct Banking Implementation Partners

1.2. Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

1.3. Access to OFSS Support

https://support.us.oracle.com

1.4. Structure

This manual is organized into the following categories:

Preface gives information on the intended audience. It also describes the overall structure of the User Manual

Application Server Configuration provides information on Creating and Managing a JMS Servers etc.

Chapters post Application server configuration are dedicated to Setup JDBC data source and Connection Pooling and JMS queue creation on Weblogic server, Module Installation and Encryption and Decryption of property files.

1.5. Related Information Sources

For more information on Oracle FLEXCUBE Direct Banking Release 12.0.3.0.0, refer to the following documents:

- Oracle FLEXCUBE Direct Banking Licensing Guide

2.Abbreviations

FCDB	Oracle FLEXCUBE Direct Banking
Java EE / JEE	Java Enterprise Edition
Java SE / JSE	Java 2 Standard Edition
DBA	Database Administrator
JDK	Java Development Kit

3.Pre- requisites

All the software requirements mentioned in the sheet
“Oracle_FLEXCUBE_Direct_Banking_Software_Stack” must be installed.
Oracle FLEXCUBE Direct Banking application is installed successfully using Oracle FCDB Installer.

4.Application Server Configuration

4.1.Creating and Managing a Server Instance

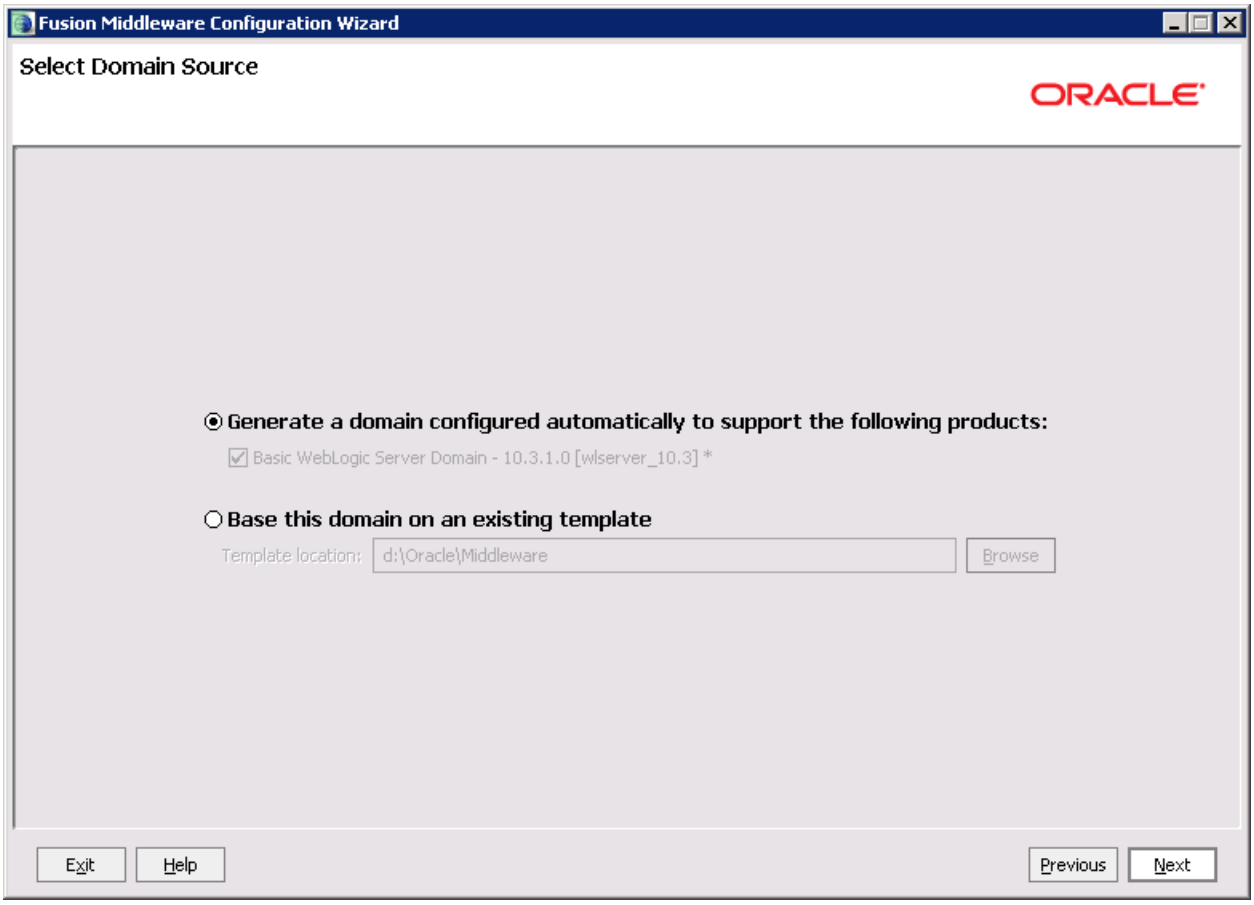
4.1.1.Creating a WebLogic domain

A domain consists of one or more server instances that can be managed with a single administration server. When the administration server is used to perform a configuration task, the changes made apply only to the domain managed by that administration server. To manage another domain, the administration server for that domain must be used.

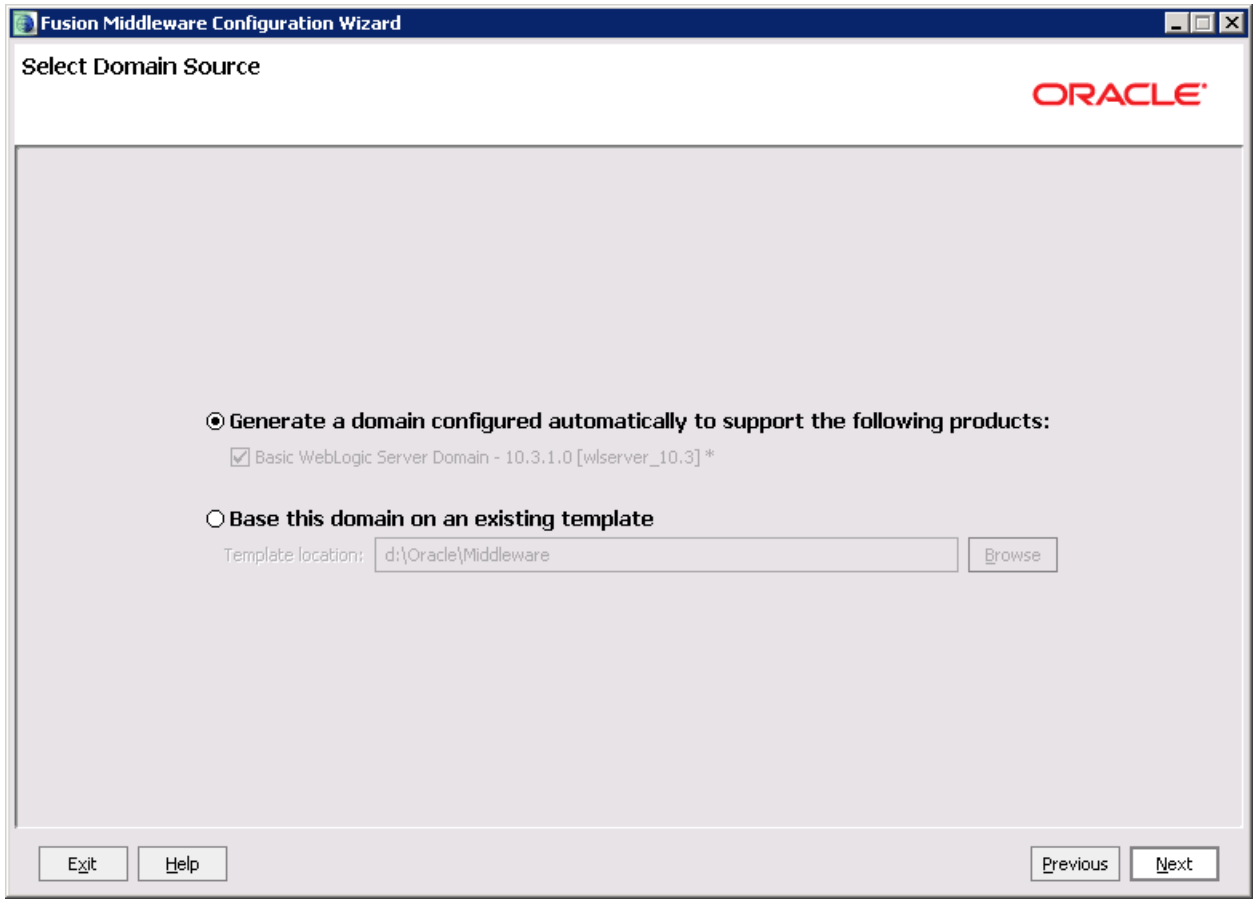
Through Wizard:

1. Go to Start Menu →Oracle WebLogic →WebLogic Server 11g R1 →Tools →Configuration Wizard in Windows.

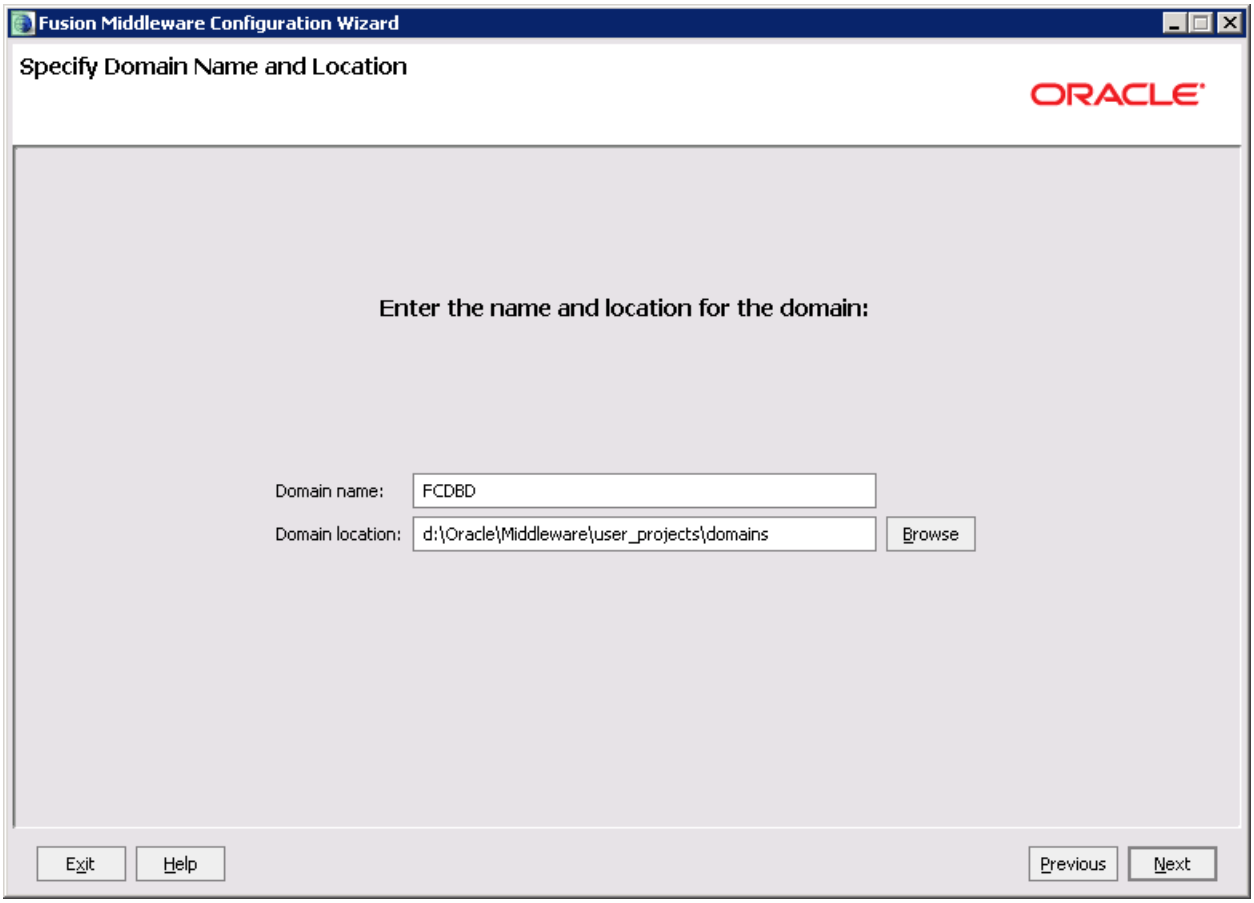
Select “Create a new WebLogic Domain” and click “Next”.


Fusion Middleware Configuration Wizard
Select Domain Source
ORACLE
Generate a domain configured automatically to support the following products:
Basic WebLogic Server Domain - 10.3.1.0 [wlserver_10.3] *
Base this domain on an existing template
Template location:
d:\Oracle\Middleware
Browse
Exit
Help
Previous
Next

Select "Generate a domain configured automatically to support the following Products" and click "Next"

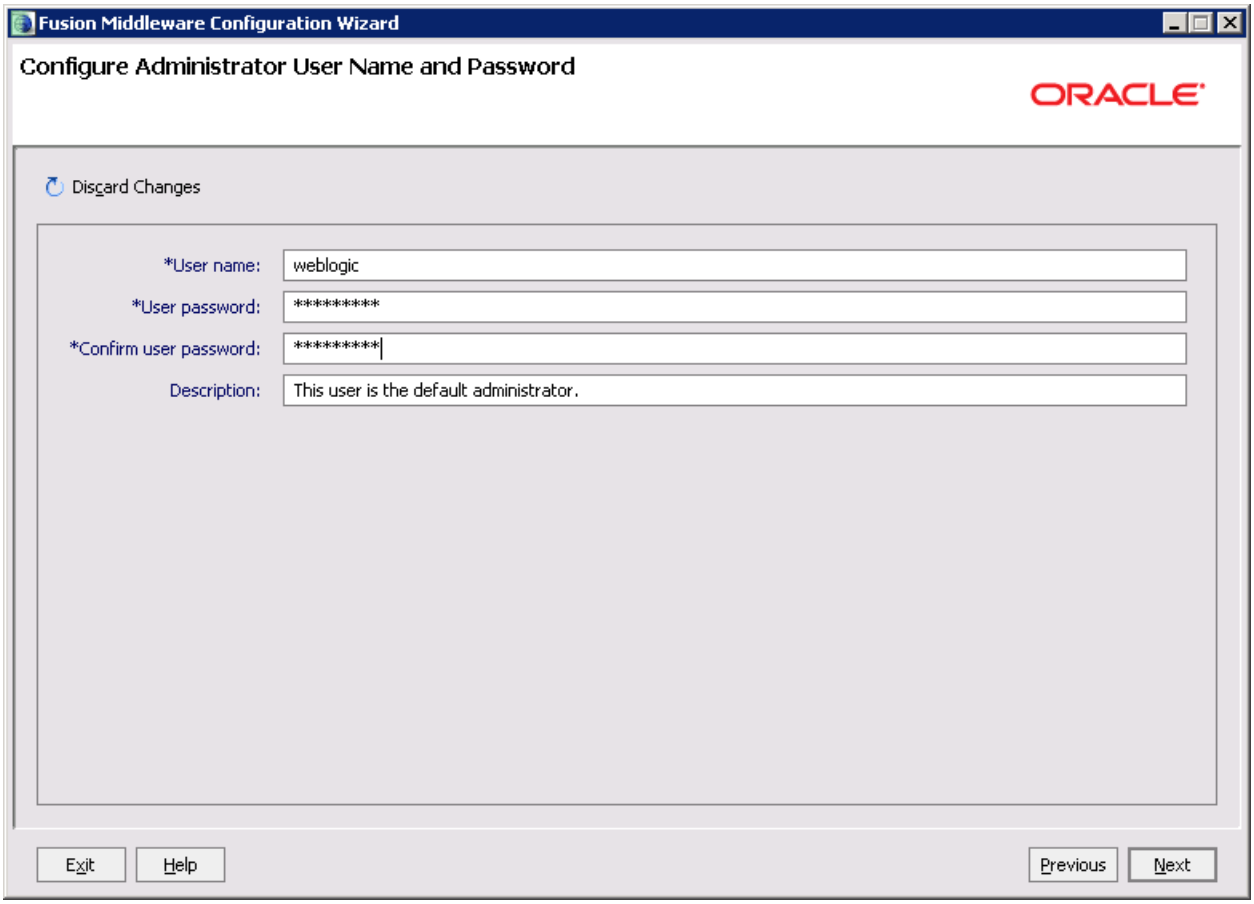


Specify Domain Name and Location

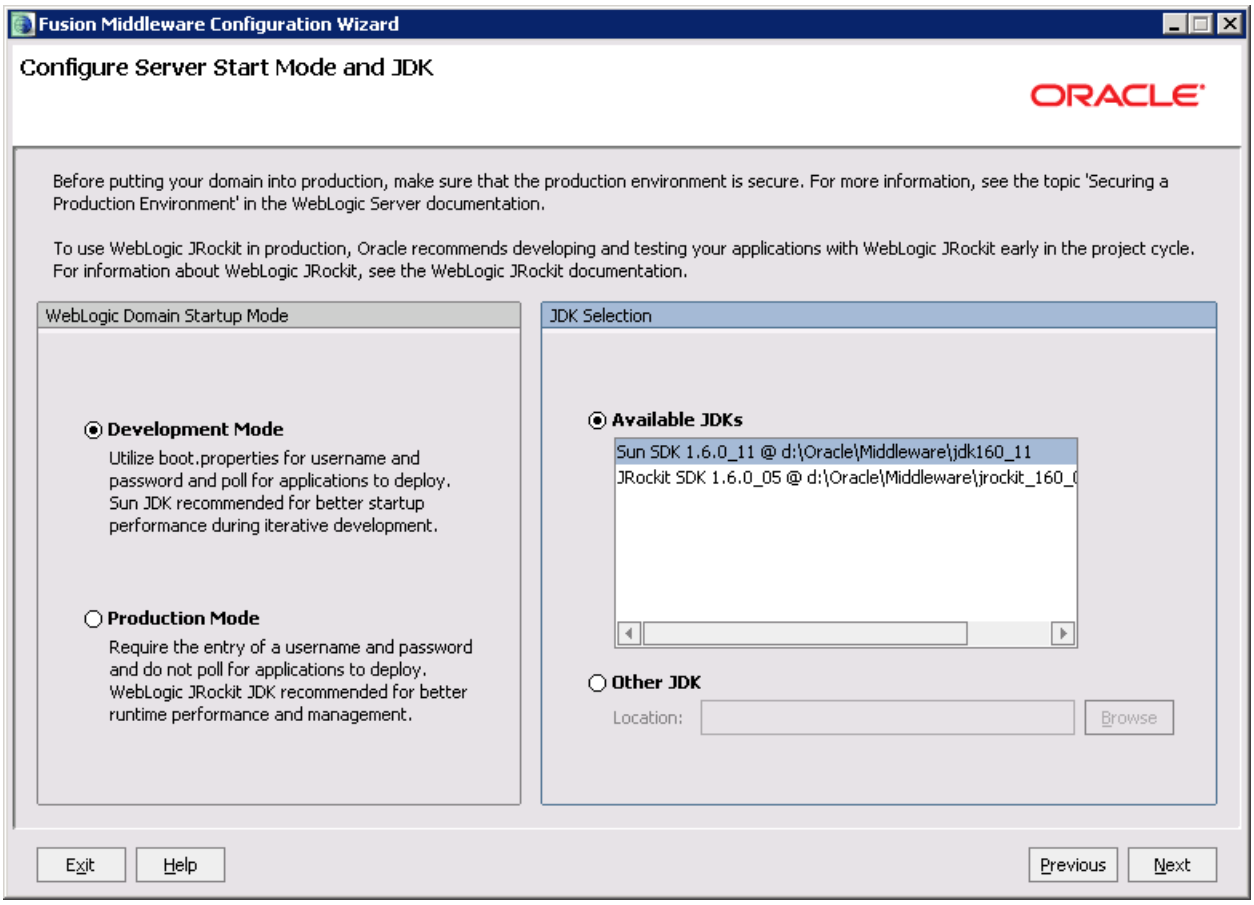


Enter the following values and click “Next”

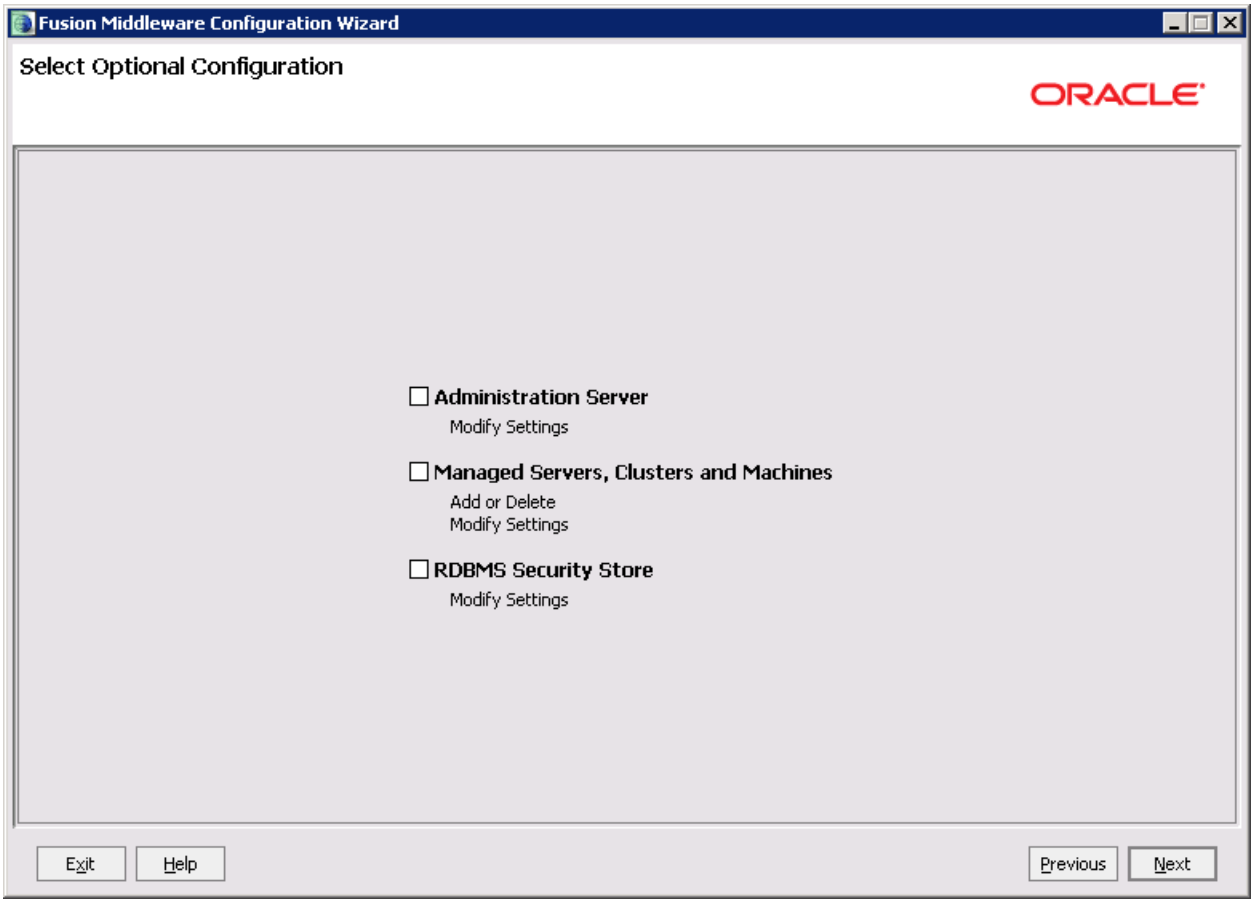
Field	Value
User Name	*<Enter username>*
User password	*<Enter password>*
Confirm user password	*<Repeat same password>*


Fusion Middleware Configuration Wizard
Configure Administrator User Name and Password
ORACLE
Discard Changes
*User name:
weblogic
*User password:
****
*Confirm user password:
****
Description:
This user is the default administrator.
Exit
Help
Previous
Next

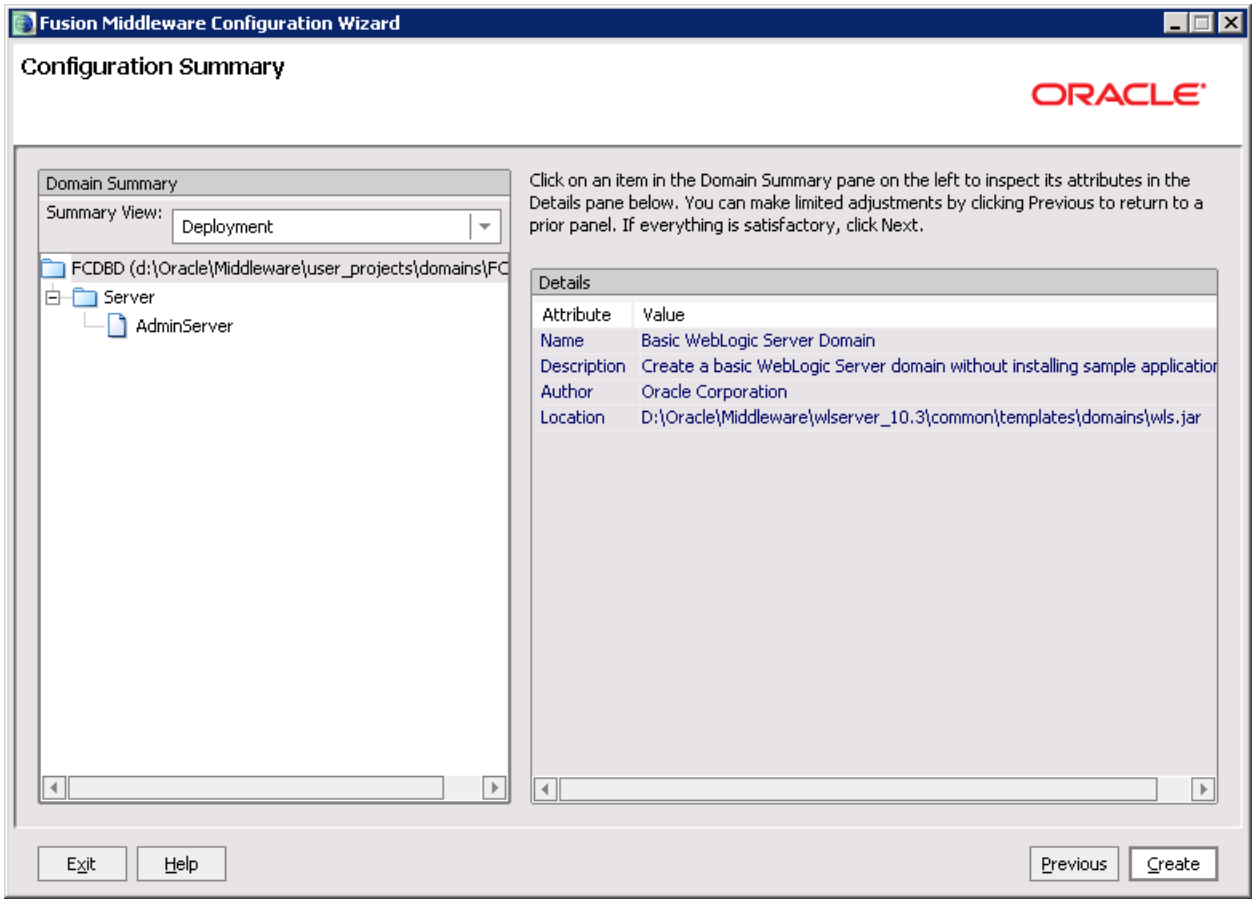
Select “Development Mode” under “Web Logic Domain Startup Mode”,
Select “Available JDKs” in JDK selection and select “Sun SDK 1.6.0_11” and click “Next”



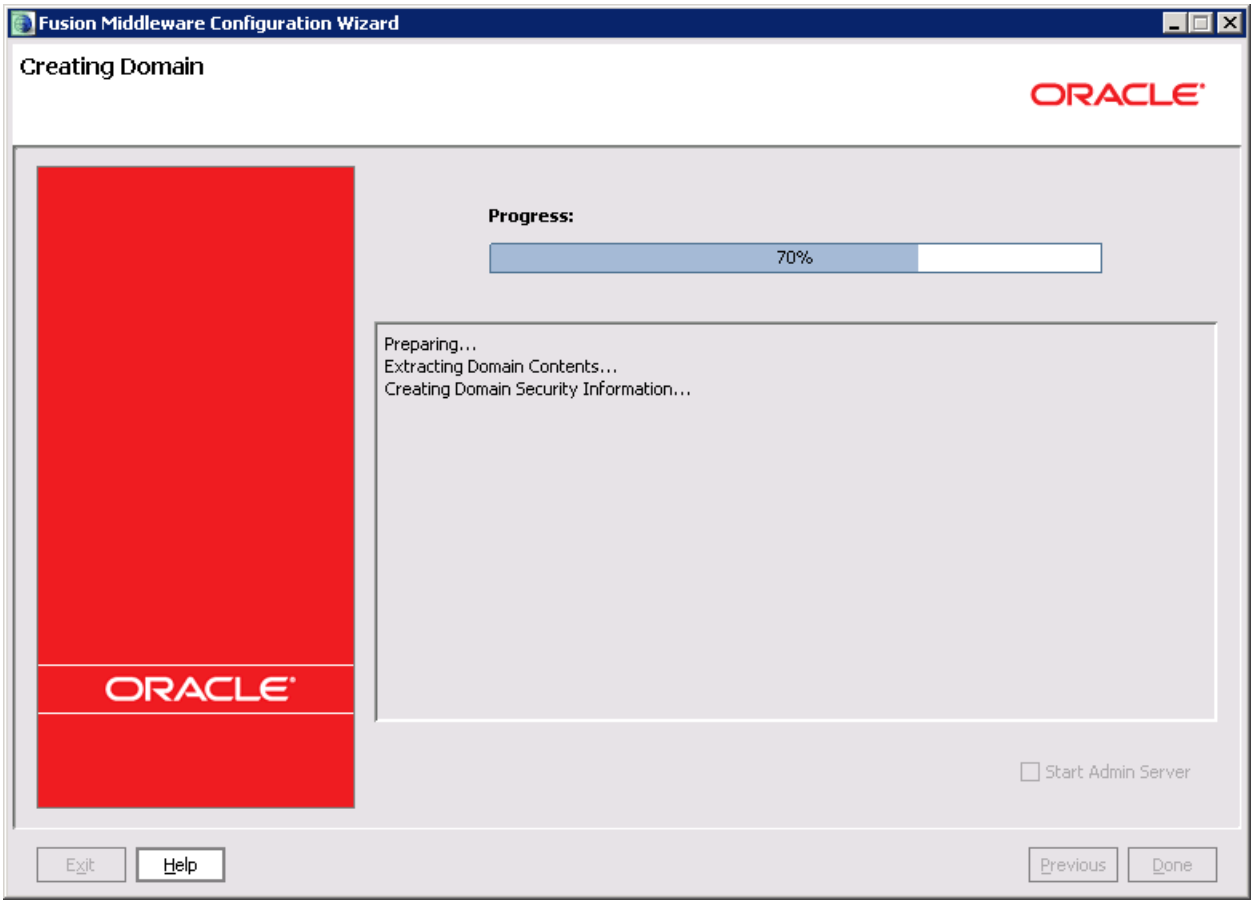
Do not select any of the check boxes and click “Next”



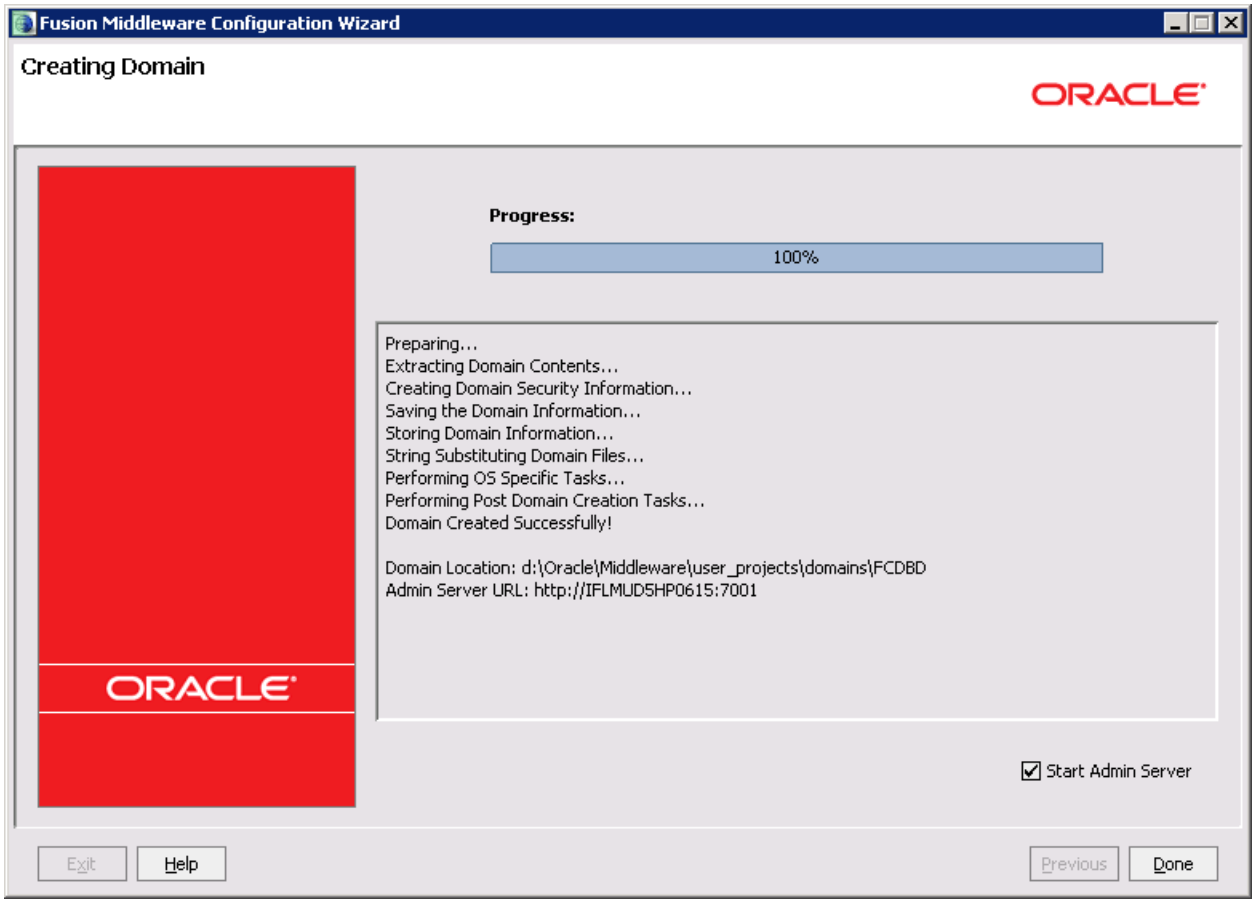
Click on “Create”



The screen displayed below show the progress



Click “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: d:\Oracle\Middleware\user_projects\domains\FCDBD
Admin Server URL: http://IFLMUD5HP0615:7001
ORACLE
Start Admin Server
Exit
Help
Previous
Done

Using commands.

a) Through the command prompt go to the <Oracle Base Folder>/<WLS home directory>/common/bin

e.g If the base folder is ***oracle*** , the path will be D:\oracle\wlserver_10.0\common\bin

b) Execute the batch file inside it wlst.bat (on Windows) or wlst.sh(on Unix)

c) The environment will be set and the prompt changes to wls:/offline>

d) Give the following command to create the domain.

```
createDomain(domainTemplate, domainDir, user, password)
```

Argument	Definition
domainTemplate	Name and location of the domain template from which you want to create a domain.
domainDir	Name of the directory to which you want to write the domain configuration information.
user	Name of the default user.
password	Password of the default user.

For e.g.:

```
createDomain('D:/oracle/wlserver_10.0/common/templates/domains/wls.jar','D:/oracle/user_projects/domains/trial', '<user_name>','<password>')
```

This will create a domain under the location D:/oracle/user_projects/domains.

