
Oracle FLEXCUBE Direct Banking

IBM WebSphere 8.5 Installation Manual

Release 12.0.3.0.0

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IBM WebSphere 8.5 Installation Manual
April 2014

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1. Preface

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

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>.

Access to OFSS Support

<https://support.us.oracle.com>

Structure

This document consists of the following chapter

Chapter 3, "Websphere v7 features"

This chapter discusses the new features of WAS.

Chapter 4, "Pre-requisites"

This chapter discusses the necessary installations/requirements prior to deployment on IBM WAS 8.5.

Chapter 5, "Application Server Configuration"

This chapter discusses configuration of application server, creation of instance of IBM WAS 8.5.

Chapter 6, "Deploying Application"

This chapter discusses the steps to be followed to deploy the application modules on IBM WAS 8.5.

Chapter 7, "Setup JDBC Data Source and Connection Pooling"

The steps for JDBC Data source creation and Connection Pool creation are discussed in this chapter.

Chapter 8, "Setup of WebSphere MQ entities"

The steps for WebSphere MQ queues and queue connections.

Chapter 9, "Appendix"

All the miscellaneous issues, for reference purpose can be found in this section.

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
HTTP	Hyper Text Transfer Protocol
J2EE	Java 2 Enterprise Edition
WAS	IBM WebSphere Application Server
FCDB BASE DIR	FCDB Base Working Directory

3. Websphere v7 features

-
- Extends the brand experience to social networking sites
 - Improves customer experience with support for advanced payment options and digital coupons
 - Delivers localized experience for Brazil and China
 - Provides powerful business user tools to centrally manage targeted marketing campaigns and promotions across Web sites
 - Helps reduce total cost of implementation by easing data loading and integration with sub-systems
 - Enables 64-bit WebSphere Application Server support with select operating systems
 - Provides WebSphere eXtreme Scale integration to support large scale high performance caching

Websphere v7 release notes –

1. Simplified Development

Increase developer productivity with a proven, standards-based platform. WebSphere Application Server V7 offers enhanced support for standards, emerging technology and a choice of development frameworks that simplifies programming models to increase developer productivity. Integral tooling makes the most of existing technology skills for rapid time-to-value.

- Java EE 5 certification, EJB 3.0 support and Java Persistence API (JPA) and Java Development Kit (JDK) 6.0, deliver simplified programming models for building reusable persistent object.
- Web services support, including JAX-WS, SOAP 1.2, MTOM, XOP, WS-ReliableMessaging, WS-Trust, WS-SecureConversation, WS-Policy, and Kerberos Token Profile, simplifies interoperability in mixed environments.
- Web 2.0 support (via Feature Pack for Web 2.0) extends Service Oriented Architecture (SOA) by connecting external Web services, internal SOA services, and Java Platform Enterprise Edition (JEE) objects into highly interactive Web application interfaces.
- Session Initiation Protocol (SIP) servlets simplify development with standardized support for interactive user sessions involving real-time multimedia elements such as voice, video, instant messaging and online games.
- Spring has certification for use with WebSphere Application Server to enable module-based programming.
- Single-step installation and configuration, wizards and default configurations, and easy-to-navigate documentation that includes extensive use of sample code help ensure fast and smooth start-up.
- WebSphere Application Server Feature Packs simplify the adoption of new standards such Services Component Architecture (SCA), and improve consumability by enabling users to selectively take advantage of new standards and features while maintaining a more stable internal release cycle.

2. High Performance

Keep your business agile in a constantly changing environment. WebSphere Application Server V7 provides a fast, reliable, available, secure and scalable environment that enables development and application efficiencies so that businesses can do more with fewer resources

Unparalleled Performance

Do more with less. WebSphere Application Server V7 delivers optimized runtime performance through provisioning, Web services, and EJB3 enhancements which can result in fewer energy consuming processors performing the same workloads of previous versions.

3. Rock-solid Security

Rest assured, applications and data are secure from attack. Out-of-the-box security configurations and user registry, compliance with government standards, and stringent Web services security. New security capabilities add deeper levels of management, user governance and auditing to decrease system vulnerabilities while maximizing developer productivity.

- WebSphere Security Domains deliver greater granularity, flexibility and control over users and infrastructure to increase administration efficiencies
- Security auditing capabilities ensure security compliance to ease development
- Broader implementation of Kerberos improves security interoperability with other applications and environments while increasing developer productivity
- Security Assertion Markup Language (SAML) token support for web services security provides for secure, interoperable Web services

4. Intelligent Management

Anticipate and adjust to mission critical issues. WebSphere Application Server V7 offers a simplified infrastructure, flexible and effective application control and runtime efficiency so you can respond to evolving business needs with infrastructure and application intelligence.

- Runtime provisioning and OSGi technology dynamically selects only the needed functions for memory and space reducing the application server footprint
- Flexible Management features in WebSphere Application Server Network Deployment improve efficiencies of administration and allow remote production resource management of WAS Base and WAS Express
- Administration tools enable attention to the deepest level of security providing fine grained security management levels
- New WebSphere Business Level Applications (WBLA) expands the notion of "application" beyond Java EE 5 to significantly improve the management of multi-component applications, simplifying administrative tasks
- Improved Console Command Assistant, easier security configuration and database connectivity, wizards and a stand-alone thin administration client enable efficient management of the deployment environment.

5. Investment Protection

Protect investments in applications through reuse and integration. From service-enabling legacy assets to inventing new ones, our technology makes your business accessible to new users in innovative ways, giving you immediate insight and interaction with partners, suppliers and customers and increasing your return on investment.

- New Web services support including WS-Business Activity, WS-Notification and WS-I Basic Security Profile, helps you more securely extend your reach and gives better application portability and control. On top of already extensive Web services support, Web 2.0 and a powerful Java Messaging Service (JMS) engine help you extend the reach of your existing applications and maximize asset utilization.
- Pre-integrated support for WebSphere MQ and tight integration with WebSphere ESB - the combination of these products form a powerful Enterprise Service Bus that can integrate the most diverse set of applications and environments
- New Deployment manager enables you to manage previous versions of WebSphere Application Server so that you can adopt newer infrastructure as your plans require
- New multi-cell support and compatibility features offer the ability to seamlessly adopt newer infrastructure and run applications developed in previous Java Enterprise Edition versions (backwards compatible to JEE v1.2) for WebSphere Application Server to eliminate intensive cost and resource requirements

4. Pre- requisites

1. All the relevant software requirements mentioned in the sheet
“Oracle_FLEXCUBE_Direct_Banking_Software_Stack” must be installed.
2. IBM WebSphere v7 must be installed on the system.
3. Flexcube Direct Banking Application is installed using Oracle FCDB Installer.
4. The document expects the user to have fair knowledge of application deployment on IBM Websphere. The document only explains deployment and configuration of Oracle FLEXCUBE Direct Banking on IBM Websphere; IBM Websphere documentation should be referred for details on IBM Websphere.

5. Application Server Configuration

5.1 Creating and Managing a Server Instance

Perform following steps for creating the WAS instance.

- 1) Go to the Admin console
- 2) Enter User Id as "WEBSHERE".

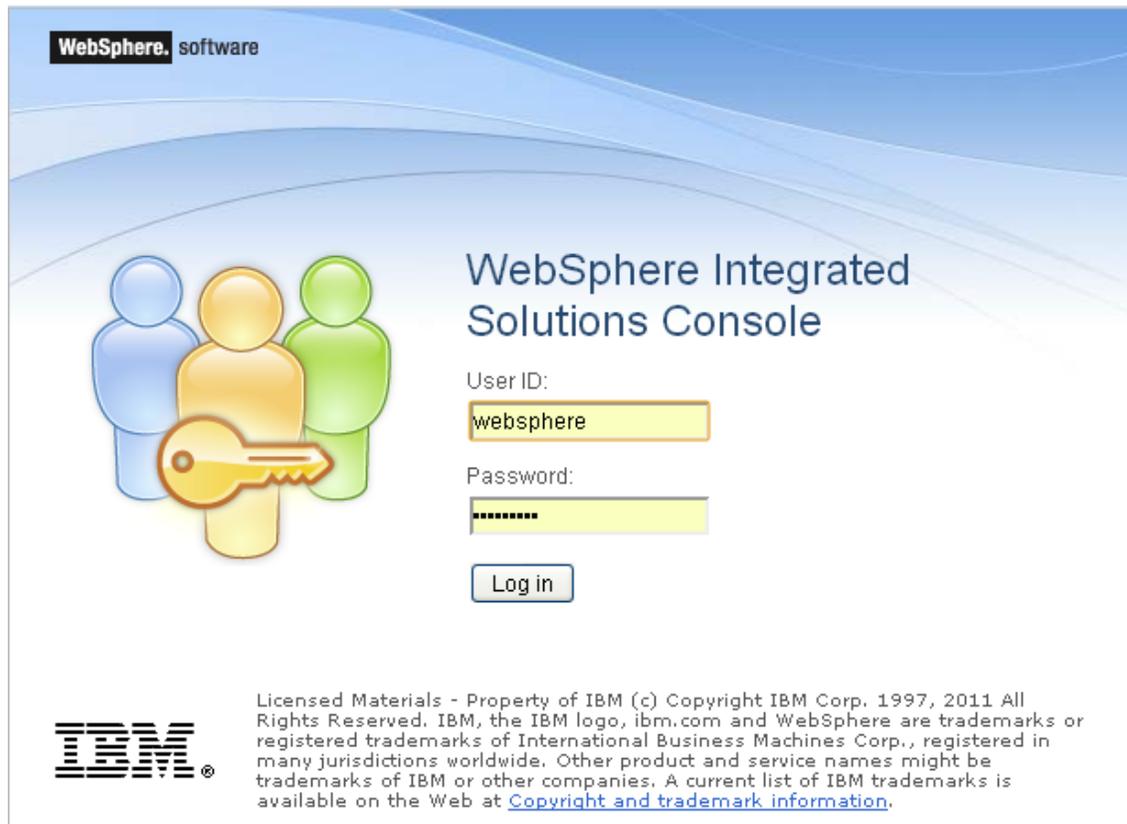


Figure 5.1.1

- 3) Following Menu will be displayed.



Figure 5.1.2

- 4) Go to Servers -> Server Types->Application servers.
Click on the server to be configured from the list. Screen as displayed in *Figure 4.1.3* will appear.

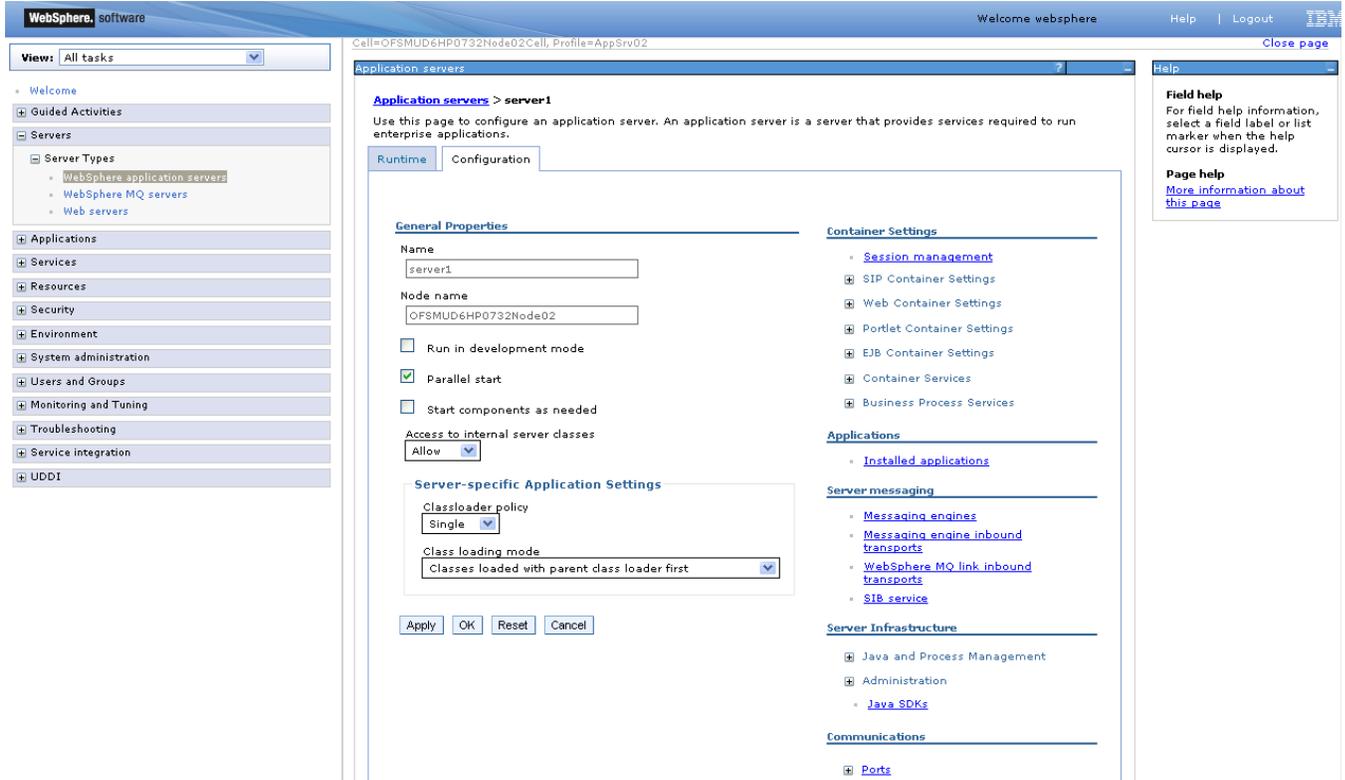


Figure 5.1.3

- 5) Select “single” as classloader policy. Click Apply.

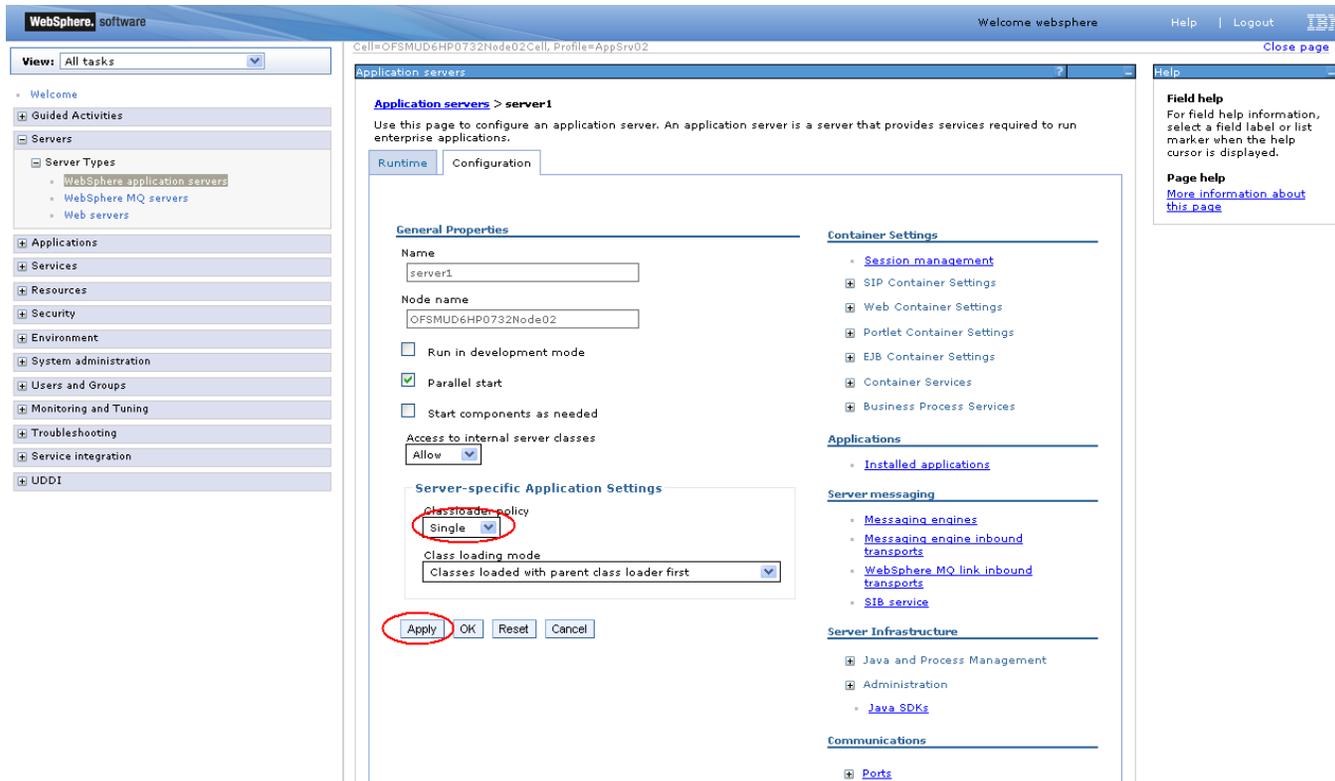


Figure 5.1.4

- 6) On the same screen, find “Port” section, expand the same to find WC_defaulthost port (termed as default host port in document). Note down the port for later use.

WebSphere software Welcome websphere [Help](#) | [Logout](#)

View: All tasks

- Welcome
- Guided Activities
- Servers
 - Server Types
 - WebSphere application servers
 - WebSphere MQ servers
 - Web servers
- Applications
- Services
- Resources
- Security
- Environment
- System administration
- Users and Groups
- Monitoring and Tuning
- Troubleshooting
- Service integration
- UDDI

Apply OK Reset Cancel

Server Infrastructure

- Java and Process Management
- Administration
 - Java SDKs

Communications

- Ports

Port Name	Port	Details
BOOTSTRAP_ADDRESS	2810	
SOAP_CONNECTOR_ADDRESS	8881	
ORB_LISTENER_ADDRESS	9101	
SAS_SSL_SERVERAUTH_LISTENER_ADDRESS	9406	
CSIV2_SSL_SERVERAUTH_LISTENER_ADDRESS	9405	
CSIV2_SSL_MUTUALAUTH_LISTENER_ADDRESS	9404	
WC_adminhost	9061	
WC_defaulthost	9081	
DCS_UNICAST_ADDRESS	9354	
WC_adminhost_secure	9044	
WC_defaulthost_secure	9444	
SIP_DEFAULTHOST	5063	
SIP_DEFAULTHOST_SECURE	5062	
SIB_ENDPOINT_ADDRESS	7277	
SIB_ENDPOINT_SECURE_ADDRESS	7287	
SIB_MQ_ENDPOINT_ADDRESS	5559	
SIB_MQ_ENDPOINT_SECURE_ADDRESS	5579	
IPC_CONNECTOR_ADDRESS	9634	
OVERLAY_UDP_LISTENER_ADDRESS	11003	
OVERLAY_TCP_LISTENER_ADDRESS	11004	

Messaging

- Communications Enabled Applications (CEA)

Performance

- Performance Monitoring Infrastructure (PMI)
- Performance and Diagnostic Advisor Configuration

Security

- Security domain
- Default policy set bindings
- JAX-WS and JAX-RPC security runtime

Troubleshooting

- NCSA access and HTTP error logging

- 7) On the same Screen, locate section “Server Infrastructure”, expand the option “Java and Process Management” and click on the link “Process Definition”.

The screenshot displays the IBM WebSphere Administration Console interface. The top navigation bar includes the WebSphere logo, the text "Welcome websphere", and links for "Help" and "Logout". Below the navigation bar, the page title is "Application servers" and the breadcrumb is "Application servers > server1". The main content area is divided into several sections:

- General Properties:** Includes fields for "Name" (server1) and "Node name" (OFSMUD6HP0732Node02). There are checkboxes for "Run in development mode", "Parallel start" (checked), and "Start components as needed". A dropdown menu for "Access to internal server classes" is set to "Allow".
- Server-specific Application Settings:** Includes a dropdown for "Classloader policy" (Single) and a dropdown for "Class loading mode" (Classes loaded with parent class loader first).
- Container Settings:** Includes links for "Session management", "SIP Container Settings", "Web Container Settings", "Portlet Container Settings", "EJB Container Settings", "Container Services", and "Business Process Services".
- Applications:** Includes a link for "Installed applications".
- Server messaging:** Includes links for "Messaging engines", "Messaging engine inbound transports", "WebSphere MQ link inbound transports", and "SIB service".
- Server Infrastructure:** This section is expanded, showing "Java and Process Management" with sub-links for "Class loader", "Process definition" (highlighted with a red circle), and "Process execution". Other sub-links include "Administration" and "Java SDKs".
- Communications:** Includes links for "Ports", "Messaging", and "Communications Enabled Applications (CEA)".
- Performance:** This section is partially visible at the bottom.

On the right side of the page, there are two help sections: "Field help" and "Page help". The "Page help" section includes a link "More information about this page".

8) On the “Process Definition” screen, click on the link “Java Virtual Machine”

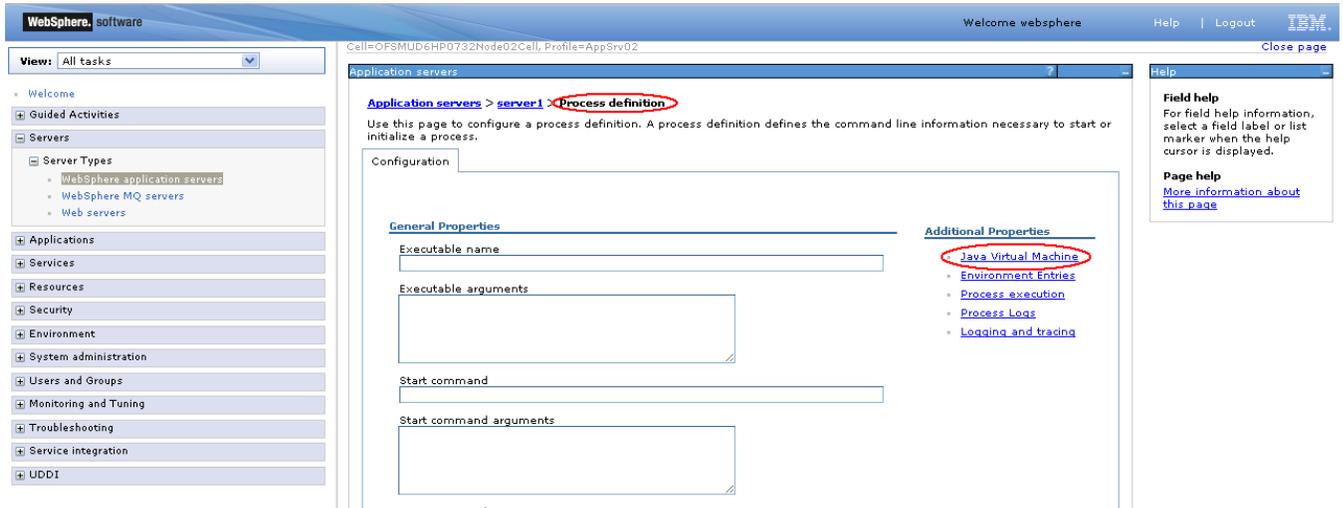


Figure 4.1.5

9) On the “Java Virtual Machine” screen, click on “Configuration” tab and then click on the link “Custom properties”.