4.1.2.SSL Configuration

For the SSL configurations kindly refer to the doc
“Oracle_FLEXCUBE_Direct_Banking_Configure_Apache_HTTP_and_Weblogic“

4.1.3.Create Cluster

For configuration of clusters kindly refer to the doc
“Oracle_FLEXCUBE_Direct_Banking_Clustering_on_Weblogic“

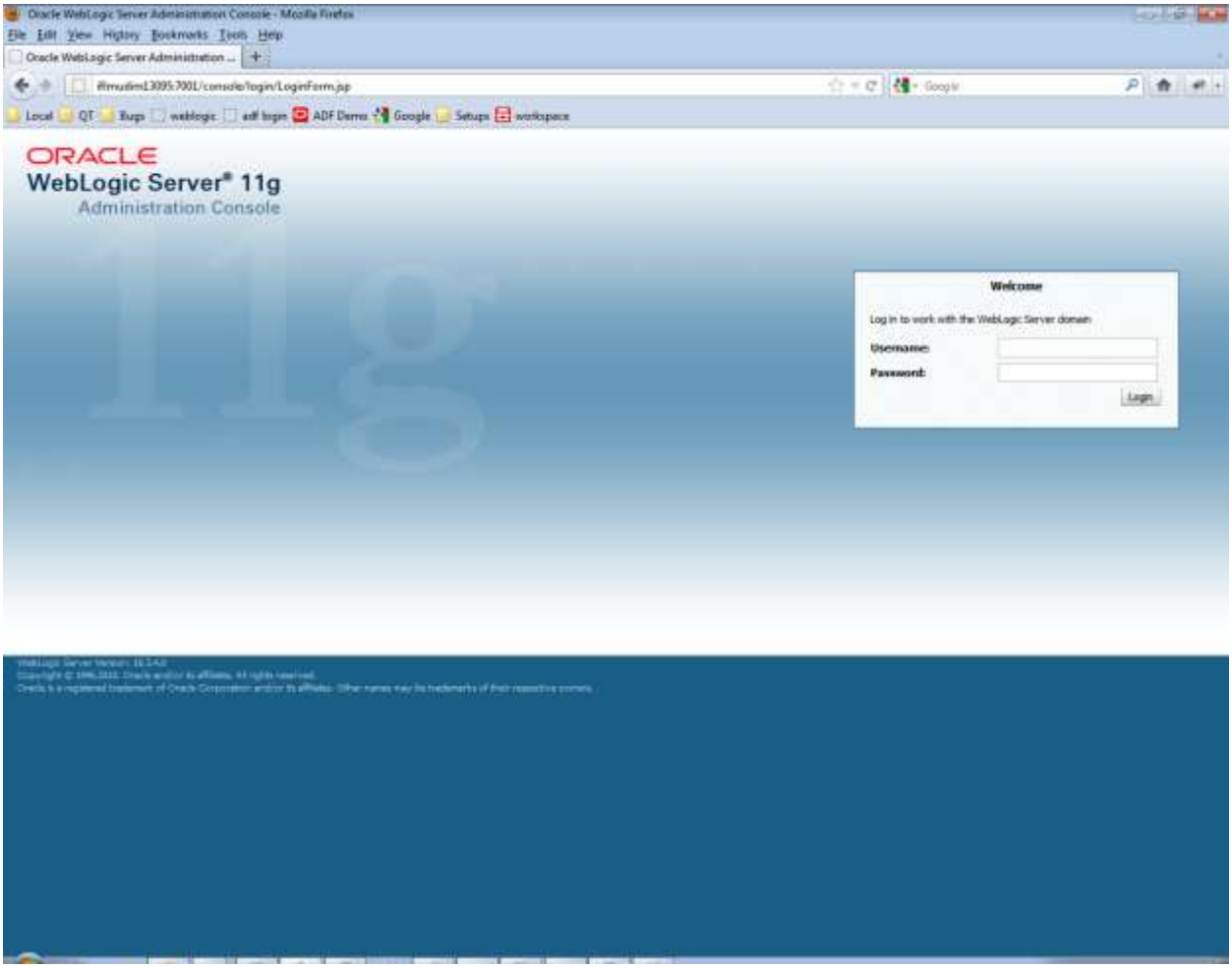
4.1.4.ORACLE WebLogic server administrative console.

The Administration Console facilitates in creating, starting, suspending, resuming and stopping servers; deploying applications and other administration facilities.

1. To start the ORACLE WebLogic Server Administration Console in Windows ,click ORACLE Products →User Projects →<*domain_name*>

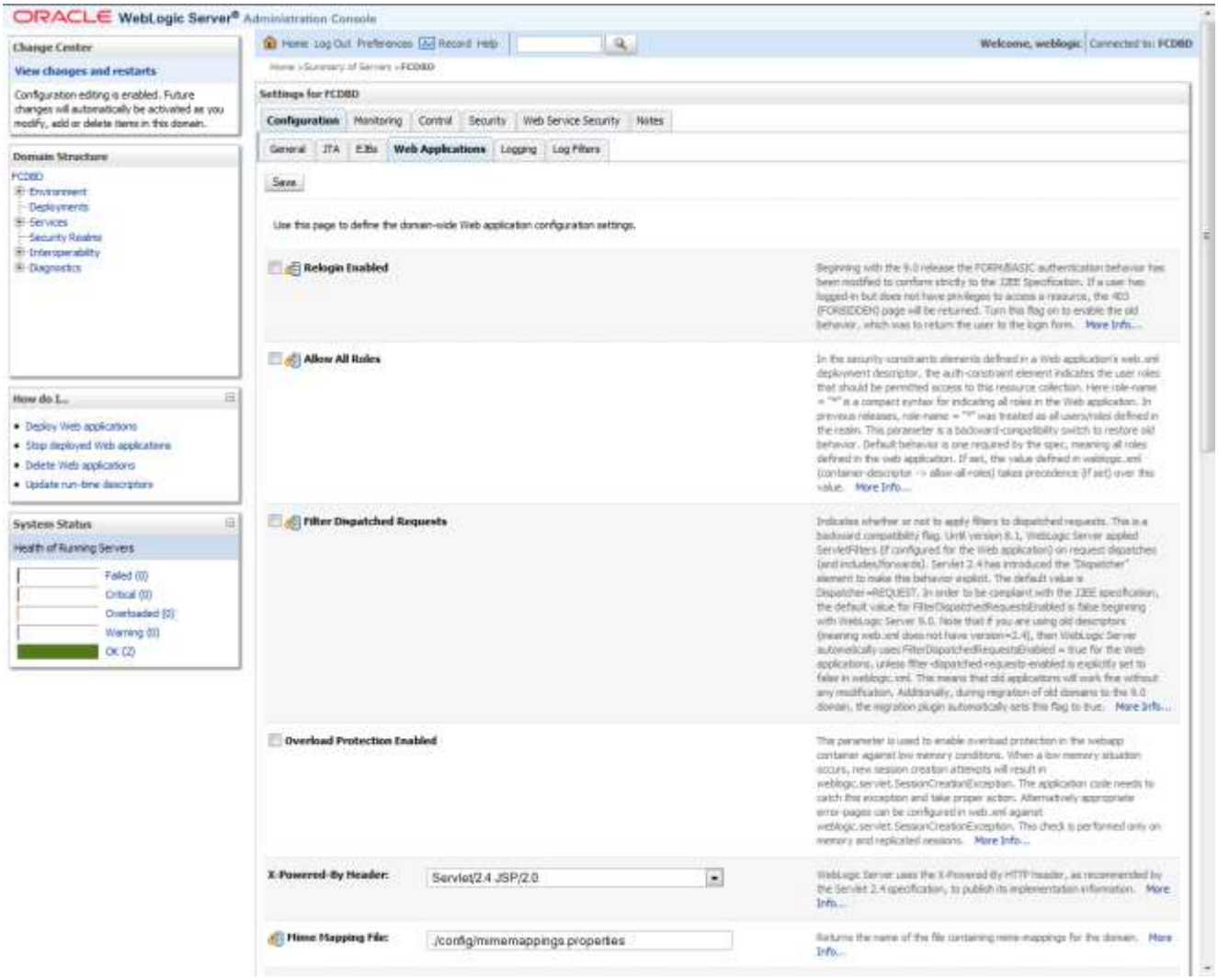
To open Administration Console, type http://<hostname OR IP>:<port>/console in browser window.

Enter User Id and Password set during domain creation and click Log In.

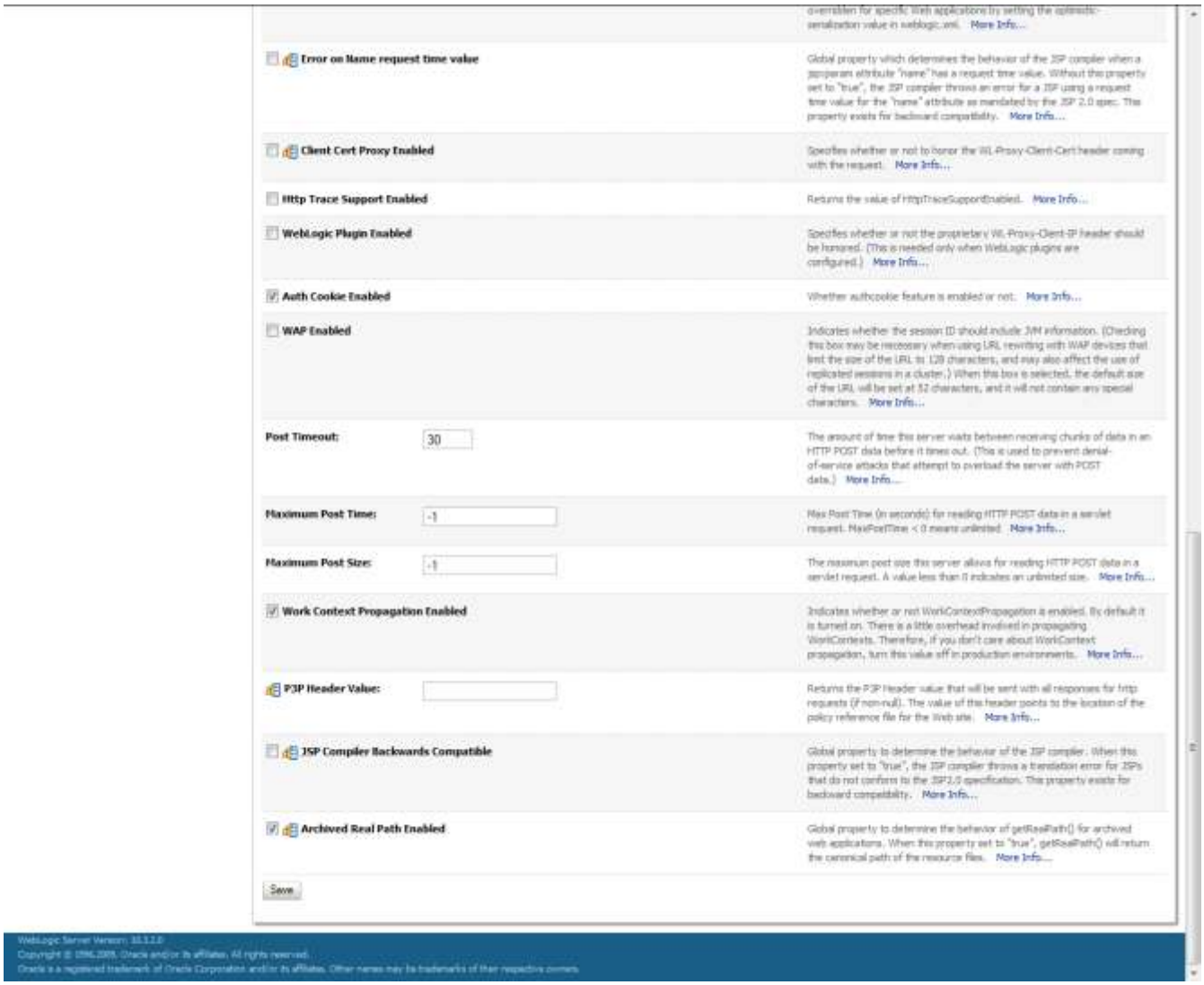


1.5.5. Enable Archived Real Path

1. In the ORACLE Weblogic Server Administration Console, click Domain Name → Web Applications



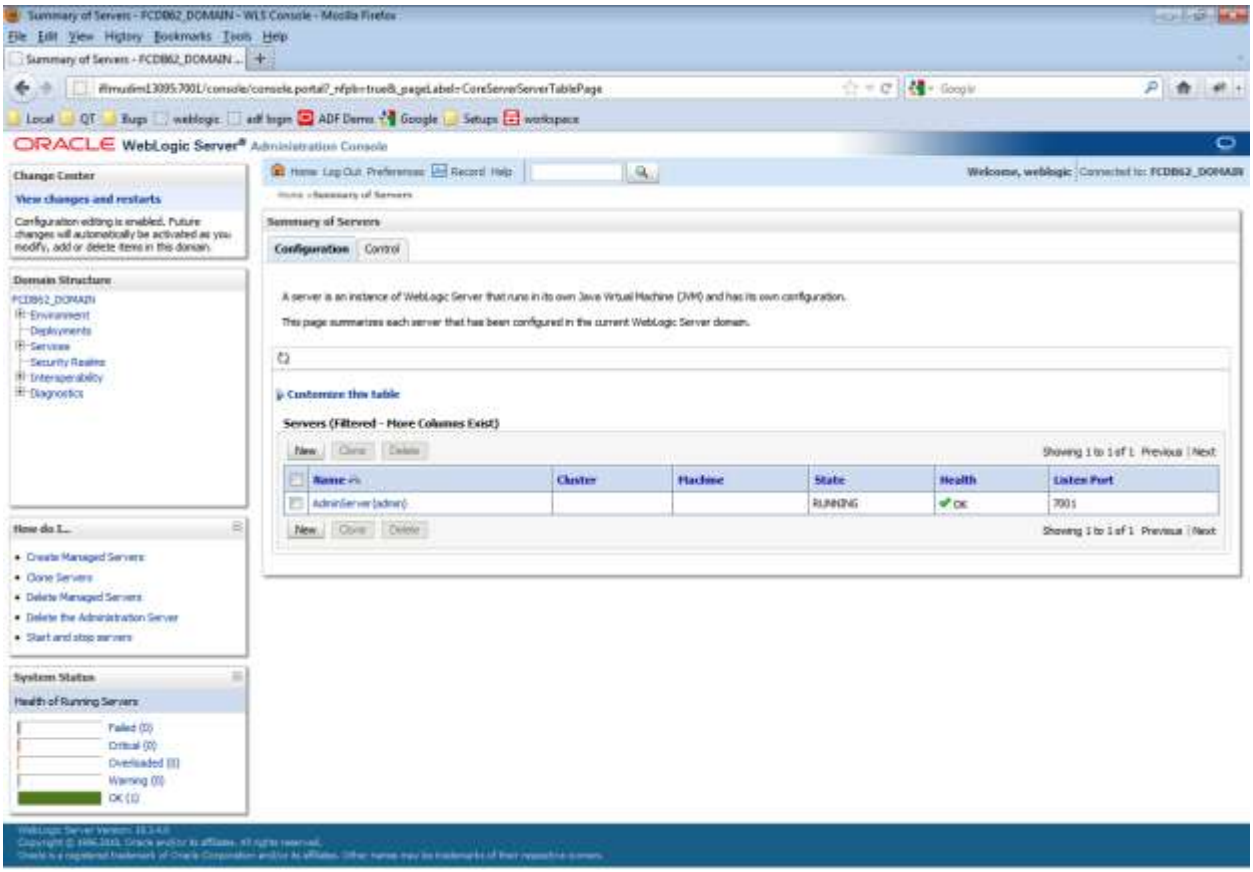
2. Scroll down and Check *Archived Real Path Enabled* and click *Save*



4.1.6.Creating a Managed Server

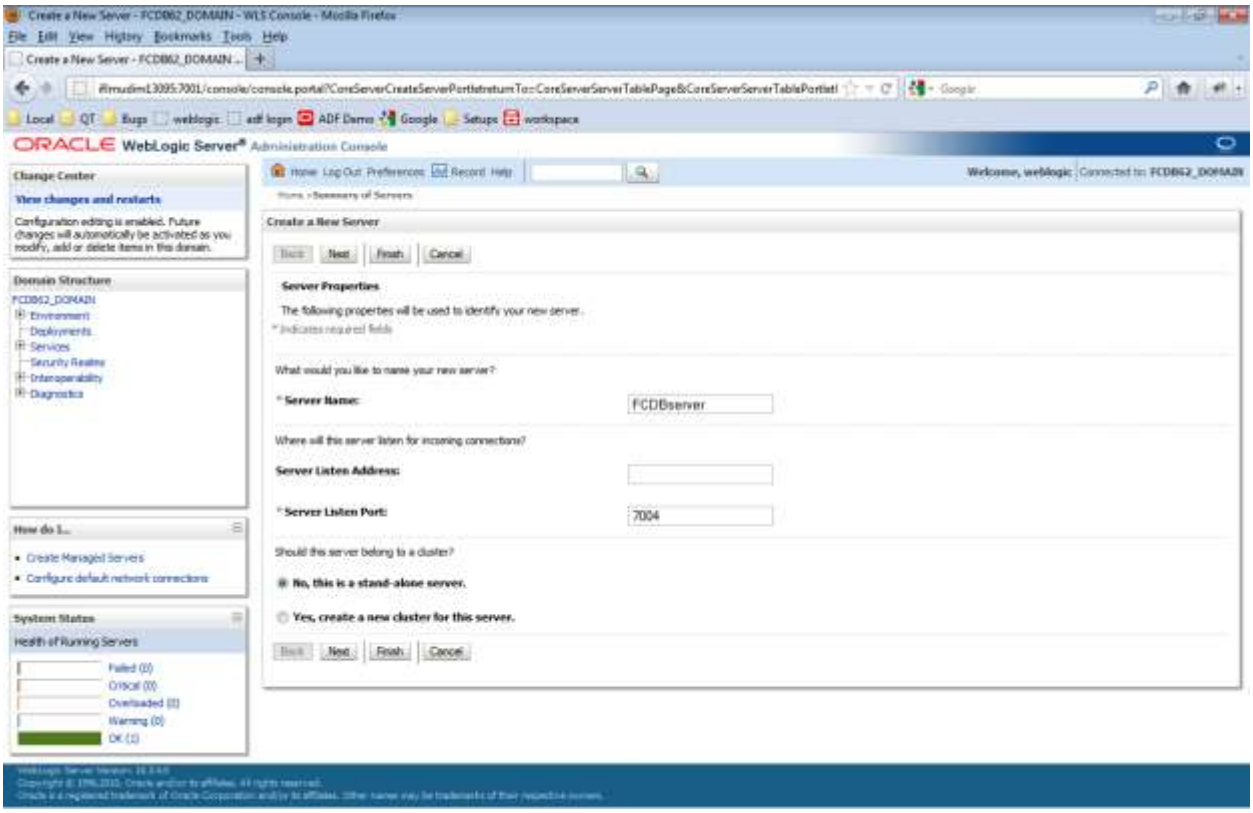
1. In the ORACLE Weblogic Server Administration Console, click Environment → Servers

Click “New”

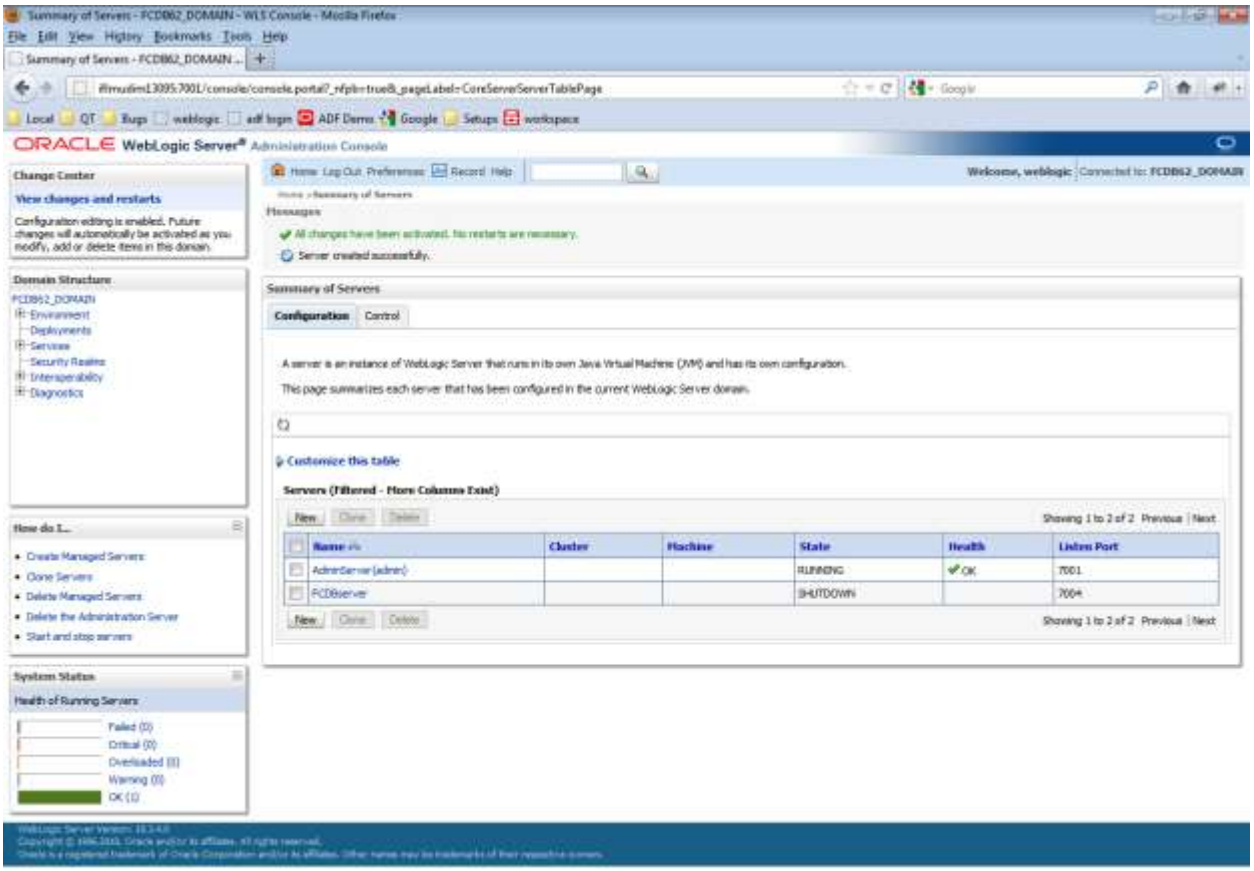


Enter the “Server Name” as “FCDBServer”, set the Server listen Port to “*7002*” or any free port that is not in use.

Select the radio button against No, this is a stand-alone server and click “Finish”



Server created successfully is displayed and summary of servers is shown.



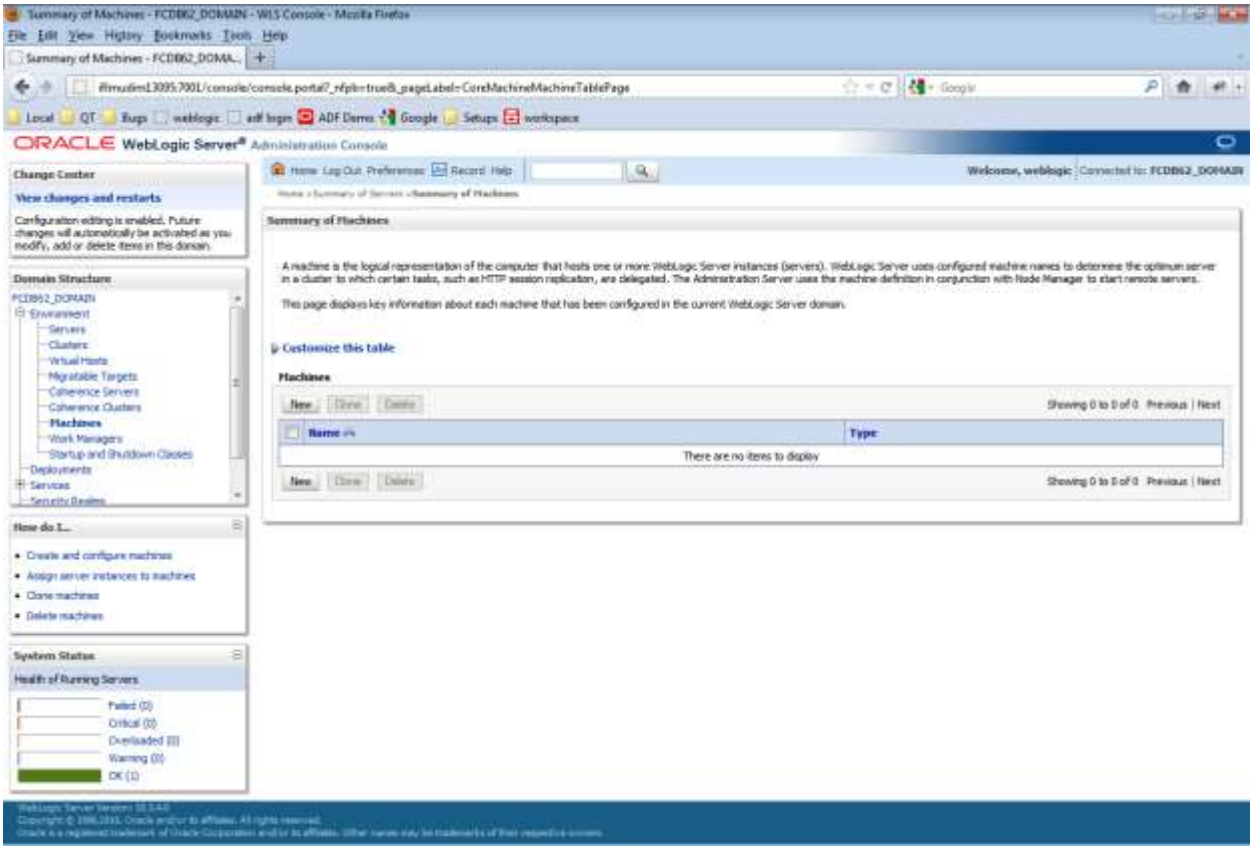
4.1.7.Configurations to Start/Stop managed server from Administrative Console

Creating Machine

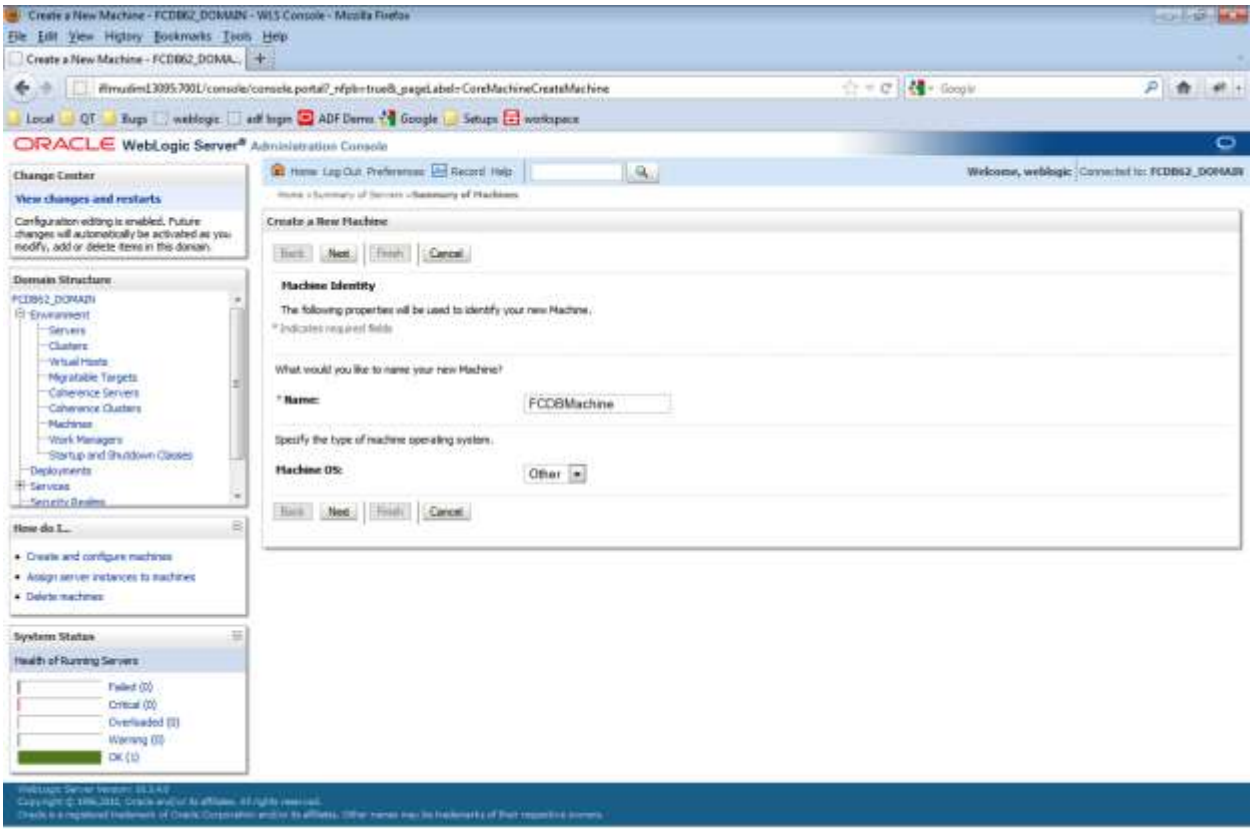
It is required to create a machine in order to Start/Suspend/Resume/Stop the Managed Servers in Weblogic using Administration Console.

1. Click Environment → Machines

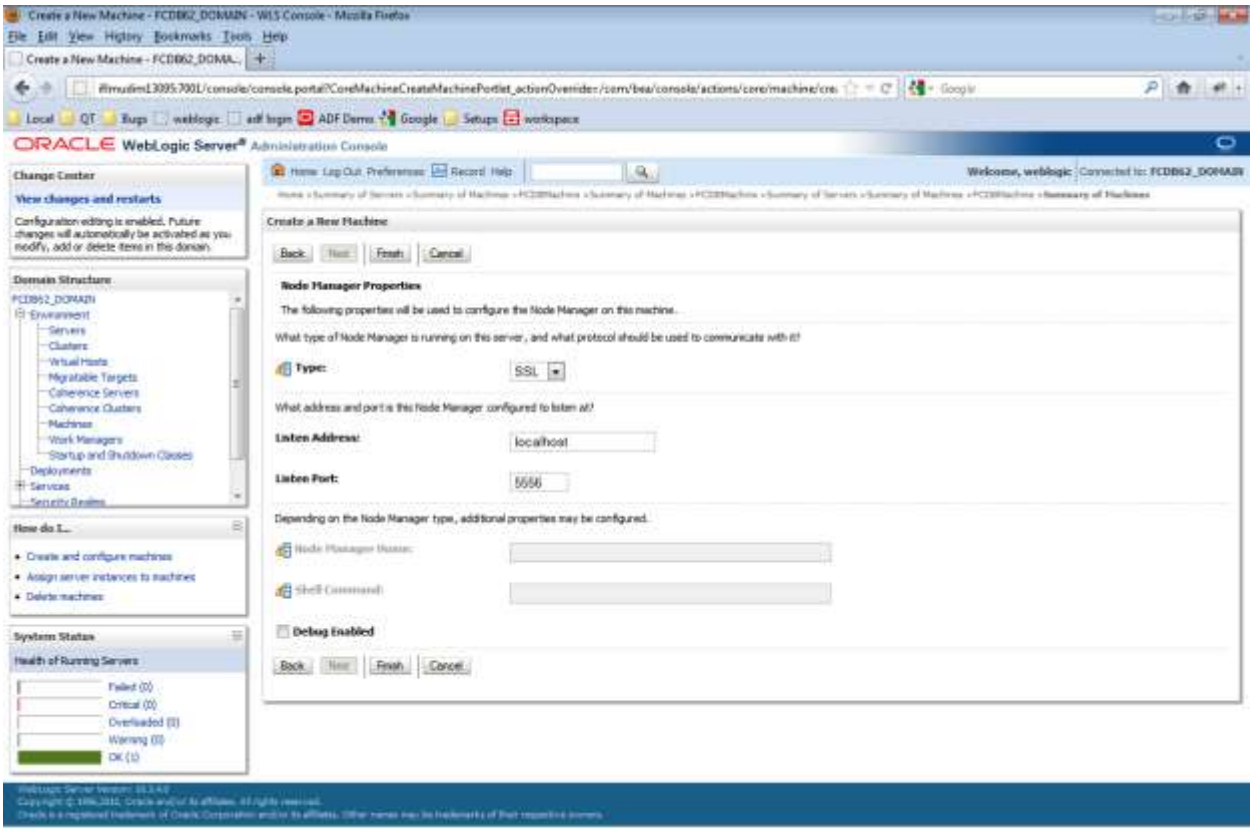
Click "New" button



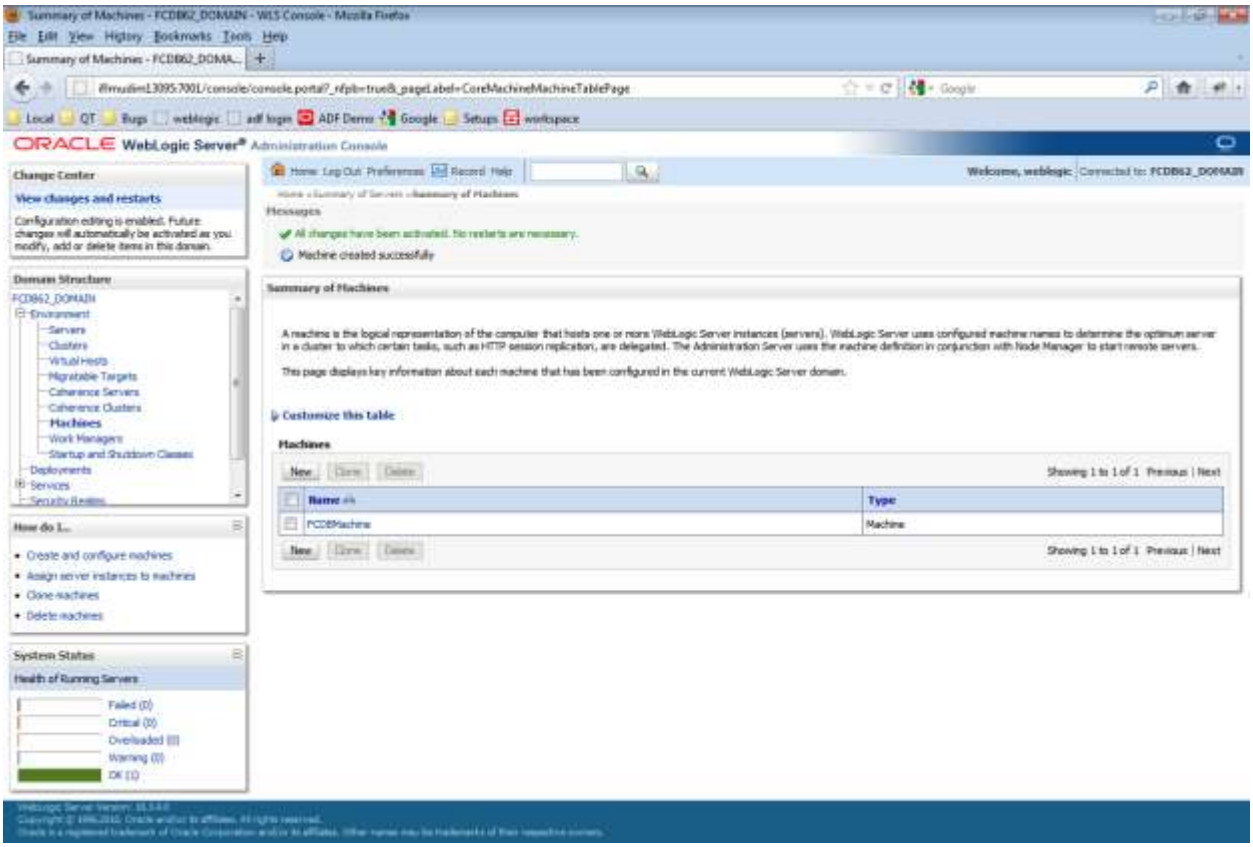
Enter the Name as “FCDBMachine” and click “Next”



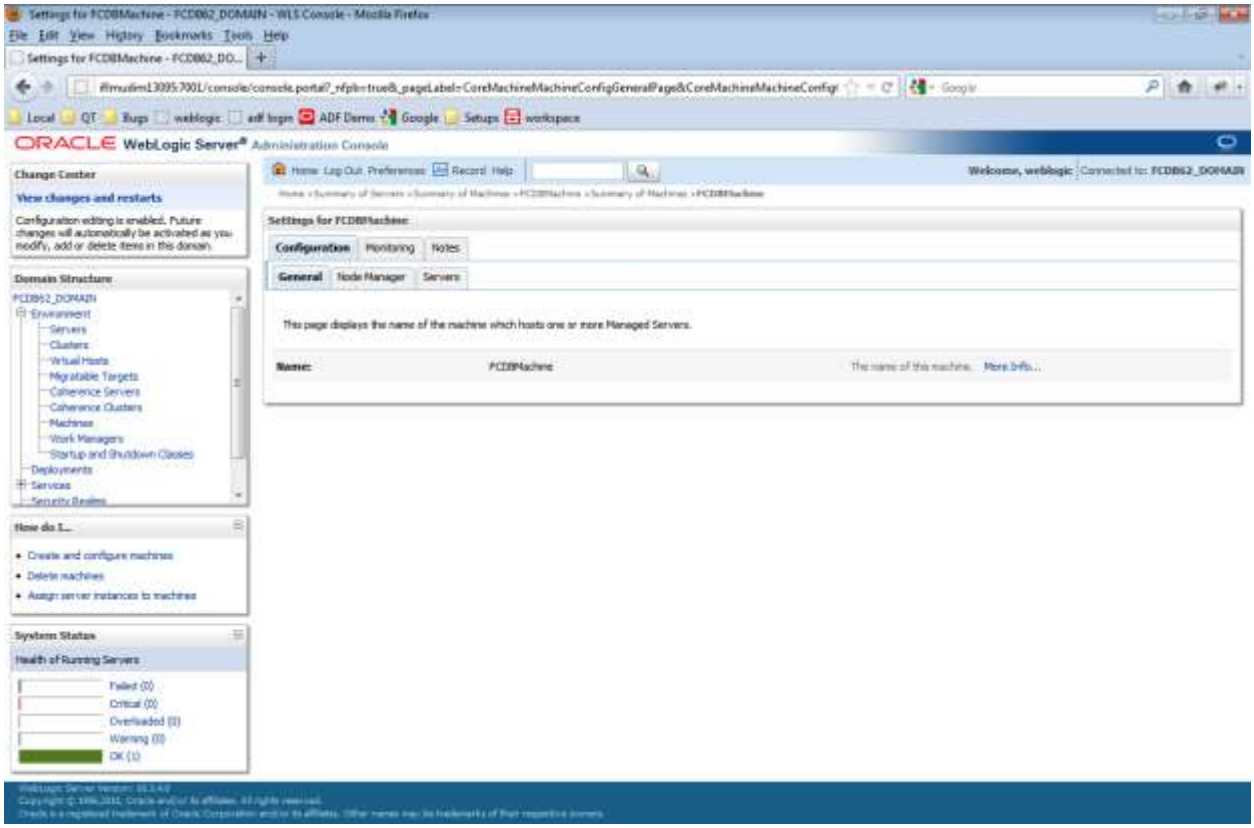
Select “Type” as “Plain” from the drop down list and click Finish.



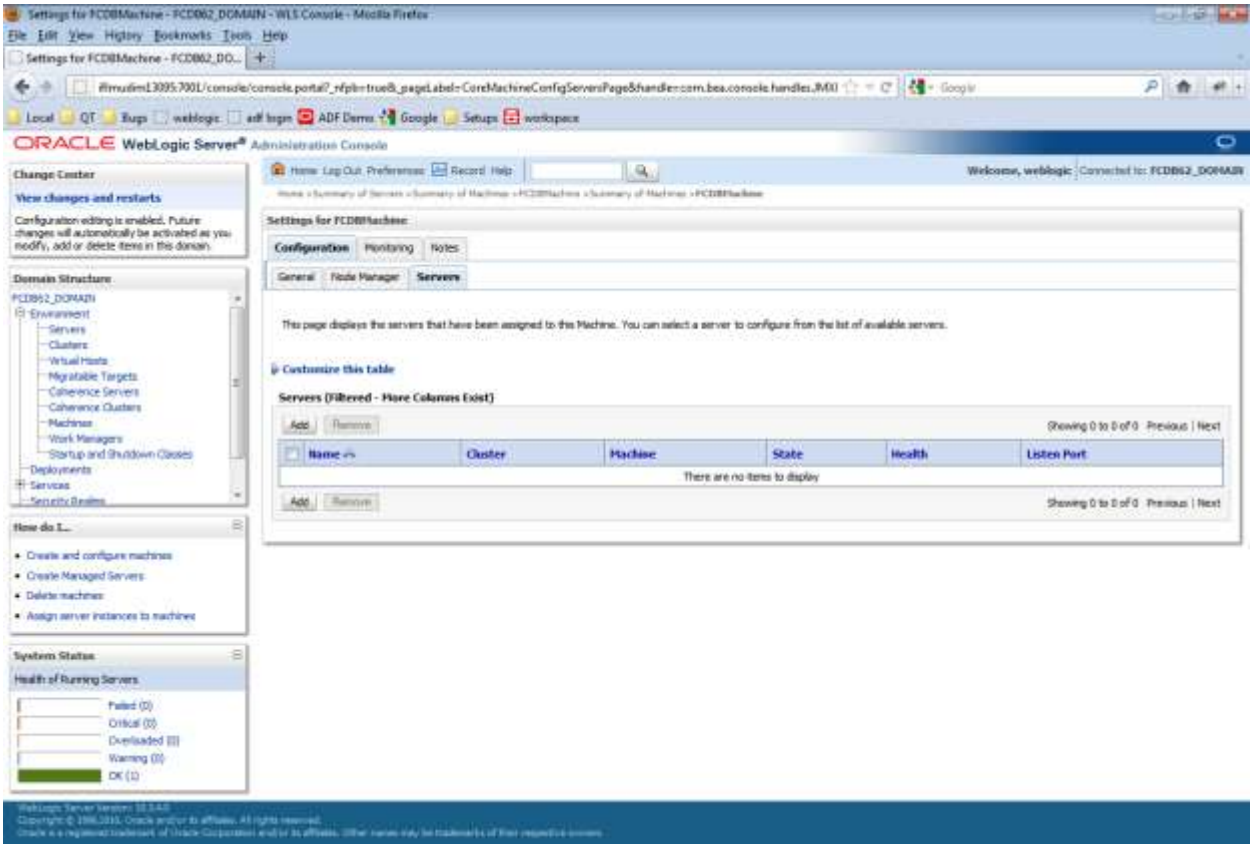
Machine created successfully message is displayed.



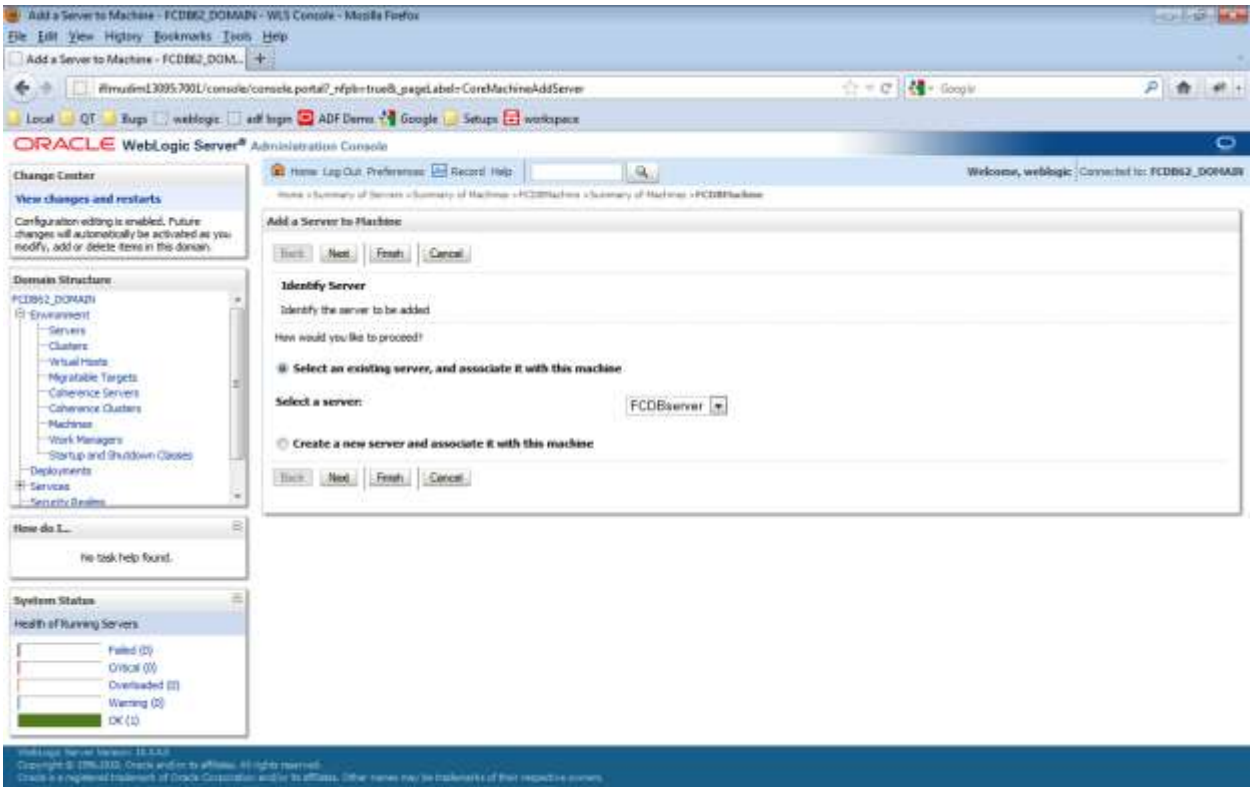
Click on Newly created FCDBMachine.



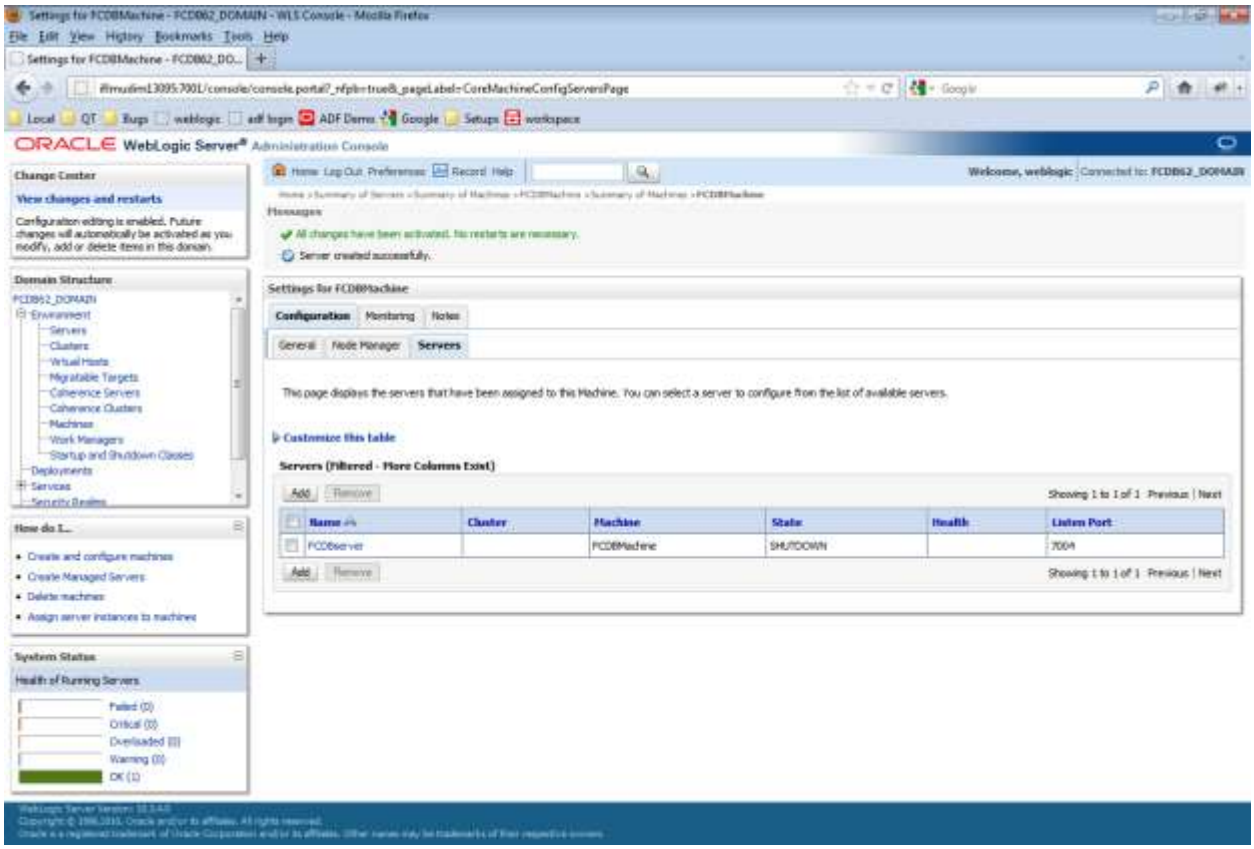
Click Servers under the “Configuration tab.



Click Add button to add a server to machine

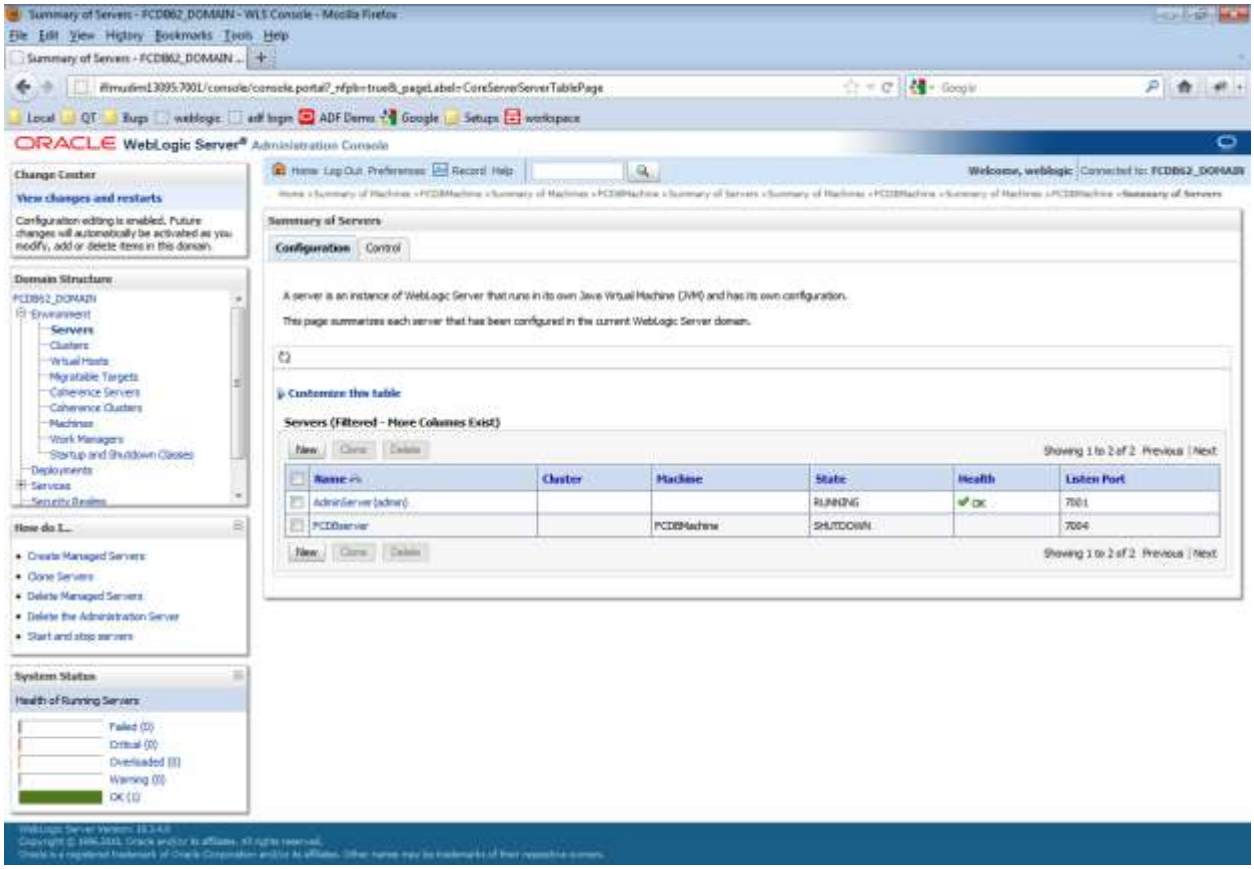


Check the radio button against “Select an existing server, and associate it with this machine”. Select FCDBServer from the “Select a Server” drop down and click on “Finish”. Server created successfully message is displayed

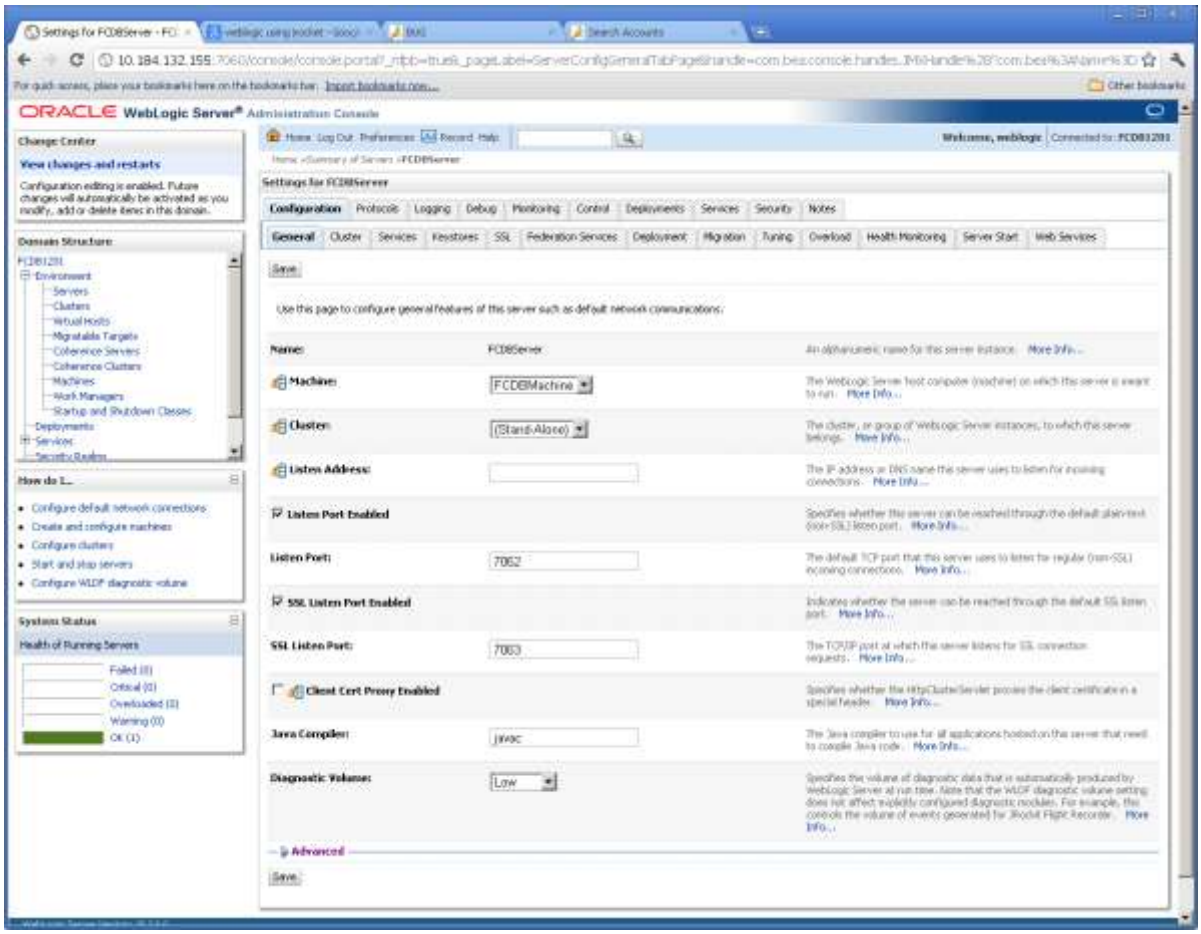


Configuring Managed Server

1. Click on Environment→Server in the left menu.



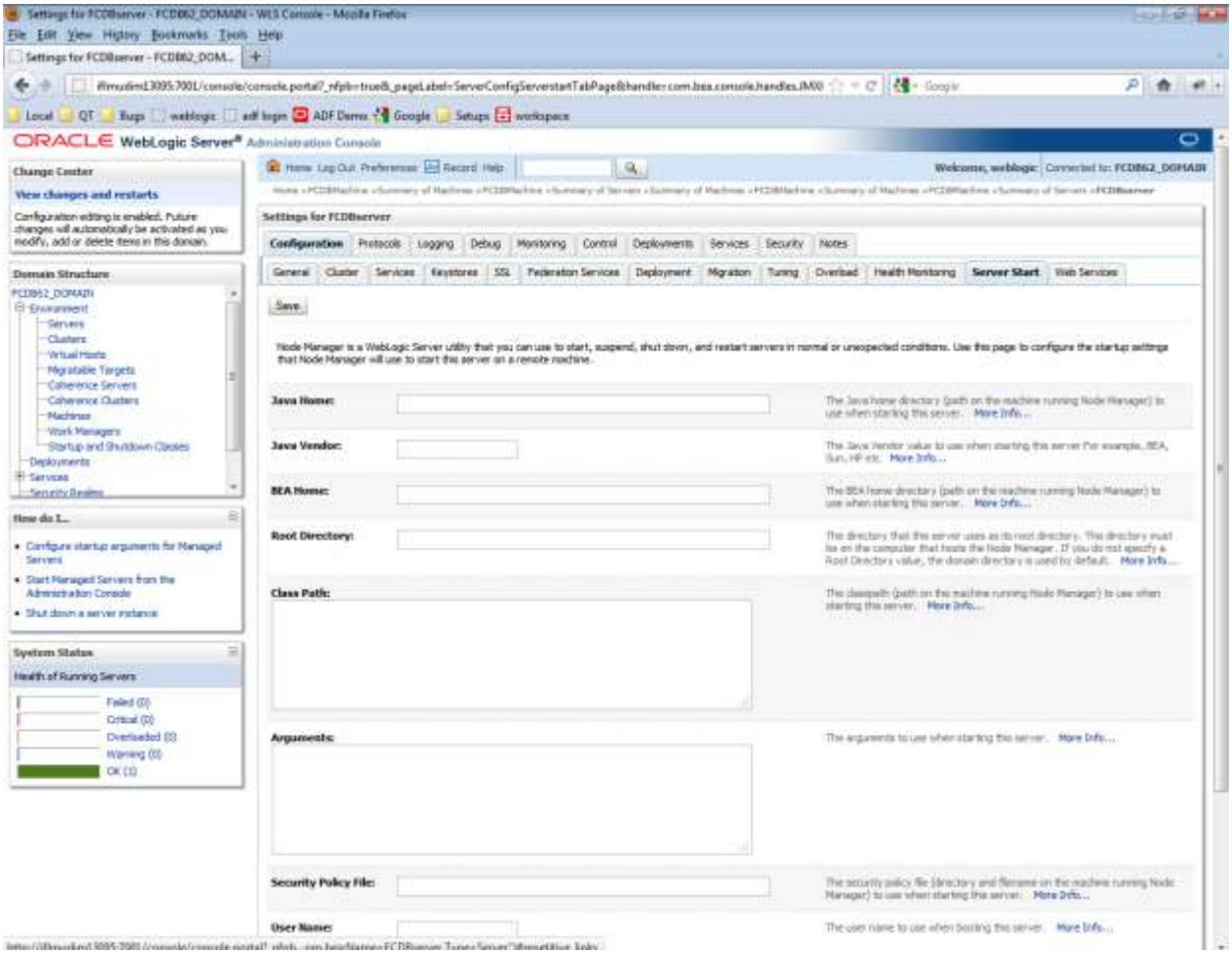
Click on server name with *FCDBServer*"



On General tab, please ensure that the 'SSL Listen Port Enabled' feature is enabled (as it is mandatory). And the Listen Address should be "App Server IP"

Note: If you are using APACHE HTTP server then kindly refer Oracle_FLEXCUBE_Direct_Banking_Configure_Apache_HTTP_and_Weblogic manual for more details.

Click on Server Start under Configuration tab.



Enter the following values and click "Save"

Assuming the <FCDB BASE DIR> as Base Working Directory specify the path for all the jars from the following location.

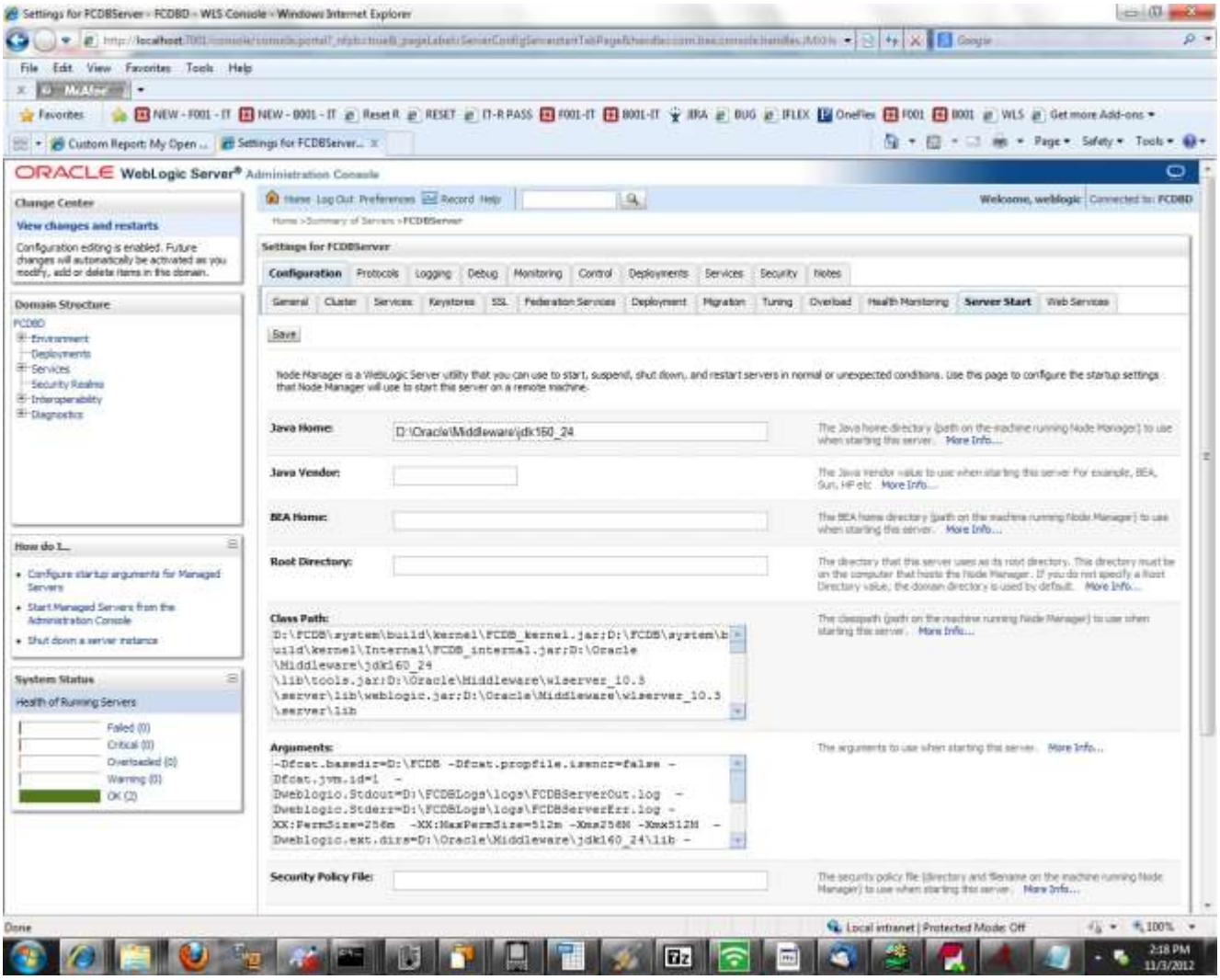
Location	Description
<FCDB BASE DIR>\system\build\kernel	Select the release jar FCDB_kernel.jar kept at this location.
<FCDB BASE DIR>\system\build\extclasses\jars	Select all the external or third-party jars within this folder.

Also mention the path for the home folder and logs.

Example configure the following properties.

Property Name	Value	Description
Java Home	<Oracle Base Folder>\jrockit-jdk1.6.0_22-R28.1.1-4.0.1	The Java home directory
Class Path	<FCDB BASE DIR>\system\build\kernel\FCDB_kernel.jar;<Oracle Base Folder>\jdk150_11\lib\tools.jar;<Oracle Base Folder>\wlserver_10.0\server\lib\weblogic.jar;< Oracle Base Folder>\wlserver_10.0\server\lib\webservices.jar;< FCDB BASE DIR>\system\build\extclasses\jars\<Include all jars residing in this path>;%classpath%;	Set the Classpath, in case of windows environment use (;) as separator and in case of Unix use (:). There Shouldn't be any space between variables.
Arguments (When JRockit is used)	-Dfcat.basedir=<BASE FOLDER> -Dfcat.propfile.isencr=false -Dfcat.jvm.id=1 -Dweblogic.Stdout=<FCAT.LOGFILE.PATH>\logs\ FCDBServerOut.log - Dweblogic.Stderr=<FCAT.LOGFILE.PATH>\logs\ FCDBServerErr.log -Xms1024M -Xmx1536M - Dweblogic.ext.dirs= < Oracle Base Folder>\jdk150_11\ lib -Dweblogic.security.SSL.ignoreHostnameVerification=true -Dweblogic.security.TrustKeyStore=DemoTrust -Dweblogic.security.SSL.enforceConstraints=off -Xmanagement:ssl=false,authenticate=false,port=7091	Path to all folders holding application relevant jar files , location of class files generated, logs and home folder which will be used when starting the server. Note: Property "fcat.propfile.isencr" indicates the properties file's encryption status. Set as 'true' if files are encrypted, else set as 'false'. Refer to point 8 in this document for more details.
Arguments (When SUN JDK is used)	-Dfcat.basedir=<BASE FOLDER> -Dfcat.propfile.isencr=false -Dfcat.jvm.id=1 -Dweblogic.Stdout=<FCAT.LOGFILE.PATH>\logs\ FCDBServerOut.log - Dweblogic.Stderr=<FCAT.LOGFILE.PATH>\logs\ FCDBServerErr.log *-XX:PermSize=512m* -Xms1024M -Xmx1536M - Dweblogic.ext.dirs= < Oracle Base Folder>\jdk150_11\ lib	

	- Dweblogic.security.SSL.ignoreHostnameVerification=true -Dweblogic.security.TrustKeyStore=DemoTrust -Dweblogic.security.SSL.enforceConstraints=off -	
Note:-	Username and Password should be blank.	



Please Note that kernel.jar should precede all the external jars

Configuring the Node Manager in Windows using command prompt

1. Open the file “WL_HOME\common\nodemanager\nodemanager.properties”
   e.g. D:\Oracle\wlserver_10.0\common\nodemanager\nodemanager.properties

Change the value of the property “SecureListener” to “false” in the file.

Execute the file installNodeMgrSvc in WL_Home\server\bin
Verify the configuration by following these steps

a. Find the service with the name “Oracle Products NodeManager through services.msc.
b. Make sure that the “Startup Type” is “Automatic”
c. Click on the Start link to start the service.

Configuration to Start/Stop Servers as a windows Service.

Admin Server

1. Copy the installAdminServerSvc.cmd file from the list of files provided in the following location.
   < Oracle Base Folder>\user_projects\domains\DOMAIN_NAME

Execute the following command at the command prompt under the directory where the installAdminServerSvc.cmd file has been copied to.

```
installAdminServerSvc <username> <password>
```

FCDBServer

Copy the installFCDBServerSvc.cmd to the following location.
< Oracle Base Folder>\user_projects\domains\DOMAIN_NAME
Execute the following command at the command prompt under the directory where the installFCDBServerSvc.cmd file has been copied to.

```
installFCDBServerSvc <username> <password>
```

Property	Description
DOMAIN_NAME	Name of the domain as specified in domain creation.
username	The user name specified at domain creation.
password	The password specified at domain creation.

Check the path in My Computer→Environment Variables→Path (Variable). It must not contain any spaces. This can be verified by giving the command at the command prompt

```
echo %PATH%
```

Starting Admin Server and Managed Server using command prompt

1. In a command prompt, set up the required environment variables by running the following script:
   WL_HOME\server\bin\setWLSEnv.cmd (on Windows)
   WL_HOME/server/bin/setWLSEnv.sh (on UNIX)
   where WL_HOME is the home directory for WebLogic.

In the command prompt, change to the root of the domain directory, usually
<ORACLE_HOME>\user_projects\domains\<DOMAIN_NAME>
To start an Administration Server, enter the following command:

```
java weblogic.Server
```

You can start a Managed Server as follows:

java -Dweblogic.Name=<managed-server-name>
Dweblogic.management.server=<url-for-Administration-Server> weblogic.Server

For example, if you create a Managed Server named FCDBSerevr in the fcdb_domain, you can enter the following command:

```
java -Dweblogic.Name= FCDBServer
Dweblogic.management.server=localhost:7001 weblogic.Server
```

Starting the Node Manager through Windows

Start the Node Manager from the Program Files→< ORACLE Folder>→Tools→Node Manager.

Starting Managed Server using Administrative Console

1. Click on “Environment→ Servers.”

Click on the server that is to be started.
Note: Only those servers which have been assigned a machine can be controlled through Administration console
Click on “Control” tab.
Select the checkbox against the server name and click on the “Start” button.
Click “Yes” in the confirmation screen.

4.2. Deploying Applications

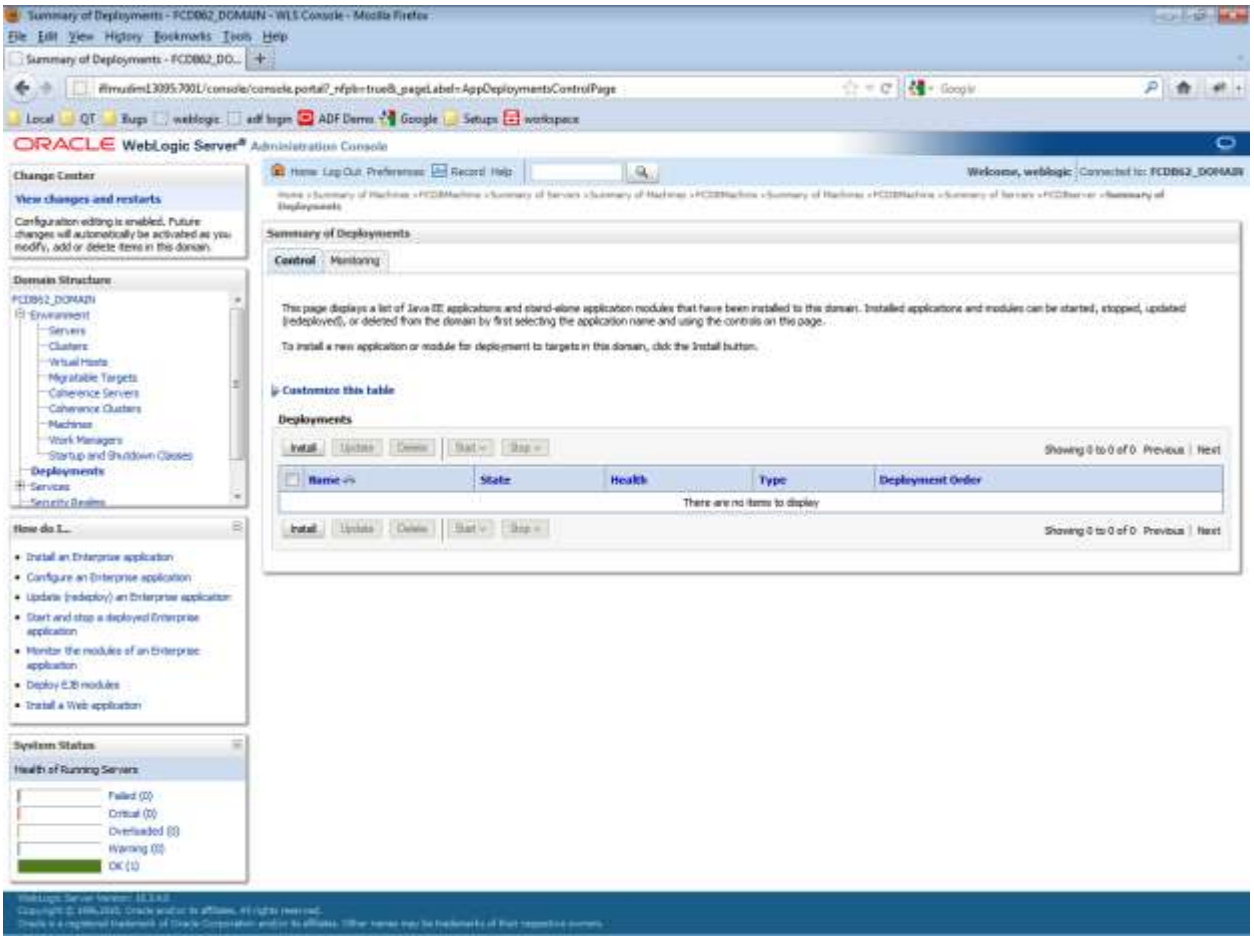
Web Application Deployment

Following section explains deploying Web application on Weblogic. For details and different options of deployment refer to documentations provided by ORACLE Weblogic .

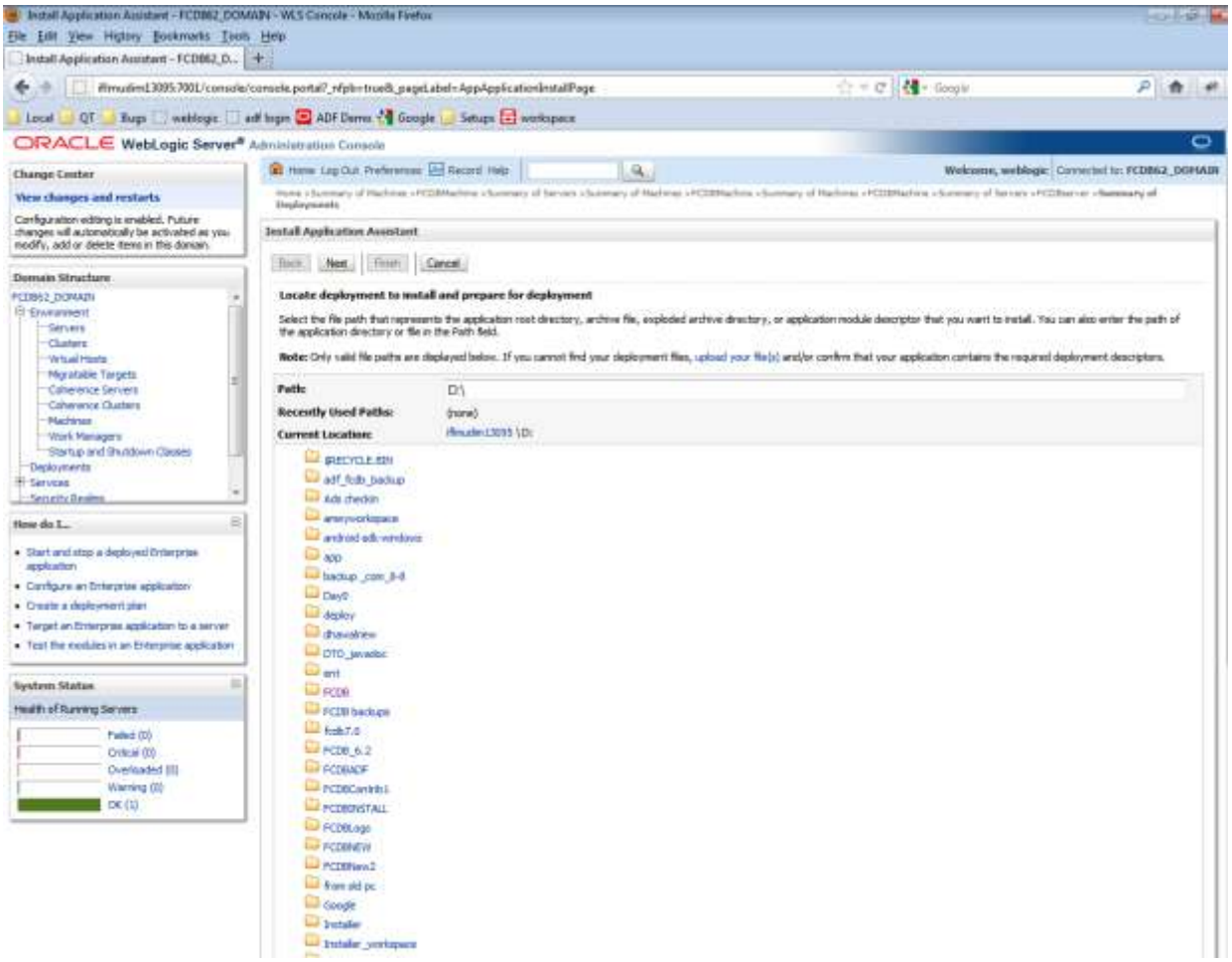
These steps should be carried out for each FCDB web application mentioned below.