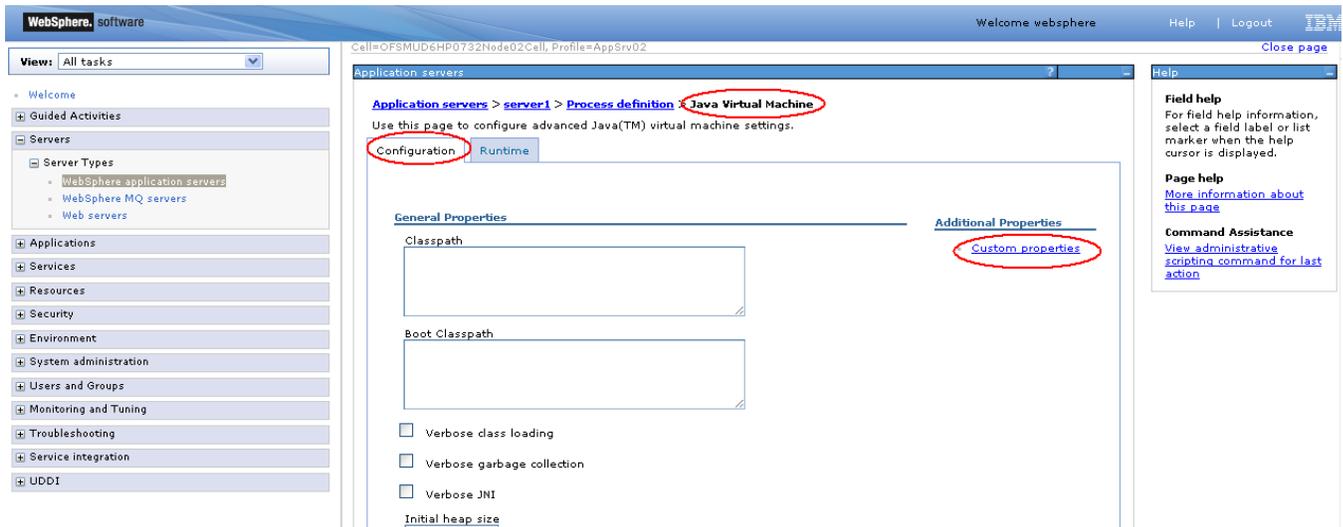


Figure 5.1.6

10) On the “Custom Properties” screen, click on “New” to configure a new custom property.

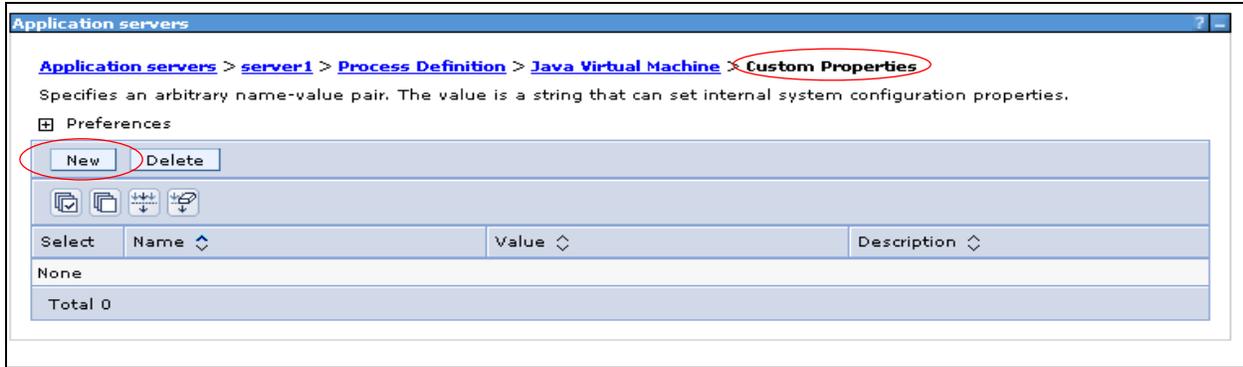


Figure 5.1.7

11) Add the property name, value and click “OK”.

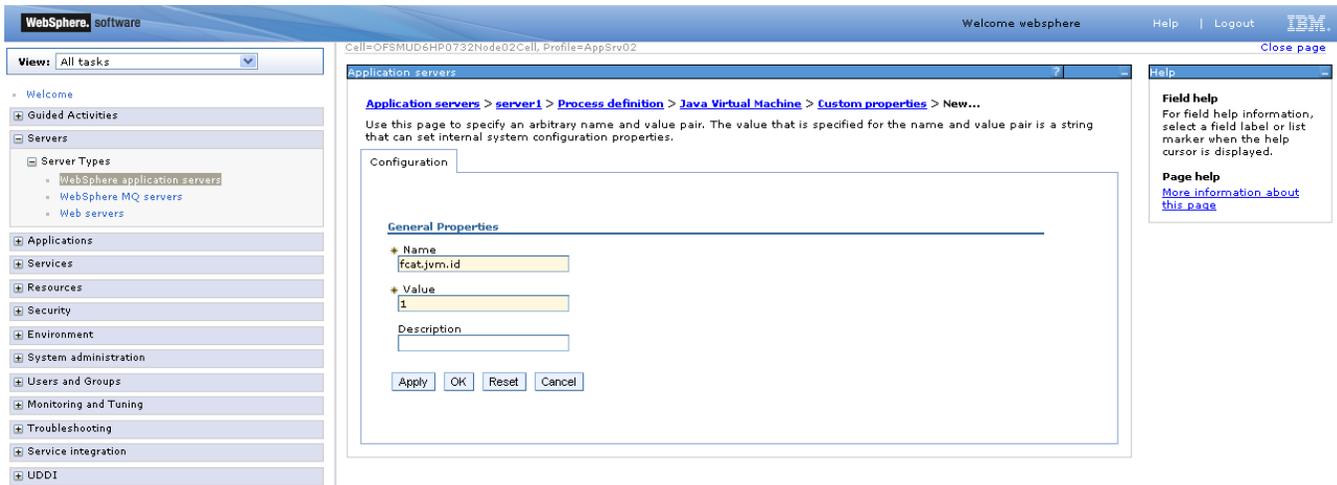


Figure 5.1.8

12) Add all below mentioned properties by following steps 11 - 12.

Property Name	Value	Explanation
fcacat.jvm.id	A unique number.	This unique number identifies the server amongst all the cluster members.
fcacat.basedir	<FCDB BASE DIR>	Path to the base folder containing FCDB application on file system. E.g.: D:\FCDB
fcacat.propfile.isencr	true/false	This property indicates the properties file's encryption status. Set as 'true' if files are encrypted, else set as 'false'. The property files are not encrypted when installed but needs to be explicitly encrypted using FCDB tool provided. Please refer Encryption and Decryption of Property Files
ws.ext.dirs	E.g.: d:\fcdb\system\build\kernel;d:\fcdb\system\build\extclasses\jars\axis;d:\fcdb\system\build\extclasses\jars\cocoon;d:\fcdb\system\build\extclasses\jars\dom;d:\fcdb\system\build\extclasses\jars\fc; d:\fcdb\system\build\extclasses\jars\flexcube;d:\fcdb\system\build\extclasses\jars\fofop;d:\fcdb\system\build\extclasses\jars\ibm;d:\fcdb\system\build\extclasses\jars\oracle;d:\fcdb\system\build\extclasses\jars\others;d:\fcdb\system\build\extclasses\jars\poi;d:\fcdb\system\build\extclasses\jars\sunjai;d:\fcdb\system\build\extclasses\jars\sunjndi;d:\fcdb\system\build\extclasses\jars\toolkit;d:\fcdb\system\build\extclasses\jars\txt.txt;d:\fcdb\system\build\extclasses\jars\xalan;	Path to all folders holding application relevant jar files. Folders are “;” colon separated for Windows OS. Folders are “:” colon separated for Linux/Unix OS. Following folder should be added: <FCDB BASE DIR>/system/build/kernel And all subdirectories under folder <FCDB BASE DIR>/system/build/extclasses/jars (Note: 1. Remove commons-beanutils-1.7.jar from <FCDB BASE DIR>/system/build/extclasses/jars/json 2. In case of Patch Installer delete the <i>FCDB_12.0.0.jar</i> from the < FCDB BASE DIR >/system/build/kernel)

13) After above steps are completed, save the configuration changes by clicking on the “Save” link on the top of the screen.

14) Since all the configurations of IBM Websphere application server are XML files, the server uses xalan parser to parse the configuration files. However Oracle FLEXCUBE Direct Banking application uses oracle parser for reporting module and hence is added to the classpath. This results in the server failing to parse its configuration files and hence failing to start. Please update following property as remedy:

- Locate the jre folder present in the application server installation folder. Usually <IBM Websphere Installation folder>/java/jre/lib
- In the above folder locate a file jaxp.properties or jaxp.properties.template. If template file is present, rename it to jaxp.properties.
- Edit the file jaxp.properties and uncomment the javax.xml.* properties. Hence following properties should now be present in the properties file.

```
javax.xml.transform.TransformerFactory=org.apache.xalan.processor.TransformerFactoryImpl
javax.xml.xpath.XPathFactory=org.apache.xpath.jaxp.XPathFactoryImpl
```

```
javax.xml.parsers.SAXParserFactory=org.apache.xerces.jaxp.SAXParserFactoryImpl
javax.xml.parsers.DocumentBuilderFactory=org.apache.xerces.jaxp.DocumentBuilderFactory
Impl
```

- Restart the server.

5.2 Creating virtual host for Web Application

This section is not mandatory. In case FCDB is to be setup on the “default_host”, this section can be skipped.

① Please refer to IBM Websphere documents to find details on virtual host and default host.

- 1) Click Administrative Console → Environment → Virtual Hosts

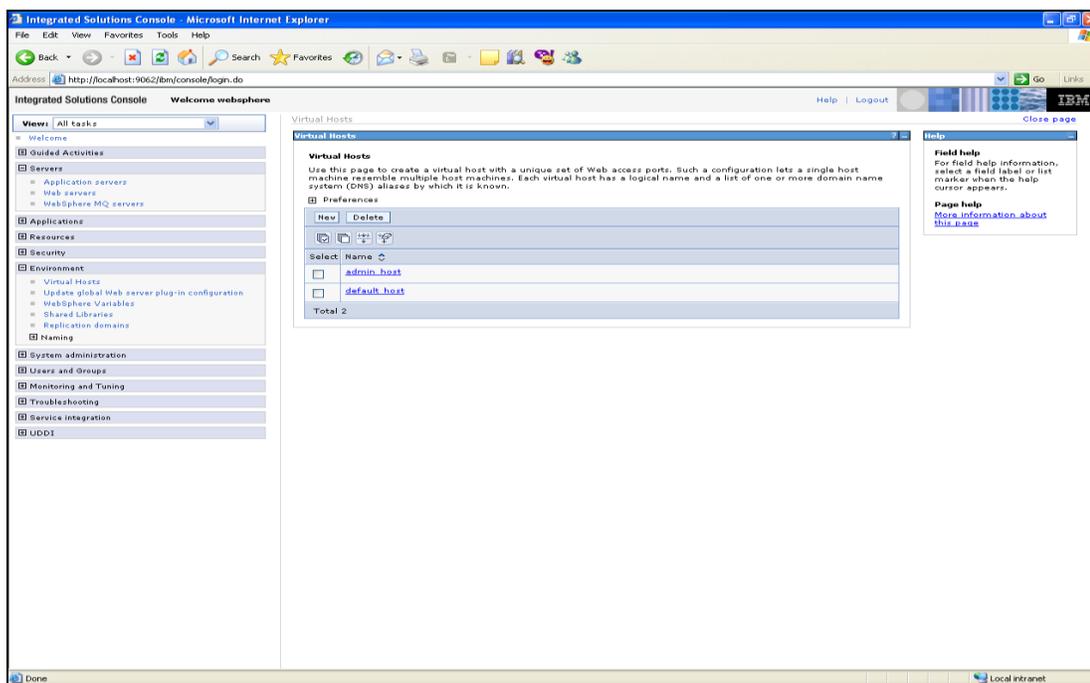


Figure 5.2.1

- 2) Click on New button. Enter the Virtual Host Name (e.g. FCDB)

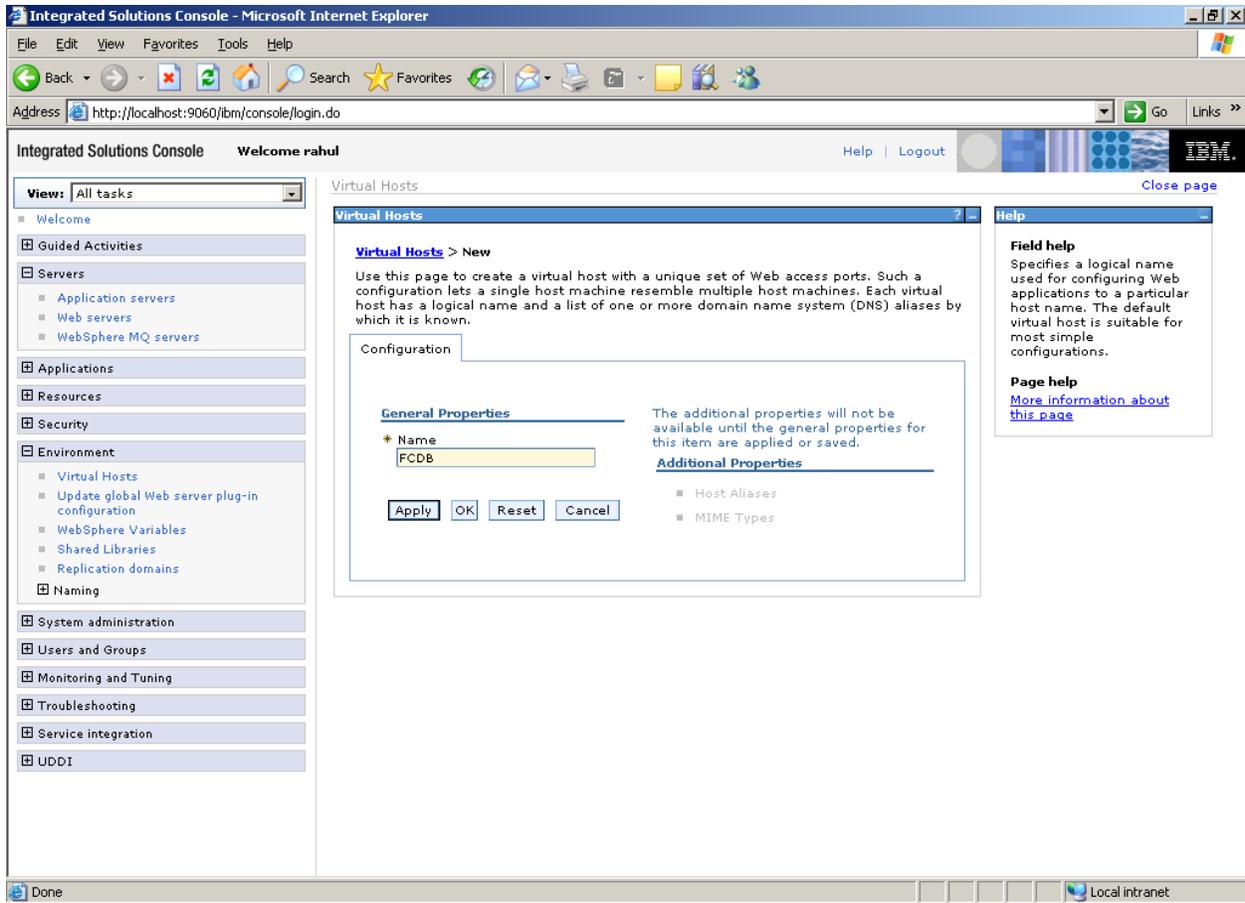


Figure 5.2.2

3) Click Apply

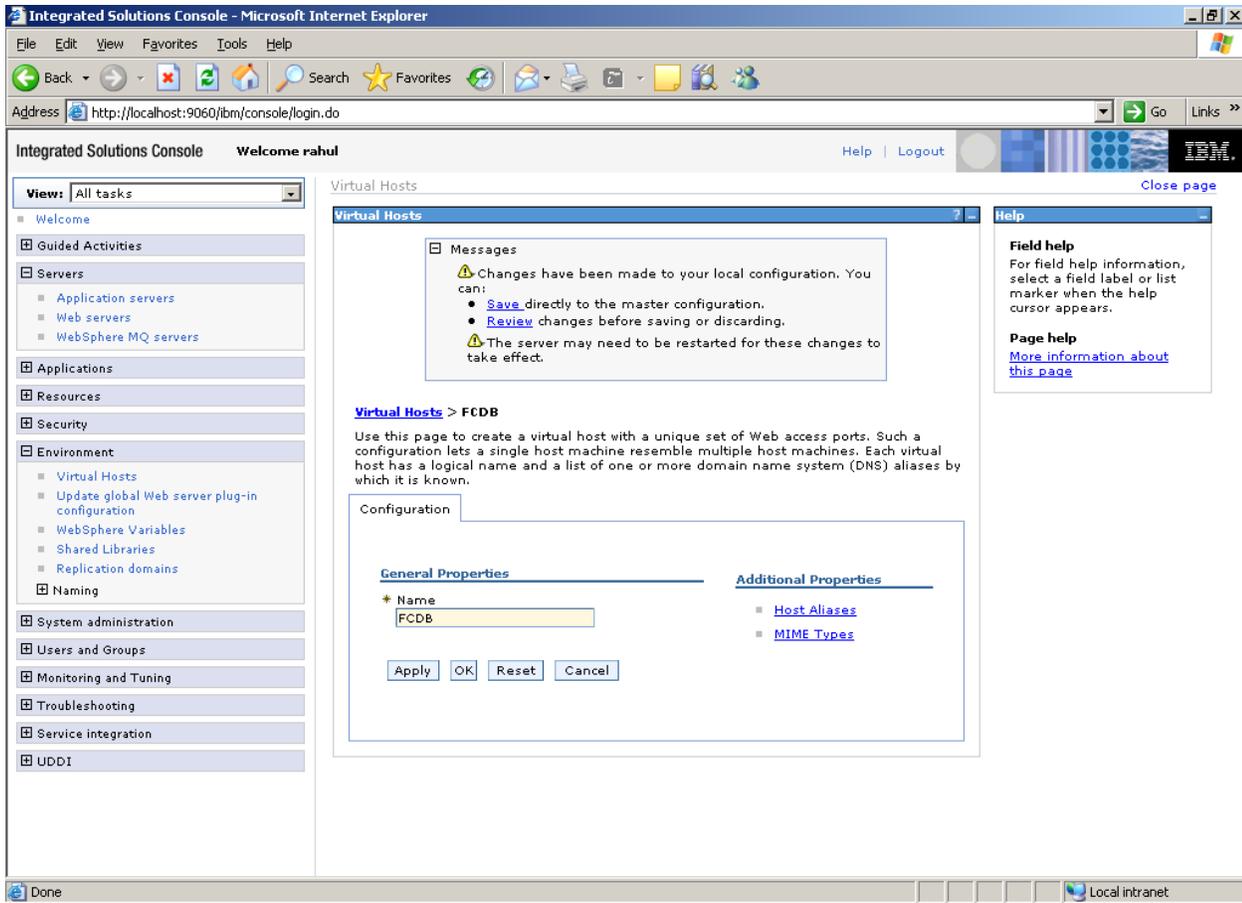


Figure 5.2.3

4) Click “Host Aliases”

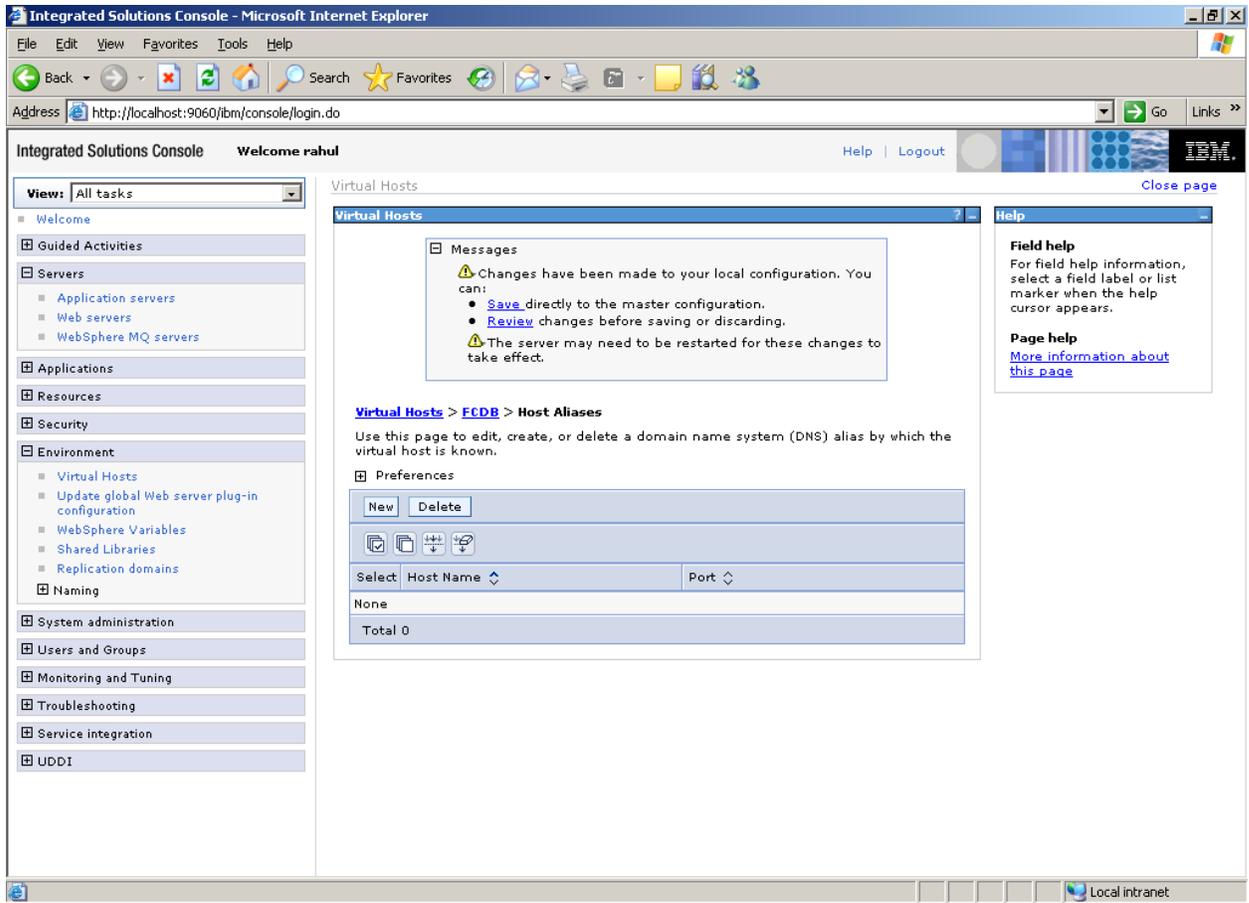


Figure 5.2.5

5) Click "New" button

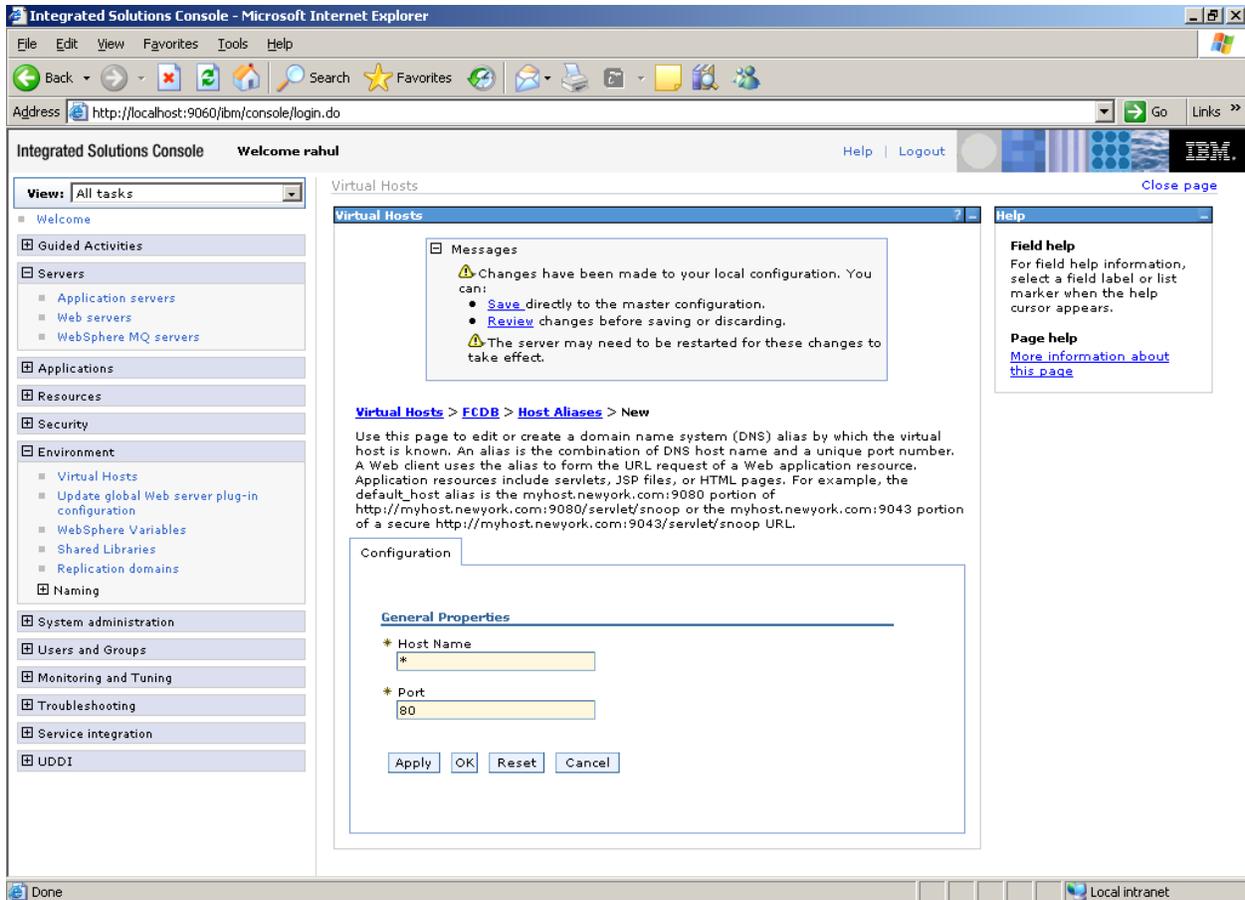


Figure 5.2.6

6) Add following host aliases (noted as default host port earlier)

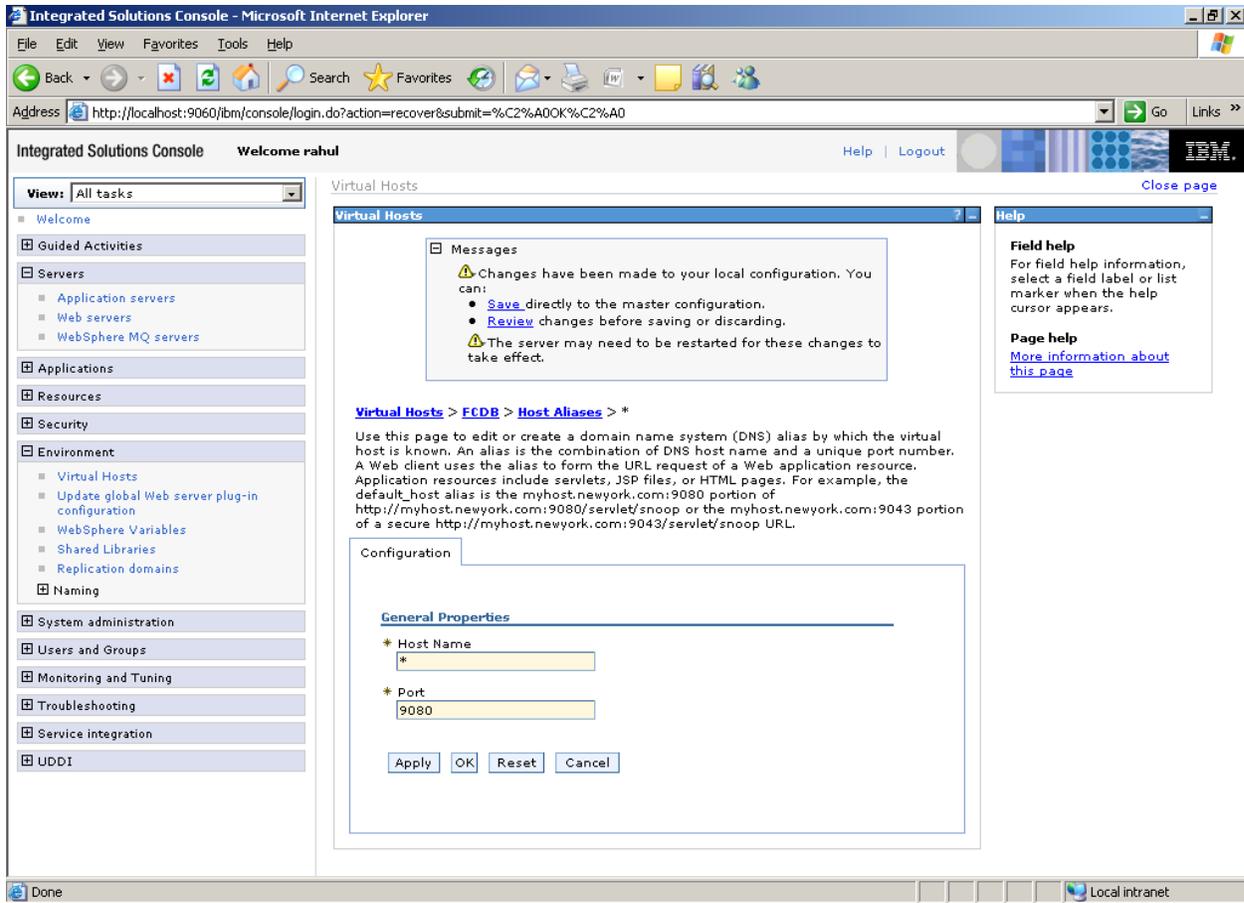


Figure 5.2.7

- 7) Click Apply
- 8) Click Save/OK

6. Deploying Applications

6.1 Web Application Deployment

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

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.
SMS.war	SMS	< FCDB BASE DIR>\deploy	Required for SMS Banking.

Update following property for websphere in MSTPROPERTIES table of FCDB:

ORACLE.UTILS.IMPL.CLASS=com.iflex.fcat.xml_sql.JFWSOracleUtils.

-
- 1) Go to Admin Console. On the left Menu expand option “Applications” and click on the link “New Applications”

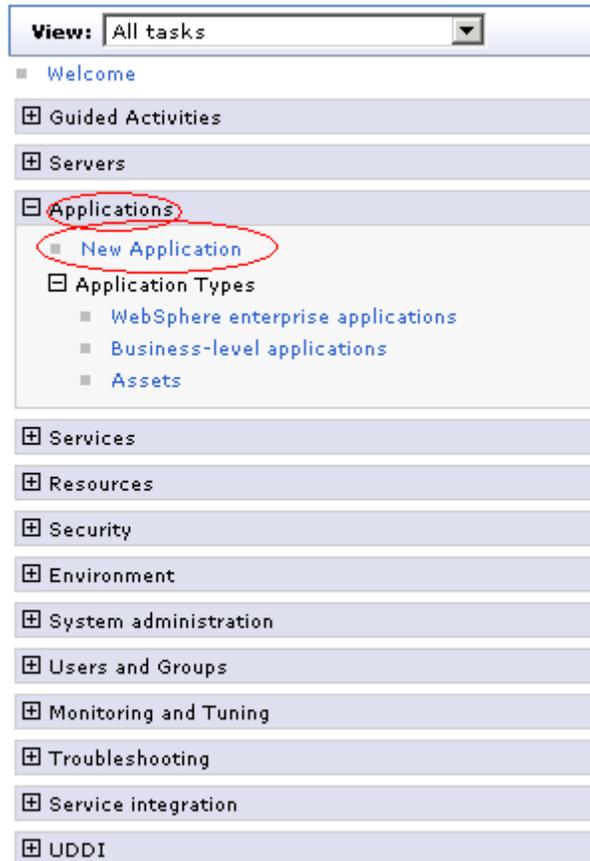
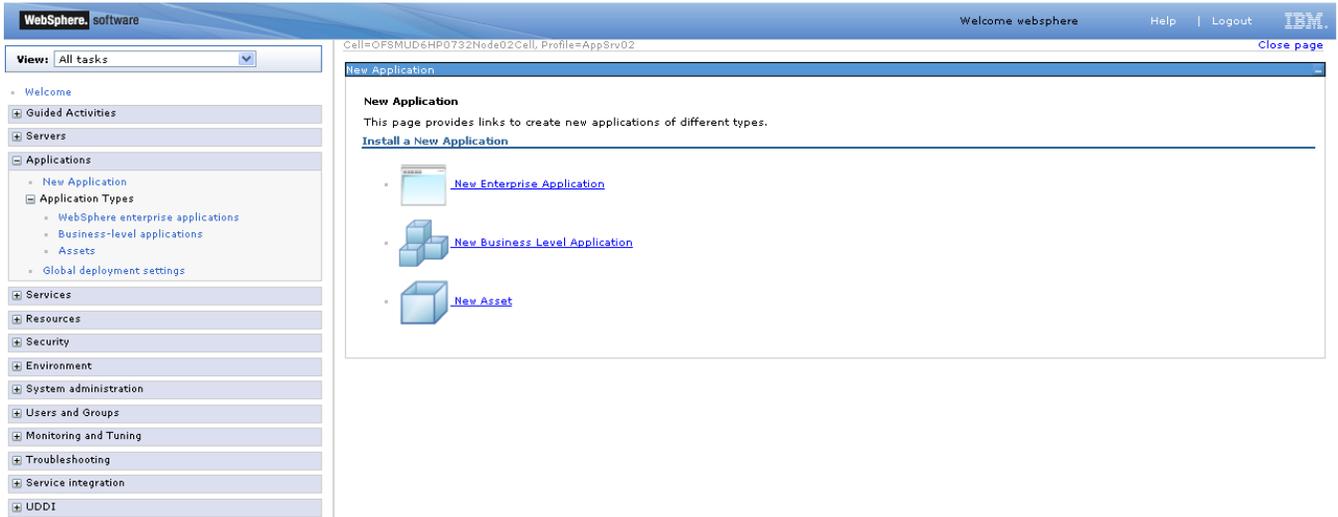


Figure 6.1

2) Screen as shown in below figure will appear. On the screen, click “New Enterprise Application”.



3) Screen as shown in below figure will appear. On the screen, click “Browse” button and browse to the web application deployable.. Click “Next” button.

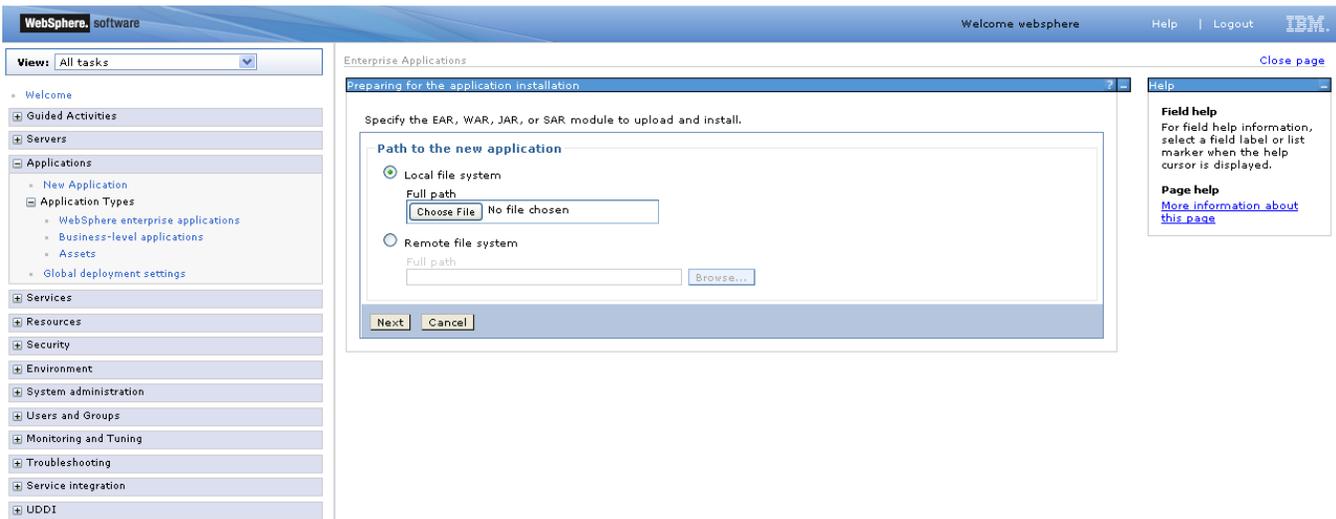
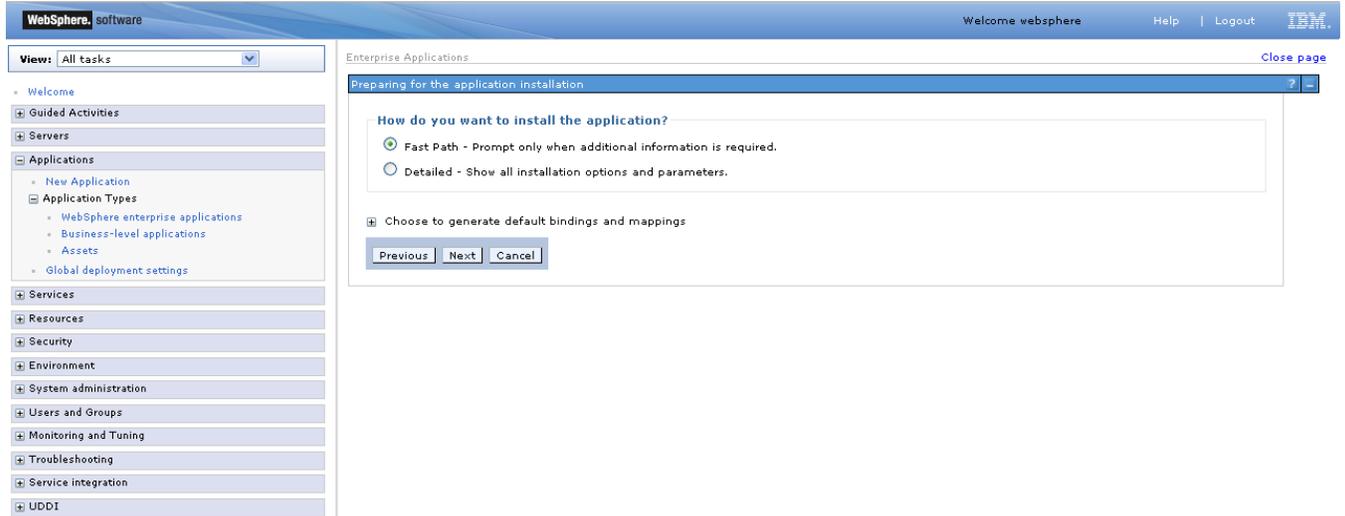


Figure 6.2

- 4) Screen as shown in below figure will appear. On the screen, click on “Fast Path - Prompt only when additional information is required” radio button and click “Next”.



5) On the Screen as shown in figure below, change the application name if required and click “Next”.

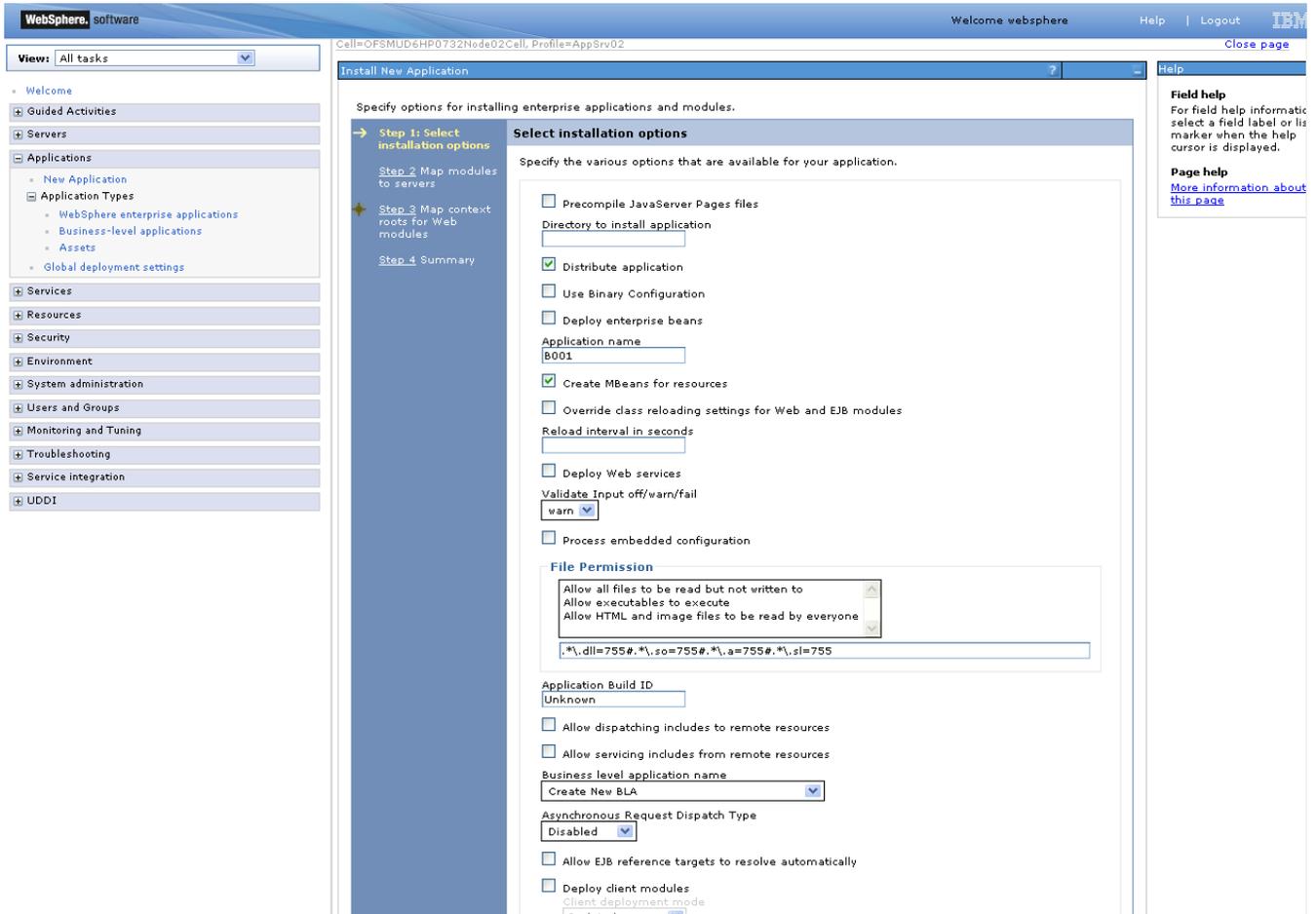
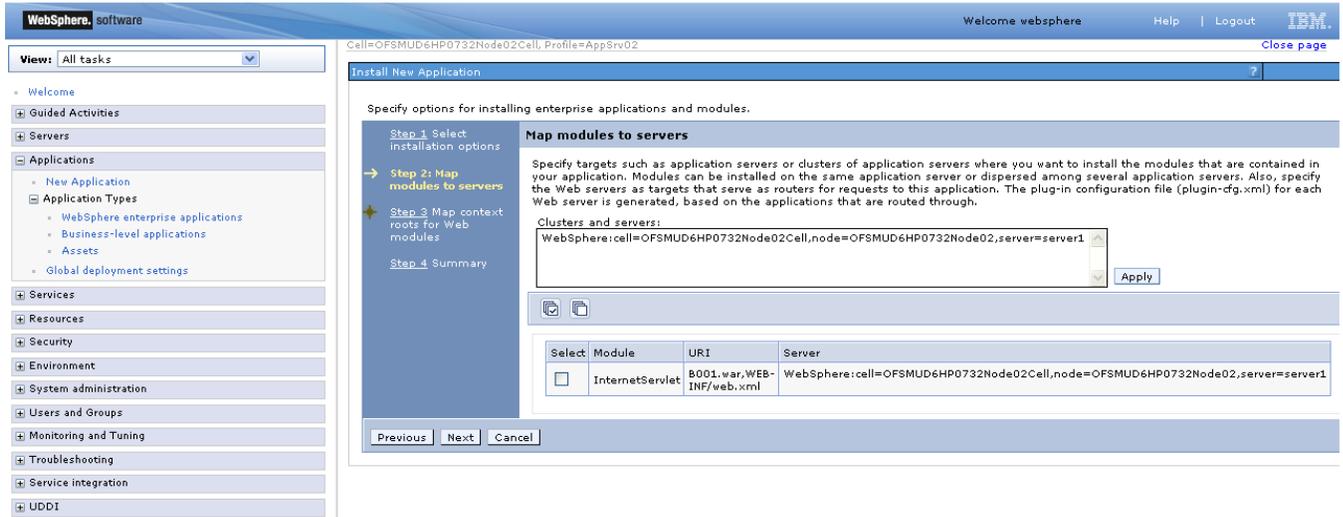
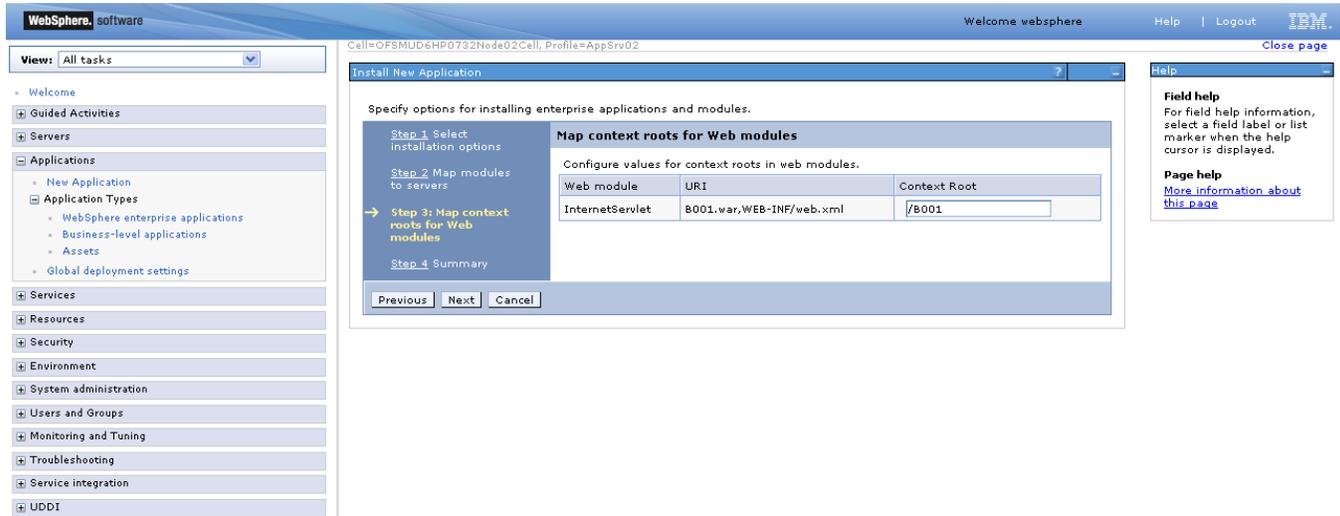


Figure 6.4

6) On the Screen as shown in figure below, Map the web module to expected server. Click “Next”.