Deployable	Suggested Context	Path Location	Description
F001.war	F001	<FCDB BASE DIR>\deploy	Application for Super entity F001
B001.war	B001	< FCDB BASE DIR>\deploy	Application for Bank entity B001. This is available only for Base release.
T001.war	T001	< FCDB BASE DIR>\deploy	Application for Model Third Party Bank entity T001. This is applicable only for Third party Accelerator Pack release.
V001.war	V001	< FCDB BASE DIR>\deploy	Application for Model Virtual Bank entity V001. This is applicable only for Virtual Bank Accelerator Pack release.
SMS.war	SMS	< FCDB BASE DIR>\deploy	Required for SMS Banking.
help.war	B001	< FCDB BASE DIR>\deploy	Required for help

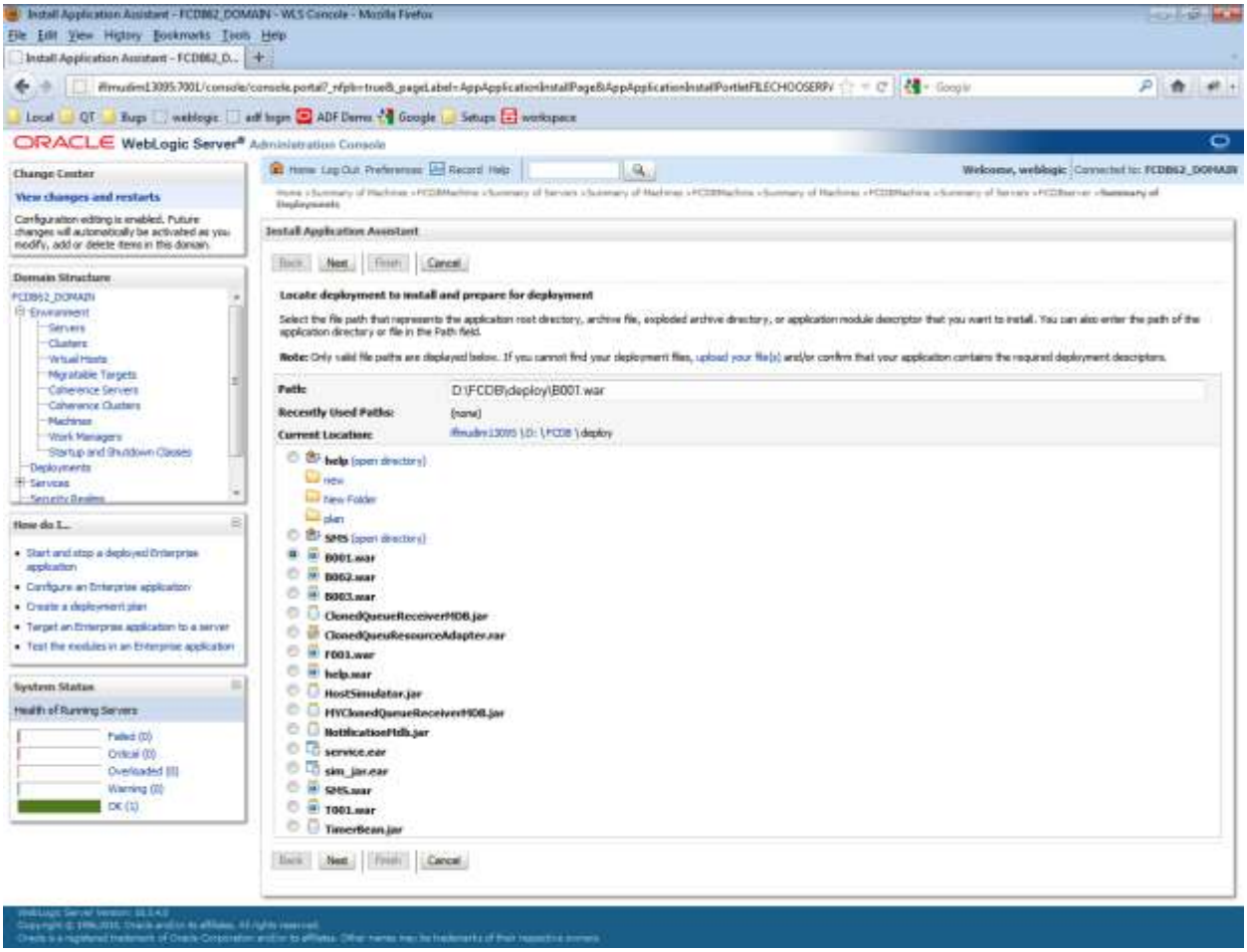
1. Click “Deployments” in the left menu.



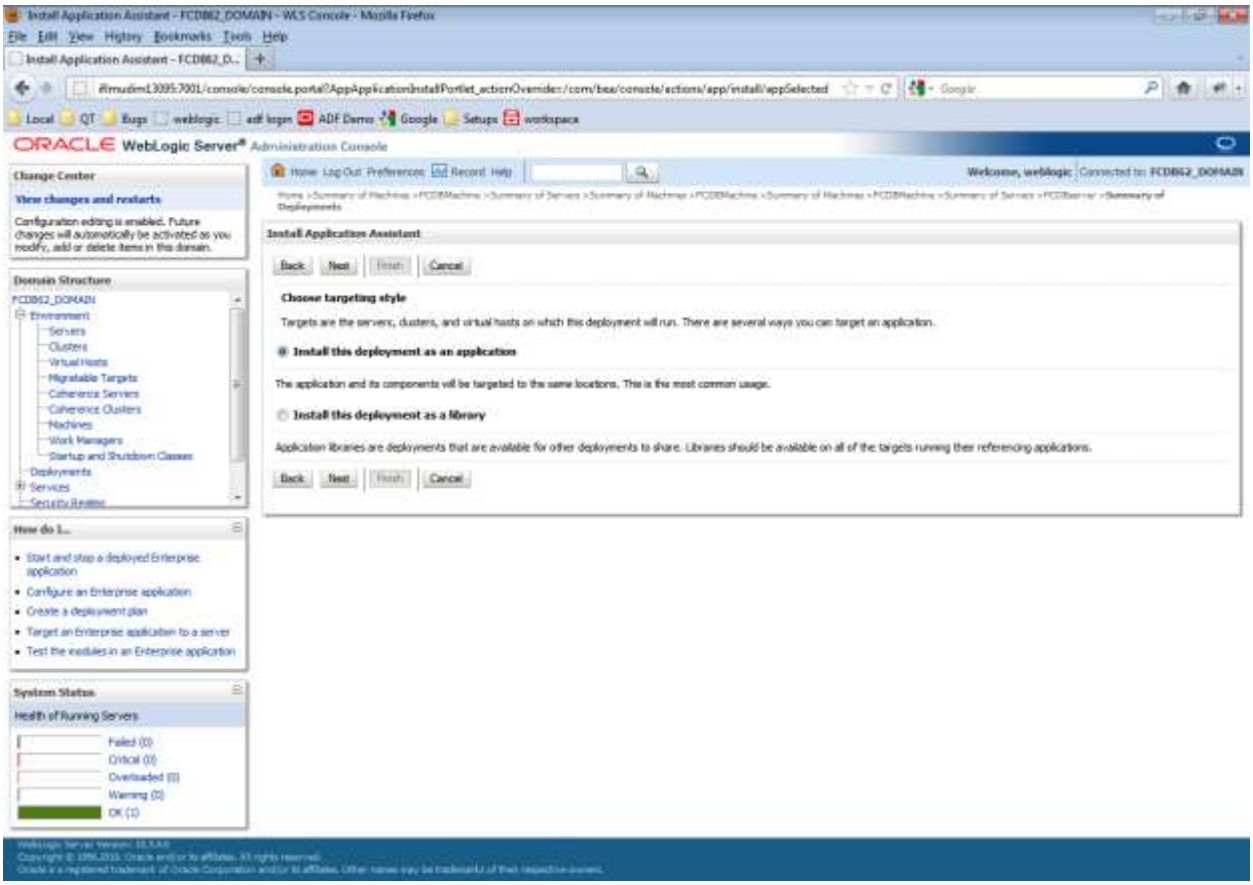
Click “Install” button.



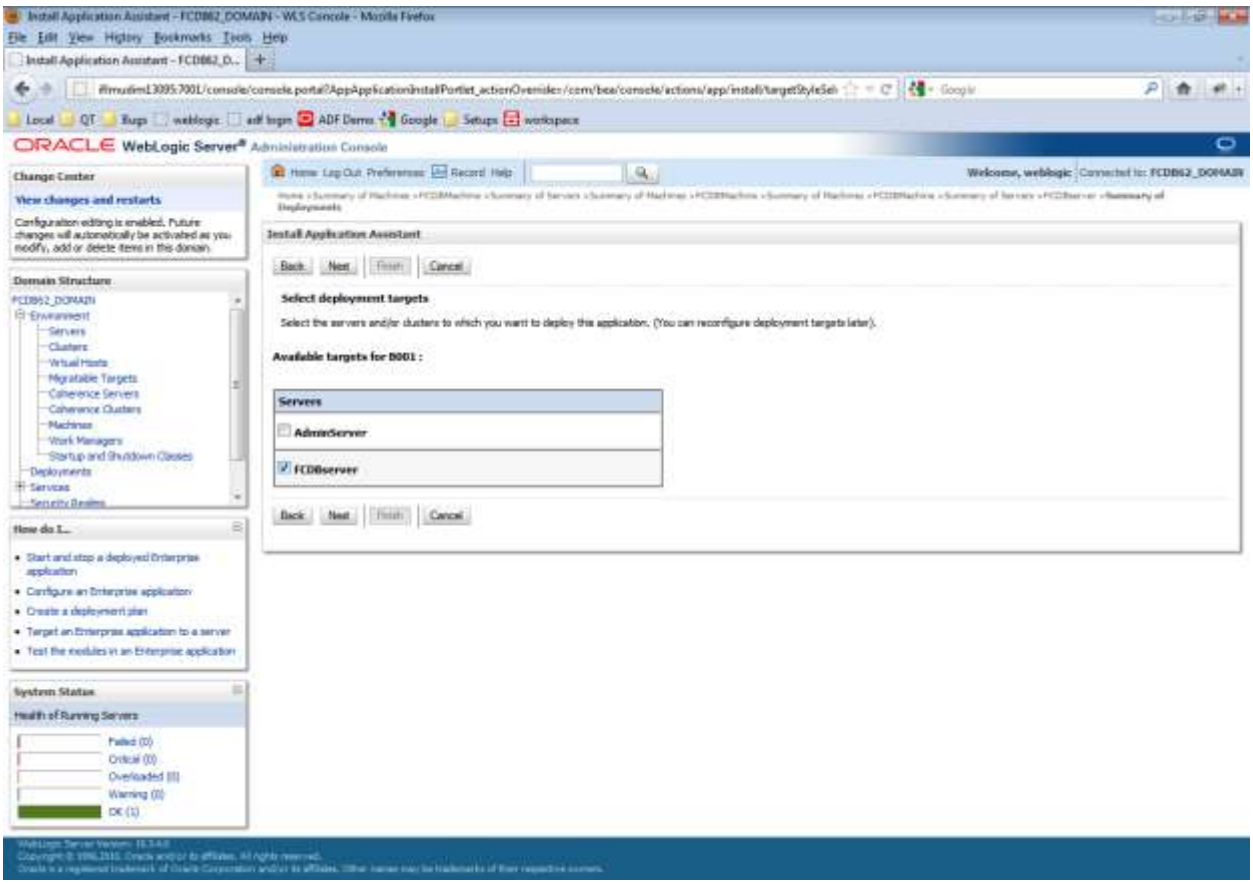
Navigate to the location where the war is stored on the machine and select the radio button against the deployable .war file. Click "Next"



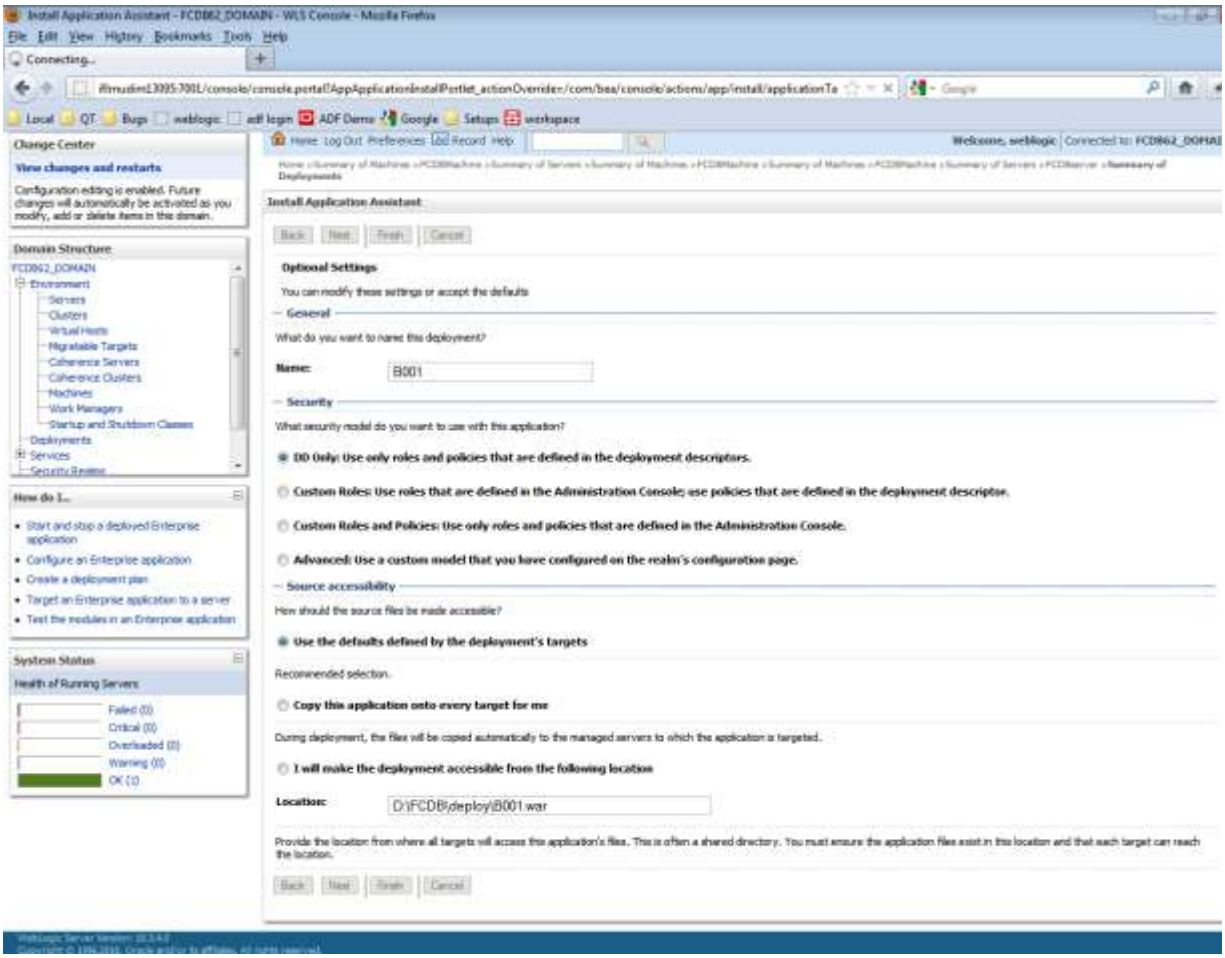
Check the radio button against “Install this deployment as an application” and click Next.



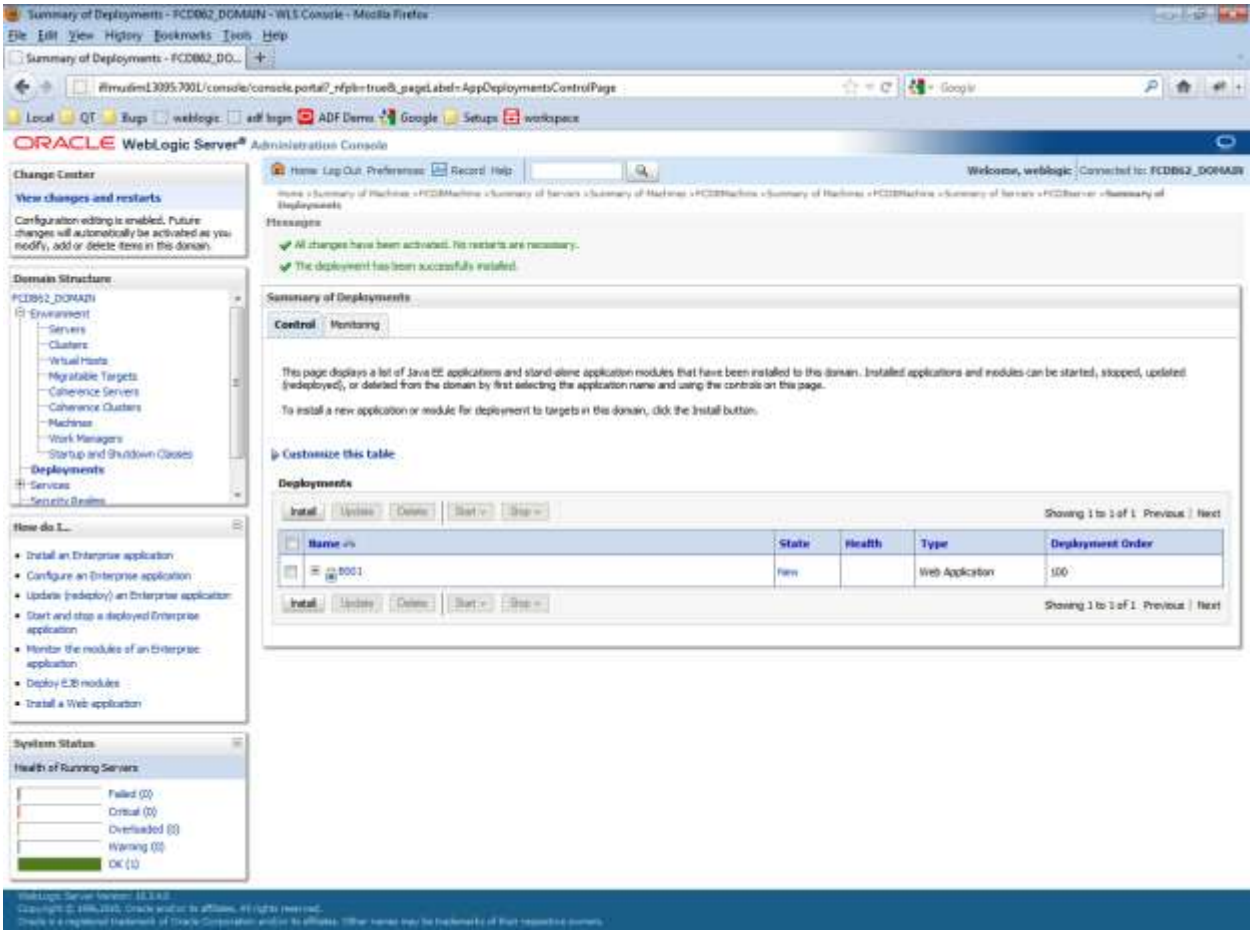
Select the server FCDBserver to be mapped and click on Next



Click Finish.



Confirmation Page is displayed

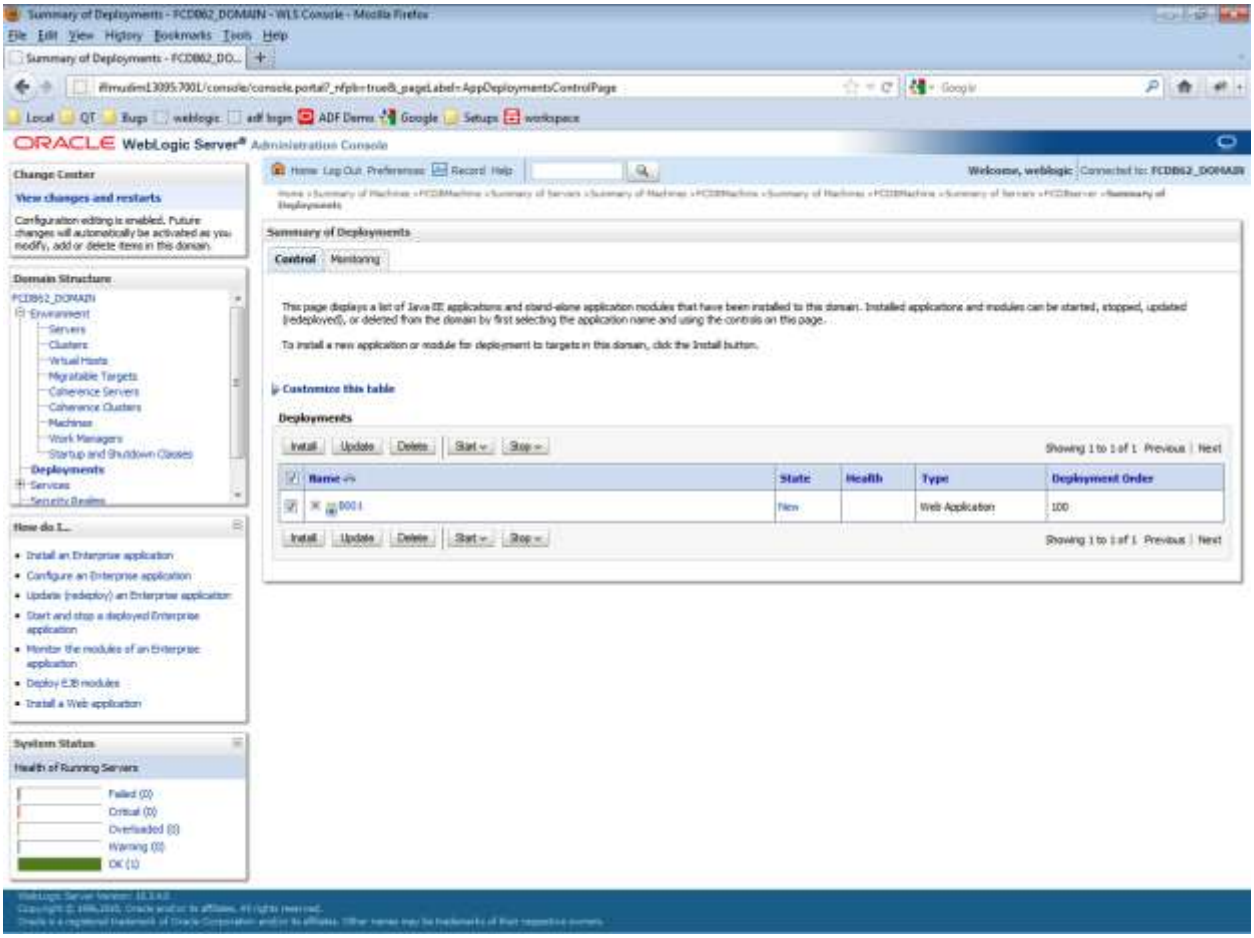


Deploy all the deployable mentioned in the Appendix depending upon the invocation mode set.

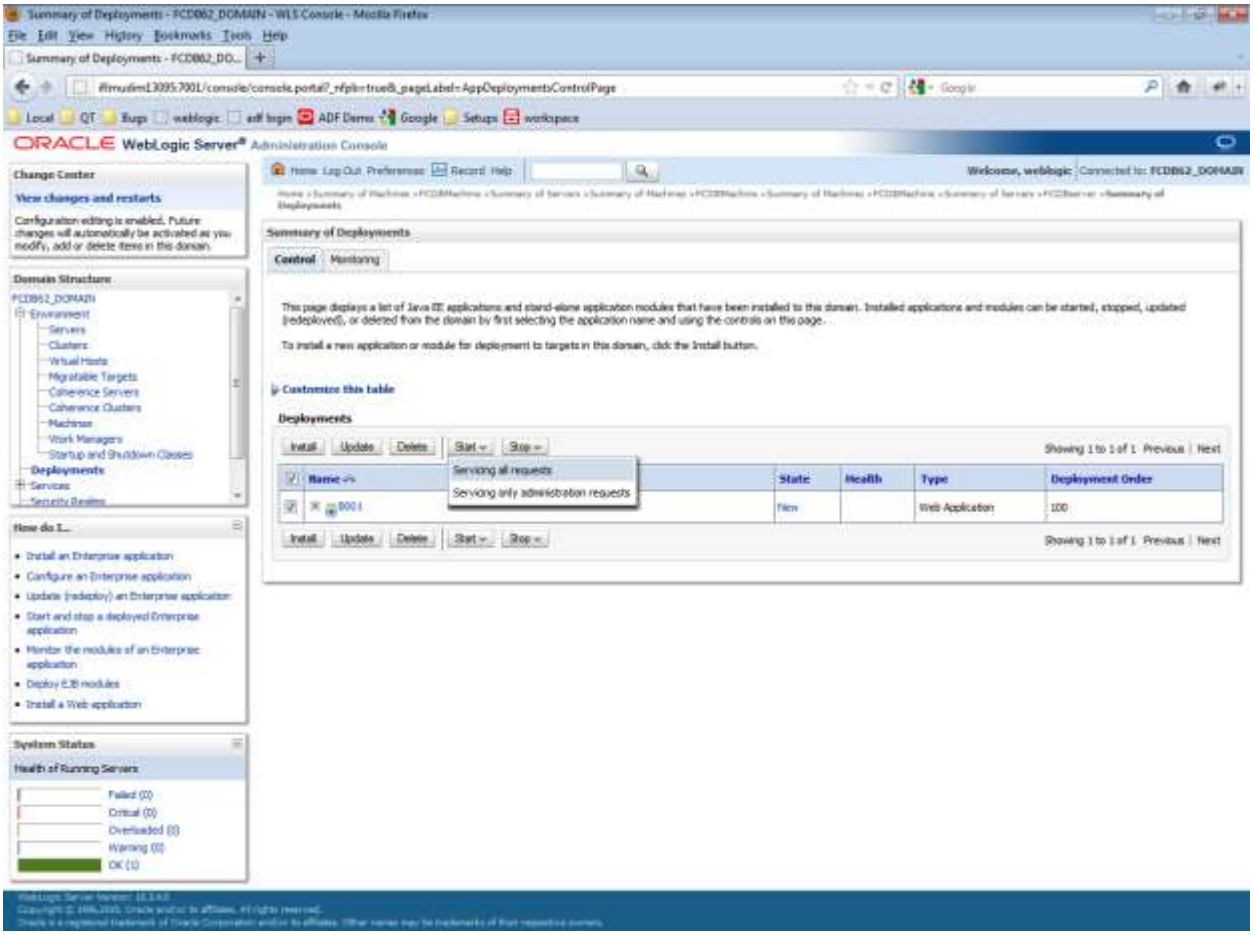
4.2.1.Starting Application

1. Click “Deployments” in the left menu

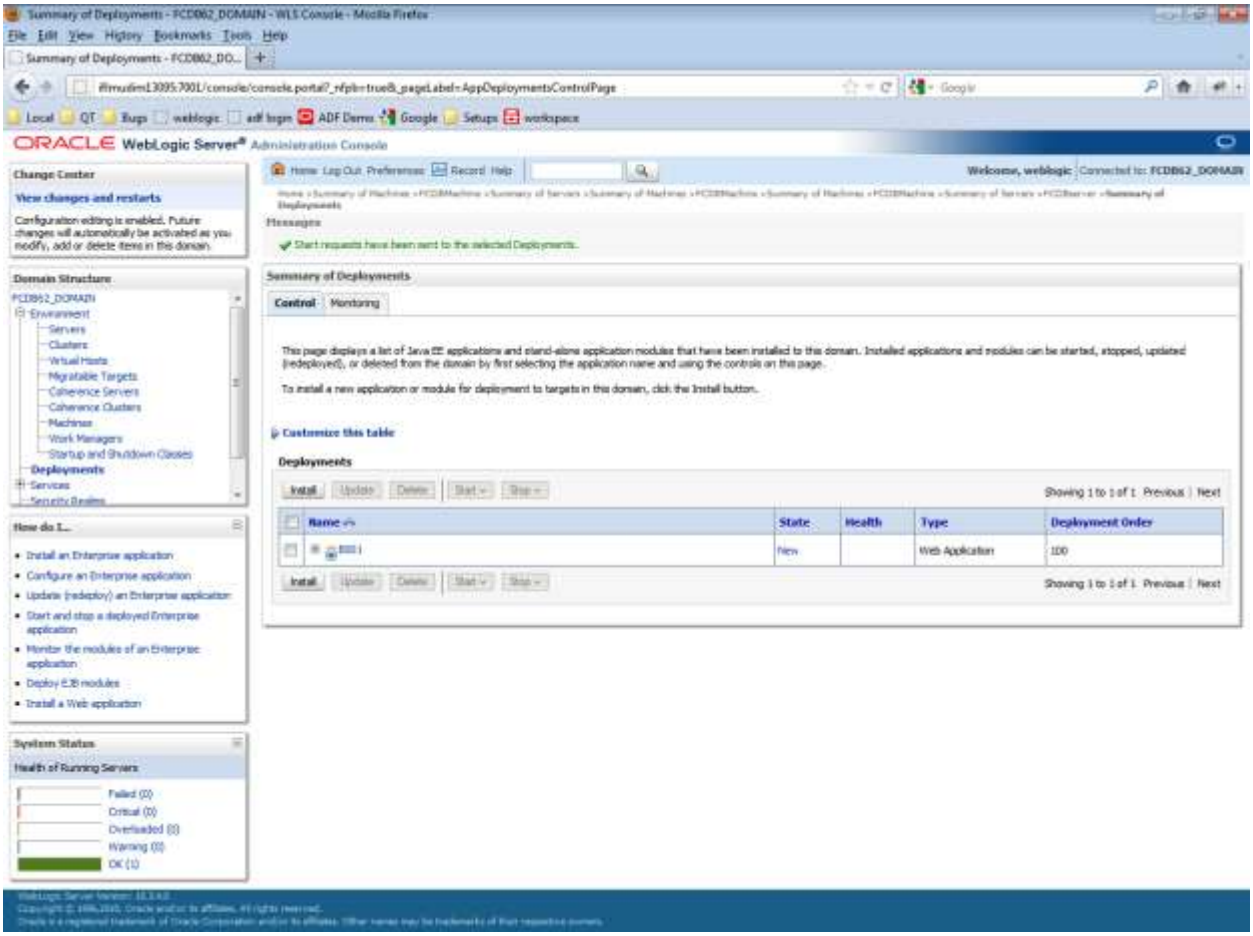
Select the applications that are to be started.



Click “Servicing all requests” in the drop down list under “Start” tab



Confirmation screen displayed



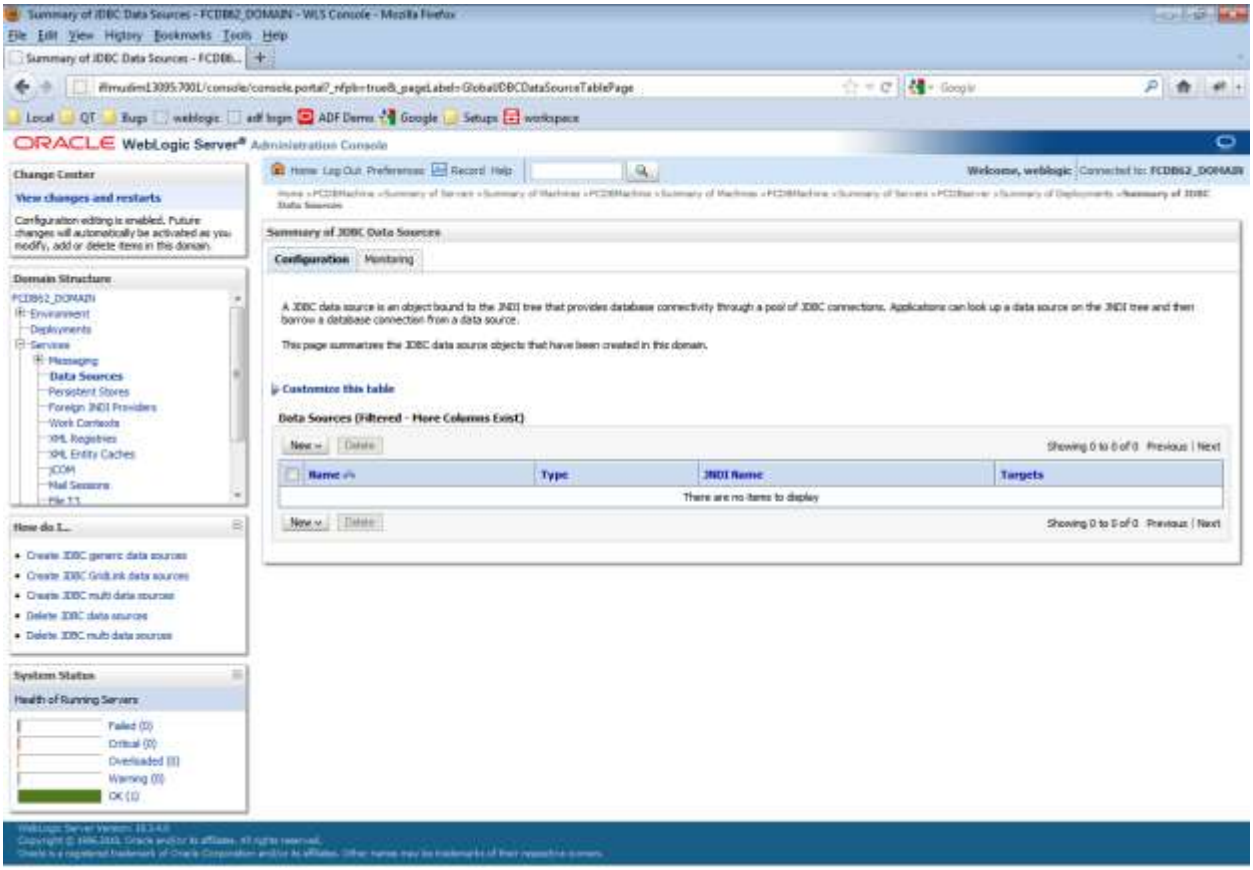
5.Setup JDBC data source and Connection Pooling

XA Enabled Data Source:

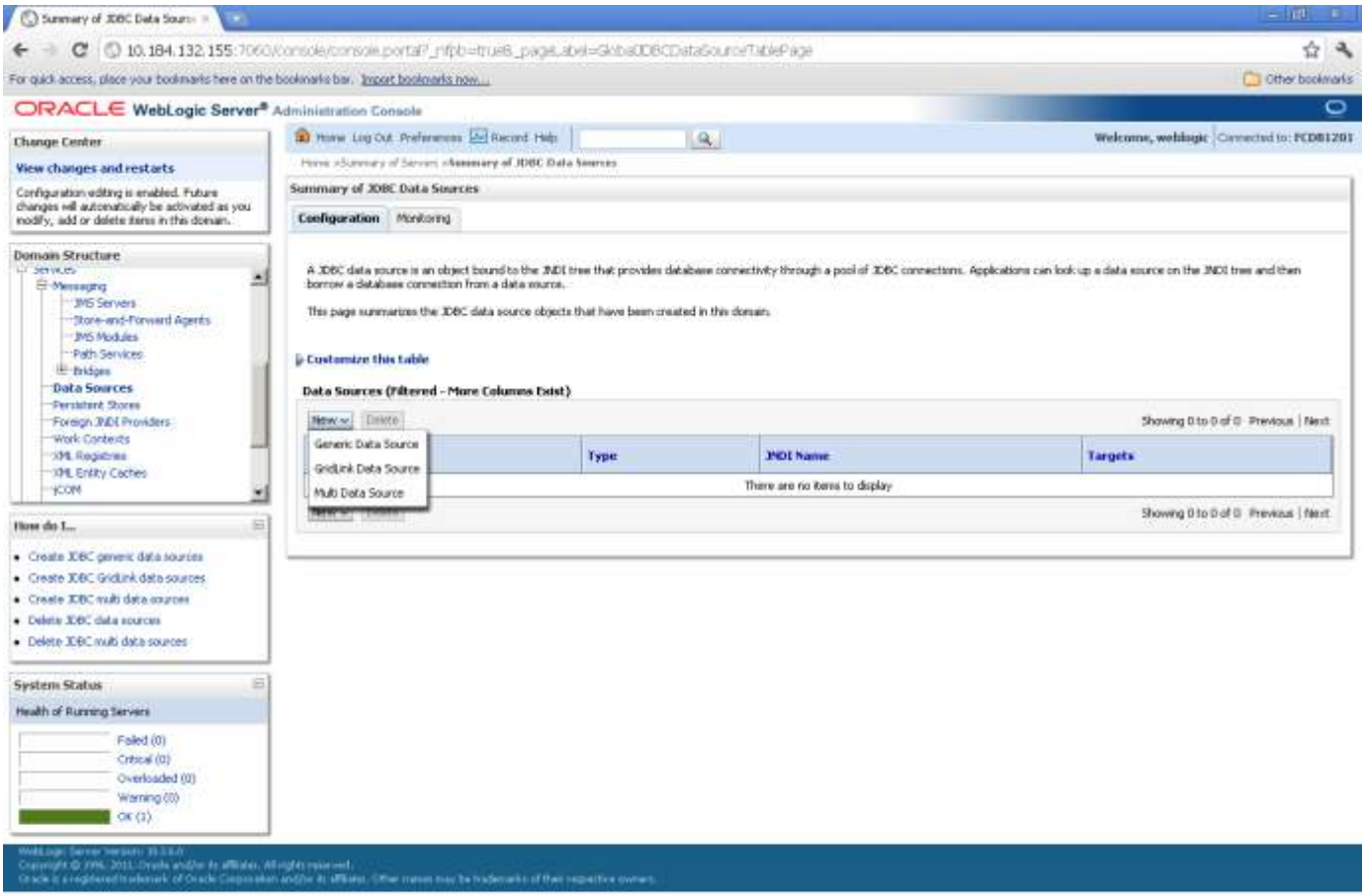
The XA-aware data source implementation allows connections to participate in distributed transactions. If an application needs to participate in a two-phase commit like in case of Bulk which will interact across the MQ and the DB for example, this type of data source must be used.

Following are the steps to configure the XA data source.

1. Go to the “Services→Data Sources”.
2. Click New to create a new JDBC Data Source

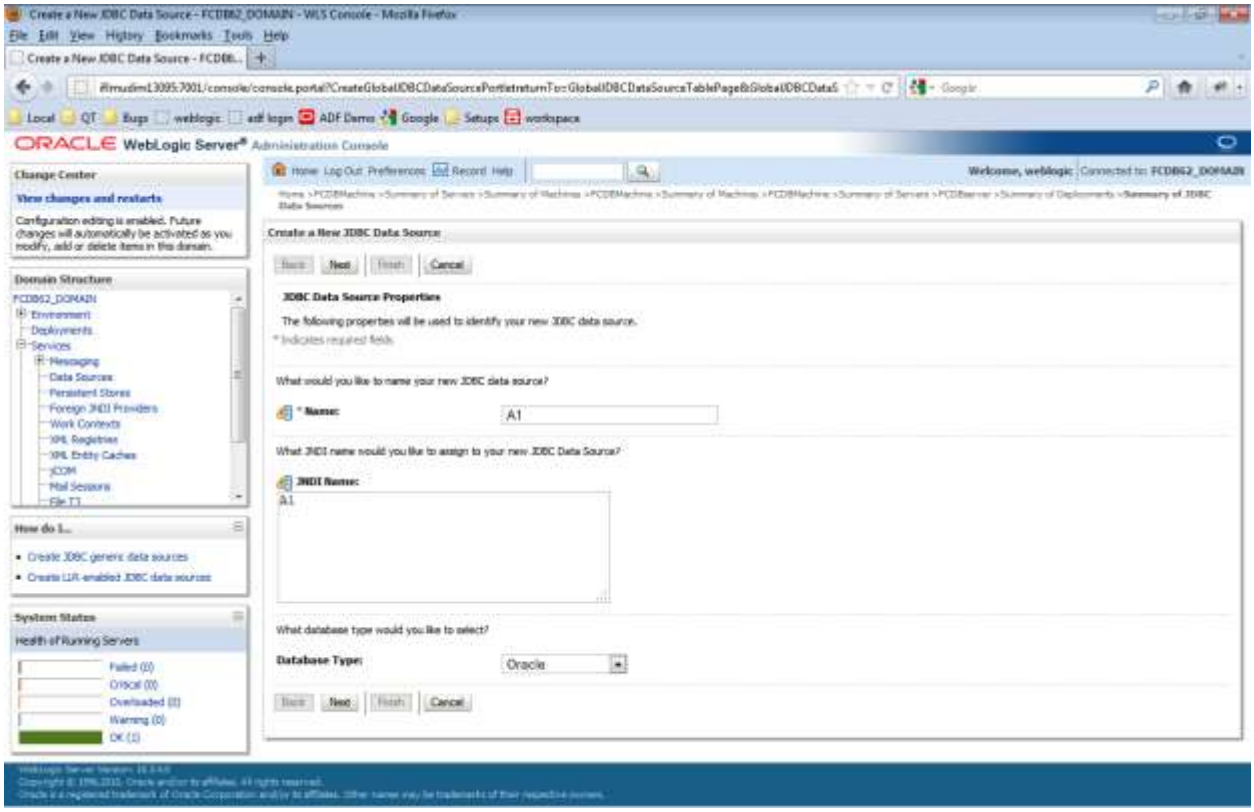


3. Select the option “Generic Data Source”.

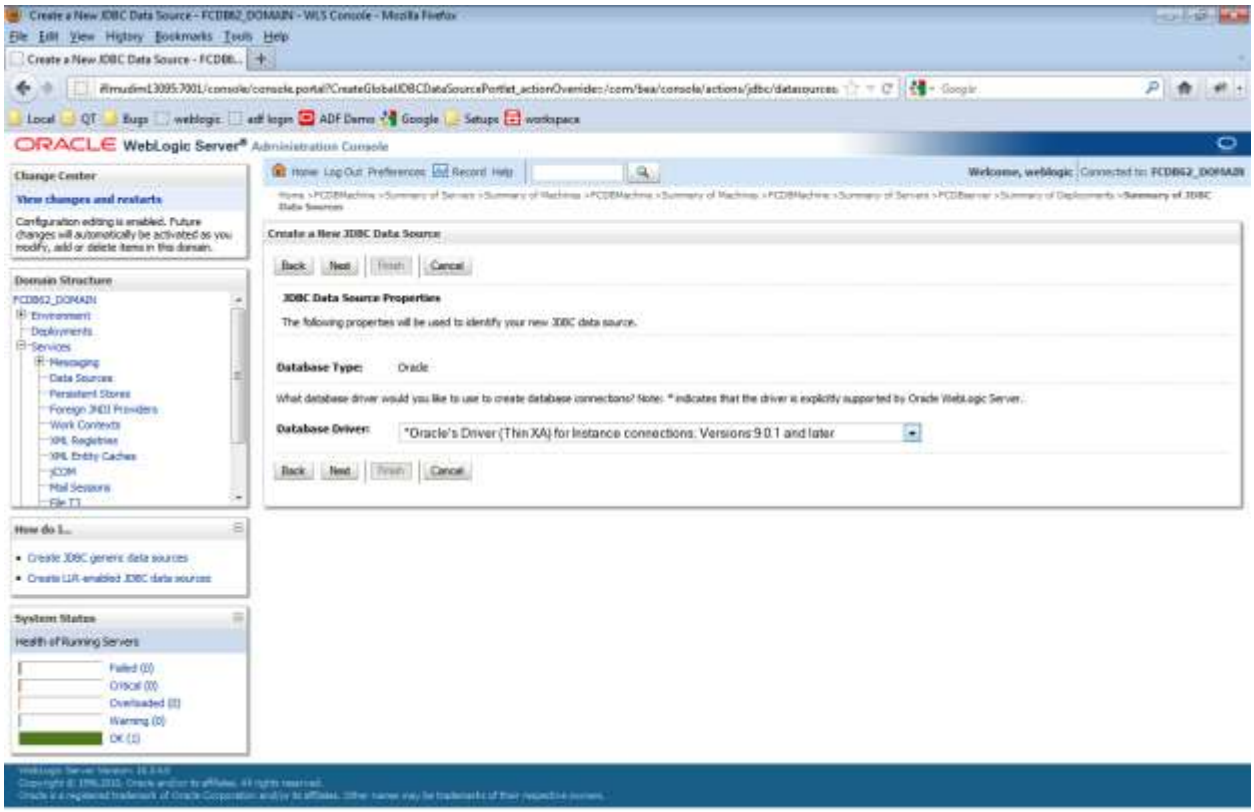


Configure the following properties for Data Source creation and click “Next”.

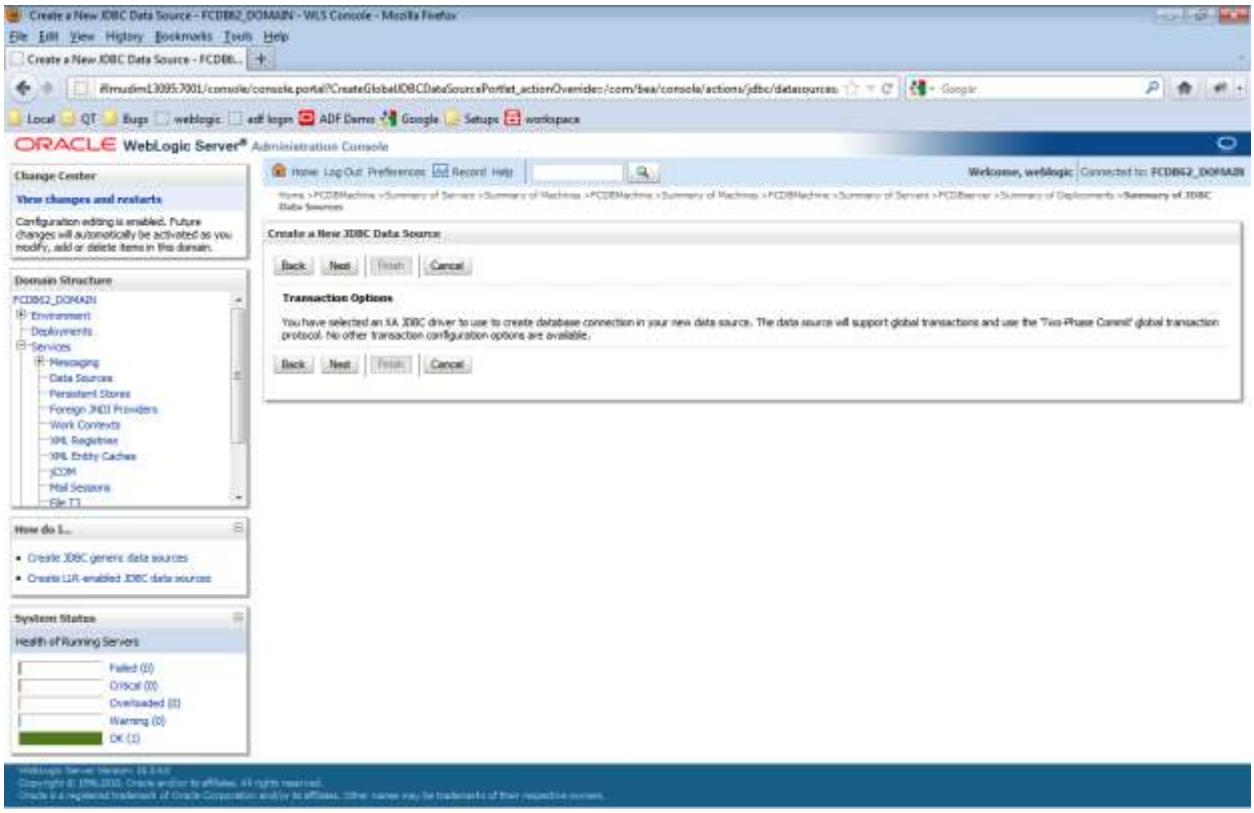
Property	Value
Data Source Name	<FCDB data source name>
JNDI Name	A1
Database Type	Oracle



Select Database Driver as Oracle's Driver (Thin XA) Versions: 9.0.1 and later and click Next.

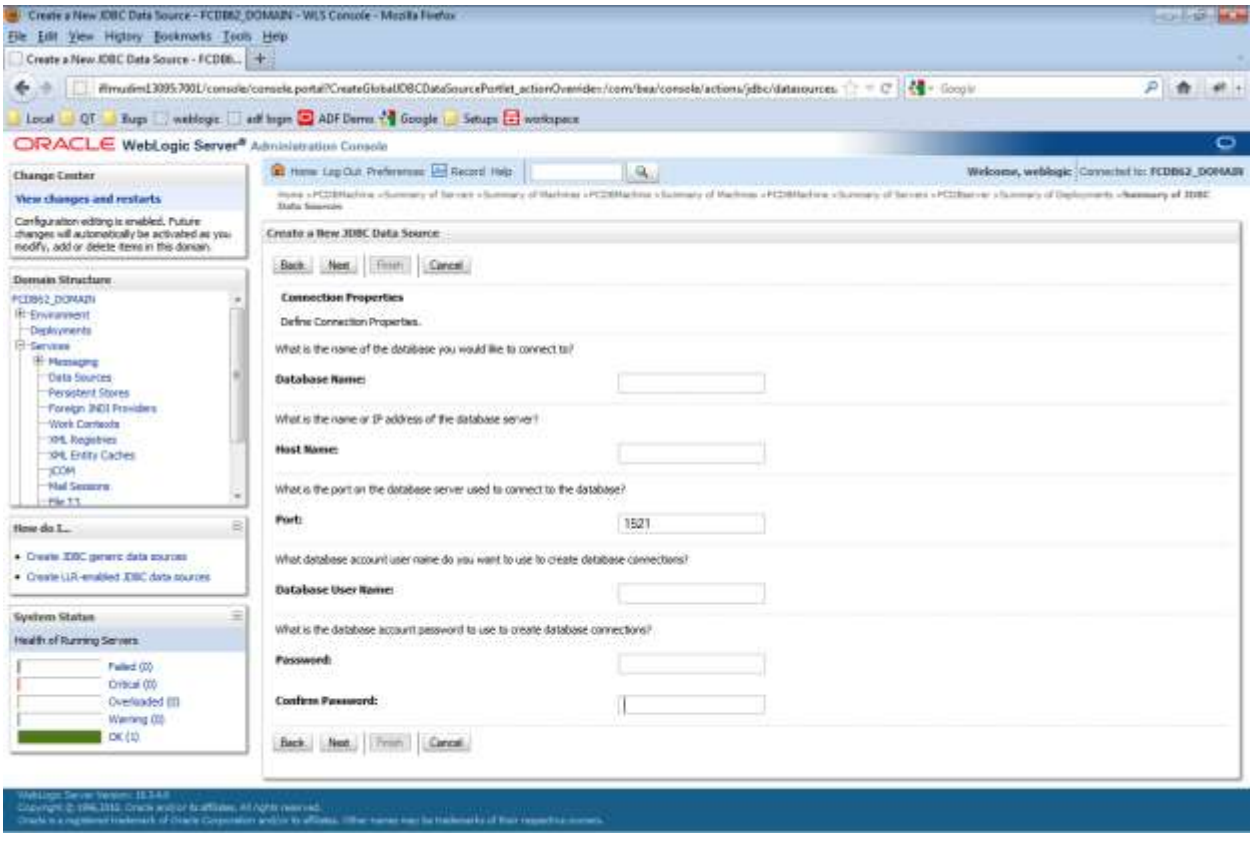


Click Next.

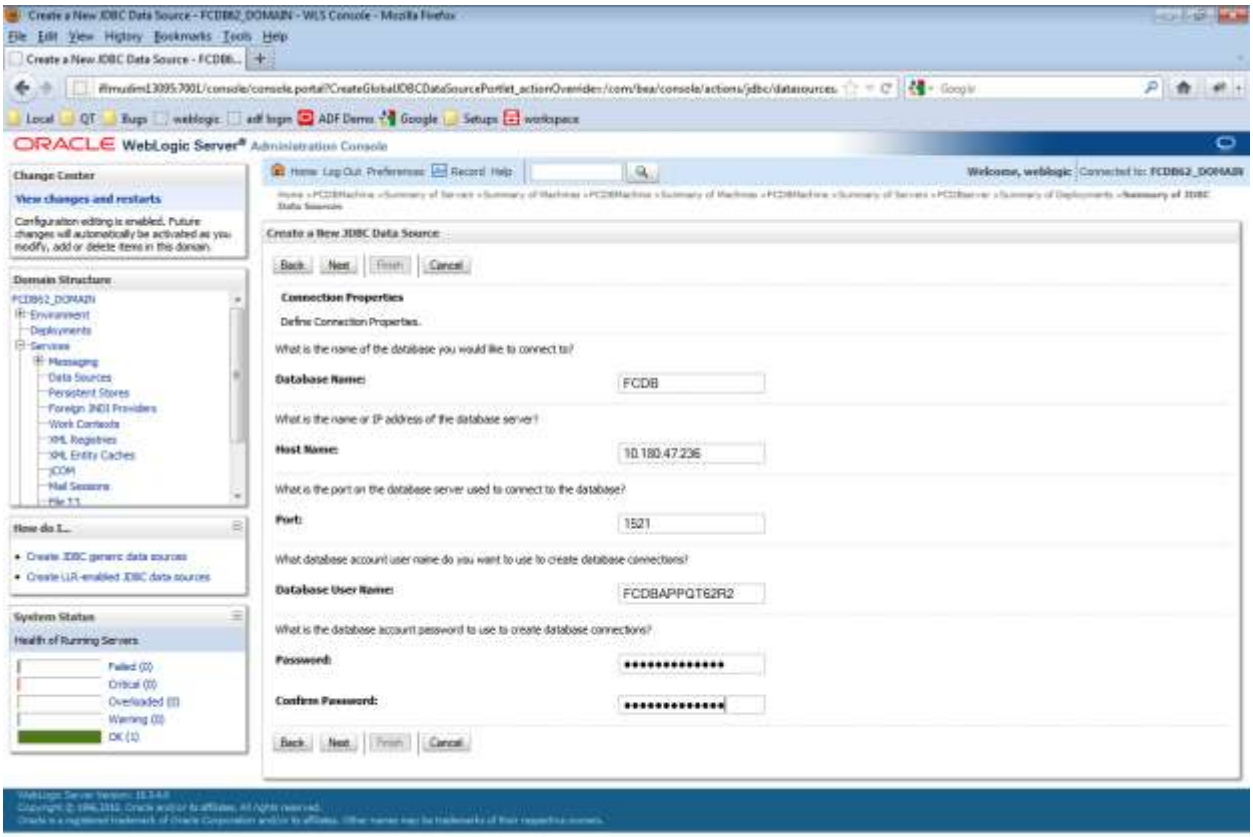

Create a New JDBC Data Source - FCDB62_DOMAIN - WLS Console - Mozilla Firefox
ORACLE WebLogic Server® Administration Console
Change Center
View changes and restarts
Domain Structure
FCDB62_DOMAIN
Environment
Deployments
Services
Messaging
Data Sources
Persistent Stores
Foreign JNDI Providers
Work Contexts
XML Registries
XML Entity Caches
jCOM
Mail Sessions
How do I...
Create JDBC generic data sources
Create LLR-enabled JDBC data sources
System Status
Health of Running Servers
Failed (0)
Critical (0)
Overloaded (0)
Warning (0)
OK (1)
Welcome, weblogic
Create a New JDBC Data Source
Back
Next
Finish
Cancel
Transaction Options
You have selected an XA JDBC driver to use to create database connection in your new data source. The data source will support global transactions and use the 'Two-Phase Commit' global transaction protocol. No other transaction configuration options are available.
Back
Next
Finish
Cancel

Click “Next” button.
Give the following database details to which you need to connect. For e.g :

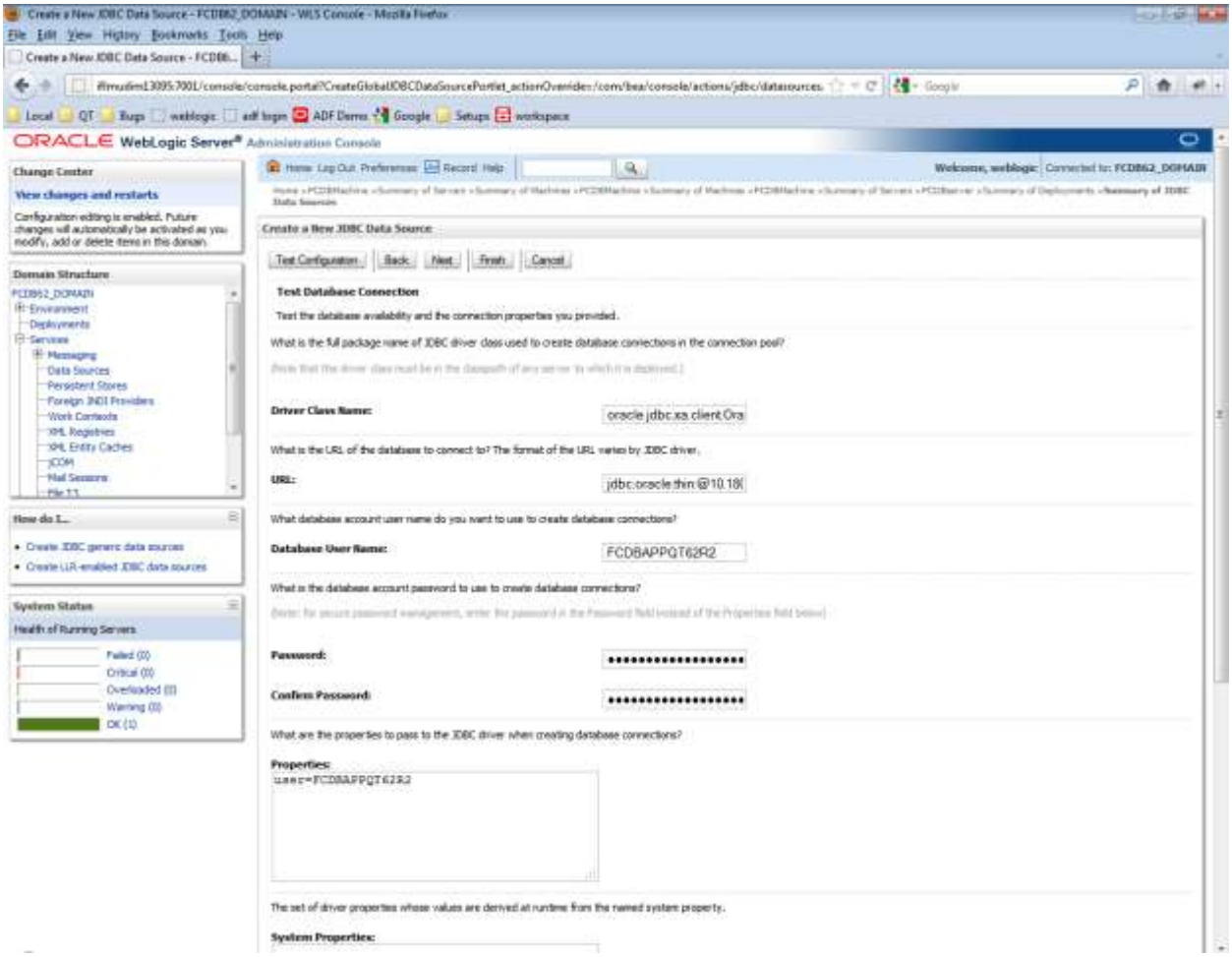
Property	Description
Database Name	Name of the database to be connected to
Host Name	ip address or hostname
Port	Port number of the database
Database User Name	Username used to connect to the database.
Password	Password used to connect to the database.
Confirm Password	Same password used to connect to the database.



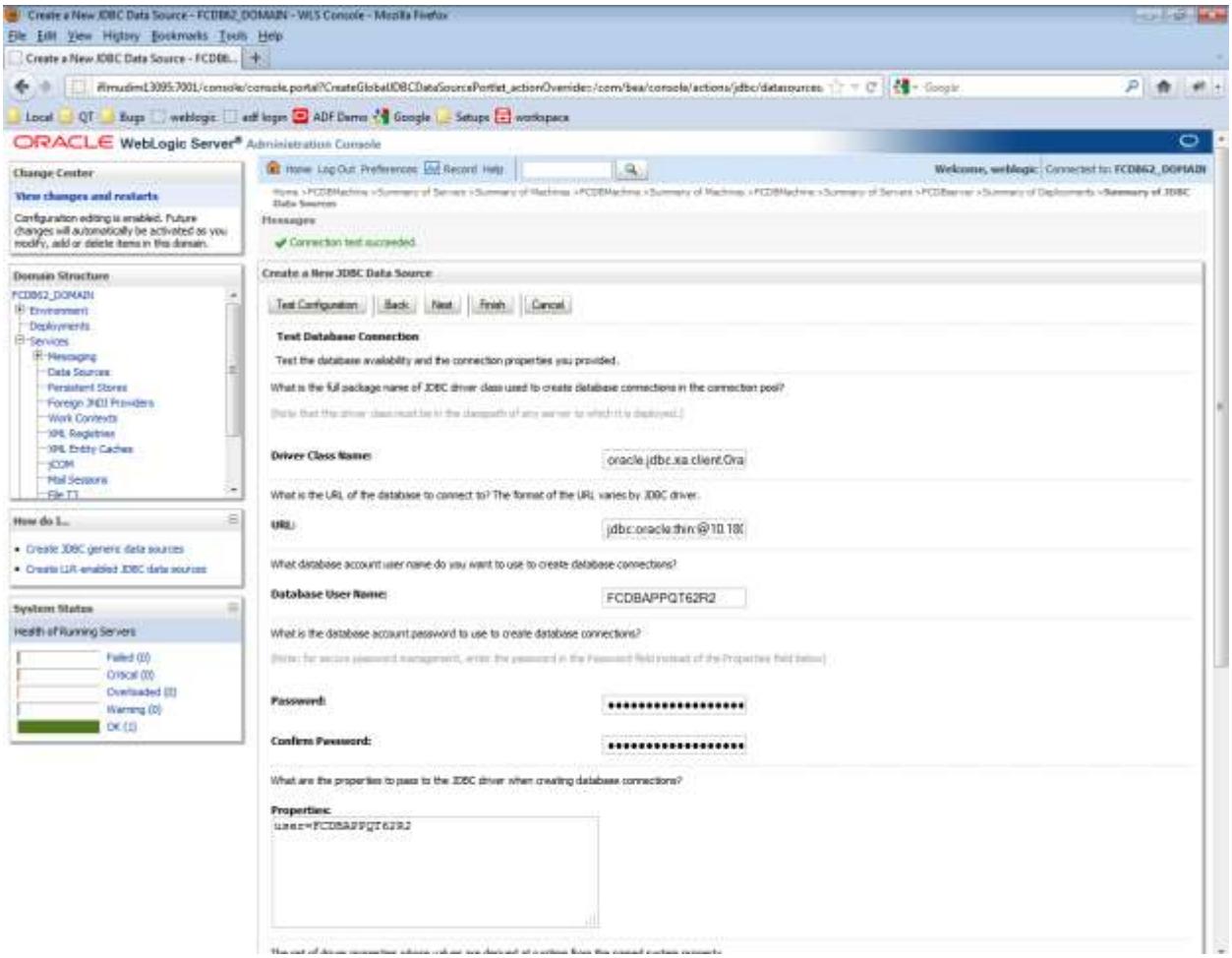
Click “Next” button.



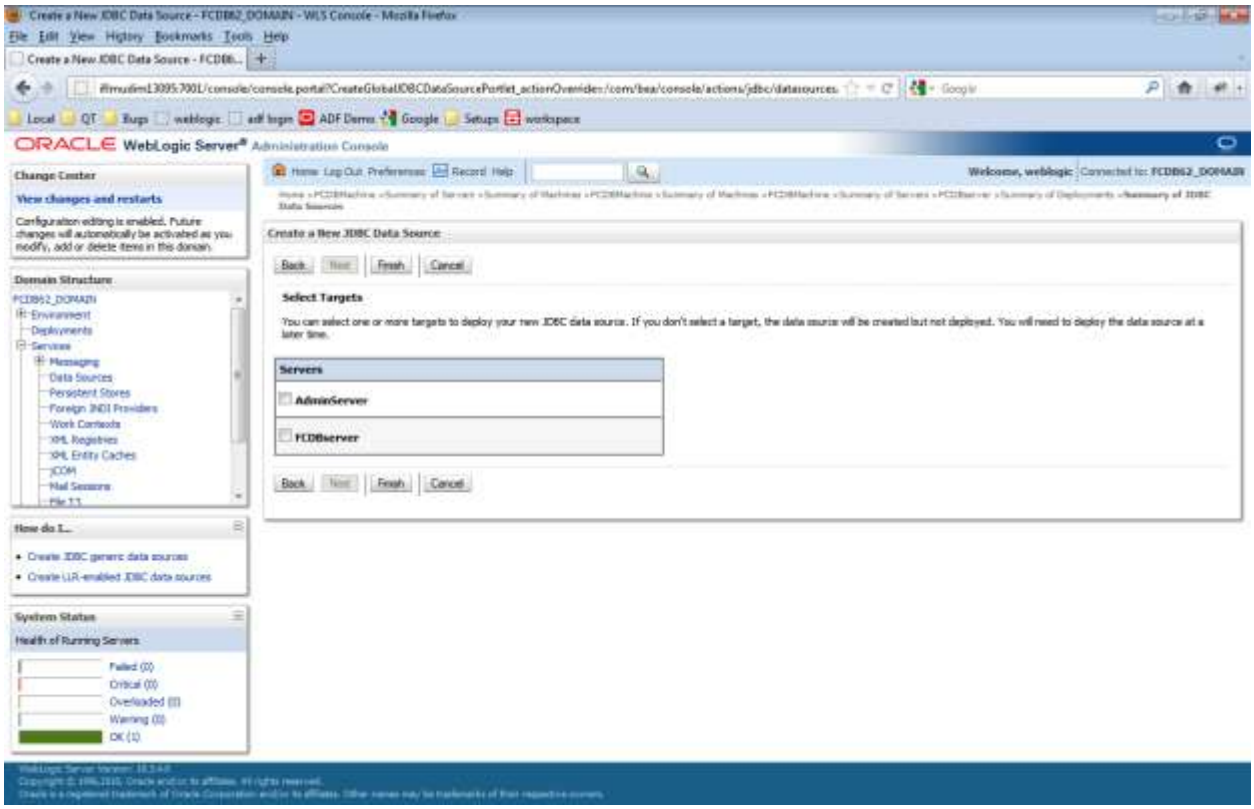
Click “Test Configuration” below.



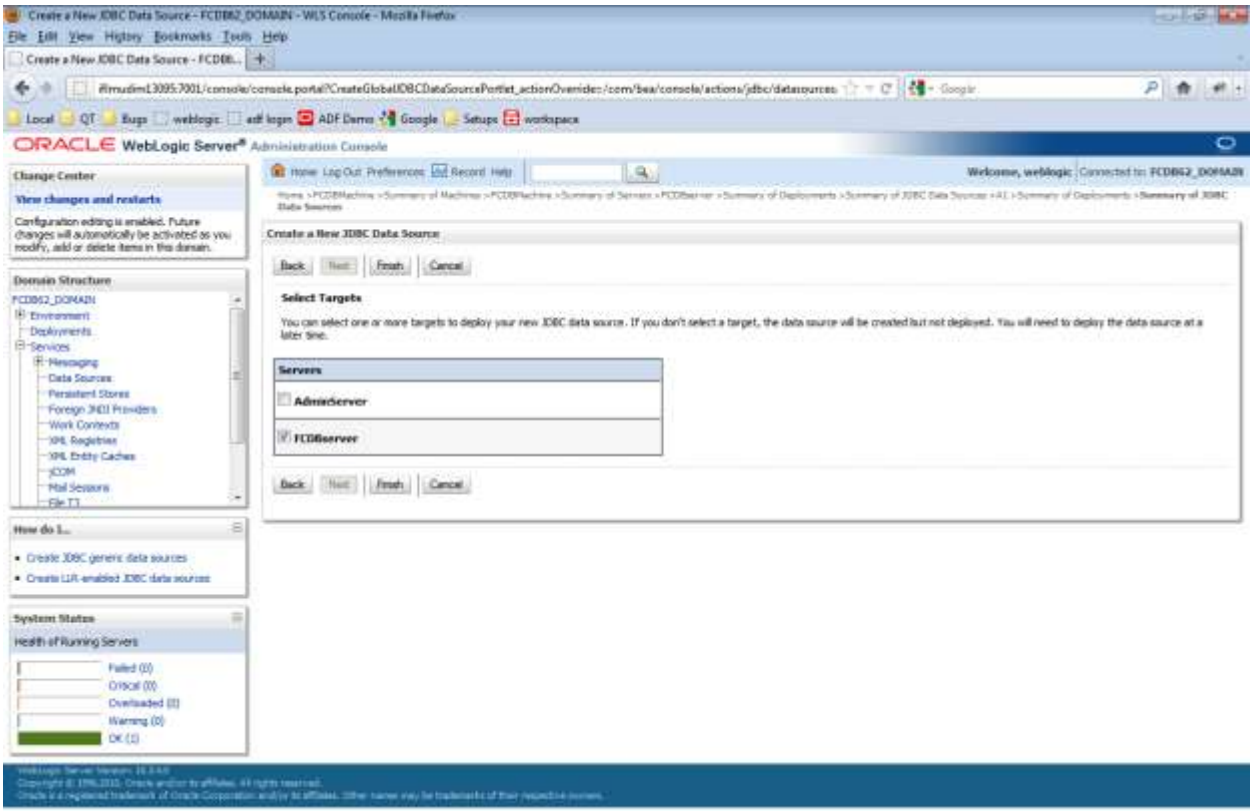
A success message must appear with “Connection test succeeded”.



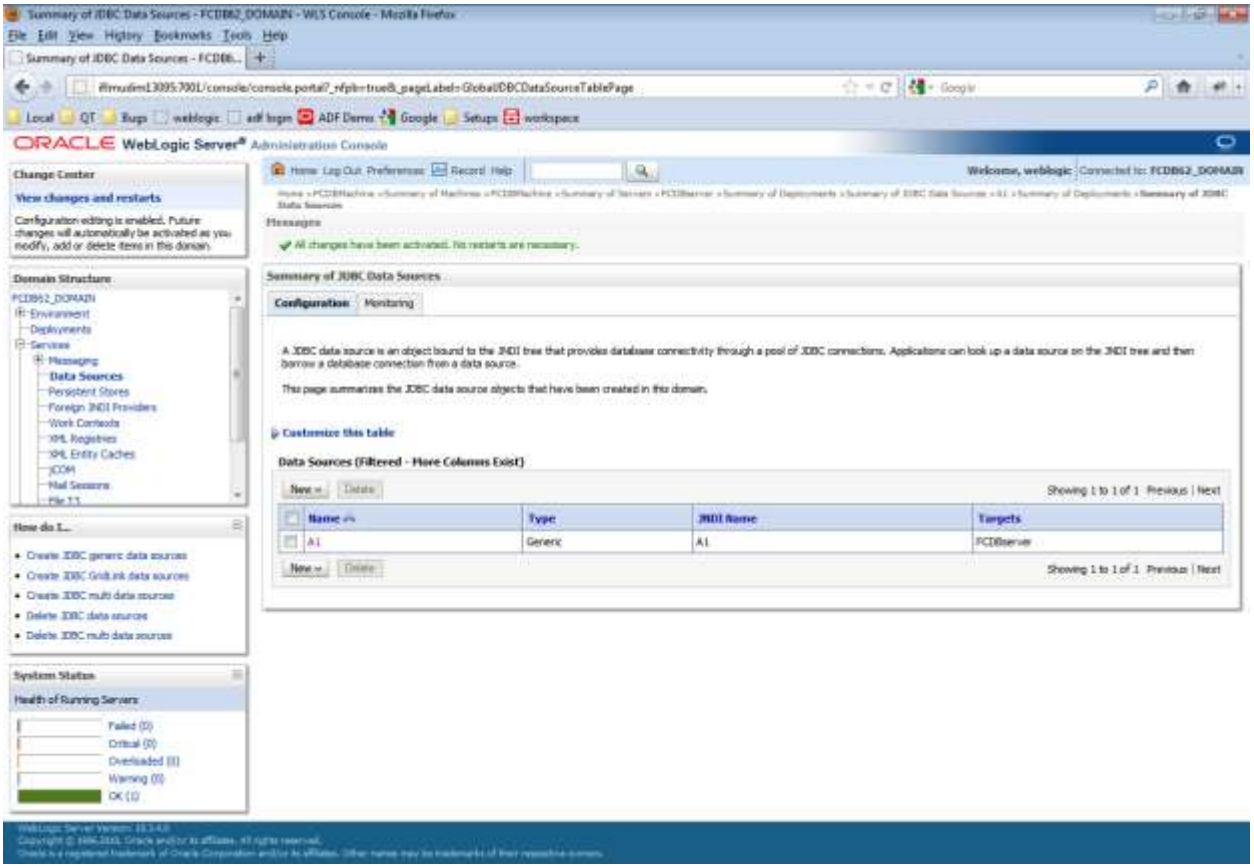
Click on the “Next” button.



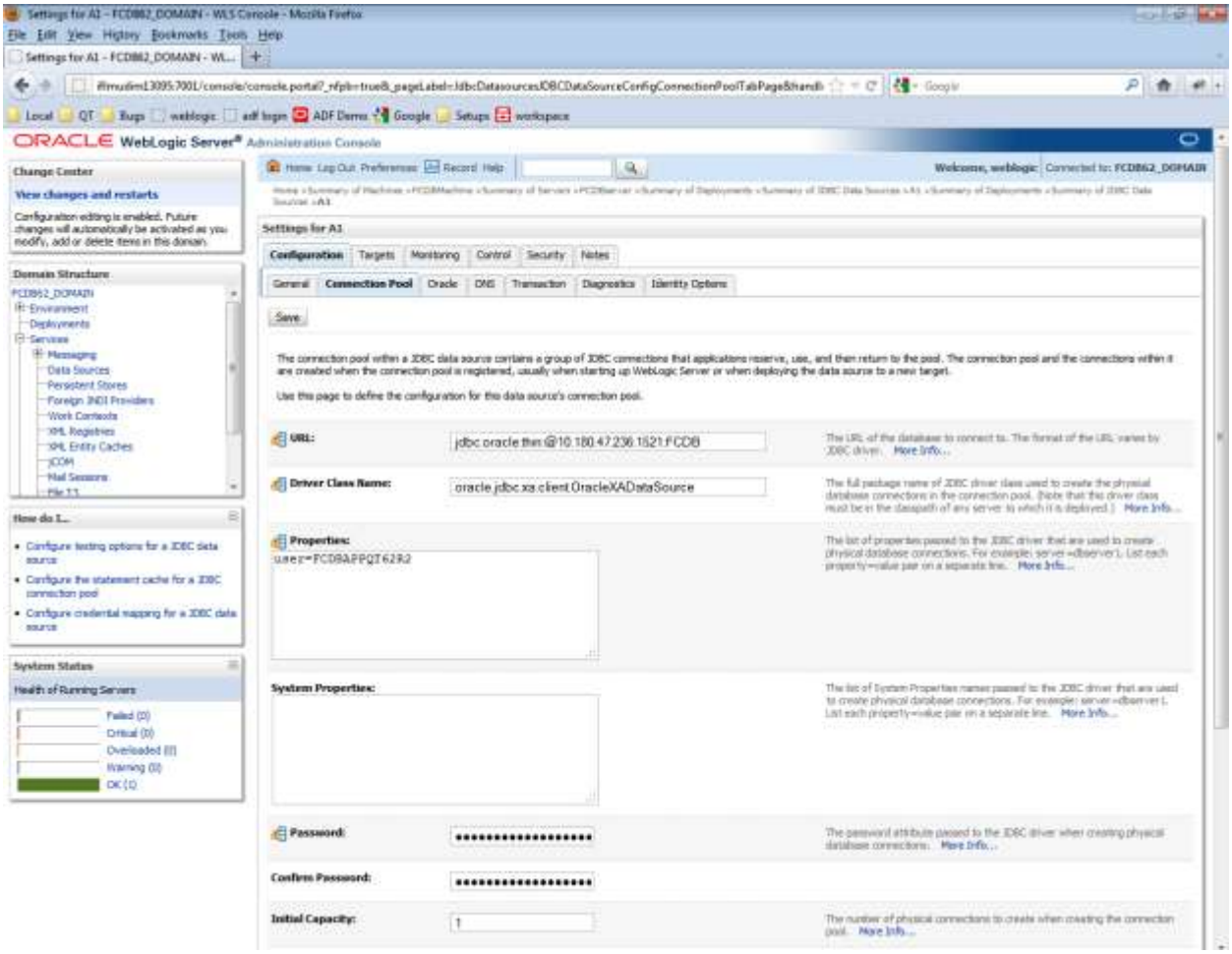
Select the server as ‘FCDBServer’ and click on Finish.