7) Enter the context root of the application and click next.



8) Summary page will appear with selected installation options, review the same and click “Finish” to begin with installation of the web application.

WebSphere, software Welcome websphere [Help](#) | [Logout](#) 

Cell=OFSMUD6HP0732Node02Cell, Profile=AppSrv02 [Close page](#)

View: All tasks

- Welcome
- ⊕ Guided Activities
- ⊕ Servers
- ⊖ Applications
 - New Application
 - ⊖ Application Types
 - WebSphere enterprise applications
 - Business-level applications
 - Assets
 - Global deployment settings
- ⊕ Services
- ⊕ Resources
- ⊕ Security
- ⊕ Environment
- ⊕ System administration
- ⊕ Users and Groups
- ⊕ Monitoring and Tuning
- ⊕ Troubleshooting
- ⊕ Service integration
- ⊕ UDDI

Install New Application ?

Specify options for installing enterprise applications and modules.

Step 1 Select installation options

Step 2 Map modules to servers

Step 3 Map context roots for Web modules

→ Step 4: Summary

Summary

Summary of installation options

Options	Values
Precompile JavaServer Pages files	No
Directory to install application	
Distribute application	Yes
Use Binary Configuration	No
Deploy enterprise beans	No
Application name	B001_war
Create MBeans for resources	Yes
Override class reloading settings for Web and EJB modules	No
Reload interval in seconds	
Deploy Web services	No
Validate Input off/warn/fail	warn
Process embedded configuration	No
File Permission	.*\,dll=755#.*\,so=755#.*\,a=755#.*\,s=755
Application Build ID	Unknown
Allow dispatching includes to remote resources	No
Allow servicing includes from remote resources	No
Business level application name	
Asynchronous Request Dispatch Type	Disabled
Allow EJB reference targets to resolve automatically	No
Deploy client modules	No
Client deployment mode	Isolated
Validate schema	No
Cell/Node/Server	Click here

Help

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

Command Assistance
[View administrative scripting command for last action](#)

- 9) Screen as shown in below figure will appear, detailing the status of the installation. On successful installation, click “Save” to complete the deploy application process.

The screenshot displays the IBM WebSphere Administration Console interface. The top navigation bar includes the text "WebSphere, software", "Welcome websphere", "Help", "Logout", and the IBM logo. On the left side, there is a navigation tree with a "View: All tasks" dropdown. The tree includes categories like "Welcome", "Guided Activities", "Servers", "Applications", "Services", "Resources", "Security", "Environment", "System administration", "Users and Groups", "Monitoring and Tuning", "Troubleshooting", "Service integration", and "UDDI". The "Applications" category is expanded, showing sub-items: "New Application", "Application Types", "WebSphere enterprise applications", "Business-level applications", "Assets", and "Global deployment settings".

The main content area is titled "Installing..." and contains the following text:

If there are enterprise beans in the application, the EJB deployment process can take several minutes. Do not save the configuration until the process completes.

Check the SystemOut.log on the deployment manager or server where the application is deployed for specific information about the EJB deployment process as it occurs.

ADMA5016: Installation of B001_war started.

ADMA0159W: Duplicate root context(B001) was found on the same node OFSMUD6HP0732Node02 and same host default_host

ADMA5068: The resource validation for application B001_war completed successfully, but warnings occurred during validation.

ADMA5058: Application and module versions are validated with versions of deployment targets.

ADMA5005: The application B001_war is configured in the WebSphere Application Server repository.

ADMA5005: The application B001_war is configured in the WebSphere Application Server repository.

ADMA5081: The bootstrap address for client module is configured in the WebSphere Application Server repository.

ADMA5053: The library references for the installed optional package are created.

ADMA5005: The application B001_war is configured in the WebSphere Application Server repository.

ADMA5001: The application binaries are saved in C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv02\wstemp\228498399\workspace\cells\OFSMUD6HP0732Node02Cell\applications\B001_war.ear\B001_war.ear

ADMA5005: The application B001_war is configured in the WebSphere Application Server repository.

SECJ0400: Successfully updated the application B001_war with the appContextIDForSecurity information.

ADMA5005: The application B001_war is configured in the WebSphere Application Server repository.

ADMA5005: The application B001_war is configured in the WebSphere Application Server repository.

ADMA5113: Activation plan created successfully.

ADMA5011: The cleanup of the temp directory for application B001_war is complete.

ADMA5013: Application B001_war installed successfully.

Application B001_war installed successfully.

To start the application, first save changes to the master configuration.

Changes have been made to your local configuration. You can:

- [Save](#) directly to the master configuration.
- [Review](#) changes before saving or discarding.

To work with installed applications, click the "Manage Applications" link.

[Manage Applications](#)

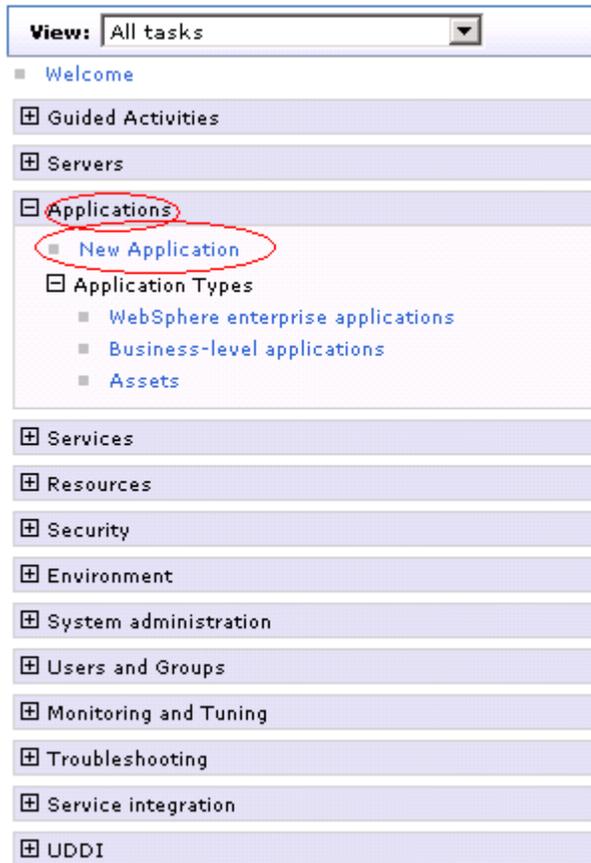
6.2 JAR Application Deployment

Following section explains deploying JAR application on IBM Websphere. For details and different options of deployment refer to documentations provided by IBM Websphere.

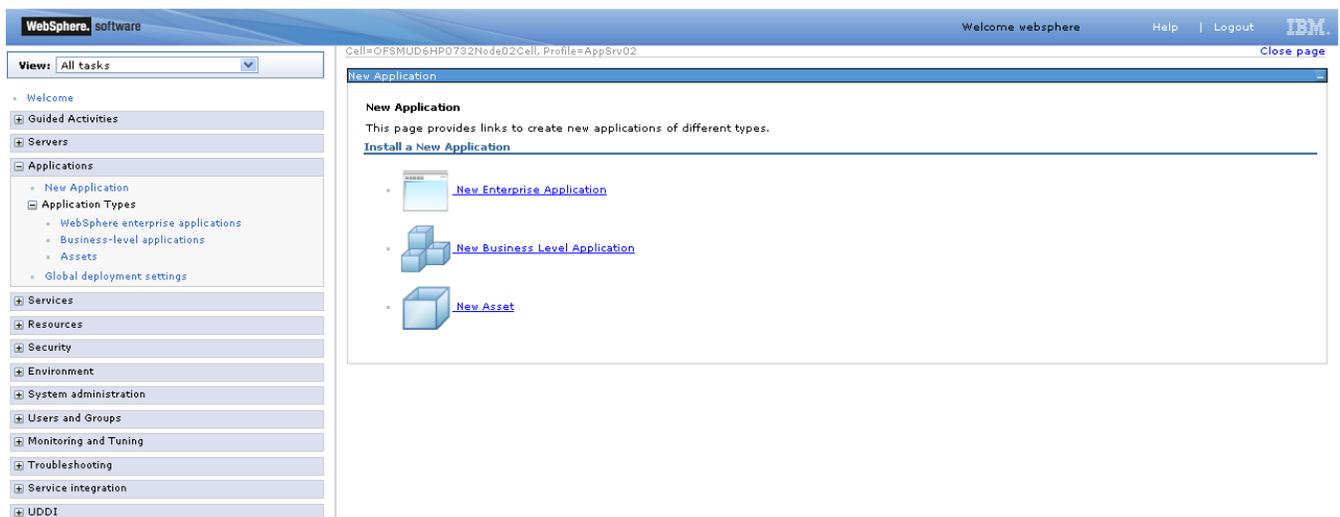
These steps should be carried out for each FCDB jar application mentioned below.

Deployable	JNDI	Path Location	Description
EJBChannleController.jar	EJBChannelController	<FCDB BASE DIR>\deploy	Deployment required. Used as interface to Channel tier.
ServiceEndPointRI.jar	ServiceEndPointEJB	<FCDB BASE DIR>\deploy	This application should be deployed if the mode of service tier invocation is EJB. If webservice mode is required, service.ear needs to be deployed. Please check "Enterprise Application Deployment" section
Service.ear	JNDI: service Context Root: service	<FCDB BASE DIR>\deploy	This application should be deployed if the mode of service tier invocation is webservice.
TransactionBean.jar	TransactionBean	<FCDB BASE DIR>\deploy	Deployment required.
TimerBean.jar	TimerBean	<FCDB BASE DIR>\deploy	Application should be deployed for timer services.

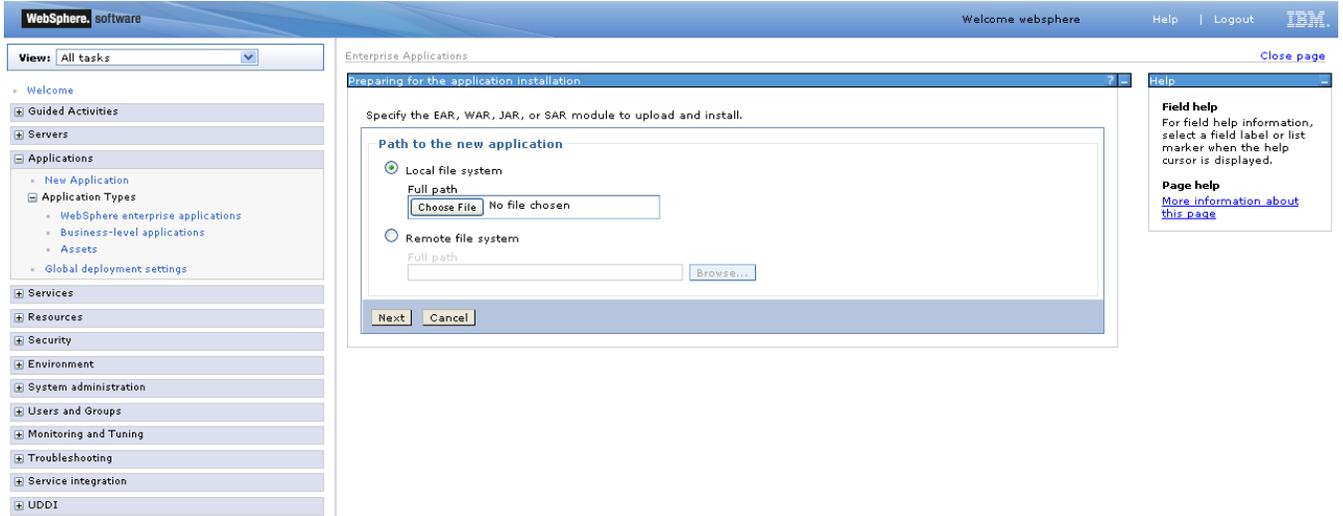
- 1) On Admin console, in the left menu, click on “New Application”.



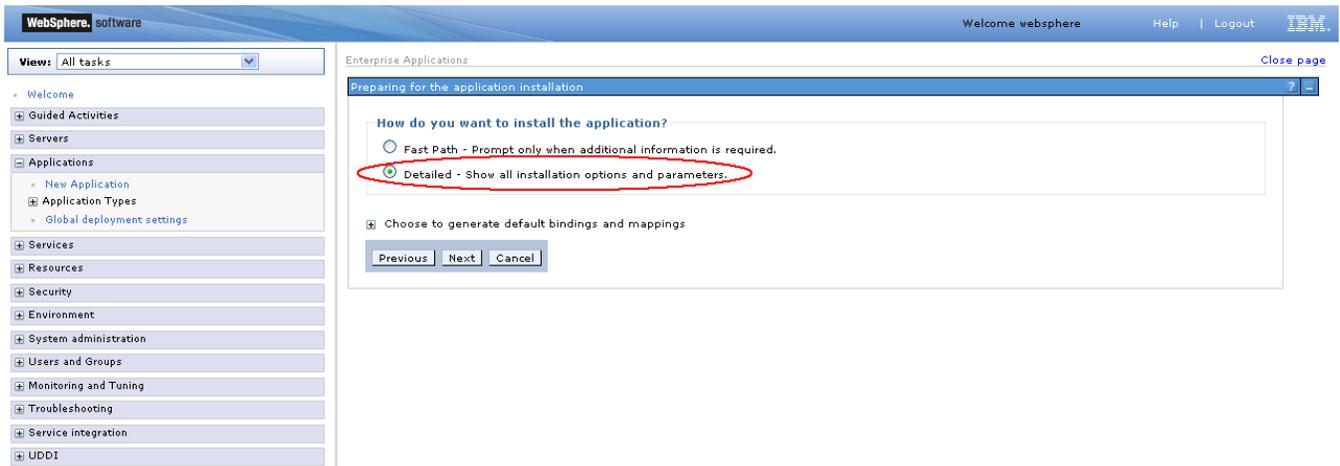
- 2) Screen as shown in below figure will appear. On the screen, click “New Enterprise Application”.



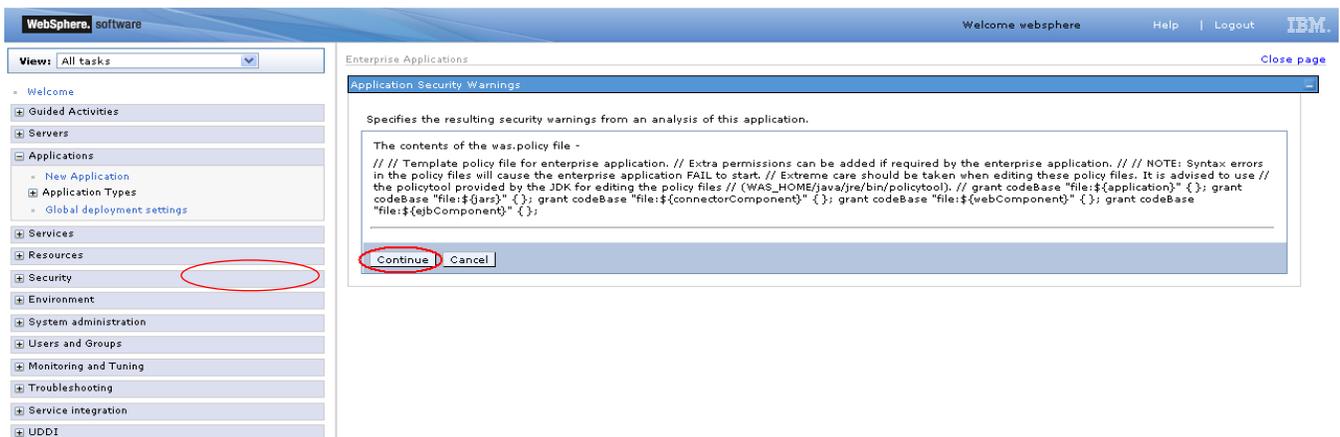
- 3) On the screen as show in figure below, use browse button to select the JAR file. Click on “Next” button.



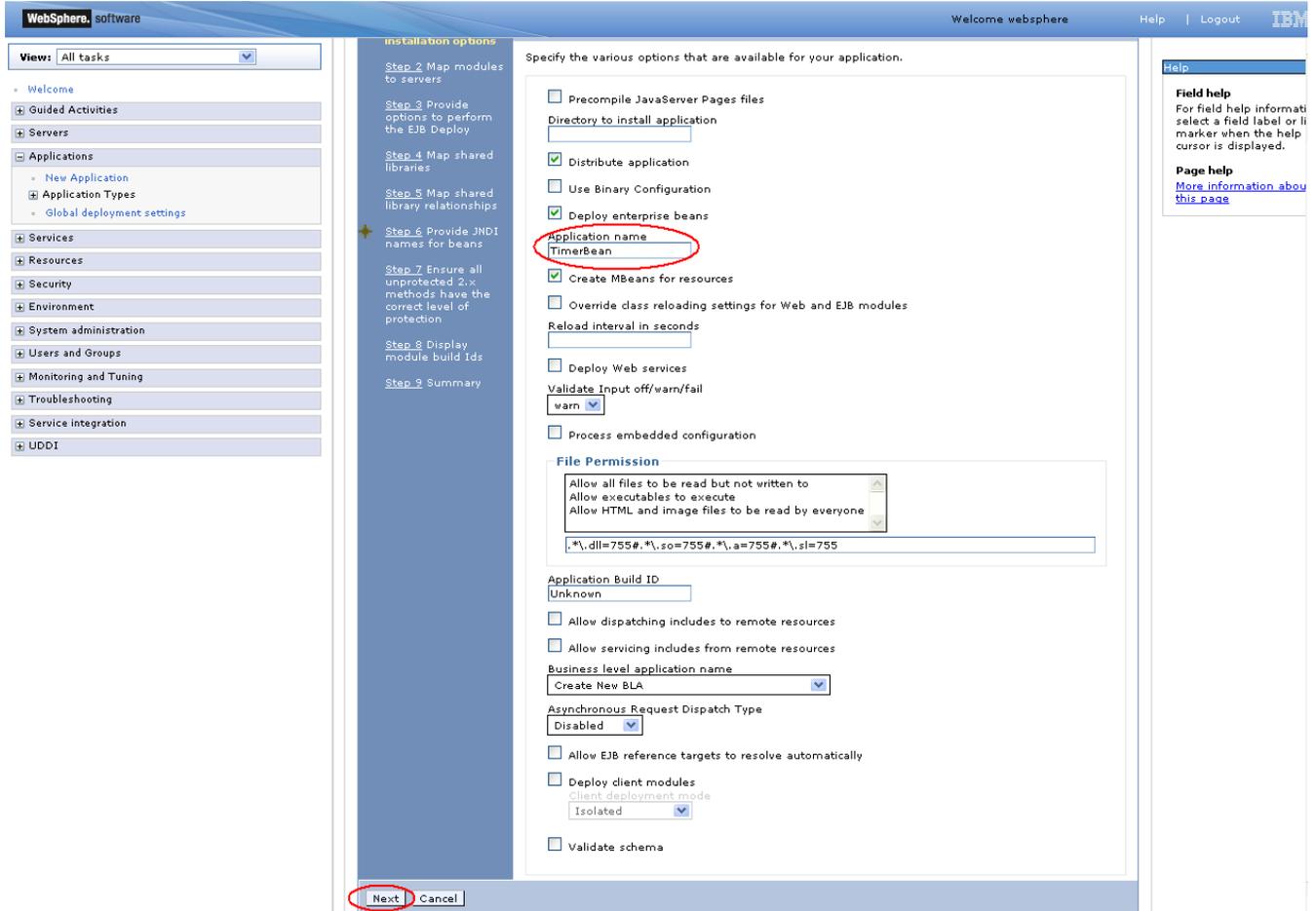
- 4) On the screen as show in figure below,Select the radio option “Show all installation options and parameters”. Click on “Next” button.



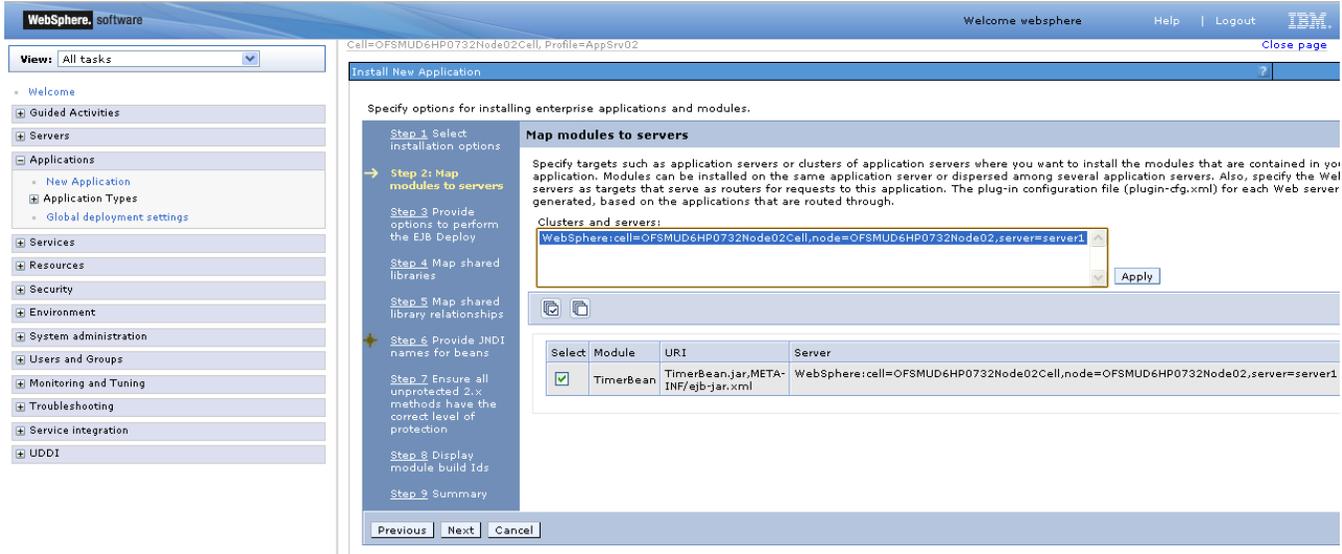
- 5) On the screen as shown below, click “Continue” button.