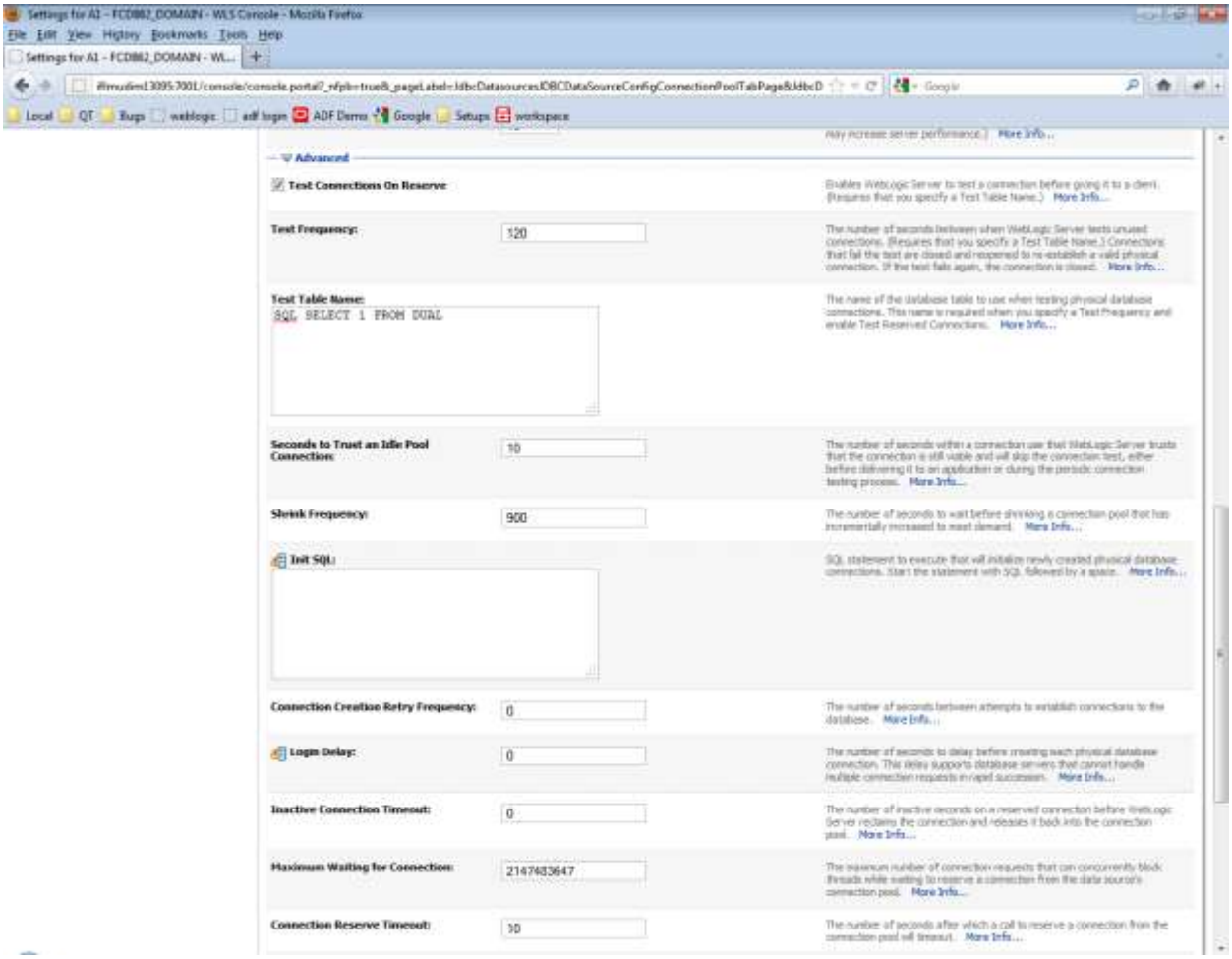
The data source is created successfully. Click on the newly created data source under Data Sources menu option.



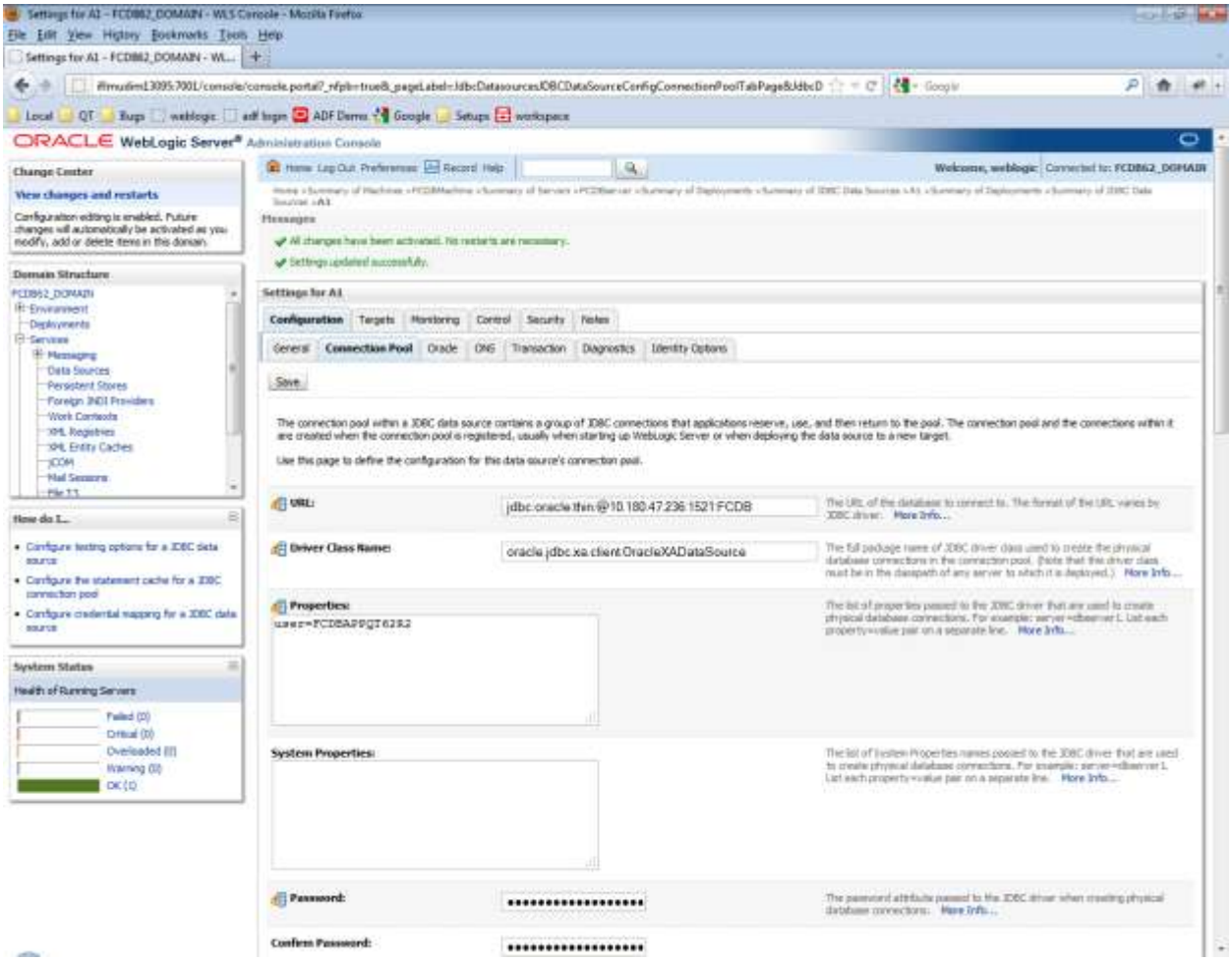
Click “Connection Pool” under “Configuration” tab on the top.



Click on the “Advanced” link below.



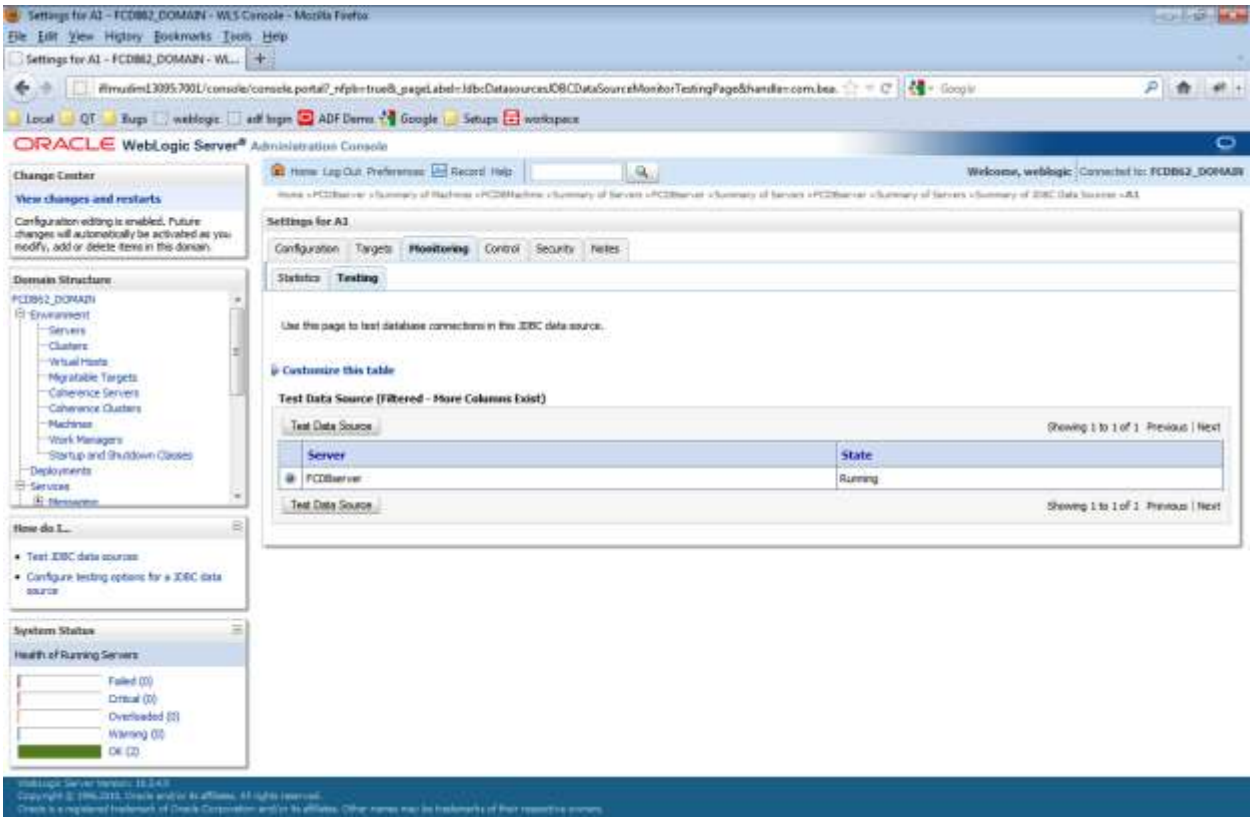
You can specify the required parameters for connection pooling. In the second section check the option against “Test Connections On Reserve” and click Save.



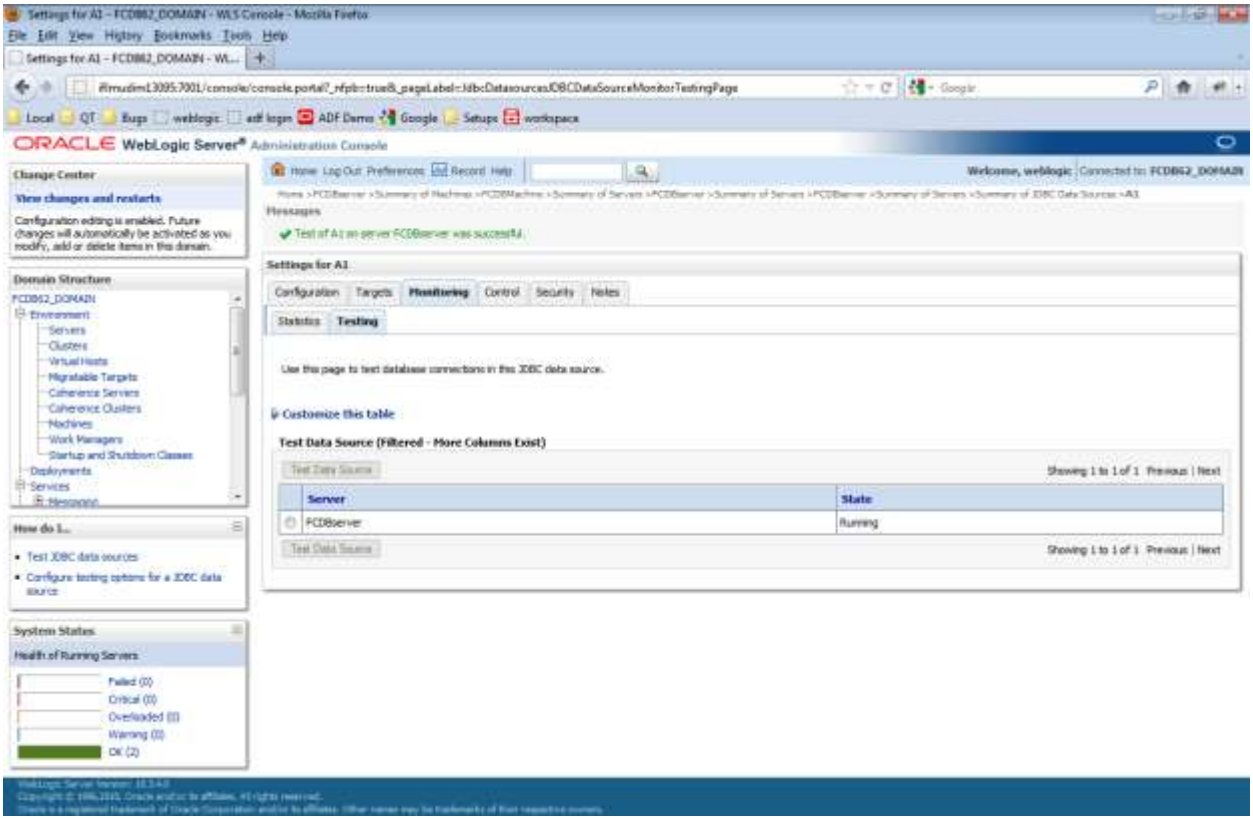
The server should be running to perform the remaining steps.

On the same screen next to the Configuration tab, select the “Monitoring” tab on the top.

Select Testing tab under Monitoring tab and then Select the radio button against the server and click “Test Data Source”.



A success message with the connection tested successfully must appear.



The property files mentioned in the Appendix will need to be updated with the data source and connection pool details as per the “Oracle_FLEXCUBE_Direct_Banking_Parameter_Sheet” under the Module Name “Core” and for Property location “fcat.properties” and “fcat-config.xml” where the Parameter Name includes application id “A1 and AP”.

Different data sources can be created w.r.t Application Id, Application type etc.

6.JMS queue creation on Weblogic server

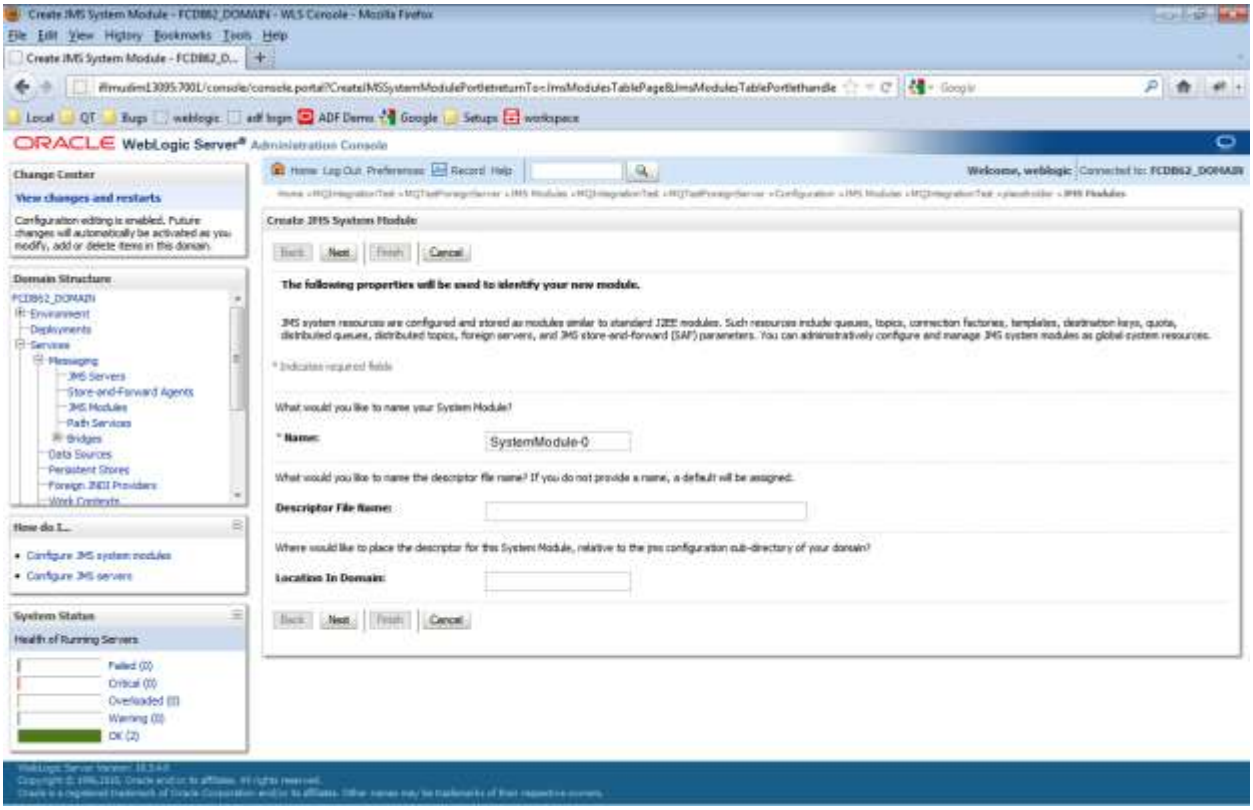
This section assumes that Weblogic JMS is to be used as the queuing system. For a detailed explanation on creation of queues on Weblogic JMS, please refer to the document

Oracle_FLEXCUBE_Direct_Banking_JMS_Queue_Creation_On_Weblogic.doc.

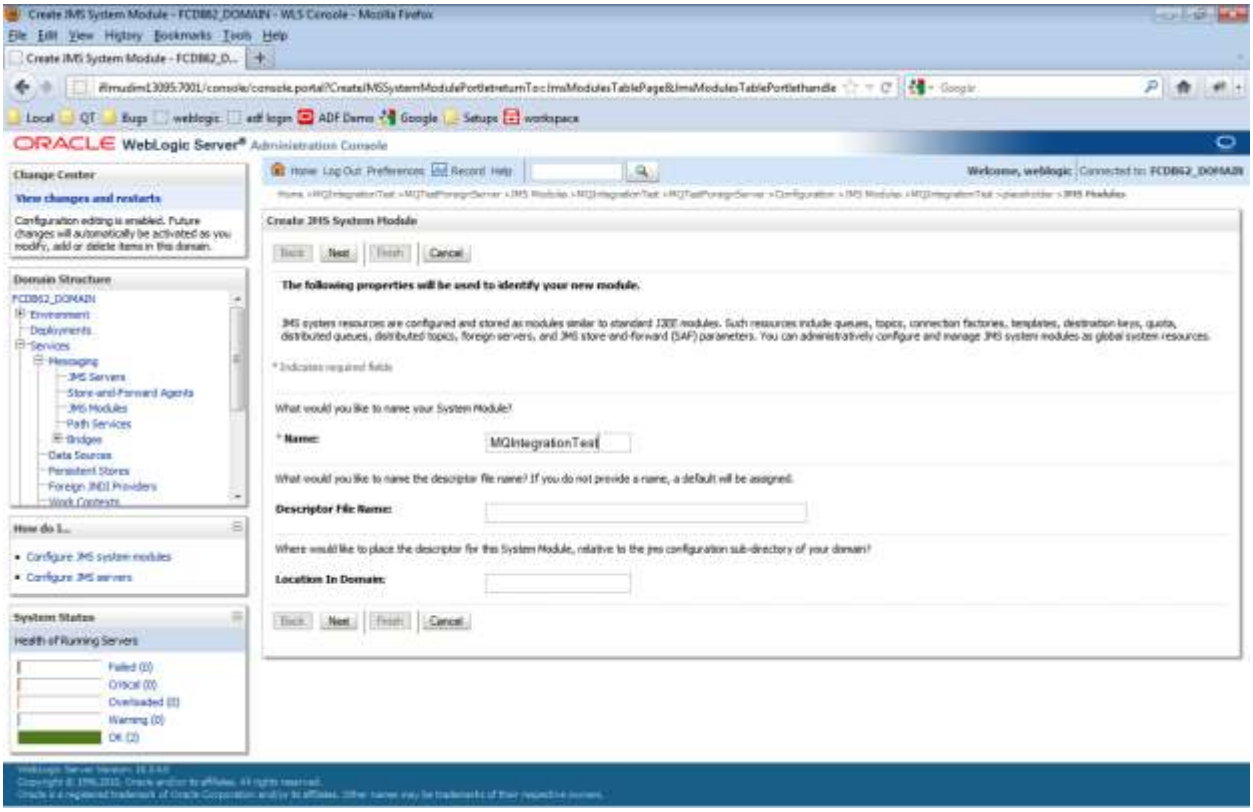
After completing the steps mentioned in above document, follow steps below

6.1.Create JMS Module

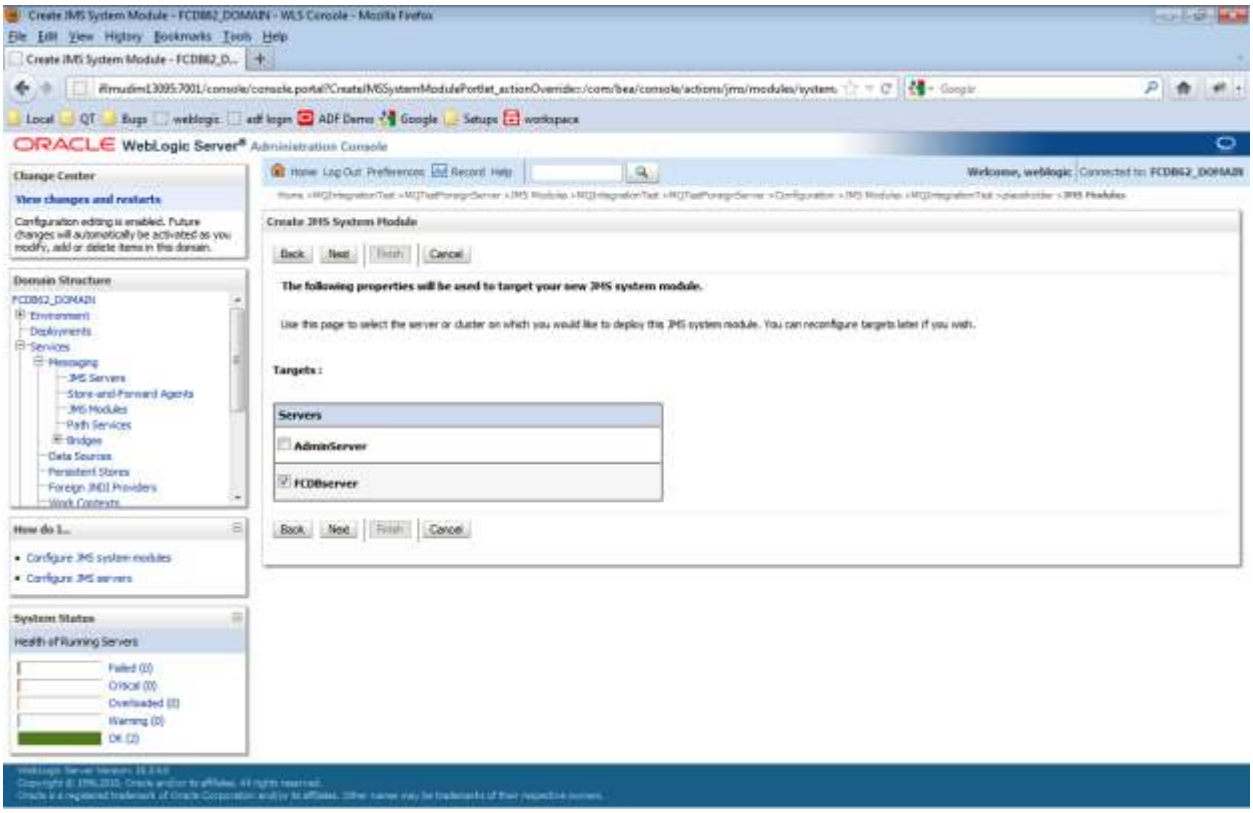
Click on “Services→Messaging→JMS Modules” on the left menu. Click on “New” button on RHS screen.



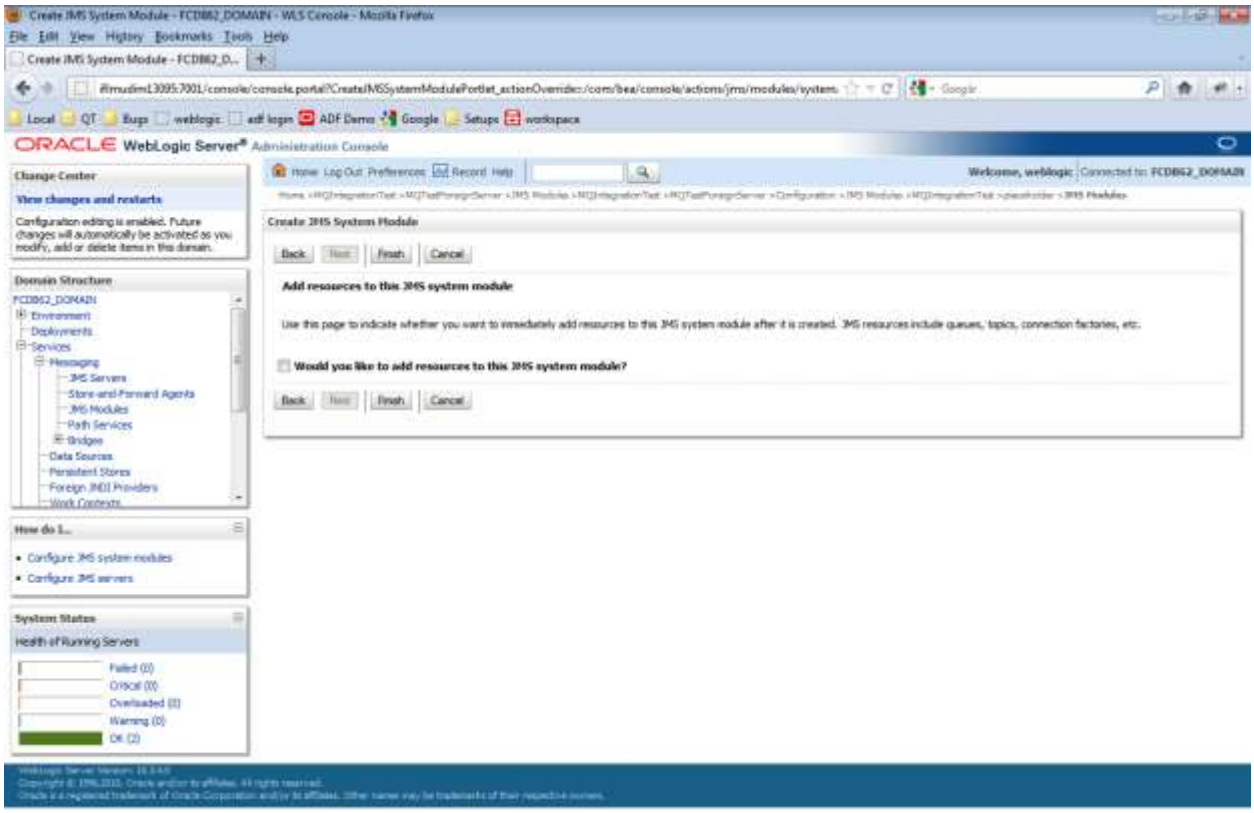
1. Type in a name “*MQIntegrationTest*” in the Name text box and click “Next”.



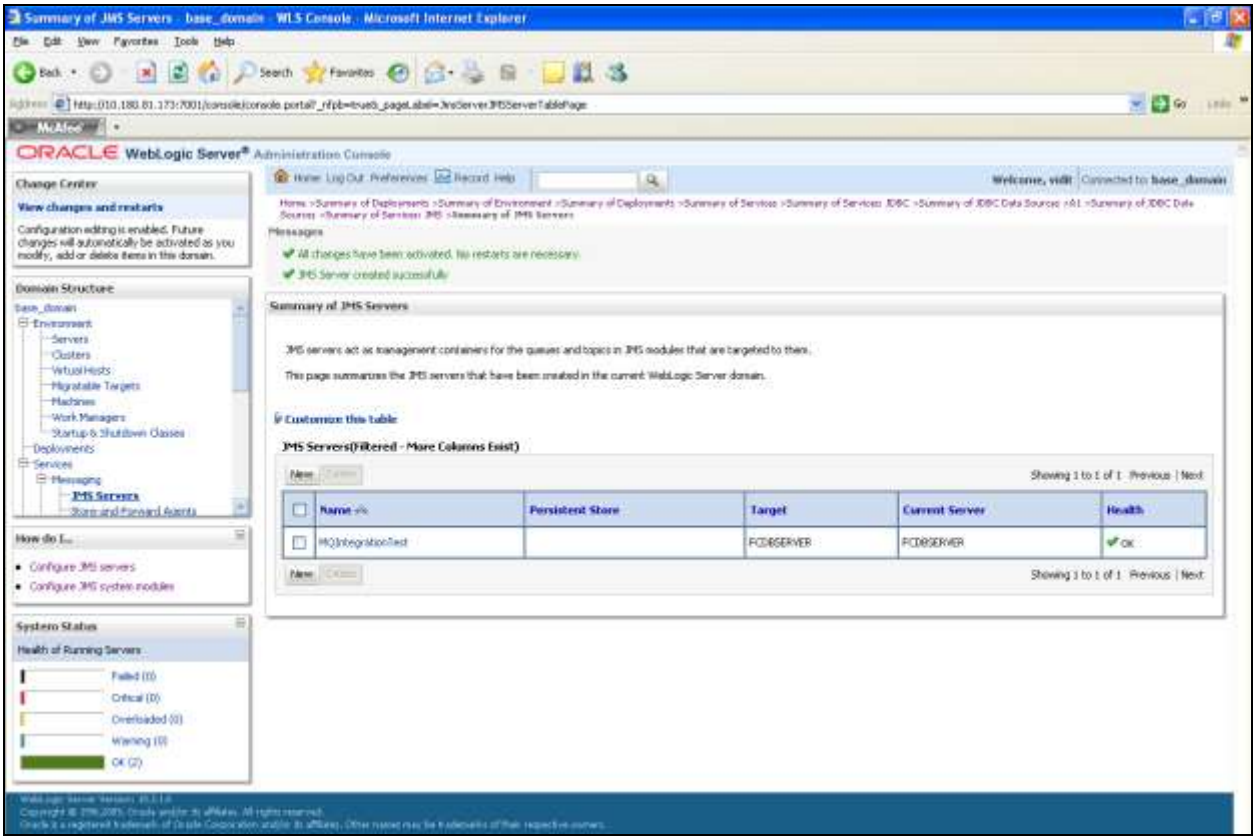
2. Select the target server as "*FCDB server*" and click "Next"



3. Click on the “Finish” without selecting the add resource to this JMS System Module.

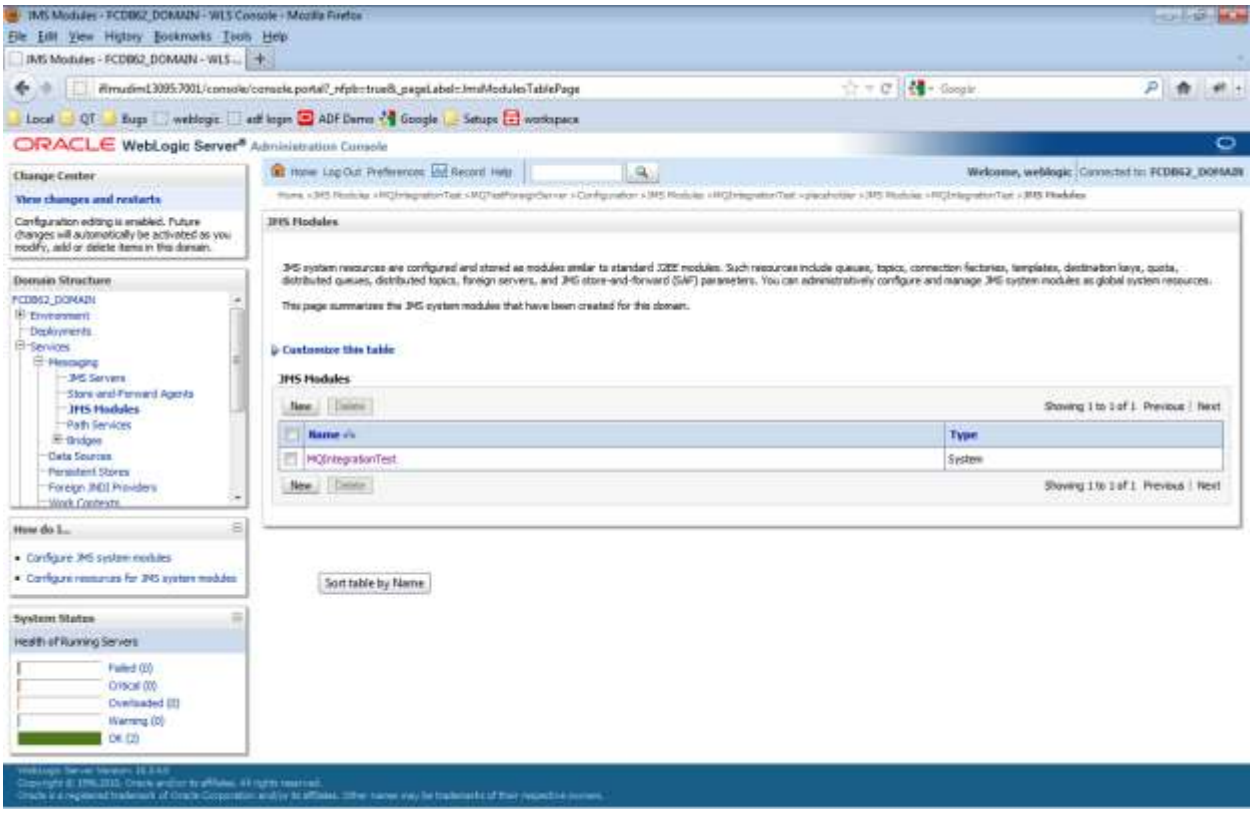


4. Following screen will appear.

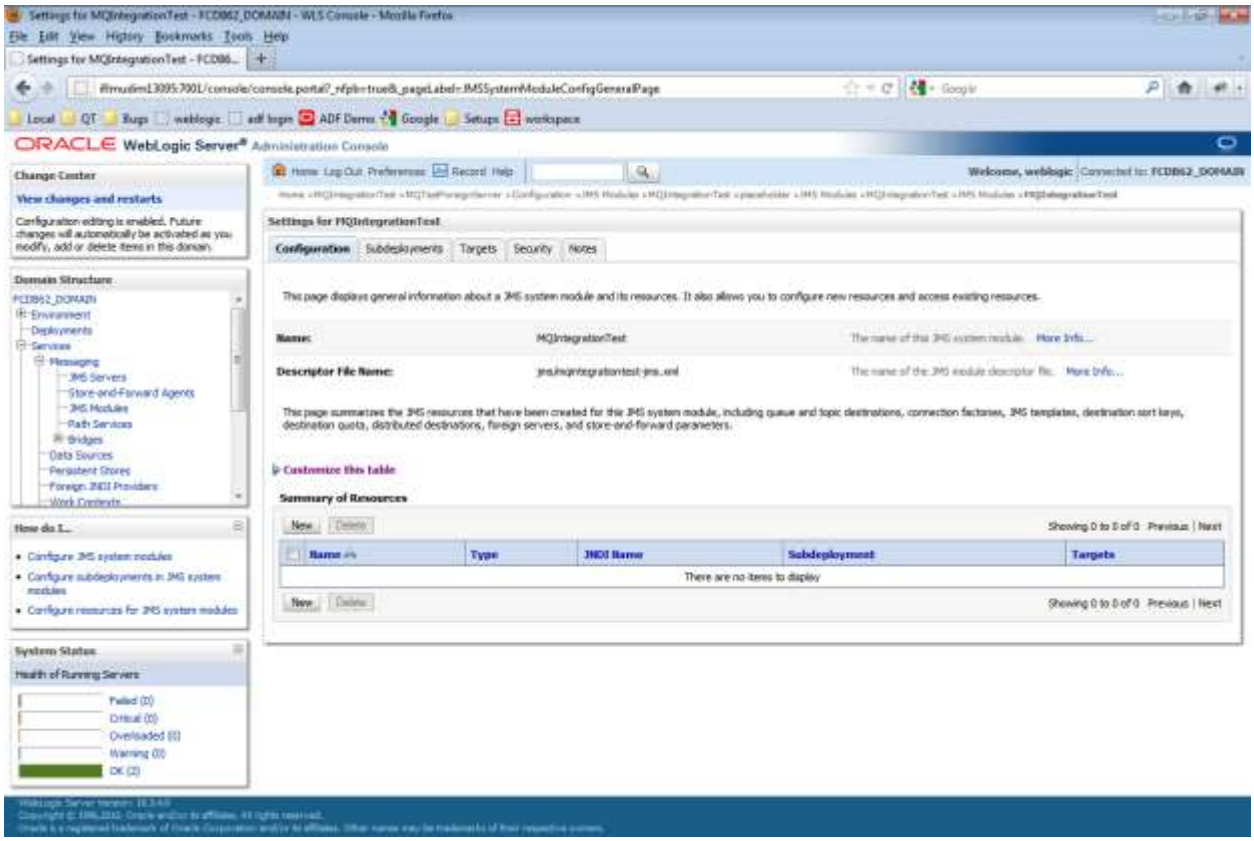


6.2.Create JMS Foreign Server

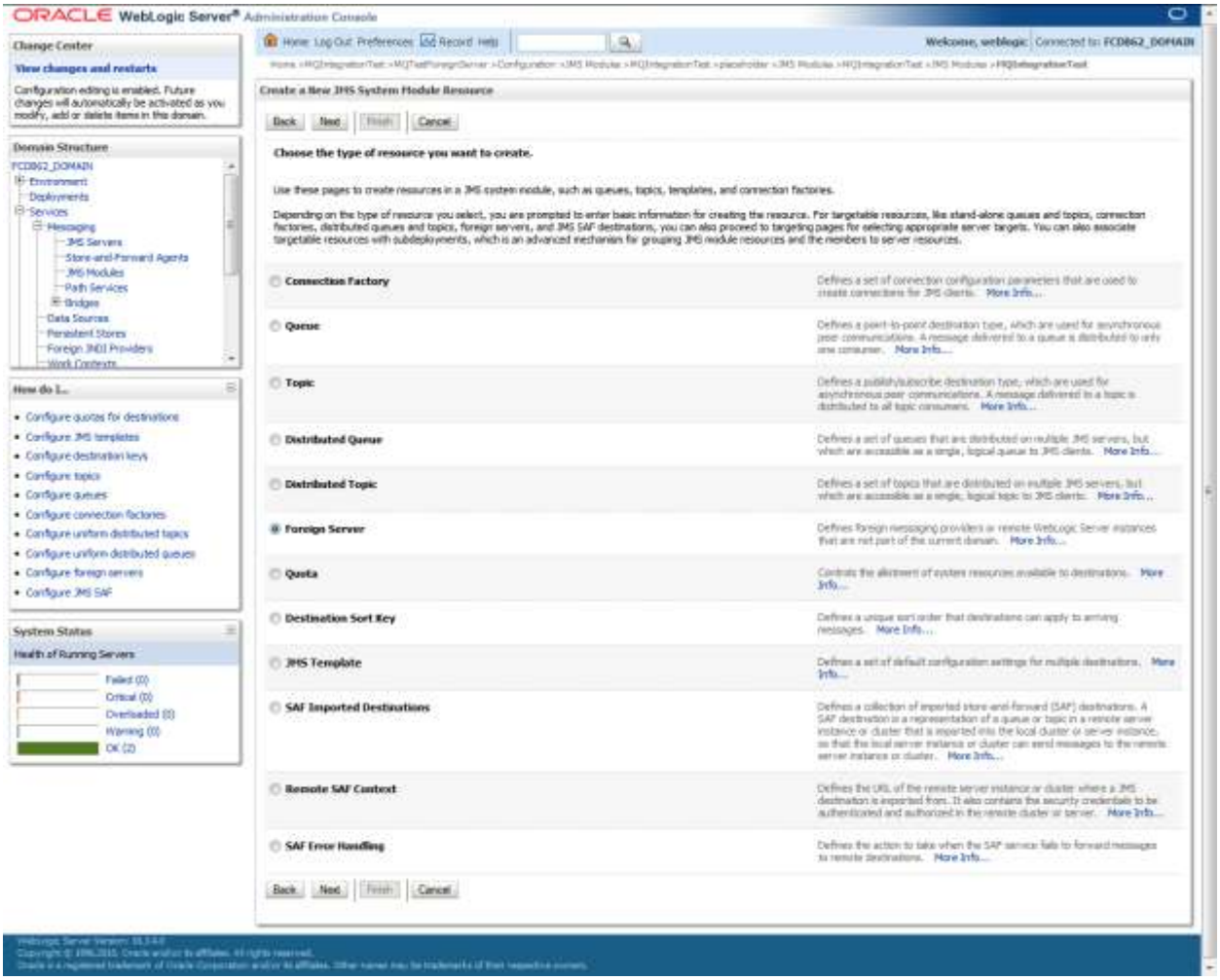
5. Select “Services→Messaging→JMS Modules” and click the link of the newly created module “MQIntegrationTest”.