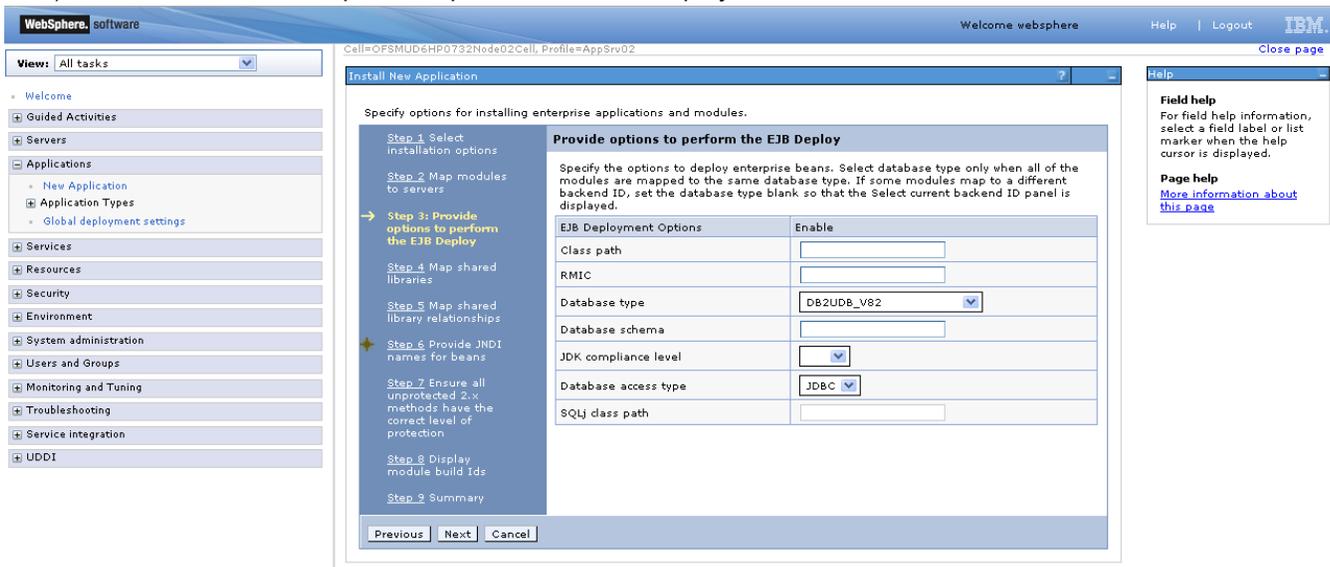
6) On the Screen as shown in below figure, Update the application name if required and click “Next”



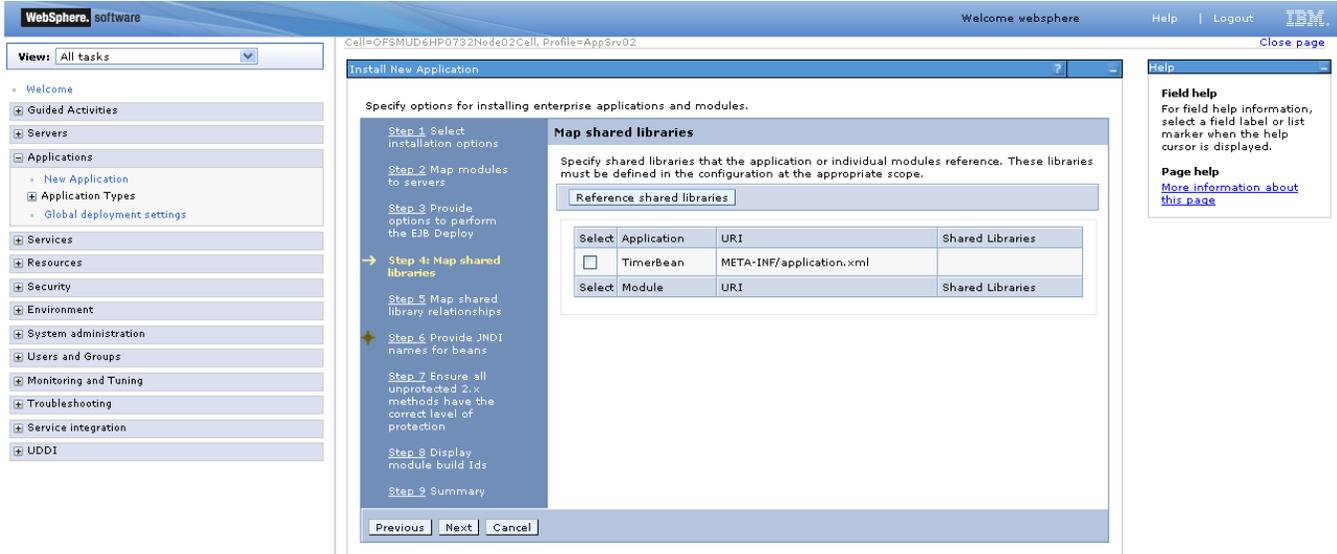
7) In screen “Map modules to server” as shown in figure below, map the JAR module to the applicable server(s) and click “Next”.



8) On Screen “Provide options to perform the EJB Deploy” Click next.



9) On the screen “Map Shared libraries” as shown below, click “Next”



10) On the Screen “Map shared libraries relationships” as shown below, click “Next”.



11) On the Screen “Provide JNDI names” as show below, provide the JNDI name for the application in field “Target Resource JNDI Name”. The JNDI name for each FCDB application is provided.

WebSphere, software Welcome websphere [Help](#) | [Logout](#) 

Cell=OPSMUD6HP0732Node02Cell, Profile=AppSrv02 [Close page](#)

View: All tasks

- Welcome
- ▣ Guided Activities
- ▣ Servers
- ▣ Applications
 - New Application
 - ▣ Application Types
 - Global deployment settings
- ▣ Services
- ▣ Resources
- ▣ Security
- ▣ Environment
- ▣ System administration
- ▣ Users and Groups
- ▣ Monitoring and Tuning
- ▣ Troubleshooting
- ▣ Service Integration
- ▣ UDDI

Install New Application ?

Specify options for installing enterprise applications and modules.

Step 1 Select installation options

Step 2 Map modules to servers

Step 3 Provide options to perform the EJB Deploy

Step 4 Map shared libraries

Step 5 Map shared library relationships

→ **Step 6: Provide JNDI names for beans**

Step 7 Ensure all unprotected 2.x methods have the correct level of protection

Step 8 Display module build Ids

Step 9 Summary

Provide JNDI names for beans

Each non-message-driven enterprise bean in your application or module must be bound to a Java Naming and Directory Interface (JNDI) name. For beans in a pre-EJB 3.0 module, you have to use JNDI name for the bean to provide the binding. For beans in a EJB 3.0 module, you can optionally provide binding through JNDI name for the bean or local/remote home JNDI names. If JNDI name for the bean is specified, you cannot specify binding for its local/remote home and any business interface. If no JNDI name is specified for beans in a EJB 3.0 module, runtime will provide a container default.

Module	Bean	URI	Target Resource JNDI Name
TimerBean	TimerBean	TimerBean.jar,META-INF/ejb-jar.xml	Target Resource JNDI Name

Previous Next Cancel

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

12) On the screen as show below, click “Next”.

WebSphere, software | Welcome websphere | Help | Logout | IBM | Close page

Cell=OFSMUD6HP0732Node02Cell, Profile=AppSrv02

View: All tasks

- Welcome
- Guided Activities
- Servers
- Applications
 - New Application
 - Application Types
 - Global deployment settings
- Services
- Resources
- Security
- Environment
- System administration
- Users and Groups
- Monitoring and Tuning
- Troubleshooting
- Service integration
- UDDI

Install New Application

Specify options for installing enterprise applications and modules.

Step 1 Select installation options
Step 2 Map modules to servers
Step 3 Provide options to perform the EJB Deploy
Step 4 Map shared libraries
Step 5 Map shared library relationships
Step 6 Provide JNDI names for beans
→ **Step 7: Ensure all unprotected 2.x methods have the correct level of protection**
Step 8 Display module build Ids
Step 9 Summary

Ensure all unprotected 2.x methods have the correct level of protection

Specify whether you want to assign a security role to the unprotected method, add the method to the exclude list, or mark the method as cleared.

Uncheck
 Exclude
 Role:

Select	Module	URI	Protection type
<input type="checkbox"/>	TimerBean	TimerBean.jar,META-INF/ejb-jar.xml	methodProtection.uncheck

Previous Next Cancel

Help

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

13) On the screen as show below, click “Next”.

WebSphere, software | Welcome websphere | Help | Logout | IBM | Close page

Cell=OFSMUD6HP0732Node02Cell, Profile=AppSrv02

View: All tasks

- Welcome
- Guided Activities
- Servers
- Applications
 - New Application
 - Application Types
 - Global deployment settings
- Services
- Resources
- Security
- Environment
- System administration
- Users and Groups
- Monitoring and Tuning
- Troubleshooting
- Service integration
- UDDI

Install New Application

Specify options for installing enterprise applications and modules.

Step 1 Select installation options
Step 2 Map modules to servers
Step 3 Provide options to perform the EJB Deploy
Step 4 Map shared libraries
Step 5 Map shared library relationships
Step 6 Provide JNDI names for beans
Step 7 Ensure all unprotected 2.x methods have the correct level of protection
→ **Step 8: Display module build Ids**
Step 9 Summary

Display module build Ids

Display module build IDs.

Module	URI	Build ID
TimerBean	TimerBean.jar,META-INF/ejb-jar.xml	

Previous Next Cancel

Help

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

14) On the “Summary” page, summary of selected installation options will be displayed. Verify the same and click “Next” to begin with application installation.

The screenshot shows the 'Install New Application' wizard in the IBM WebSphere Administration Console. The main content area is titled 'Specify options for installing enterprise applications and modules.' and contains a 'Summary' section with a table of installation options.

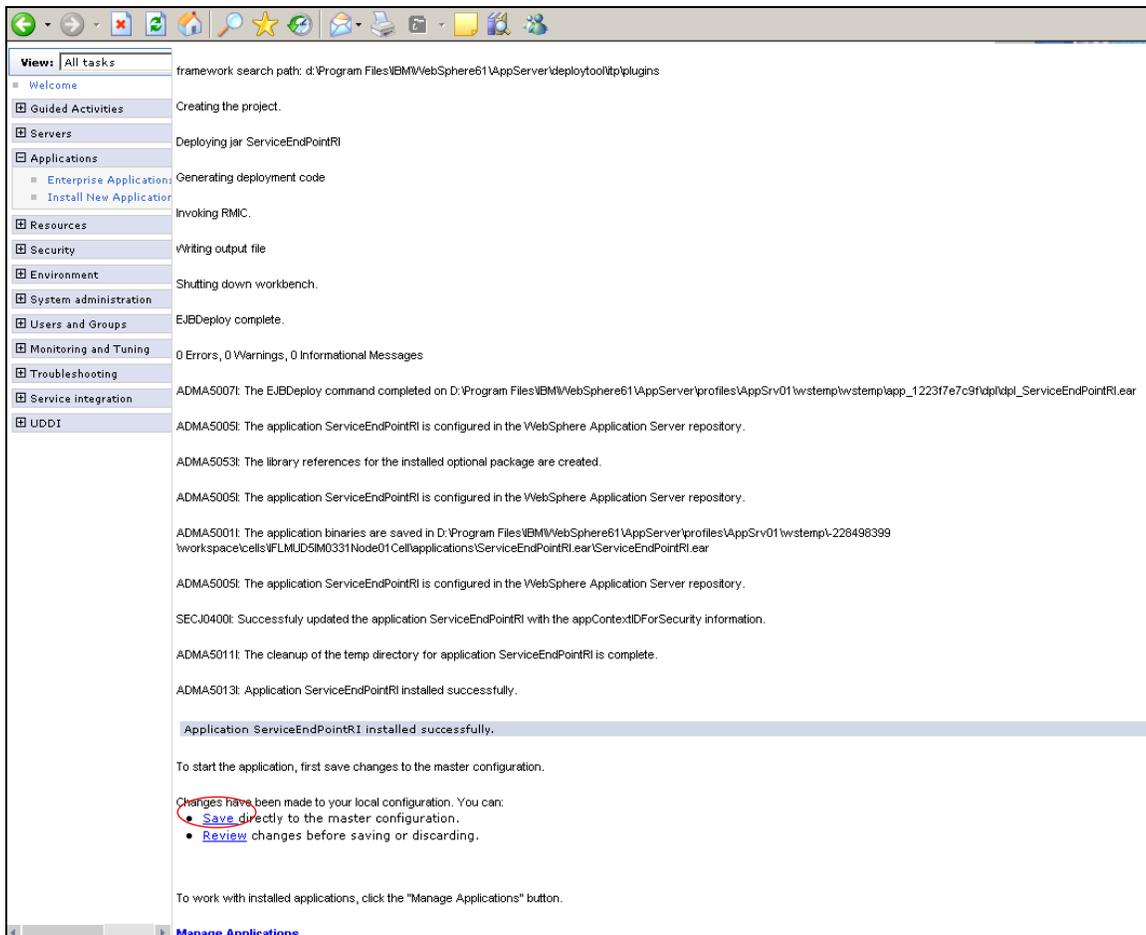
Summary

Summary of installation options

Options	Values
Precompile JavaServer Pages files	No
Directory to install application	
Distribute application	Yes
Use Binary Configuration	No
Deploy enterprise beans	Yes
Application name	TimerBean
Create MBeans for resources	Yes
Override class reloading settings for Web and EJB modules	No
Reload interval in seconds	
Deploy Web services	No
Validate Input off/warn/fail	warn
Process embedded configuration	No
File Permission	.*\,dl=755#.*\,so=755#.*\,a=755#.*\,sl=755
Application Build ID	Unknown
Allow dispatching includes to remote resources	No
Allow servicing includes from remote resources	No
Business level application name	
Asynchronous Request Dispatch Type	Disabled
Allow EJB reference targets to resolve automatically	No
Deploy client modules	No
Client deployment mode	Isolated
Validate schema	No
Cell/Node/Server	Click here
Class path	
RMIC	
Database type	DB2UDB_V82
Database schema	
JDK compliance level	
Database access type	JD&C

At the bottom of the summary table, there are buttons for 'Previous', 'Finish', and 'Cancel'.

- 15) The next screen displays application installation status. On successful installation, click the link “Save” to save the installation.



6.3 Enterprise Application Deployment

Following section explains deploying EAR application on IBM Websphere. For details and different options of deployment refer to documentations provided by IBM Websphere.

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

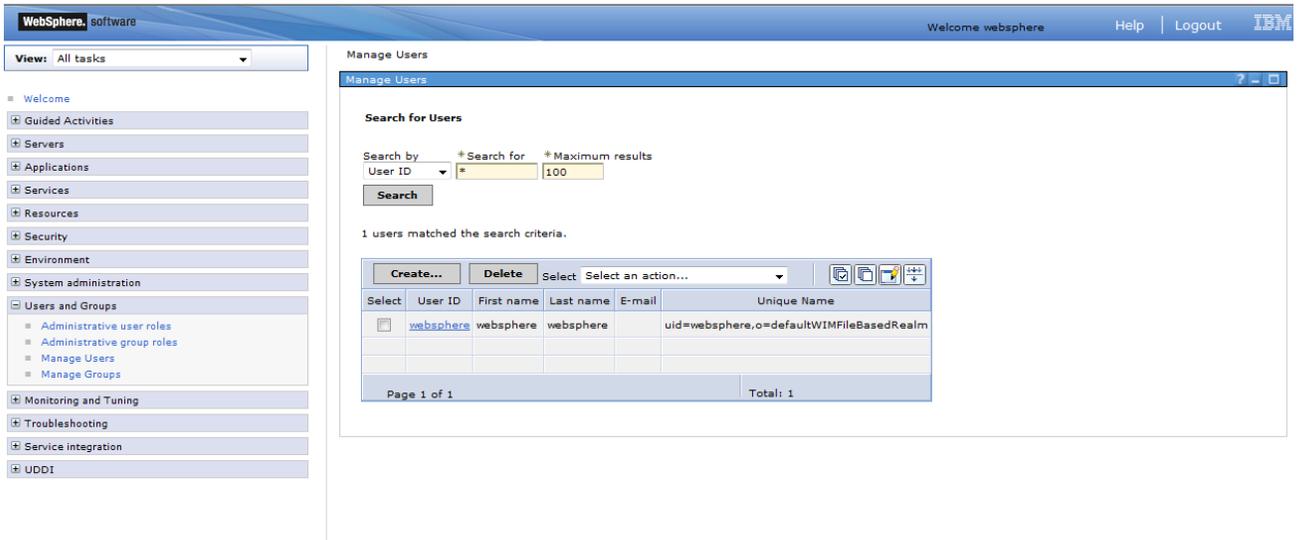
Deployable	JNDI Name/Root	Path Location	Description
Service.ear	JNDI: service Context Root: service	<FCDB BASE DIR>\deploy\ websphere	This application should be deployed if the mode of service tier invocation is webservice. If EJB mode is required, ServiceEndPointRI.jar needs to be deployed.

Before deploying services.ear, the below steps needs to be followed to create a user for enabling webservice authentication –

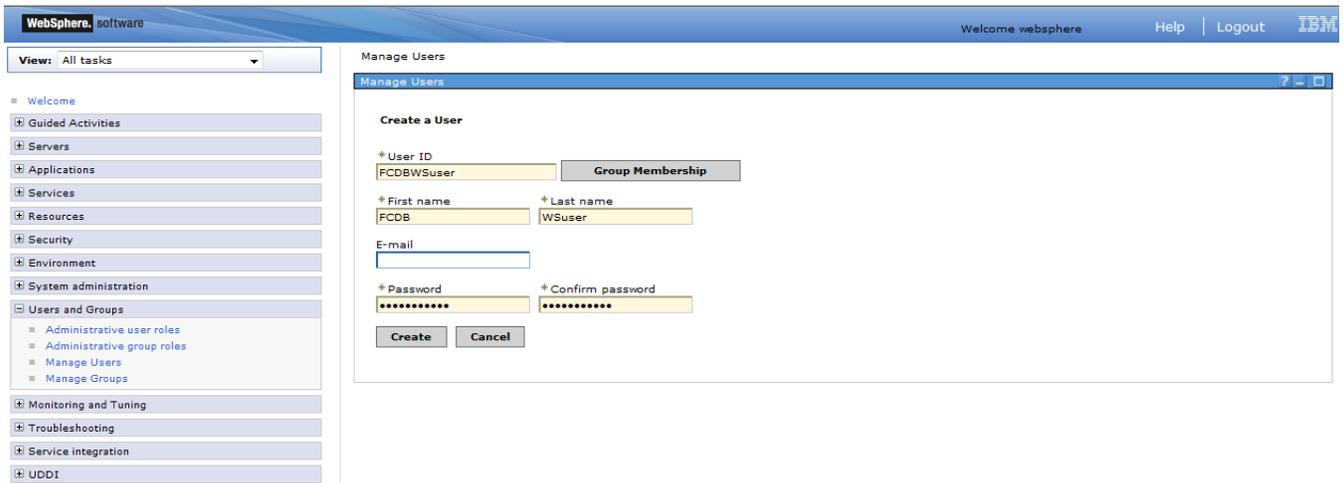
1. On Admin console, in the left menu, click on “Manage Users”.



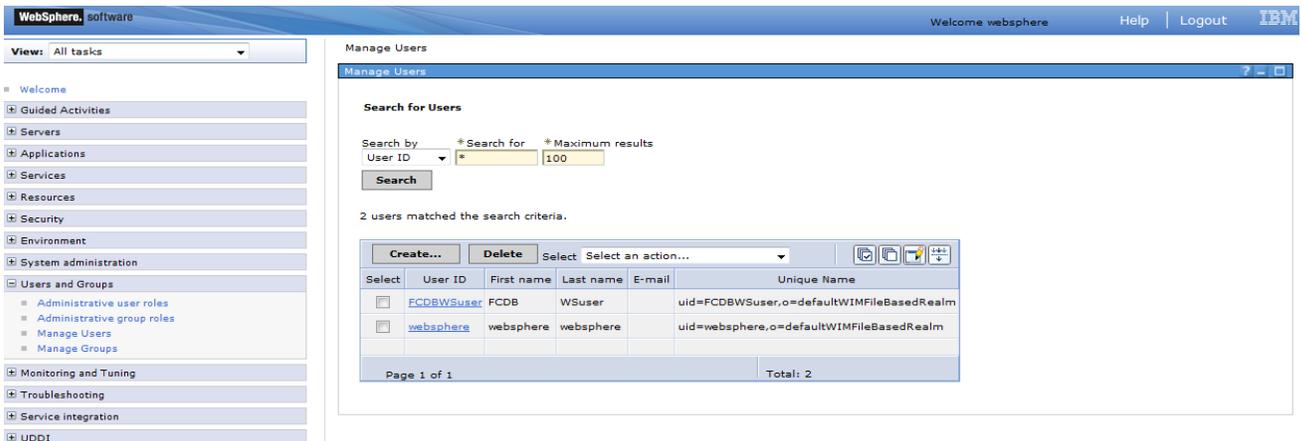
2. Screen as shown in below figure will appear. On the screen, click “Create”.



3. On the screen as show in figure below, enter the user details (e.g. FCDBWSuser). Click on “Create” button



4. User is created successfully in the current security realm.

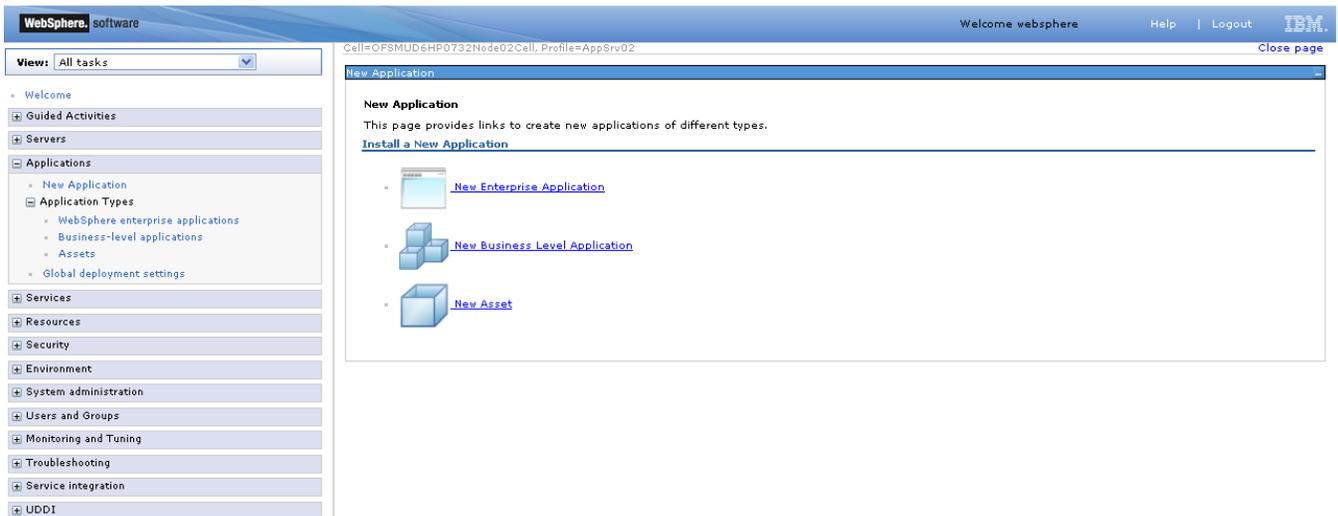


These steps needs to be followed for deploying service.ear-

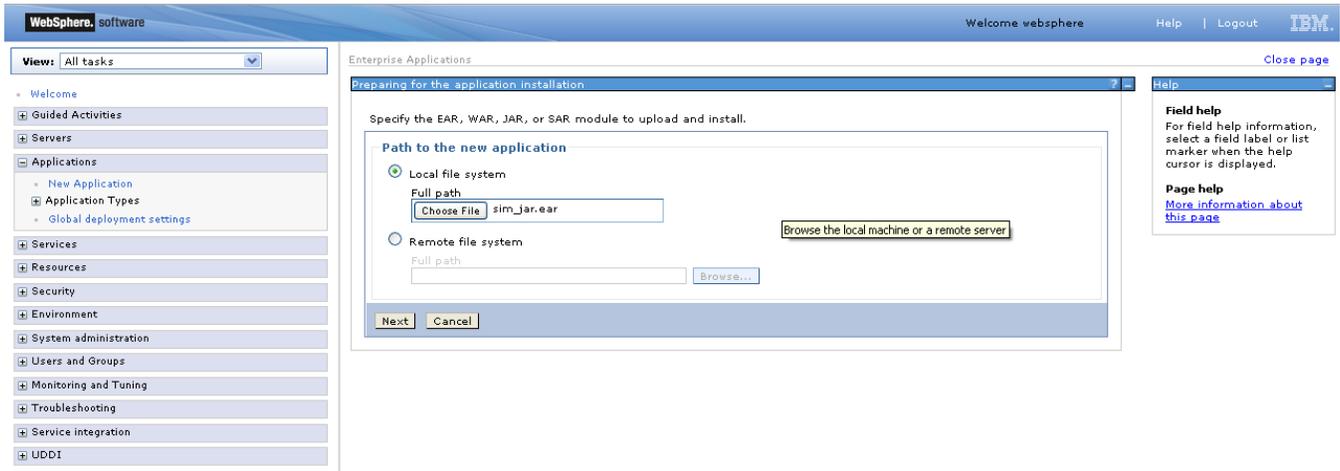
On Admin console, in the left menu, click on “New Application”.



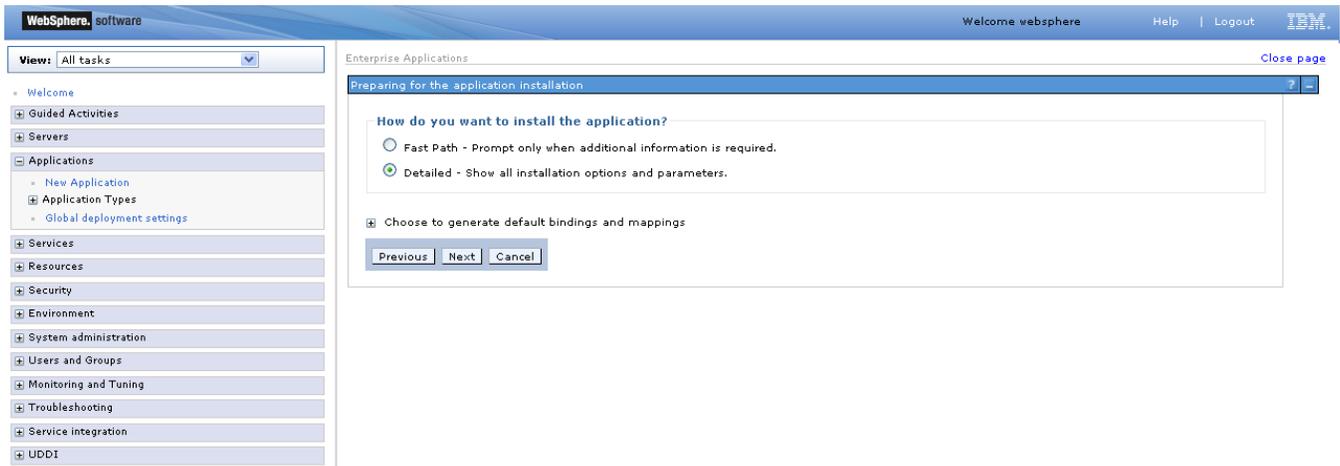
1) Screen as shown in below figure will appear. On the screen, click “New Enterprise Application”.



2) On the screen as show in figure below, use browse button to select the EAR file. Click on “Next” button.



3) On the screen as show in figure below, select the radio option “Show all installation options and parameters”. Click on “Next” button.



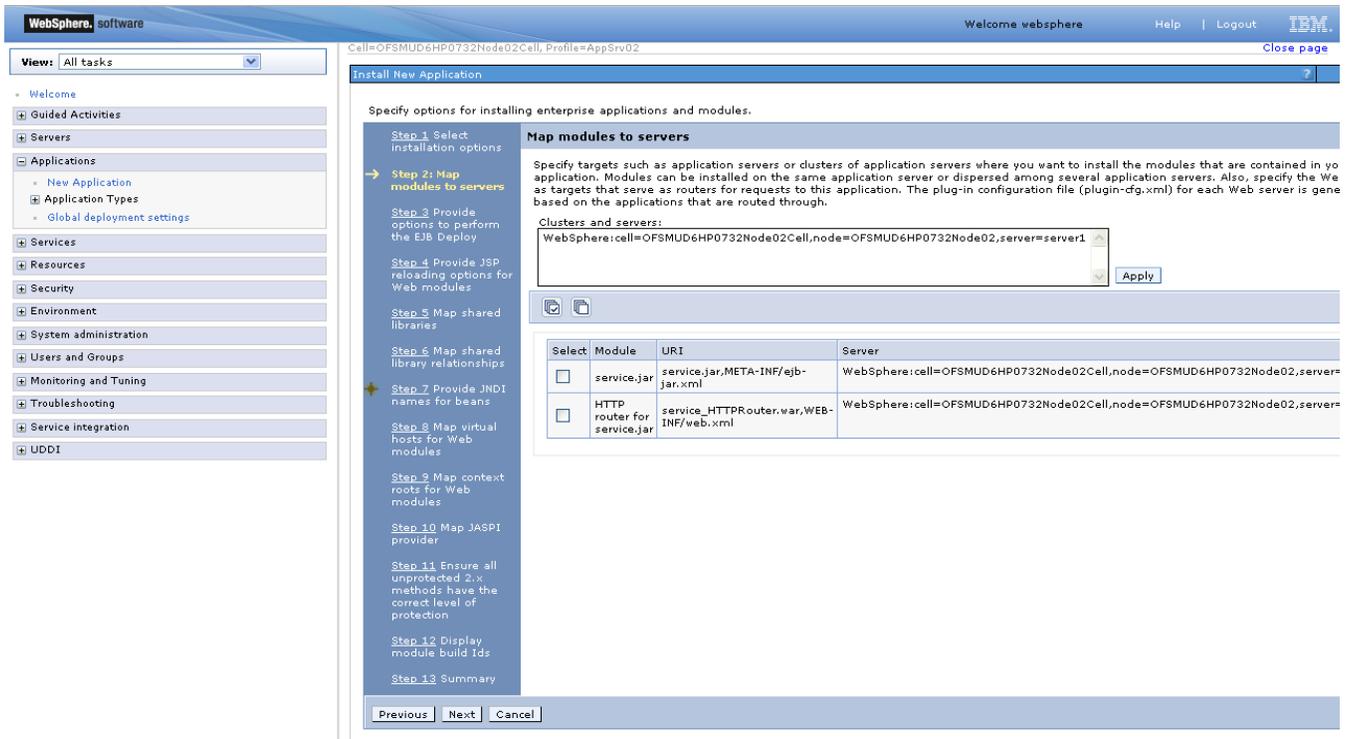
4) On the screen as shown below, click “Continue” button.



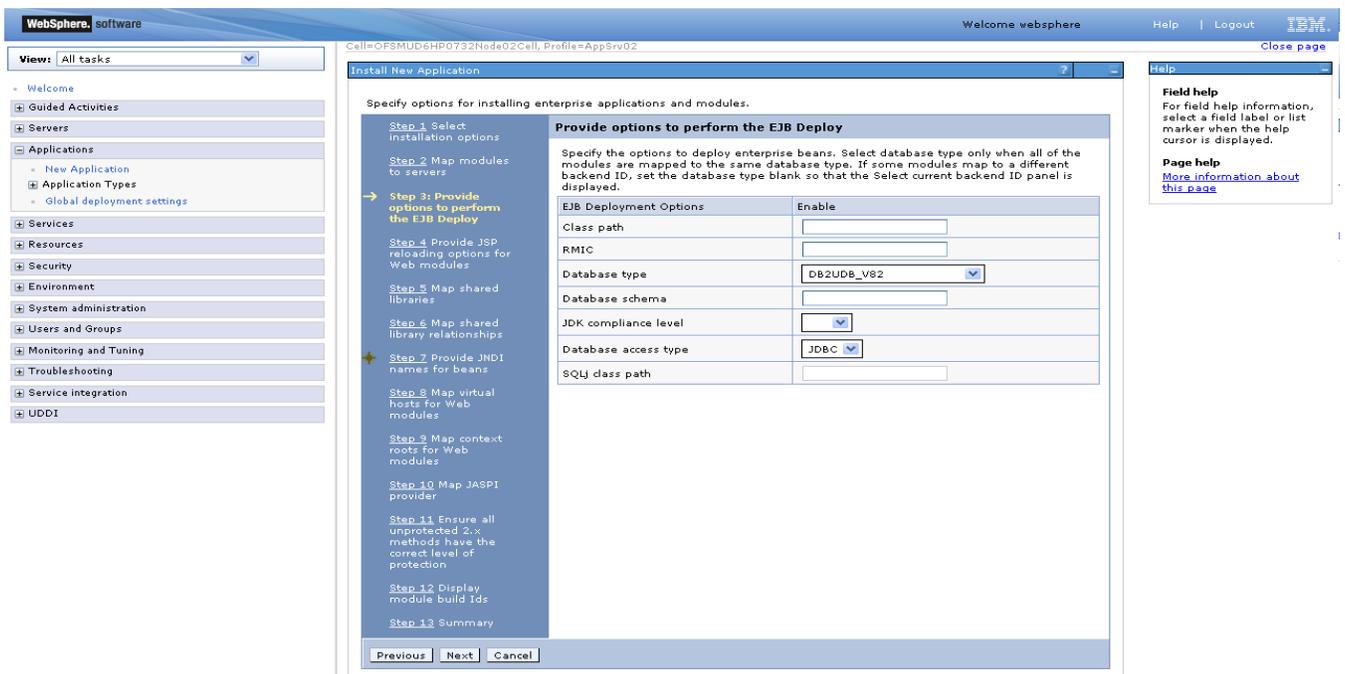
5) On the Screen as shown in below figure, Update the application name if required and click “Next”

The screenshot displays the IBM WebSphere installation wizard interface. The top navigation bar includes 'WebSphere, software', 'Welcome websphere', and 'Help | Logout'. On the left, a 'View:' dropdown is set to 'All tasks', and a sidebar lists various management tasks such as 'Welcome', 'Guided Activities', 'Servers', 'Applications', 'Services', 'Resources', 'Security', 'Environment', 'System administration', 'Users and Groups', 'Monitoring and Tuning', 'Troubleshooting', 'Service integration', and 'UDDI'. The main content area is titled 'Specify the various options that are available for your application.' and contains several configuration sections: 'Precompile JavaServer Pages files', 'Directory to install application', 'Distribute application' (checked), 'Use Binary Configuration', 'Deploy enterprise beans' (checked), 'Application name' (text field containing 'service.ear', circled in red), 'Create MBeans for resources' (checked), 'Override class reloading settings for Web and EJB modules', 'Reload interval in seconds', 'Deploy Web services', 'Validate Input off/warn/fail' (dropdown set to 'warn'), 'Process embedded configuration', 'File Permission' (text area with permissions), 'Application Build ID' (text field containing 'Unknown'), 'Allow dispatching includes to remote resources', 'Allow servicing includes from remote resources', 'Business level application name' (dropdown set to 'Create New BLA'), 'Asynchronous Request Dispatch Type' (dropdown set to 'Disabled'), 'Allow EJB reference targets to resolve automatically', 'Deploy client modules' (dropdown set to 'Isolated'), and 'Validate schema'. At the bottom, the 'Next' button is circled in red, along with a 'Cancel' button. A 'Help' sidebar on the right provides 'Field help' and 'Page help' links.

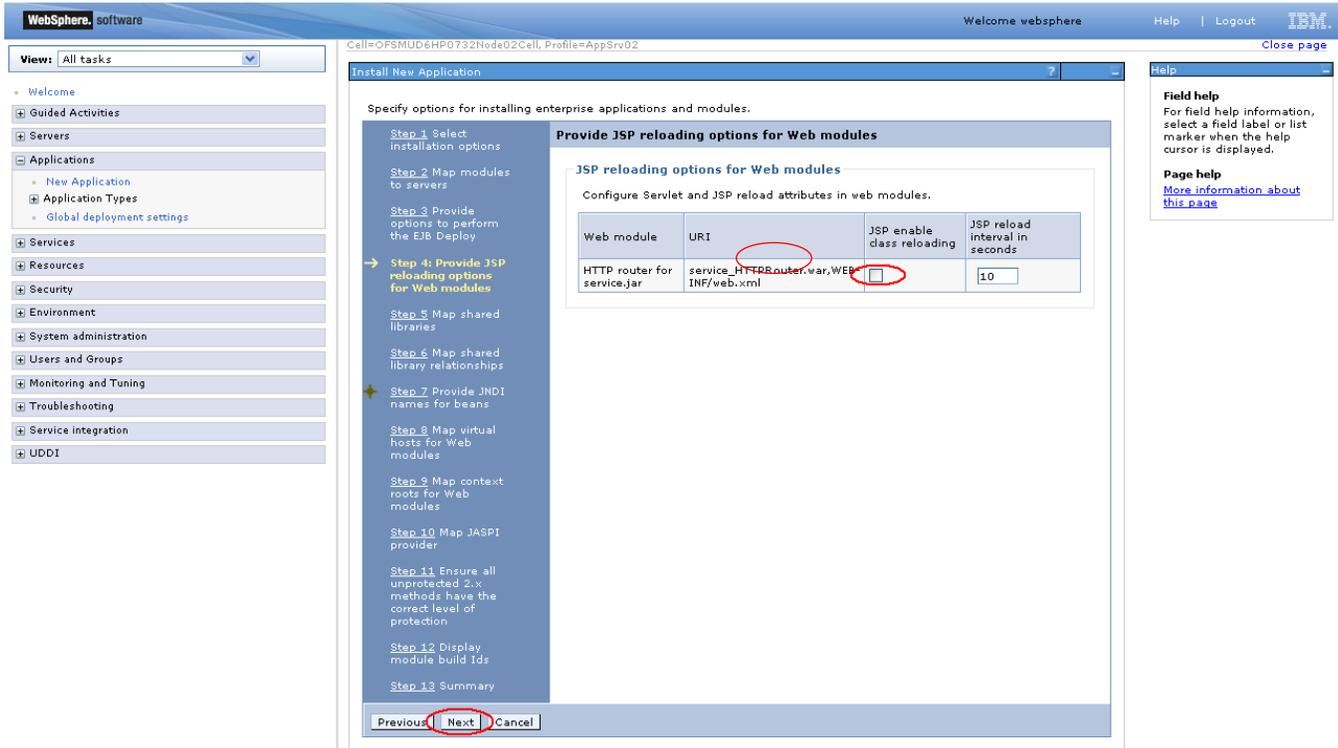
- 6) In screen “Map modules to server” as shown in figure below, map the modules to the applicable server(s) and click “Next”.



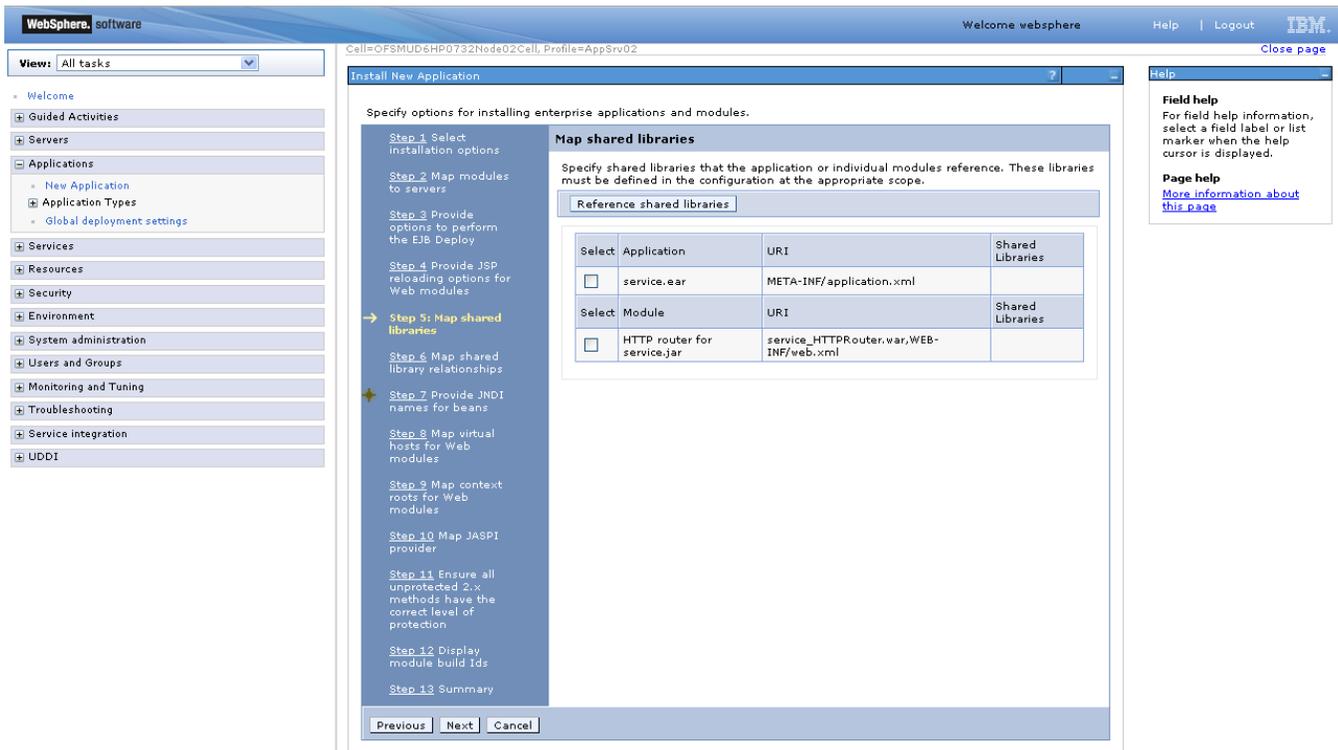
- 7) On screen “Provide options” as shown in figure below, add the FCDB Kernel jar to the classpath. Add <FCDB BASE DIR>/system/build/kernel/FCDB_<version>.jar to the class path field and click “Next”.



8) Disable JSP Class reloading for all web modules and click “Next”



9) On the screen “Map Shared libraries” as shown below, click “Next”



10) On “Map shared library relationships” click next.

WebSphere, software | Welcome websphere | Help | Logout | IBM | Cell=OFSMUD6HP0732Node02Cell, Profile=AppSrv02 | Close page

View: All tasks

- Welcome
- Guided Activities
- Servers
- Applications
 - New Application
 - Application Types
 - Global deployment settings
- Services
- Resources
- Security
- Environment
- System administration
- Users and Groups
- Monitoring and Tuning
- Troubleshooting
- Service integration
- UDDI

Install New Application

Specify options for installing enterprise applications and modules.

Step 1 Select installation options

Step 2 Map modules to servers

Step 3 Provide options to perform the EJB Deploy

Step 4 Provide JSP reloading options for Web modules

Step 5 Map shared libraries

→ Step 6: Map shared library relationships

★ Step 7 Provide JNDI names for beans

Step 8 Map virtual hosts for Web modules

Step 9 Map context roots for Web modules

Step 10 Map JASPI provider

Step 11 Ensure all unprotected 2.x methods have the correct level of protection

Step 12 Display module build Ids

Step 13 Summary

Previous Next Cancel

Map shared library relationships

Specify asset or composition unit IDs as shared libraries that the application or individual modules reference. If a composition unit ID is specified, it must be part of the business level application that this enterprise application belongs to. If an asset ID is specified, a composition unit is created from the asset. When editing an application, only composition unit IDs can be specified as shared libraries.

Reference shared libraries

Select	Application	URI	Asset or composition unit IDs	Match target
<input type="checkbox"/>	service.ear	META-INF/application.xml		<input checked="" type="checkbox"/>
Select	Module	URI	Asset or composition unit IDs	Match target
<input type="checkbox"/>	HTTP router for service.jar	service_HTTPRouter.war,WEB-INF/web.xml		<input checked="" type="checkbox"/>

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

11) On the Screen “Provide JNDI names” as show below, provide the JNDI name for the application in field “Target Resource JNDI Name”. The JNDI name for each FCDB application has been provided at the start of this section.

WebSphere, software | Welcome websphere | Help | Logout | IBM | Close page

Cell=OFSMUD6HP0732Node02Cell, Profile=AppSrv02

Install New Application

Specify options for installing enterprise applications and modules.

Step 7: Provide JNDI names for beans

Each non-message-driven enterprise bean in your application or module must be bound to a Java Naming and Directory Interface (JNDI) name. For beans in a pre-EJB 3.0 module, you have to use JNDI name for the bean to provide the binding. For beans in an EJB 3.0 module, you can optionally provide binding through JNDI name for the bean or local/remote home JNDI names. If JNDI name for the bean is specified, you cannot specify binding for its local/remote home and any business interface. If no JNDI name is specified for beans in an EJB 3.0 module, runtime will provide a container default.

Module	Bean	URI	Target Resource JNDI Name
service.jar	ServiceEndPointRemoteSoapBindingImpl	service.jar,META-INF/ejb-jar.xml	service

Previous Next Cancel

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

12) On the screen “Map Virtual host”, map web modules to the relevant virtual host & click Next.

WebSphere, software | Welcome websphere | Help | Logout | IBM | Close page

Cell=OFSMUD6HP0732Node02Cell, Profile=AppSrv02

Install New Application

Specify options for installing enterprise applications and modules.

Step 8: Map virtual hosts for Web modules

Specify the virtual host for the Web modules that are contained in your application. You can install Web modules on the same virtual host or disperse them among several hosts.

Apply Multiple Mappings

Select	Web module	Virtual host
<input type="checkbox"/>	HTTP router for service.jar	default_host

Previous Next Cancel

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

- 13) On screen “Map Context roots”, map the web modules with respective context root. The context root has been configured in the deployable and the default context root being displayed can be used. If no context root is displayed, use the context root as mentioned for the application at the start of this section.