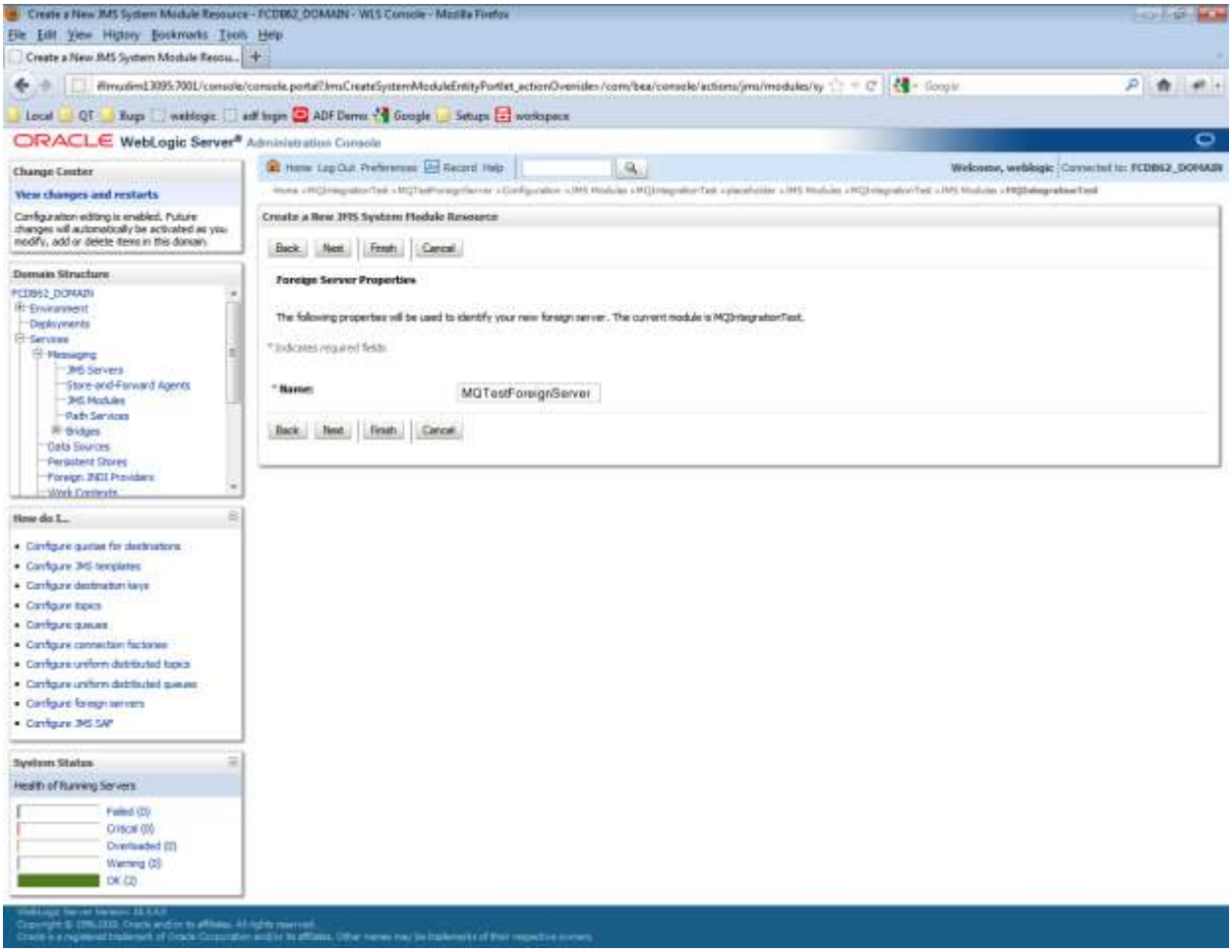
6. Click the “New” button.



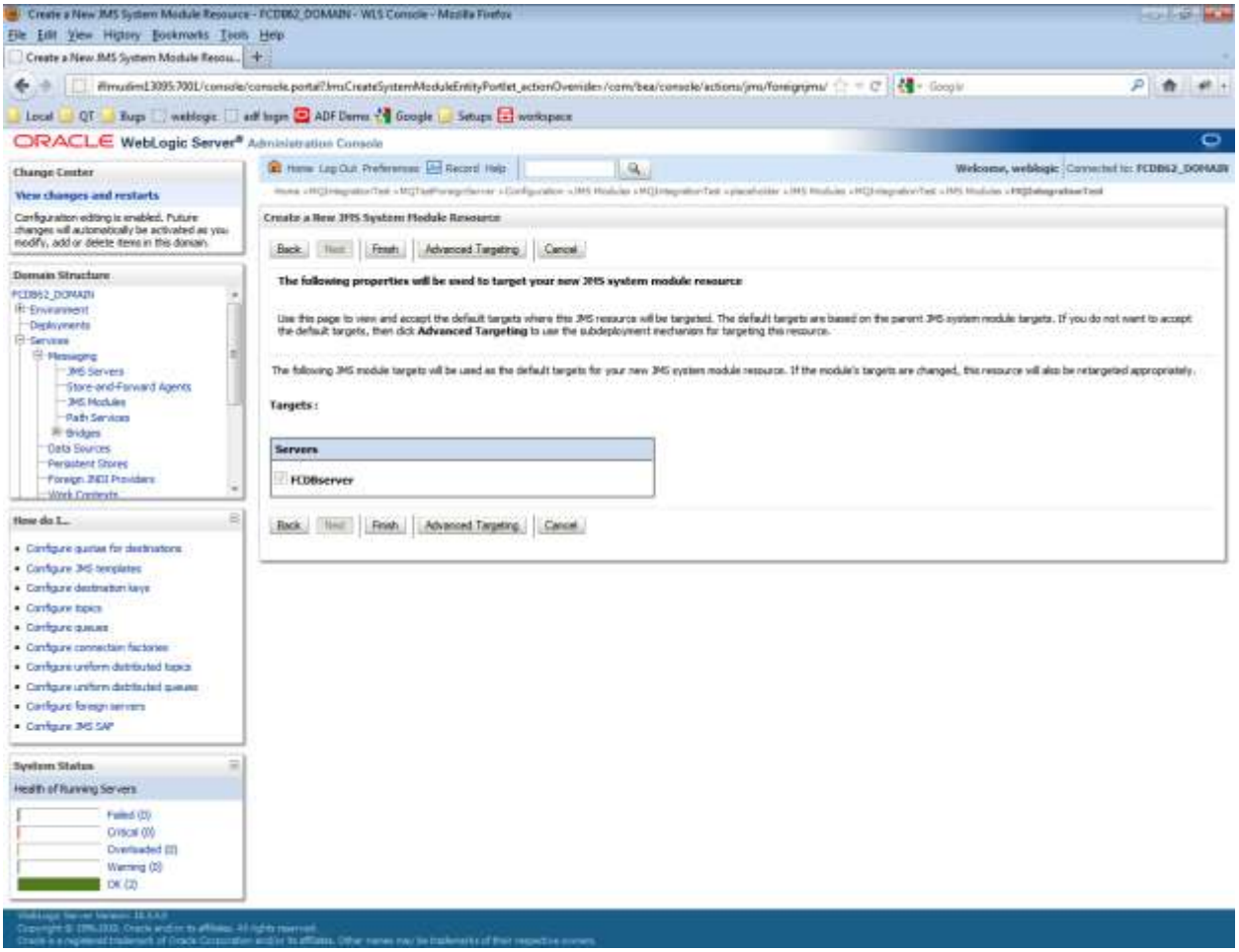
7. Select “Foreign Server” radio button and click Next



8. Enter "*MQTestForeignServer*" in the Name text box, click "Next" button.

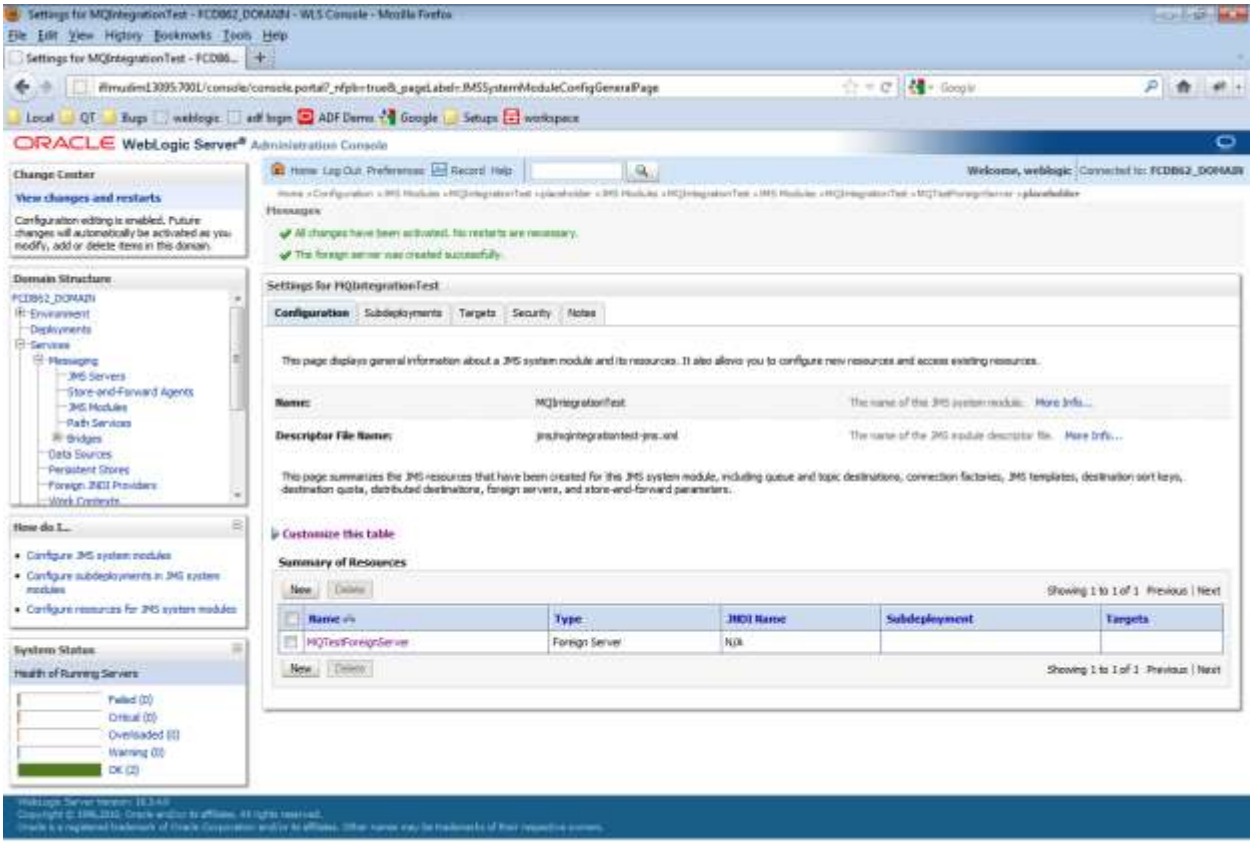


9. The ensuing page shows that the target server is already selected. Click “Finish”



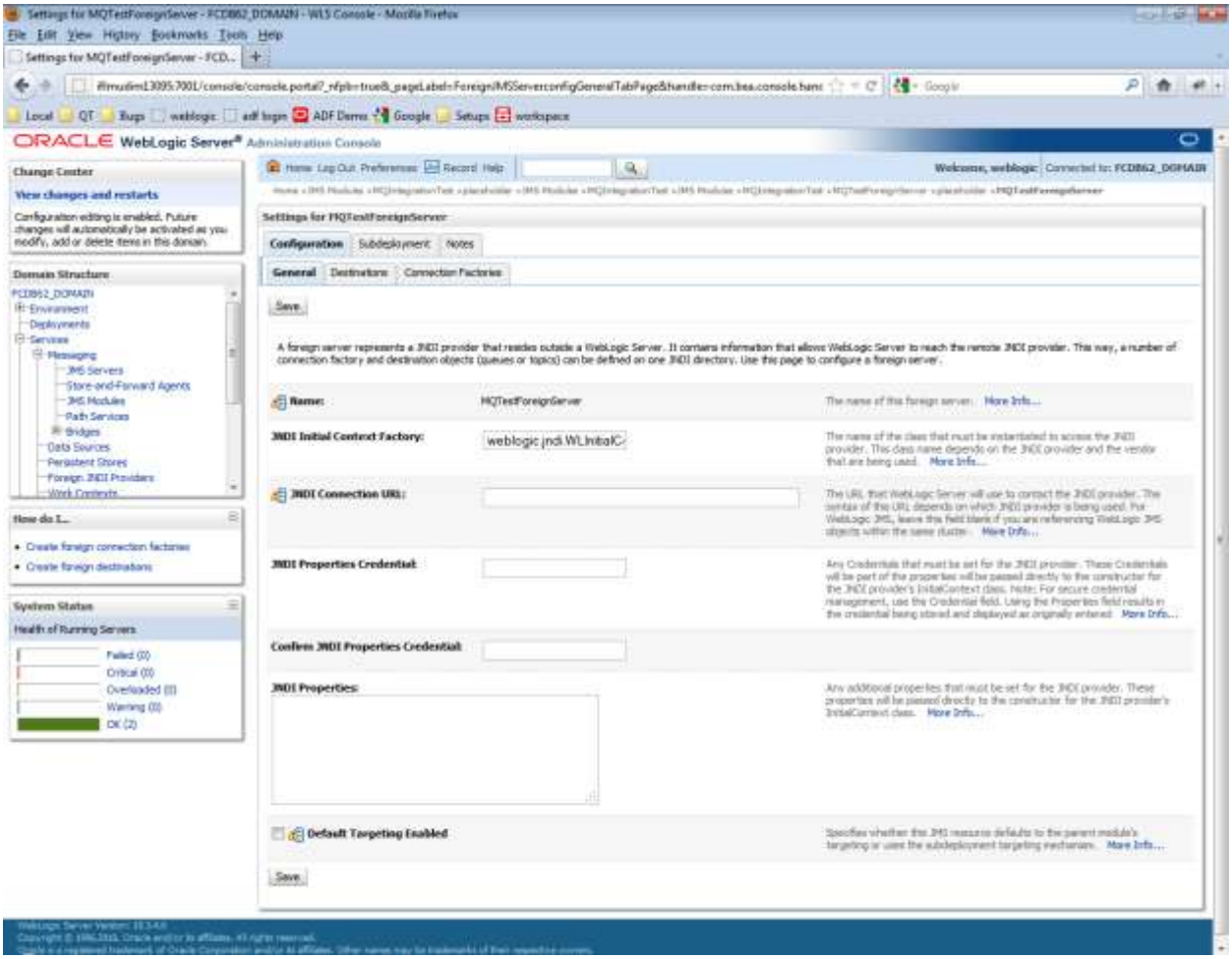
10. ‘The foreign server was created successfully’ message will appear.

11. Click on the newly created foreign server (“MQTestForeignServer”.)



12. Under the tab “Configuration→General” type in following details

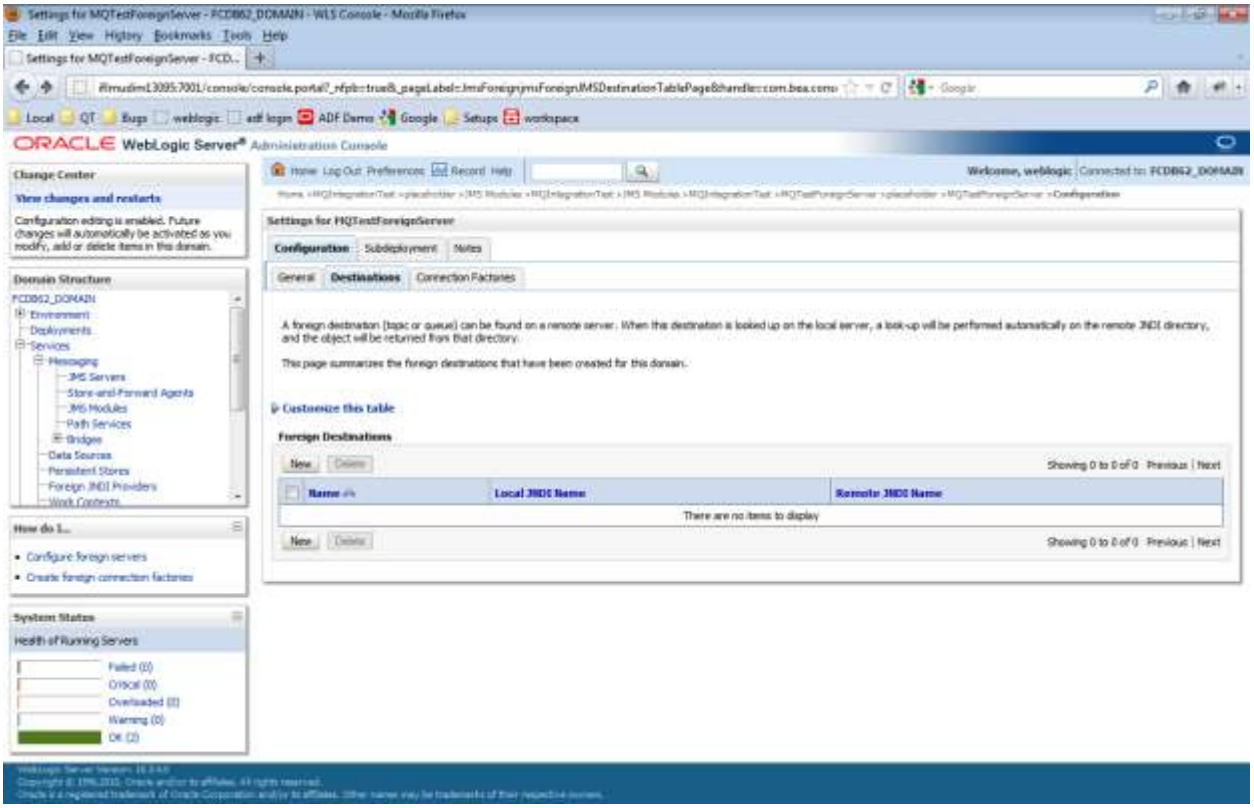
Property	Value
JNDI Initial Context Factory	weblogic.jndi.WLInitialContextFactory
JNDI Connection URL	t3://localhost:7003 (The server IP of the weblogic server where queues are created should be mentioned here. If the queues are on the same server as FCDB, then localhost can be mentioned. The port should be queuing server’s bookstrap port). If https is to be used then t3s should be used.



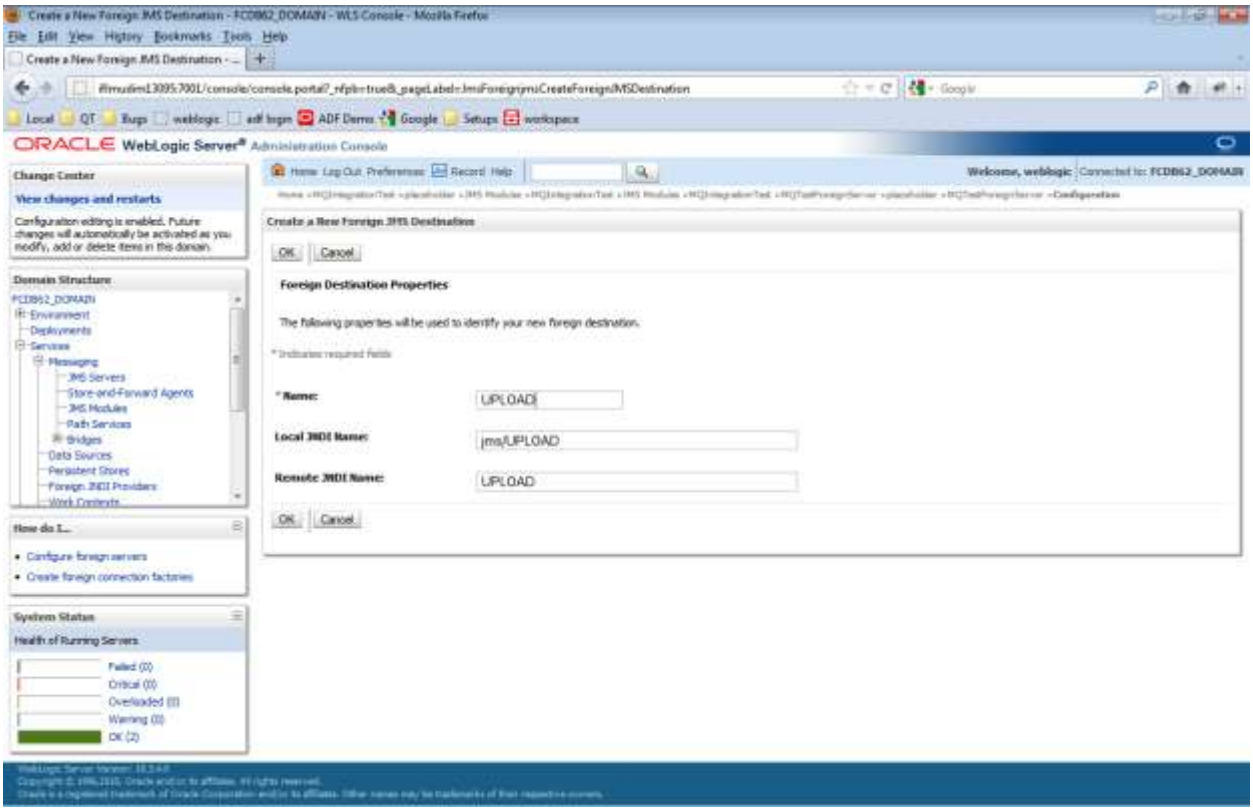
13. Click “Save”.

6.3.Creating Destinations

14. Click button “New” under “Configuration→Destinations” the tab at the top

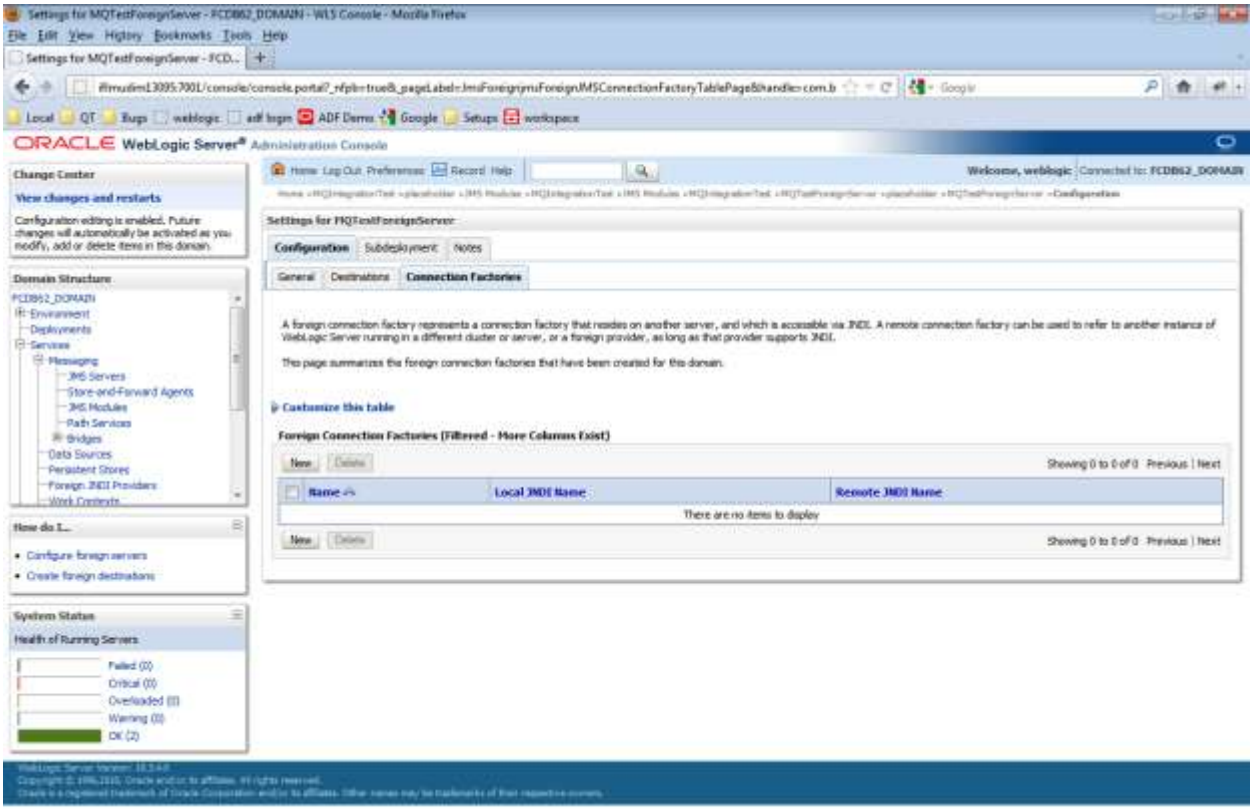


15. Click “New” and enter following details.



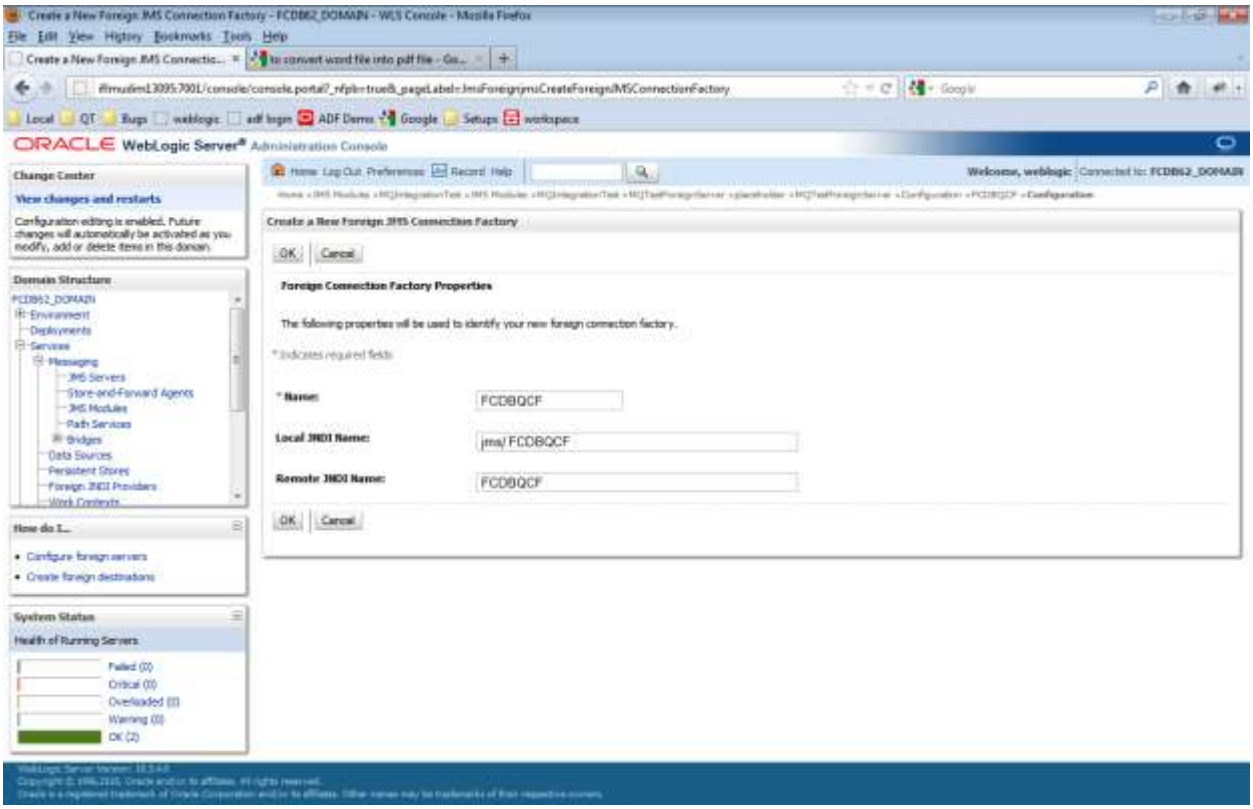
16. Click “OK”.

17. Click on Connection Factories under Configuration tab on top and click “New”.



18. Enter following details in “Create a New Foreign JMS Connection Factory”.

Property	Value
Name	FCDBQCF
Local JNDI Name	jms/ FCDBQCF (Name of the Queue Connection Factory)
Remote JNDI Name	FCDBQCF (Name of the Queue Connection Factory)



Click “OK”. With that you are done with creating and configuring Foreign JMS Server.

7.Module Installation

7.1. Bulk Module Setup

To deploy the bulk module on Weblogic JMS follow the steps explained in the doc "Oracle_FLEXCUBE_Direct_Banking_JMS_Queue_Creation_On_Weblogic" along with the deployment of MDBs as explained in section "Deploying Applications". The MDBs will be deployed as a normal war/ear deployment. Alongwith the MDBs Refer to the Appendix for the ears required to be deployed for Bulk.

A queue connection factory with the JNDI name "jms/FCDBQCF" is required to be created.

List of queues required for Bulk module are:-

1. jms/UPLOAD
2. jms/DECRYPT
3. jms/PREPROCESS
4. jms/PROCESS
5. jms/AUTH
6. jms/AUTHREJECT
7. jms/RESPONSE
8. jms/COMPLETE

The list of MDBs required for deployment on the queues is as follows:

1. UPLOAD_MDB
2. DECRYPT_MDB
3. PREPROCESS_MDB
4. PROCESS_MDB

5. AUTH_MDB
6. AUTHREJECT_MDB
7. RESPONSE_MDB
8. COMPLETE_MDB

Configure the properties in as per the sheet attached "Oracle_FLEXCUBE_Direct_Banking_Parameter_Sheet" for the Property Location "fcat.properties and fcat.config file" under the Module Name for the "BULK" section.

Creating Data source for Bulk Connection:

To create Data source for Bulk connection follow the steps of creation of 'XA Enabled Data Source. (As mentioned in the section 'Setup JDBC data source and Connection Pooling' of this document) using following parameters.

Property	**Value**
Data Source Name	BT
JNDI Name	BT
Database Type	Oracle
Database Driver	Oracle's Driver (Thin XA) Versions:9.0.1 or later

7.2. Alerts Notification and Chase Cycle Setup

To deploy the Alerts and Chase module on the Weblogic JMS follow the steps explained in the doc "Oracle_FLEXCUBE_Direct_Banking_JMS_Queue_Creation_On_Weblogic" along with the deployment of MDBs as explained in section "Deploying Applications". The MDBs will be deployed as a normal war/ear deployment.

1. Create one queue manager and two Queues. One Queue manager will manage both the queues.
2. Deploy the following MDBs for Alerts and Chase:
   a. AlertMDBQueue
   b. ChaseQueue
3. Configure the properties in as per the sheet attached "Oracle_FLEXCUBE_Direct_Banking_Parameter_Sheet" for the Property Location "fcat.properties and fcat.config file" under the Module Name for "Timer Bean, Alerts (Email), Alerts (SMS),EMAIL SMTP,Chase"

7.3.J2ME based Oracle FLEXCUBE Direct Banking Application

The following archives should be downloaded on user mobile to enable J2ME Based Oracle FLEXCUBE Direct Banking Application:

Deployable	Path Location
FCDBMidlet.jar	<FCDB BASE DIR>\deploy\mobile
FCDBMidlet.jad	<FCDB BASE DIR>\deploy\mobile

7.4.SMS based Oracle FLEXCUBE Direct Banking Application

The following web archive needs to be deployed on the Application server to enable SMS Based Oracle FLEXCUBE Direct Banking Application:

Deployable	Context	Path Location
SMS.war	SMS	<FCDB BASE DIR>\deploy

8.DB Creation

For completing the DB setup kindly refer to the doc
“Oracle_FLEXCUBE_Direct_Banking_Database_Setup“

Once the database scripts are successfully executed the SUPERADMIN user created must be unlocked by executing the files in the Tools Section.

9.Encryption and Decryption of property files

The property files <Identity>.xml , fcat-config.xml and fcat.properties mentioned in the Appendix will be stored in the encrypted format and decrypted later for reading them.

The system property “fcat.propfile.isencr” is set as “true”; if the property files are encrypted. It is set as “false”; if property files are in plain text format. If this property is not set at all as system property then all the property files are assumed to be in plain text format.

The usage of the tools are mentioned in the Tools section.

10.Service Tier Security

10.1.Webservice Mode

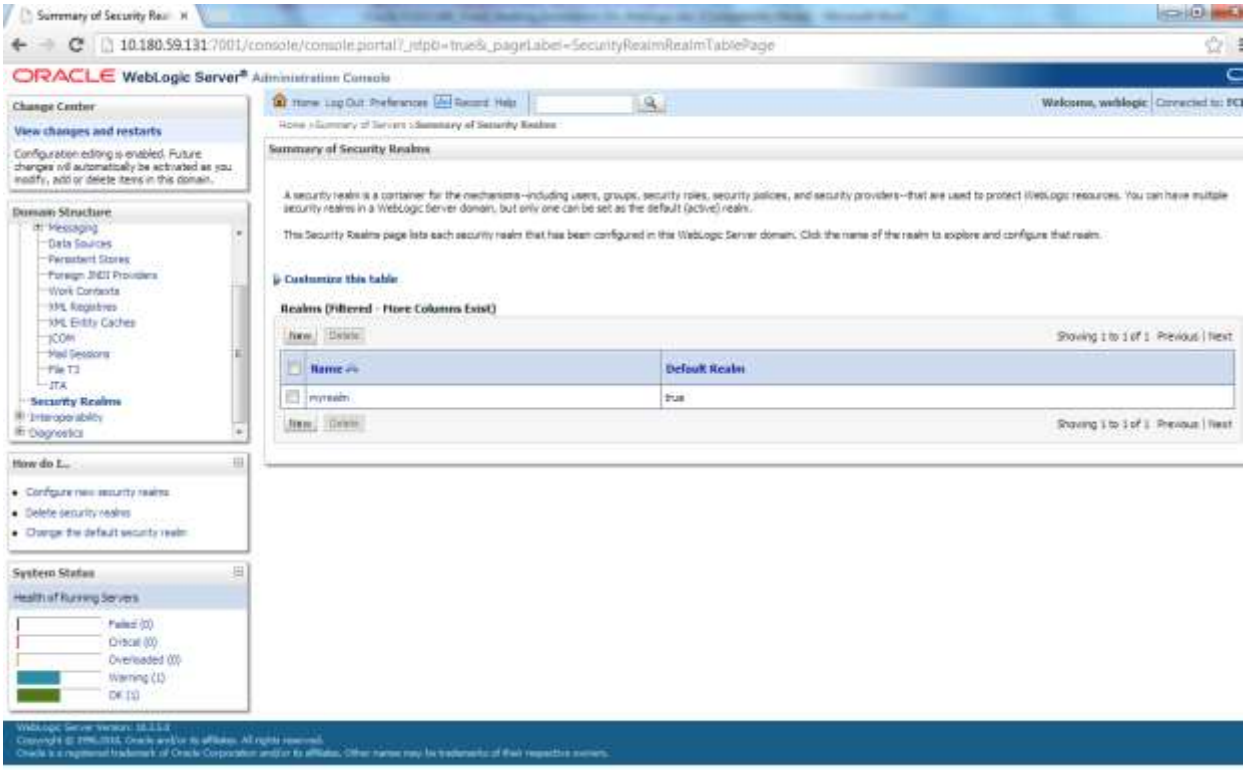
For enabling webservice mode, the invocation mode in fcat-config.xml should be set as 'W'.

Deployment of application through *Webservice* mode requires following ear:

Application Name	Deployable	Context	Path Location
service	service.ear	service	<FCDB BASE DIR>\deploy\weblogic

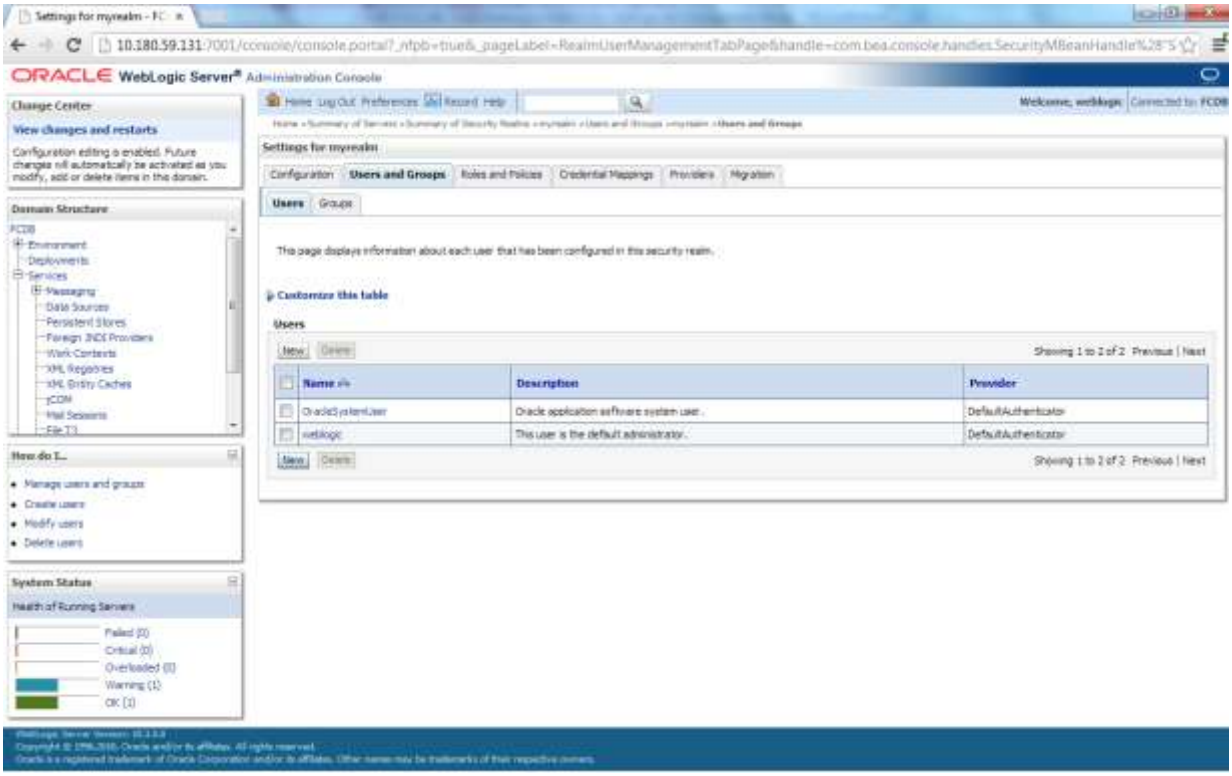
After deploying services.ear, please follow the below steps to authenticate webservice –

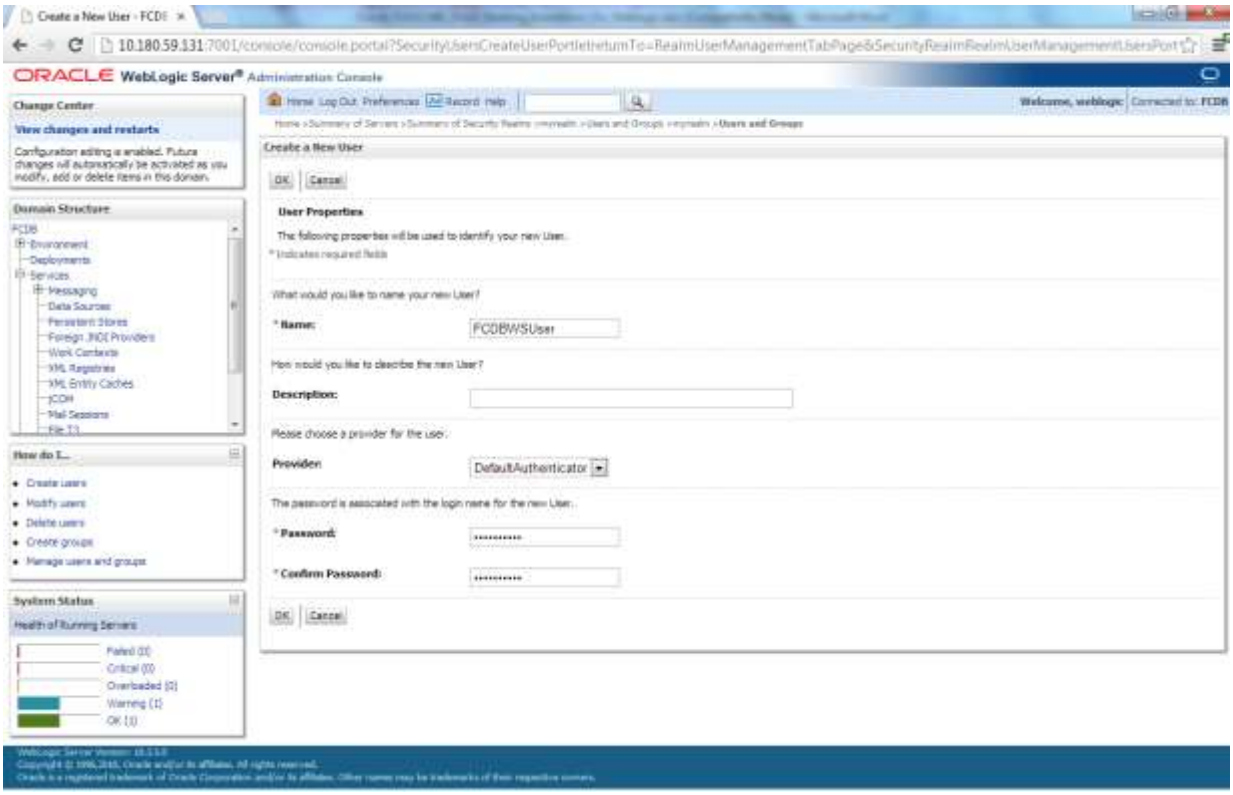
1. Create a user under the current security realm.



Click on the name of security realm.

Under ‘User & Groups’ tab, click on “New”



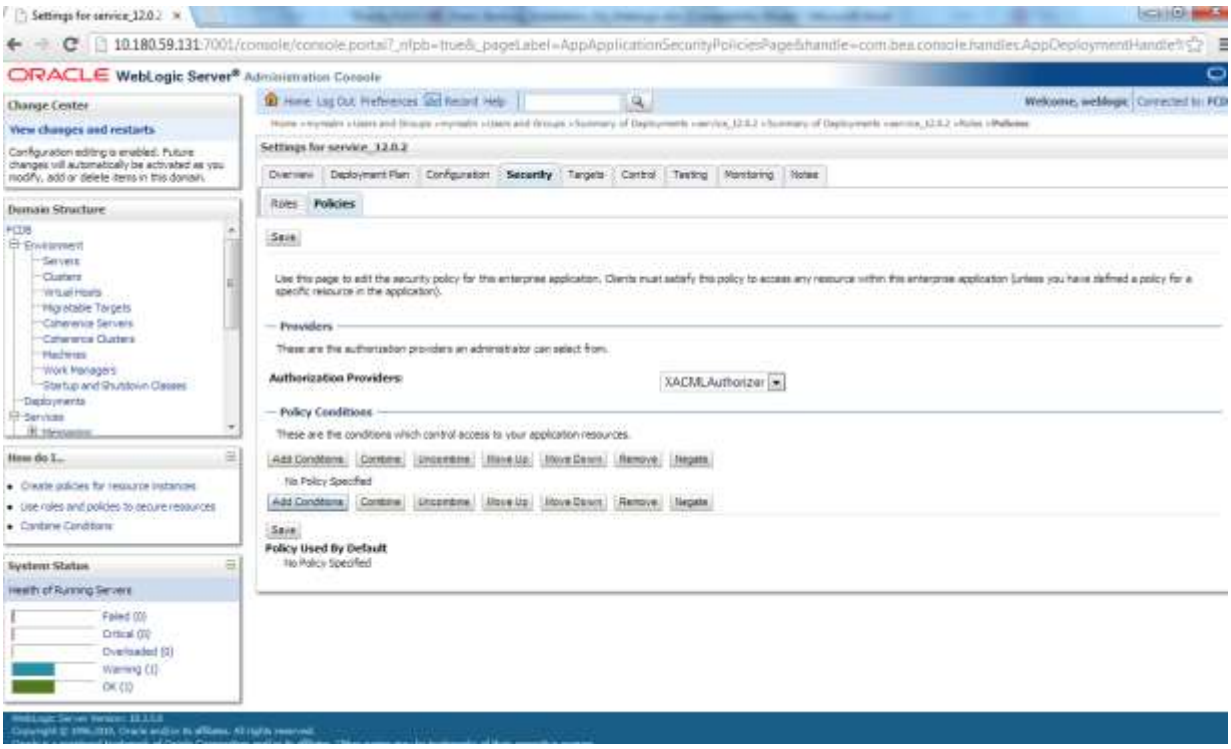


Enter the following values and click “OK”

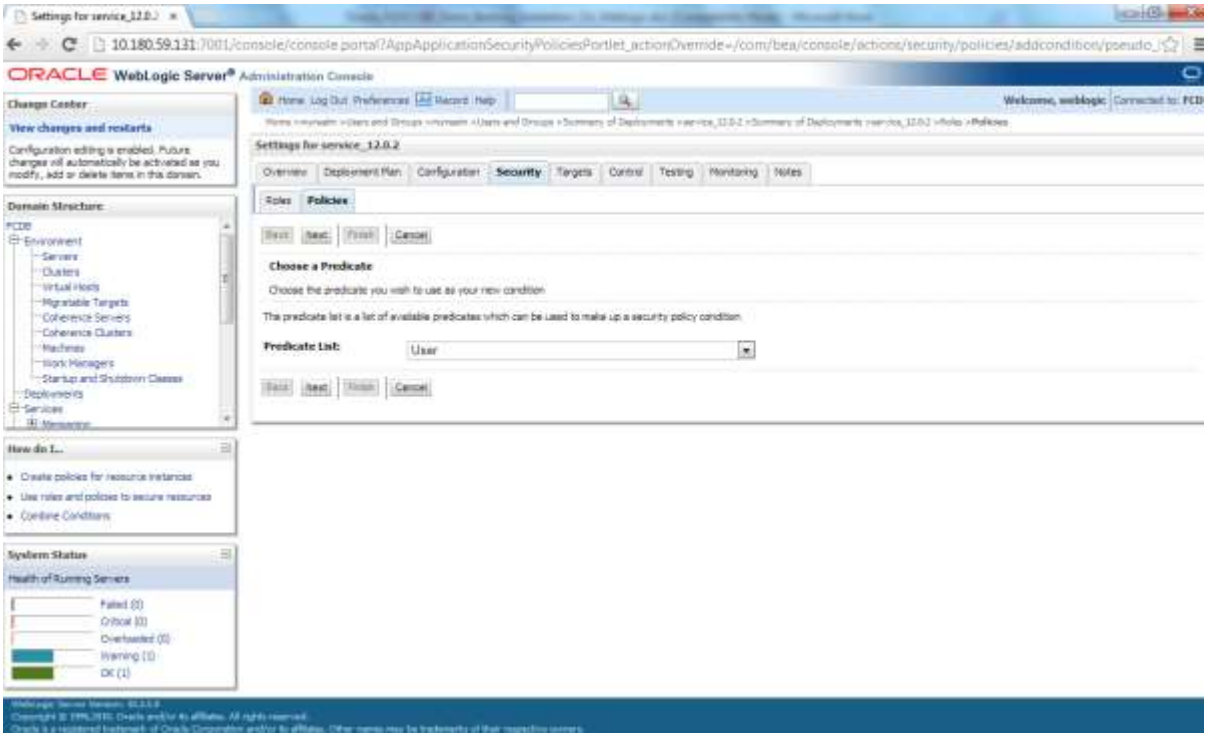
Field	Value
Name	*<Enter username>*
Password	*<Enter password>*
Confirm Password	*<Repeat same password>*

2. Go to Deployment and click on “service”

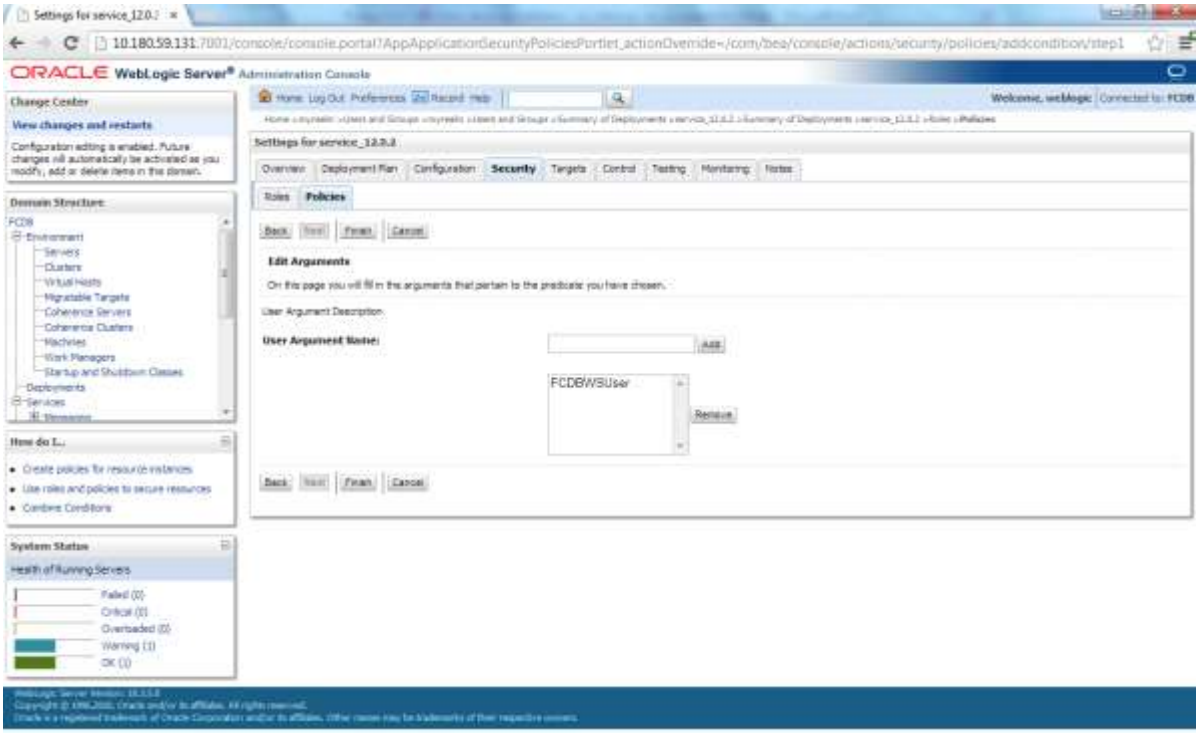
   Go to Security → Policies → Add condition



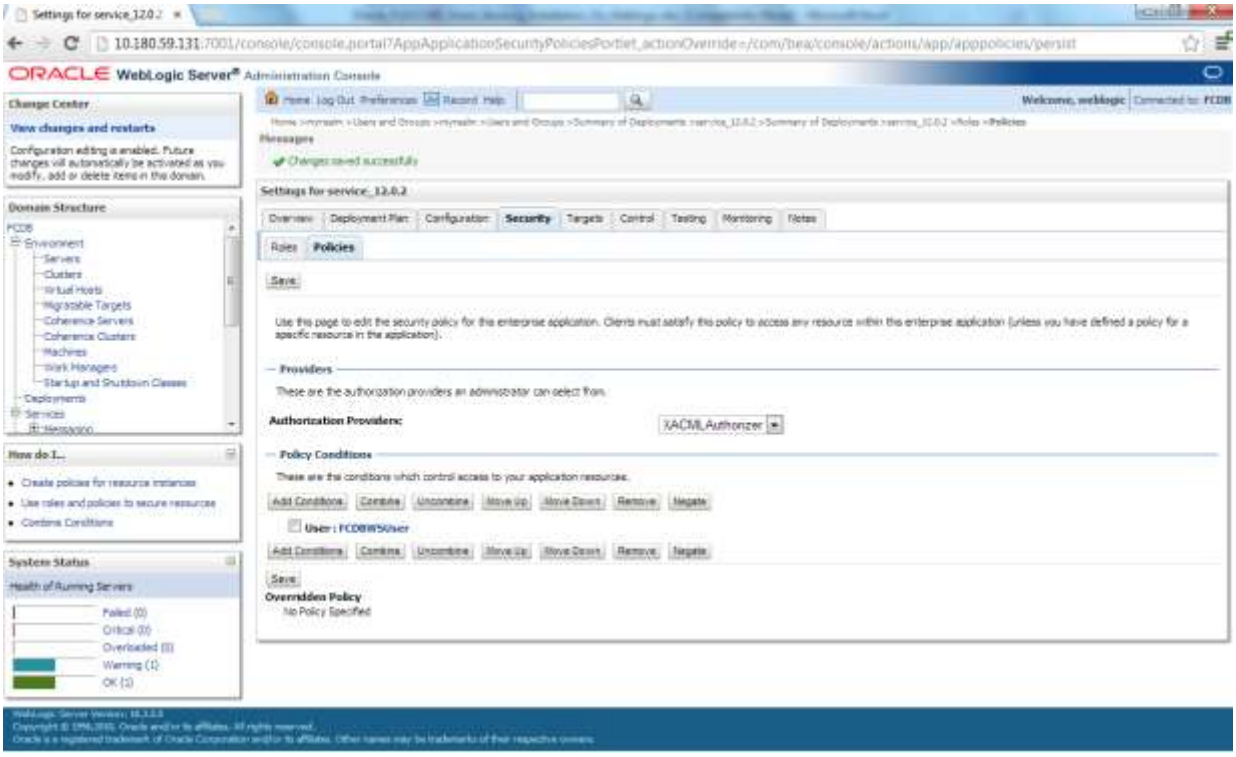
From predicate list, select the “User” option and click on “Next”



Specify the name of the user in”User Argument Name” filed and “Add”, Click on “Finish”



Click on “Save”



3. In fcat-config.xml set the following properties with username and password of the user created in above steps.

Field	Value
FCAT.CONNECT.SVC.USERNAME	<*Enter username*>
FCAT.CONNECT.SVC.PASSWORD	<*Enter password*>

10.2.EJB Mode

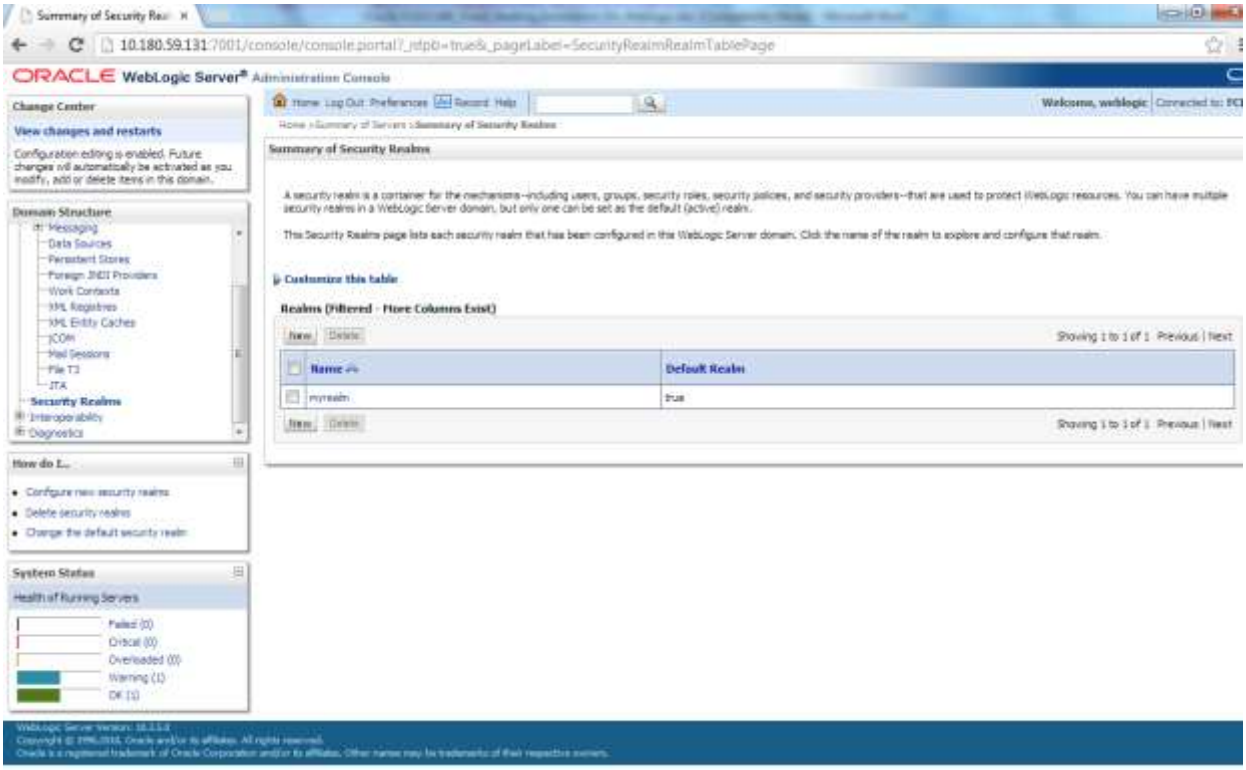
For enabling EJB mode, the invocation mode in fcat-config.xml should be set as 'E'.

Deployment of application through EJB mode requires following jar:

Application Name	Deployable	Context	Path Location
ServiceEndPointRI	ServiceEndPointRI.jar	ServiceEndPointEJB	<FCDB BASE DIR>\deploy

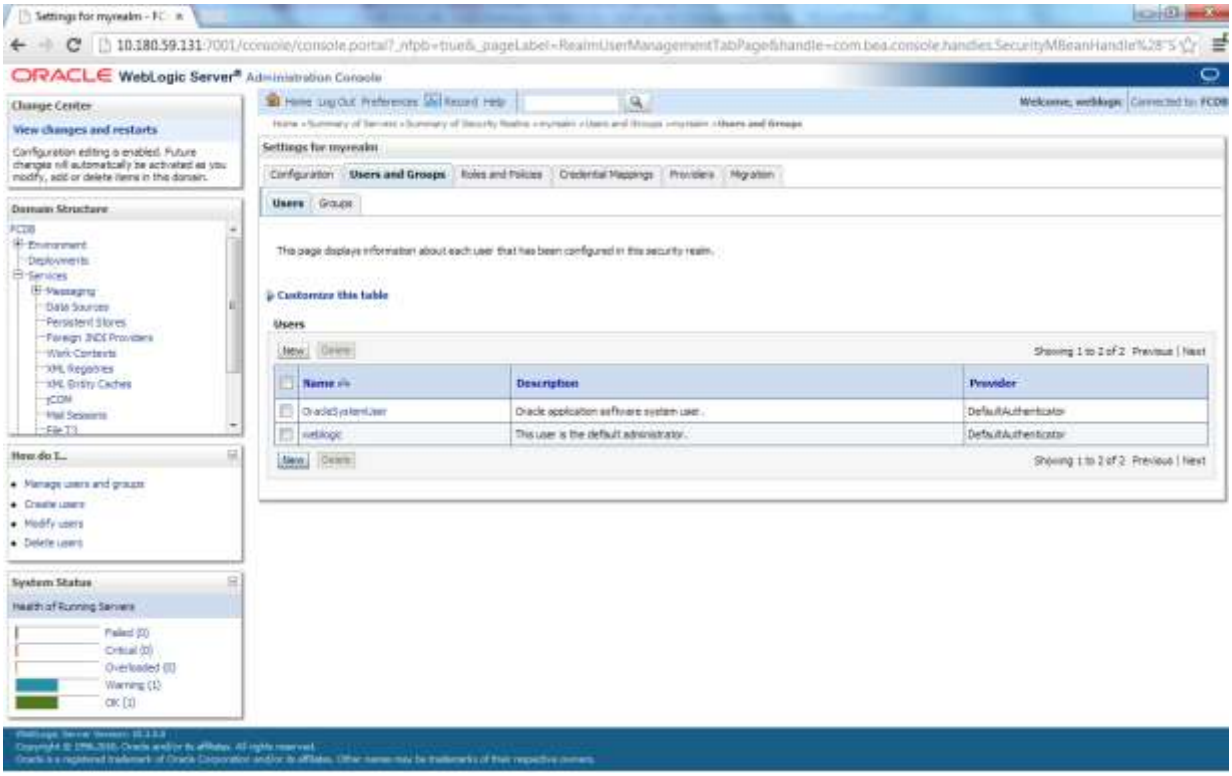
After deploying ServiceEndPointRI.jar, please follow the below steps to authenticate EJB mode –

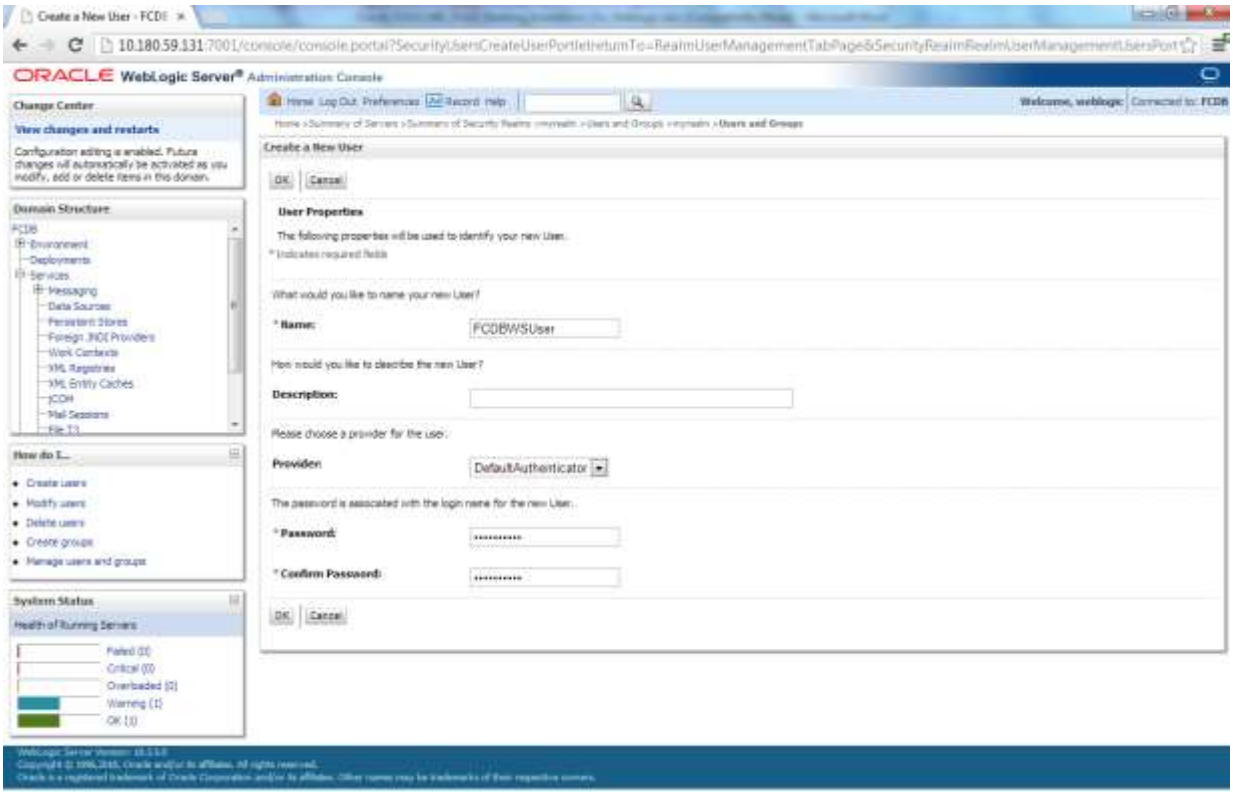
1. Create a user under the current security realm.



Click on the name of security realm.

Under ‘User & Groups’ tab, click on “New”





Enter the following values and click “OK”

Field	Value
Name	*<Enter username>*
Password	*<Enter password>*
Confirm Password	*<Repeat same password>*

2. In fcat-config.xml set the following properties with username and password of the user created in above steps.

Field	Value
FCAT.CONNECT.SVC.USERNAME	*<Enter username>*
FCAT.CONNECT.SVC.PASSWORD	*<Enter password>*

3. A role named *FCDBEJBRole* is defined as follows, in *ejb-jar.xml* inside *ServiceEndPointRI.jar.* The user which was created in the above steps is to be assigned this role which is done in step 4.s

```
<assembly-descriptor>
    <security-role>
        <role-name>FCDBEJBRole</role-name>
    </security-role>
    <method-permission>
        <role-name>FCDBEJBRole</role-name>
        <method>
            <ejb-name>ServiceEndPointEJB</ejb-name>
            <method-name>processRequestWithXML</method-name>
        </method>
    </method-permission>
</assembly-descriptor>
```

4. Update the above created username in *weblogic-ejb-jar.xml* inside *ServiceEndPointRI.jar* in <principal-name/> tag.

```
<security-role-assignment>
    <role-name>FCDBEJBRole</role-name>
    <principal-name>%%username%%</principal-name>
</security-role-assignment>
```

**By default, the username set in *<principal-name/>* is weblogic.

12. Fonts

If the FCDB application is being used at sites with language other than English, then we recommend that you put in the required language-specific font files in the following location of Weblogic installation

<Oracle Base Folder>\`jrockit-jdk1.6.0_22-R28.1.1-4.0.1\jre\lib\fonts`

To support the language font for certain functionalities like PDF download.

13.Appendix

After the successful installation of FCDB with the help of FCDB Installer, following folder structure will be created:

Folder Name	Comments
<FCDB BASE DIR>\documents	Folder containing all FCDB documents
<FCDB BASE DIR>\dbsetup	Folder containing scripts for FCDB Database setup
<FCDB BASE DIR>\system	Folder containing FCDB application & properties files
<FCDB BASE DIR>\system\build\kernel	Folder containing the application codebase in form of a jar called FCDB_kernel.jar.
<FCDB BASE DIR>\system\build\extclasses\jars	Folder containing all requisite third-party jars. Seperate folders will be created for all the third party jars. e.g. <FCDB BASE DIR>\system\build\extclasses\jars\fcr
<FCDB BASE DIR>\system\home	Folder containing all the configuration/properties files of the application.

<FCDB BASE DIR>\system\build\tools	Folder containing all the tools required to generate the GUI xsls, to encrypt/decrypt the property files and generation of password for db user.
<FCAT.LOGFILE.PATH>\logs	Property FCAT.LOGFILE.PATH is configured to locate the folder for storing the log files of the server. e.g. D:\FCDBLogs. If this property is not set then logs are created at default location at <FCDB BASE DIR>\logs.

Deployment of application through *EJB mode* requires following jars:

Application Name	Deployable	JNDI	Path Location
EJBChannleController	EJBChannleController.jar	EJBChannelController	<FCDB BASE DIR>\deploy
ServiceEndPointRI	ServiceEndPointRI.jar	ServiceEndPointEJB	<FCDB BASE DIR>\deploy
TransactionBean	TransactionBean.jar	TransactionBean	<FCDB BASE DIR>\deploy
TimerBean	TimerBean.jar	TimerBean	<FCDB BASE DIR>\deploy

Deployment of the war file is mandatory for both modes (EJB\Webservice).

Deployable	Context	Path Location
F001.war	F001	<FCDB BASE DIR>\deploy
B001.war	B001	<FCDB BASE DIR>\deploy
SMS.war [SMS Banking]	SMS	<FCDB BASE DIR>\deploy
T001.war	T001	< FCDB BASE DIR>\deploy
V001.war	V001	< FCDB BASE DIR>\deploy
SMS.war	SMS	< FCDB BASE DIR>\deploy

Additional deployments when interaction with host is Message driven requires the following MDBs:

Deployable	Context	Comment	Path Location

CloneQueueReceiverMDB.jar	CloneQueueReceiverMDB	Mandatory	<FCDB BASE DIR>\deploy
ClonedQueuResourceAdapter.rar	ClonedQueuResourceAdapter	Mandatory	<FCDB BASE DIR>\deploy

The following ears will be required for Bulk module setup.

Deployable	Context	Path Location
BULKEVENTHANDLEREJB.ear	BULKEVENTHANDLEREJB	<FCDB BASE DIR>\deploy\weblogic\bulk

The following archives should be downloaded on user mobile to enable J2ME Based Oracle FLEXCUBE Direct Banking Application.

Deployable	Context	Path Location
FCDBMidlet.jar		<FCDB BASE DIR>\deploy\mobile
FCDBMidlet.jad		<FCDB BASE DIR>\deploy\mobile

Configuration/Property Files

The layers presentation, channel & service in the system use the following property files:

Property File	Purpose
<Identity>.xml	Each web application deployed has its own property file named as <daemonName>.xml. The daemon name can be configured by property 'FCAT.INTERNETSERVLET.DAEMON.NAME' in web.xml. If no daemon name is specified, default name 'INTERNETSERVLET' is used. (internetservlet.xml). The daemon name can be B001 hence B001.xml.
fcat-config.xml	Configuration property used at the channel layer containing the db properties, invocation mode.This will be updated mainly when the invocation mode is Webservice (W).
fcat.properties	Configuration property used at the service layer containing the db properties, connection pool settings, path for logs and properties configured specific to any module installed.

Kindly refer to the sheet “Oracle_FLEXCUBE_Direct_Banking_Parameter_Sheet” under Module Name “Core” and Property Location for all the above files.

14.Tools

Before using the tools ensure that the Java home path is set.

Encryption and Decryption of property files in home folder.

Change the working folder to <FCDB BASE DIR>\system\build\tools. Pick up the following files for the respective platform and execute them at the command prompt:

File Name	OS
securepropertiesfiles.bat	Windows
securepropertiesfiles.sh	Linux

The tool operates in the interactive mode. The arguments will be provided on execution of the files.

To encrypt or decrypt a file the arguments prompted are :

<Encryption or Decryption mode(E/D)> <Path of the input property file> <Path of the output property file>

e.g. E D:\FCDB\system\home\fcat-config.xml D:\config

Once the file is encrypted set the system property “fcat.propfile.isencr” to “true”.

Build the XSL templates to required language.

The templatized xsls will be picked up from the location

<FCDB BASE DIR>\system\datafiles\gui\<usertype>\<channel id>\template To generate the GUI xsls from the templatized xsls the following tools must be executed at the command prompt.

File Name	OS
xslbuild.bat	Windows
xslbuild.sh	Linux

The tool will execute in the interactive mode and prompt for the user type, channel id, language id and format. After execution the generated files will be stored in the location

<FCDB BASE DIR>\system\datafiles\gui\<usertype>\<channel id>\<language id>

Unlock & set password for user "SUPERADMIN"

To unlock the user created and set a user defined password for it, the following files must executed at the command prompt for the respective platform.

File Name	OS
resetadmin.bat	Windows
resetadmin.sh	Linux

These tools cannot be successfully used more than once

The tool would require weblogic.jar which is located in the following path on the application server

< ORACLE Base Folder>\<WLS home directory\server\lib