The screenshot shows the IBM WebSphere Administration Console interface. The main window is titled "Install New Application" and displays a wizard with 13 steps. Step 9, "Map context roots for Web modules", is the active step. The wizard is titled "Specify options for installing enterprise applications and modules." and includes a sub-section "Map context roots for Web modules" with the instruction "Configure values for context roots in web modules." Below this instruction is a table with three columns: "Web module", "URI", and "Context Root".

Web module	URI	Context Root
HTTP router for service.jar	service_HTTPRouter.war,WEB-INF/web.xml	/service

At the bottom of the wizard, there are buttons for "Previous", "Next", and "Cancel". On the right side of the console, there is a "Help" panel with "Field help" and "Page help" sections.

- 14) On screen “Map security roles to users or groups”, map the role “FCDBWSRole” and map it with the user created before deploying the ear.

Specify options for installing enterprise applications and modules.

Step 10: Map security roles to users or groups

Each role that is defined in the application or module must map to a user or group from the domain user registry. accessIds: The accessIds are required only when using cross realm communication in a multi domain scenario. For all other scenarios the accessId will be determined during the application start based on the user or group name. The accessIds represent the user and group information that is used for Java Platform, Enterprise Edition authorization when using the WebSphere default authorization engine. The format for the accessIds is user:realm/uniqueUserID, group:realm/uniqueGroupID. Entering wrong information in these fields will cause authorization to fail. AllAuthenticatedInTrustedRealms: This indicates that any valid user in the trusted realms be given the access. AllAuthenticated: This indicates that any valid user in the current realm be given the access.

Map Users... Map Groups... Map Special Subjects

Select	Role	Special subjects	Mapped users	Mapped groups
<input type="checkbox"/>	FCDBWSRole	None		

Previous Next Cancel

15) On the screen as show below, click “Ok”.

Cell=OF5MUD61M1D303Node01Cell, Profile=AppSrv03

New Application

Map users/groups

Use this page to search for users or groups and add them to the selected roles.

- FCDBWSRole

Search and Select Users

Decide how many results to display, enter a search string (use * for wildcard), and click Search. Select users in the Available list and add them to the Selected list.

Display a maximum of results

Search string

Search

Available:

Selected:

OK Cancel

16) On the screen as show below, click “Next”.

View: All tasks

- Welcome
- Guided Activities
- Servers
- Applications
 - New Application
 - Application Types
 - WebSphere enterprise applications
 - Business-level applications
 - Assets
 - Global deployment settings
- Services
- Resources
- Security
- Environment
- System administration
- Users and Groups
 - Administrative user roles
 - Administrative group roles
 - Manage Users
 - Manage Groups
- Monitoring and Tuning
- Troubleshooting
- Service integration
- UDDI

Specify options for installing enterprise applications and modules.

Step 1 Select installation options

Step 2 Map modules to servers

Step 3 Provide options to perform the EJB Deploy

Step 4 Provide JSP reloading options for Web modules

Step 5 Map shared libraries

Step 6 Map shared library relationships

Step 7 Provide JNDI names for beans

Step 8 Map virtual hosts for Web modules

Step 9 Map context roots for Web modules

→ **Step 10: Map security roles to users or groups**

Step 11 Map JASPI provider

Step 12 Ensure all unprotected 2.x methods have the correct level of protection

Step 13 Display module build Ids

Step 14 Summary

Map security roles to users or groups

Each role that is defined in the application or module must map to a user or group from the domain user registry, accessIds: The accessIds are required only when using cross realm communication in a multi domain scenario. For all other scenarios the accessId will be determined during the application start based on the user or group name. The accessIds represent the user and group information that is used for Java Platform, Enterprise Edition authorization when using the WebSphere default authorization engine. The format for the accessids is user:realm/uniqueUserID, group:realm/uniqueGroupID. Entering wrong information in these fields will cause authorization to fail. AllAuthenticatedInTrustedRealms: This indicates that any valid user in the trusted realms be given the access. AllAuthenticated: This indicates that any valid user in the current realm be given the access.

Map Users...
Map Groups...
Map Special Subjects ▼

Select	Role	Special subjects	Mapped users	Mapped groups
<input type="checkbox"/>	FCDBWSRole	None	FCDBWSuser	

Help

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

17) On the screen as show below, click “Next”.

WebSphere, software

View: All tasks

- Welcome
- Guided Activities
- Servers
- Applications
 - New Application
 - Application Types
 - Global deployment settings
- Services
- Resources
- Security
- Environment
- System administration
- Users and Groups
- Monitoring and Tuning
- Troubleshooting
- Service integration
- UDDI

Cell=OFSMUD6HP0732Node02Cell, Profile=AppSrv02

Install New Application

Specify options for installing enterprise applications and modules.

Step 1 Select installation options

Step 2 Map modules to servers

Step 3 Provide options to perform the EJB Deploy

Step 4 Provide JSP reloading options for Web modules

Step 5 Map shared libraries

Step 6 Map shared library relationships

Step 7 Provide JNDI names for beans

Step 8 Map virtual hosts for Web modules

Step 9 Map context roots for Web modules

→ **Step 10: Map JASPI provider**

Step 11 Ensure all unprotected 2.x methods have the correct level of protection

Step 12 Display module build Ids

Step 13 Summary

Map JASPI provider

JASPI providers offer an alternative to JAAS pluggable authentication for web modules. By default, an application inherits the JASPI settings defined in the WebSphere Application Server global or domain security configuration and web modules inherit the application setting. However, you can override these defaults by using wsadmin or the administrative console.

Select JASPI provider ▼

Select	Application	URI	JASPI provider name
<input type="checkbox"/>	service.ear	META-INF/application.xml	Inherit JASPI provider
Select	Module	URI	JASPI provider name
<input type="checkbox"/>	HTTP router for service.jar	service_HTTPRouter.war,WEB-INF/web.xml	Inherit JASPI provider

Help

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

18) On the screen as show below, select the role and associate it with the module by clicking on “Apply”. Now click on “Next”

View: All tasks

- Welcome
- Guided Activities
- Servers
- Applications
 - New Application
 - Application Types
 - WebSphere enterprise applications
 - Business-level applications
 - Assets
 - Global deployment settings
- Services
- Resources
- Security
- Environment
- System administration
- Users and Groups
 - Administrative user roles
 - Administrative group roles
 - Manage Users
 - Manage Groups
- Monitoring and Tuning
- Troubleshooting
- Service integration
- UDDI

Specify options for installing enterprise applications and modules.

Step 1 Select installation options

Step 2 Map modules to servers

Step 3 Provide options to perform the EJB Deploy

Step 4 Provide JSP reloading options for Web modules

Step 5 Map shared libraries

Step 6 Map shared library relationships

Step 7 Provide JNDI names for beans

Step 8 Map virtual hosts for Web modules

Step 9 Map context roots for Web modules

Step 10 Map security roles to users or groups

Step 11 Map JASPI provider

→ **Step 12: Ensure all unprotected 2.x methods have the correct level of protection**

Step 13 Display module build IDs

Step 14 Summary

Ensure all unprotected 2.x methods have the correct level of protection

Specify whether you want to assign a security role to the unprotected method, add the method to the exclude list, or mark the method as cleared.

Uncheck
 Exclude
 Role: FCDBWSRole

Select	Module	URI	Protection type
<input checked="" type="checkbox"/>	service.jar	service.jar,META-INF/ejb-jar.xml	FCDBWSRole

Help

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

Previous
Next
Cancel

19) On the screen as show below, click “Next”.

View: All tasks

- Welcome
- Guided Activities
- Servers
- Applications
 - New Application
 - Application Types
 - Global deployment settings
- Services
- Resources
- Security
- Environment
- System administration
- Users and Groups
- Monitoring and Tuning
- Troubleshooting
- Service integration
- UDDI

Cell=OFSMUD6HP0732Node02Cell, Profile=AppSrv02

Install New Application

Specify options for installing enterprise applications and modules.

Step 1 Select installation options

Step 2 Map modules to servers

Step 3 Provide options to perform the EJB Deploy

Step 4 Provide JSP reloading options for Web modules

Step 5 Map shared libraries

Step 6 Map shared library relationships

Step 7 Provide JNDI names for beans

Step 8 Map virtual hosts for Web modules

Step 9 Map context roots for Web modules

Step 10 Map JASPI provider

Step 11 Ensure all unprotected 2.x methods have the correct level of protection

→ **Step 12: Display module build IDs**

Step 13 Summary

Display module build IDs

Display module build IDs.

Module	URI	Build ID
service.jar	service.jar,META-INF/ejb-jar.xml	
HTTP router for service.jar	service_HTTPRouter.war,WEB-INF/web.xml	

Help

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

Previous
Next
Cancel

20) On the “Summary” page, summary of selected installation options will be displayed. Verify the same and click “Next” to begin with application installation.

WebSphere, software Welcome websphere [Help](#) | [Logout](#) 

Cell=OFSMUD6HP0732Node02Cell, Profile=AppSrvv02 [Close page](#)

View: All tasks

- Home
- Guided Activities
- Servers
- Applications
 - New Application
 - Application Types
 - Global deployment settings
- Services
- Resources
- Security
- Environment
- System administration
- Users and Groups
- Monitoring and Tuning
- Troubleshooting
- Service integration
- UDDI

Install New Application

Specify options for installing enterprise applications and modules.

Step 1 Select installation options

Step 2 Map modules to servers

Step 3 Provide options to perform the EJB Deploy

Step 4 Provide JSP reloading options for Web modules

Step 5 Map shared libraries

Step 6 Map shared library relationships

Step 7 Provide JNDI names for beans

Step 8 Map virtual hosts for Web modules

Step 9 Map context roots for Web modules

Step 10 Map JASPI provider

Step 11 Ensure all unprotected `<*>` methods have the correct level of protection

Step 12 Display module build ids

→ **Step 13: Summary**

Summary

Summary of installation options

Options	Values
Precompile JavaServer Pages files	No
Directory to install application	
Distribute application	Yes
Use Binary Configuration	No
Deploy enterprise beans	Yes
Application name	service.ear
Create MBeans for resources	Yes
Override class reloading settings for Web and EJB modules	No
Reload interval in seconds	
Deploy Web services	No
Validate Input off/warn/fail	warn
Process embedded configuration	No
File Permission	.*\,dll=755#.*\,so=755#.*\,a=755#.*\,sl=755
Application Build ID	Unknown
Allow dispatching includes to remote resources	No
Allow servicing includes from remote resources	No
Business level application name	
Asynchronous Request Dispatch Type	Disabled
Allow EJB reference targets to resolve automatically	No
Deploy client modules	No
Client deployment mode	Isolated
Validate schema	No
Cell/Node/Server	Click here
Class path	
RMIC	
Database type	DB2UDB_V82
Database schema	
JDK compliance level	
Database access type	JDBC

[Previous](#) [Finish](#) [Cancel](#)

Help

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

Command Assistance
[View administrative scripting command for last action](#)

21) The next screen displays application installation status. On successful installation, click the link “Save” to save the installation.

The screenshot shows the 'View: All tasks' window. The left pane lists various tasks such as 'Welcome', 'Guided Activities', 'Servers', 'Applications', 'Resources', 'Security', 'Environment', 'System administration', 'Users and Groups', 'Monitoring and Tuning', 'Troubleshooting', 'Service integration', and 'UDDI'. The right pane displays a log of messages, including:

- framework search path: d:\Program Files\IBM\WebSphere61\AppServer\deploytool\tp\plugins
- Creating the project.
- Deploying jar service_EJB
- Generating deployment code
- Invoking RMIC.
- Writing output file
- Shutting down workbench.
- EJBDeploy complete.
- 0 Errors, 0 Warnings, 0 Informational Messages
- ADMA5007I: The EJBDeploy command completed on D:\Program Files\IBM\WebSphere61\AppServer\profiles\AppSrv01\wstemp\wstemp\app_122419e3f25\tp\l\apl_service_ear.ear
- ADMA5005I: The application service.ear is configured in the WebSphere Application Server repository.
- ADMA5005I: The library references for the installed optional package are created.
- ADMA5005I: The application service.ear is configured in the WebSphere Application Server repository.
- ADMA5001I: The application binaries are saved in D:\Program Files\IBM\WebSphere61\AppServer\profiles\AppSrv01\wstemp\226498399\workspace\cells\WFLMUD5IM0331\Node01\Cell\applications\service.ear.ear\service.ear.ear
- ADMA5005I: The application service.ear is configured in the WebSphere Application Server repository.
- SECJ0400I: Successfully updated the application service.ear with the appContext:IDForSecurity information.
- ADMA5011I: The cleanup of the temp directory for application service.ear is complete.
- ADMA5013I: Application service.ear installed successfully.

A blue bar highlights the message: "Application service.ear installed successfully." Below this, instructions are provided to start the application and save changes to the master configuration. A red circle highlights the "Save" link in the instructions.

22) In fcacfg.xml set the following properties with username and password of the user created in above steps and restart the server.

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

The following section explains deploying JAR application on IBM Websphere. For details and different options of deployment refer to documentations provided by IBM Websphere.

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

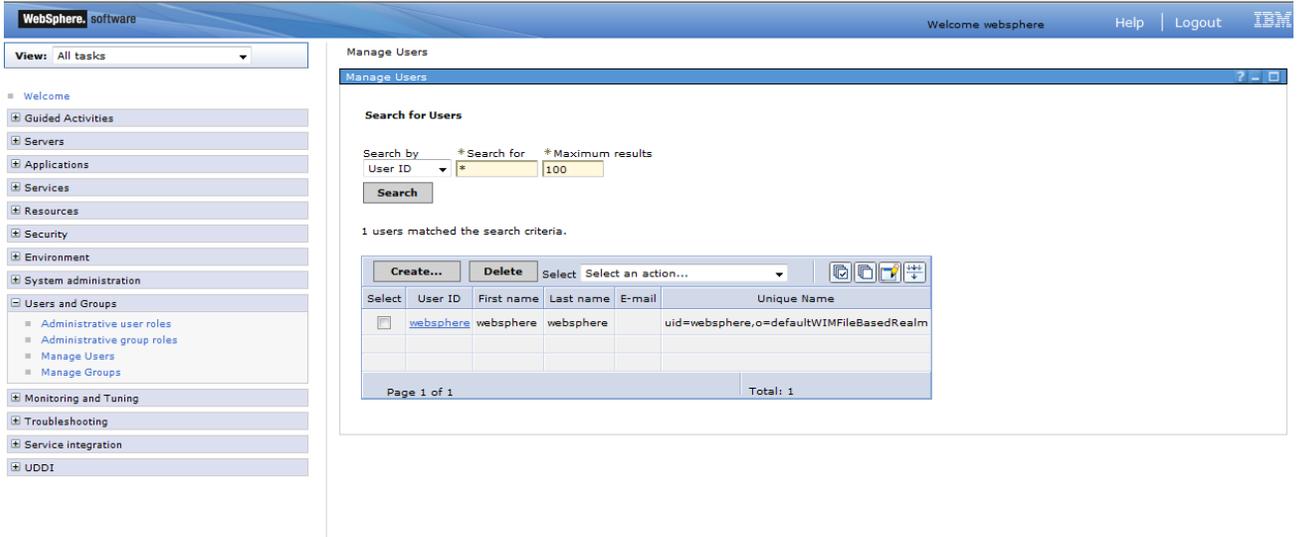
Deployable	JNDI Name/Root	Path Location	Description
ServiceEndPointRI.jar	ServiceEndPoint	<FCDB BASE DIR>\deploy\websphere	This application should be deployed if the mode of service tier invocation is EJB mode.

Before deploying ServiceEndPointRI.jar, the below steps needs to be followed to create an user for enabling EJB mode authentication –

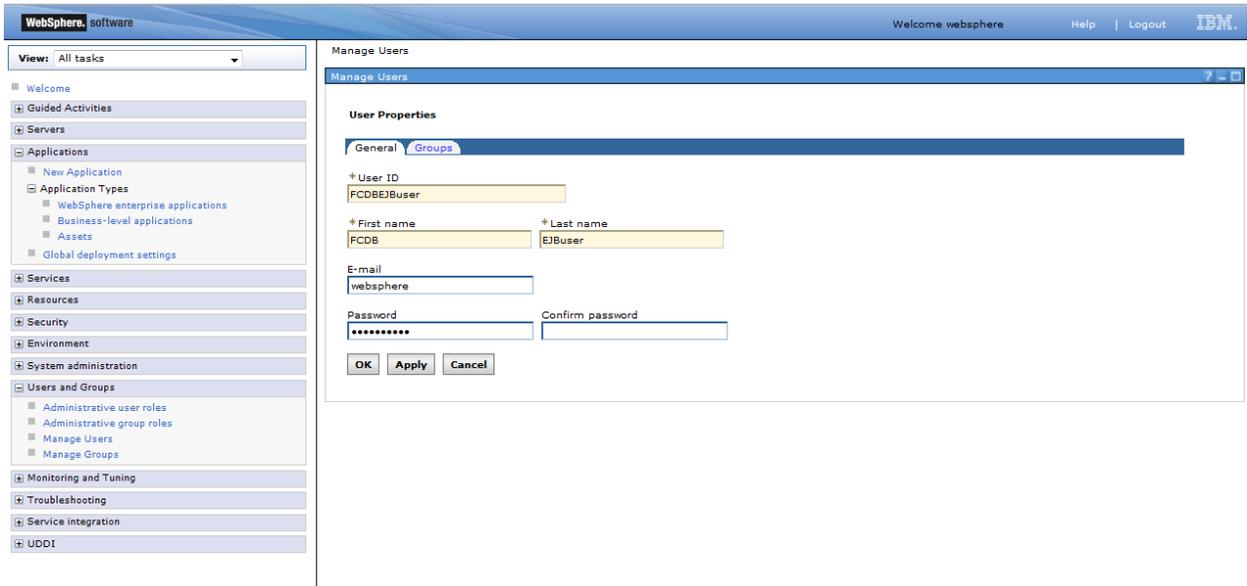
- On Admin console, in the left menu, click on “Manage Users”.



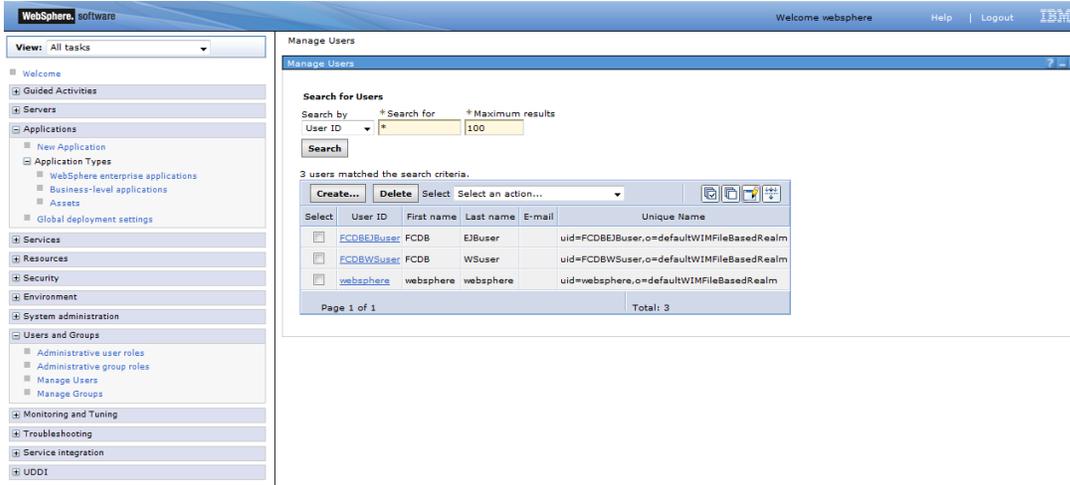
- Screen as shown in below figure will appear. On the screen, click “Create”.



- On the screen as show in figure below, enter the user details (e.g. FCDBEJUser). Click on “Create” button



- User is created successfully in the current security realm.

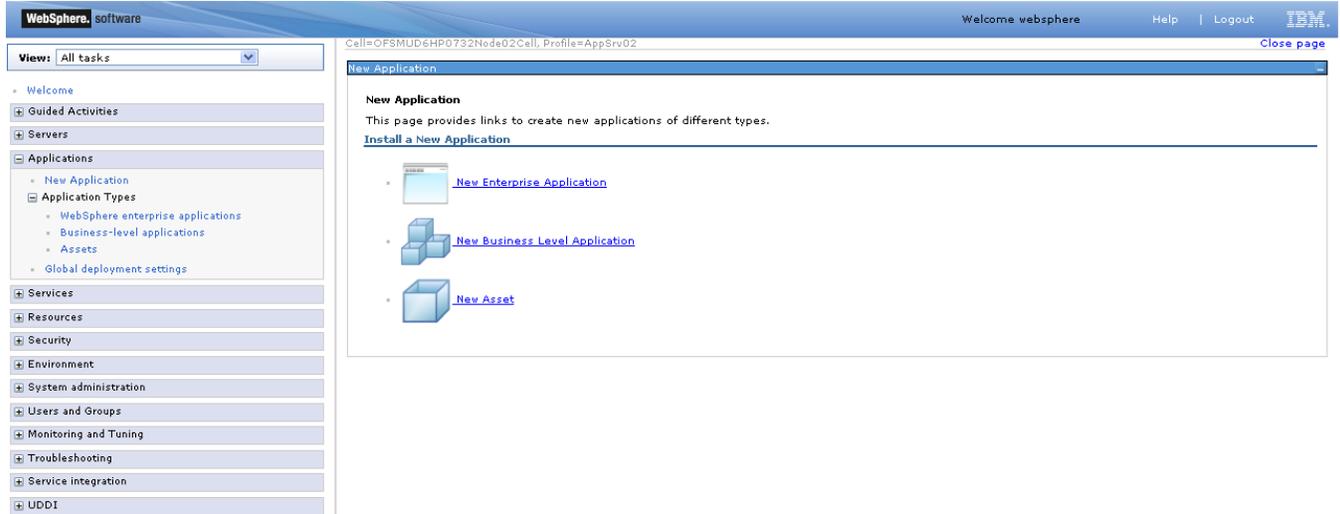


These steps need to be followed for deploying ServiceEndPointRI.jar-

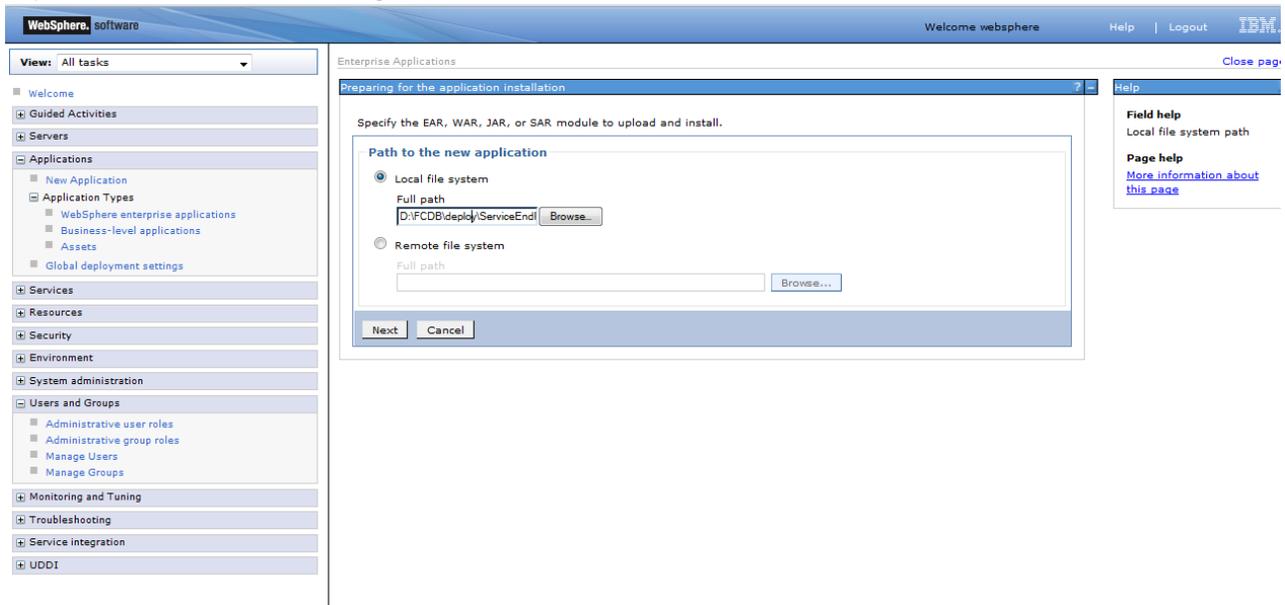
On Admin console, in the left menu, click on "New Application".



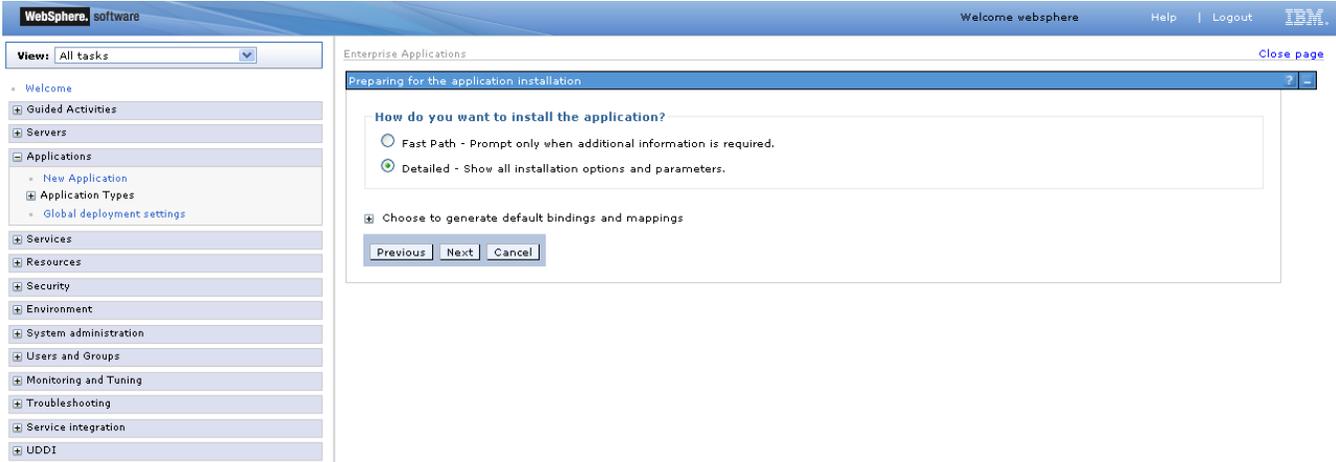
23) Screen as shown in below figure will appear. On the screen, click "New Enterprise Application".



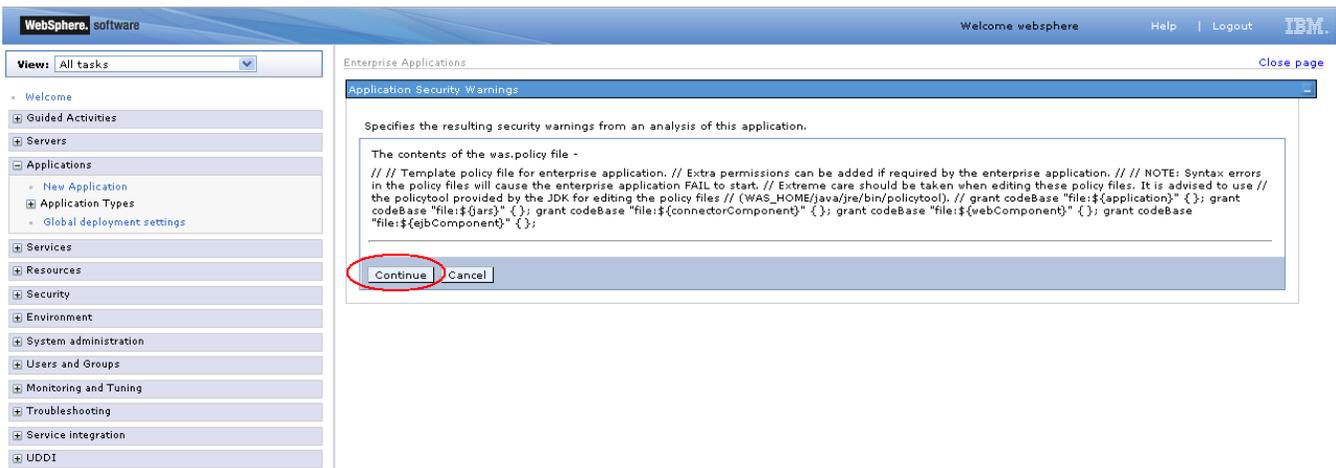
24) On the screen as show in figure below, use browse button to select the JAR file. Click on “Next” button.



25) On the screen as show in figure below, select the radio option “Show all installation options and parameters”. Click on “Next” button.



26) On the screen as shown below, click “Continue” button.



27) On the Screen as shown in below figure, Update the application name if required and click “Next”

WebSphere, software

Cell=OPSMUD61M1D303Node01Cell, Profile=AppSrv03

Welcome websphere Help Logout IBM

View: All tasks

- Welcome
- Guided Activities
- Servers
- Applications
 - New Application
 - Application Types
 - WebSphere enterprise applications
 - Business-level applications
 - Assets
 - Global deployment settings
- Services
- Resources
- Security
- Environment
- System administration
- Users and Groups
 - Administrative user roles
 - Administrative group roles
 - Manage Users
 - Manage Groups
- Monitoring and Tuning
- Troubleshooting
- Service integration
- UDDI

Install New Application

Specify options for installing enterprise applications and modules.

Step 1: Select installation options

Step 2: Map modules to servers

Step 3: Provide options to perform the EJB Deploy

Step 4: Map shared libraries

Step 5: Map shared library relationship

Step 6: Provide JNDI names for beans

Step 7: Map security roles to users or groups

Step 8: Ensure all unprotected 2.x methods have the correct level of protection

Step 9: Display module build Ids

Step 10: Summary

Select installation options

Specify the various options that are available for your application.

- Precompile JavaServer Pages files
- Directory to install application:
- Distribute application
- Use Binary Configuration
- Deploy enterprise beans
- Application name:
- Create MBeans for resources
- Override class reloading settings for Web and EJB modules
- Reload interval in seconds:
- Deploy Web services
- Validate Input off/warn/fail:
- Process embedded configuration

File Permission

Allow all files to be read but not written to
Allow executables to execute
Allow HTML and image files to be read by everyone

.*\,dl=755#.*\,so=755#.*\,a=755#.*\,sl=755

Application Build ID:

- Allow dispatching includes to remote resources
- Allow servicing includes from remote resources

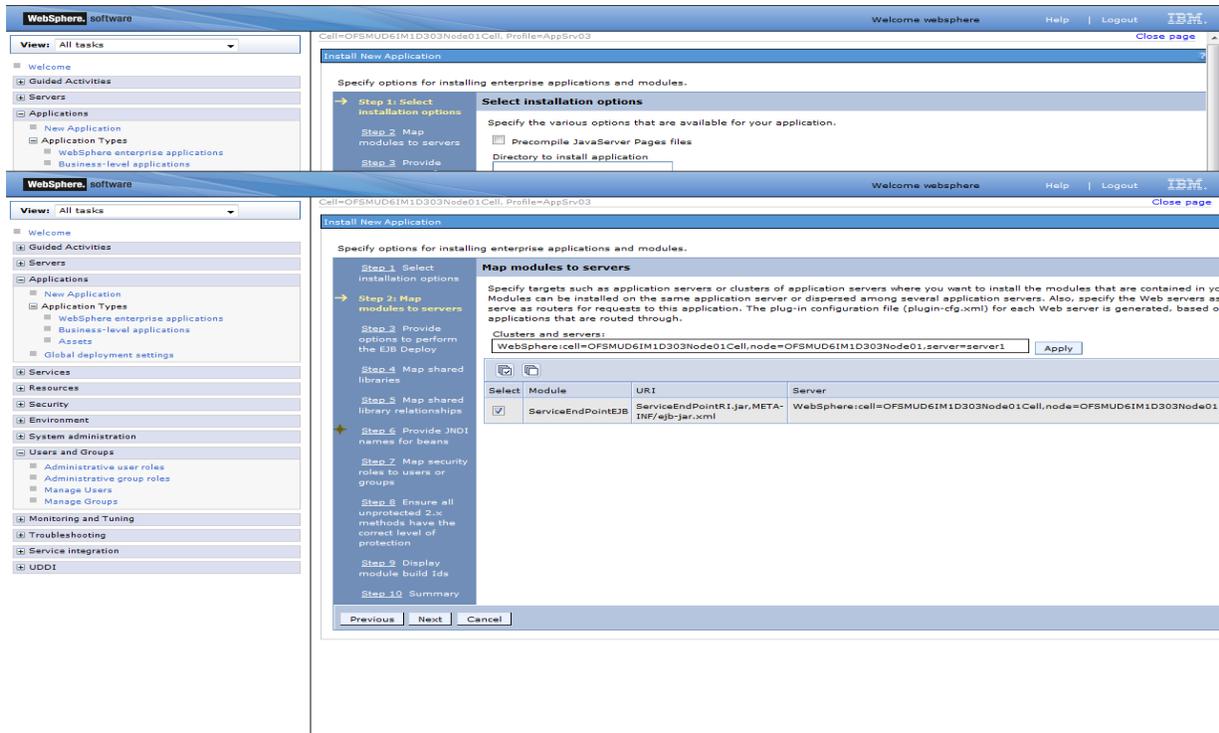
Business level application name:

Asynchronous Request Dispatch Type:

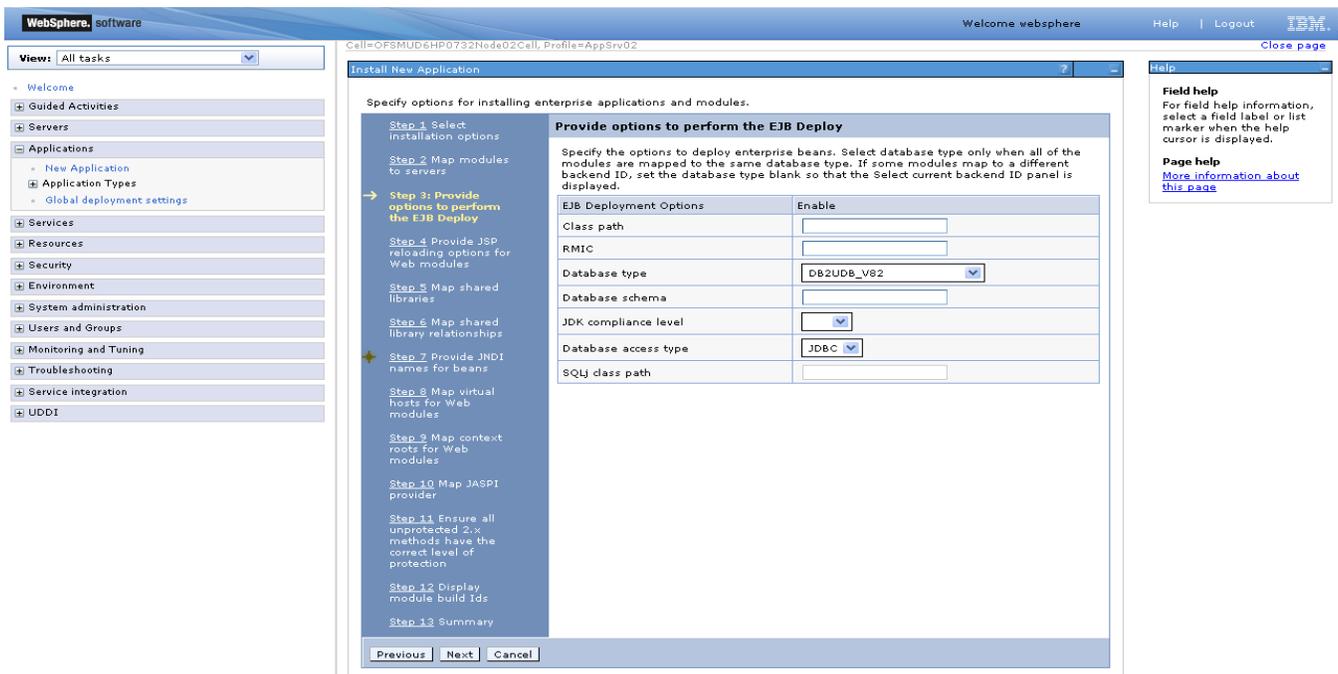
- Allow EJB reference targets to resolve automatically
- Deploy client modules
 - Client deployment mode:
- Validate schema

Next Cancel

28) In screen “Map modules to server” as shown in figure below, map the modules to the applicable server(s) and click “Next”.



29) On screen “Provide options” as shown in figure below, add the FCDB Kernel jar to the classpath. Add <FCDB BASE DIR>/system/build/kernel/FCDB_<version>.jar to the class path field and click “Next”.



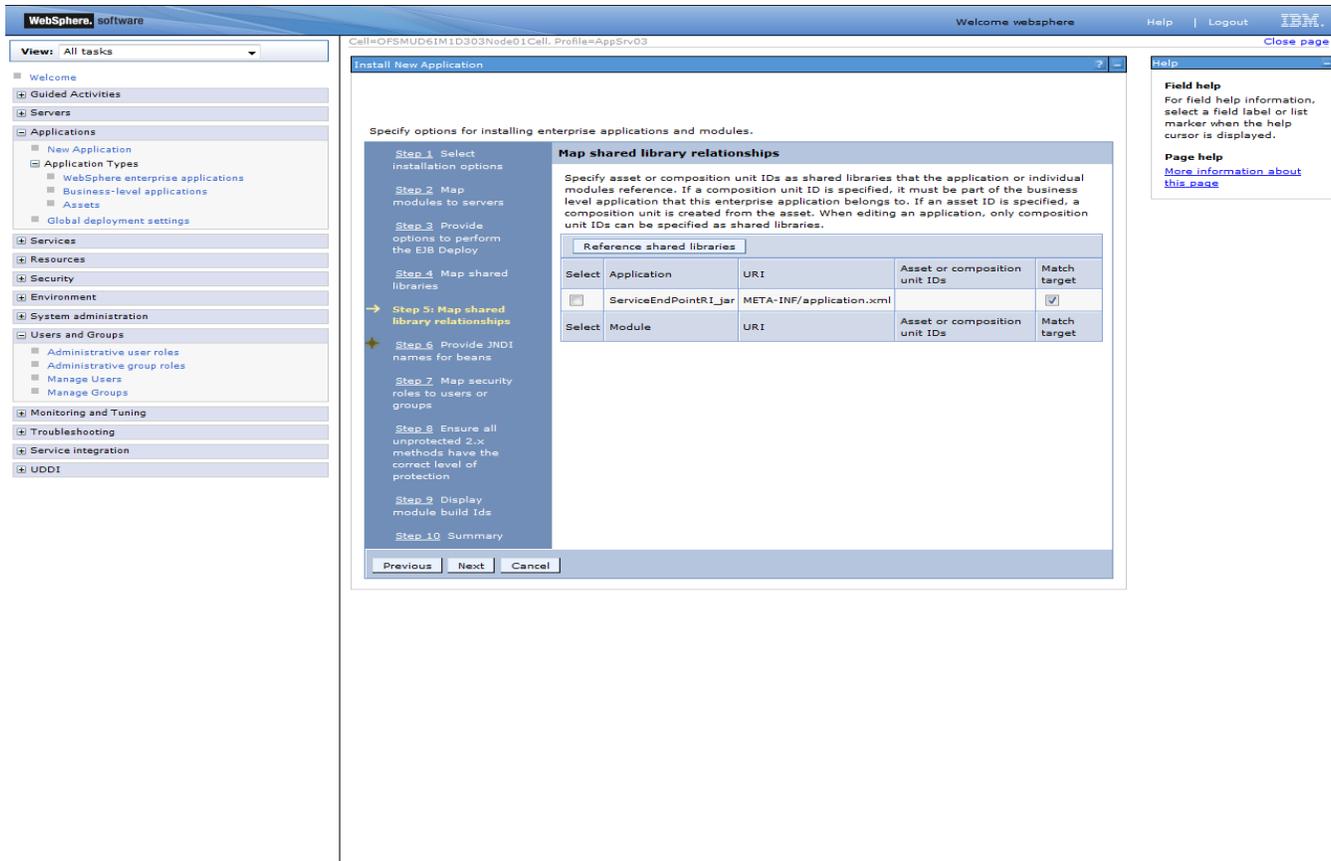
30) On the screen “Map Shared libraries” as shown below, click “Next”

The screenshot shows the 'Install New Application' wizard in the IBM WebSphere Administration Console. The current step is 'Step 4: Map shared libraries'. The wizard is titled 'Install New Application' and shows a progress bar with 10 steps. The 'Map shared libraries' section is active, displaying a table with the following data:

Select	Application	URI	Shared Libraries
<input type="checkbox"/>	ServiceEndPointRI.jar	META-INF/application.xml	
Select	Module	URI	Shared Libraries

At the bottom of the wizard, there are three buttons: 'Previous', 'Next', and 'Cancel'. The 'Previous' button is highlighted, indicating it is the current step.

31) On “Map shared library relationships” click next.



32) On the Screen “Provide JNDI names” as show below, provide the JNDI name for the application in field “Target Resource JNDI Name”. The JNDI name for each FCDB application has been provided at the start of this section.

WebSphere, software Welcome websphere Help | Logout IBM

Cell=QFSMUD61M1D303Node01Cell, Profile=AppSrv03 Close page

View: All tasks

- Welcome
- ▣ Guided Activities
- ▣ Servers
- ▣ Applications
 - New Application
 - ▣ Application Types
 - WebSphere enterprise applications
 - Business-level applications
 - Assets
 - Global deployment settings
- ▣ Services
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- ▣ System administration
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 - Administrative user roles
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 - Manage Groups
- ▣ Monitoring and Tuning
- ▣ Troubleshooting
- ▣ Service integration
- ▣ UDDI

Install New Application

Specify options for installing enterprise applications and modules.

Step 1 Select installation options

Step 2 Map modules to servers

Step 3 Provide options to perform the EJB Deploy

Step 4 Map shared libraries

Step 5 Map shared library relationships

→ Step 6: Provide JNDI names for beans

Step 7 Map security roles to users or groups

Step 8 Ensure all unprotected 2.x methods have the correct level of protection

Step 9 Display module build Ids

Step 10 Summary

Provide JNDI names for beans

Each non-message-driven enterprise bean in your application or module must be bound to a Java Naming and Directory Interface (JNDI) name. For beans in a pre-EJB 3.0 module, you have to use JNDI name for the bean to provide the binding. For beans in a EJB 3.0 module, you can optionally provide binding through JNDI name for the bean or local/remote home JNDI names. If JNDI name for the bean is specified, you cannot specify binding for its local/remote home and any business interface. If no JNDI name is specified for beans in a EJB 3.0 module, runtime will provide a container default.

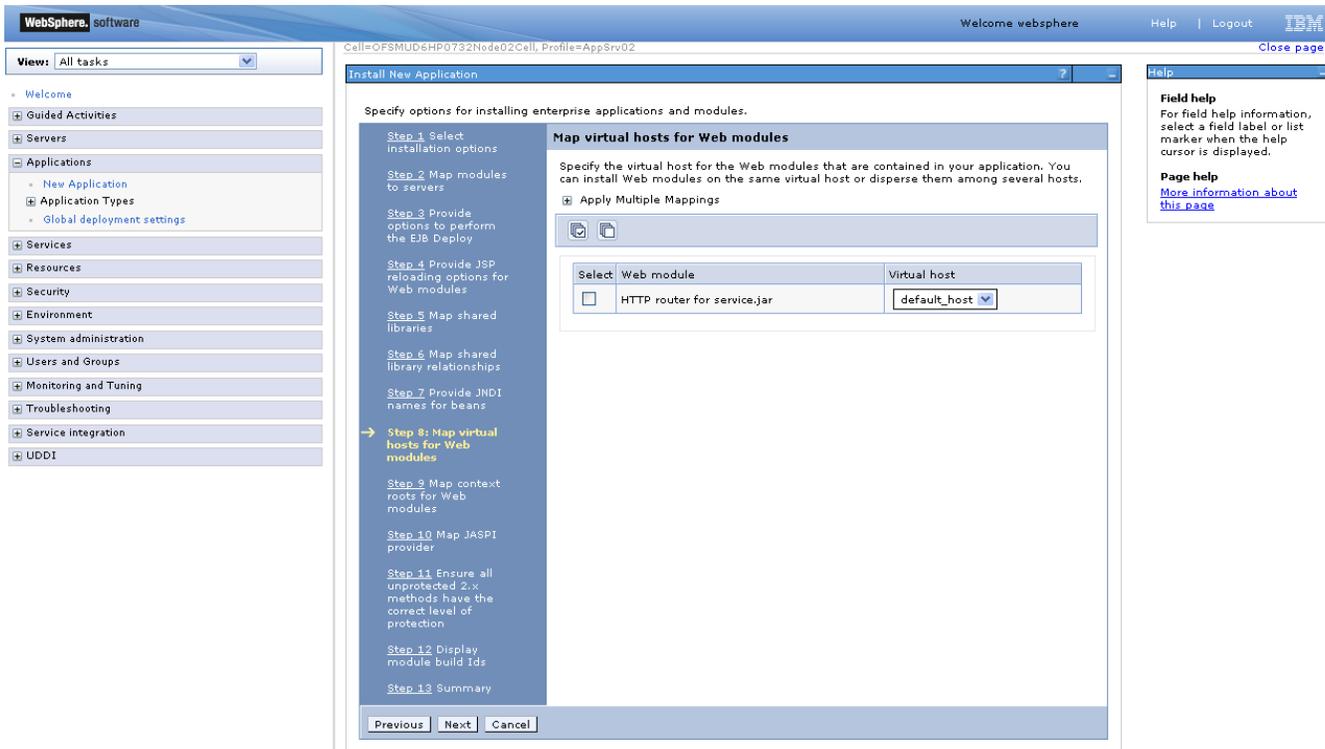
Module	Bean	URI	Target Resource JNDI Name
ServiceEndPointEJB	ServiceEndPointEJB	ServiceEndPointRI.jar,META-INF/ejb-jar.xml	Target Resource JNDI Name ServiceEndPoint

Previous Next Cancel

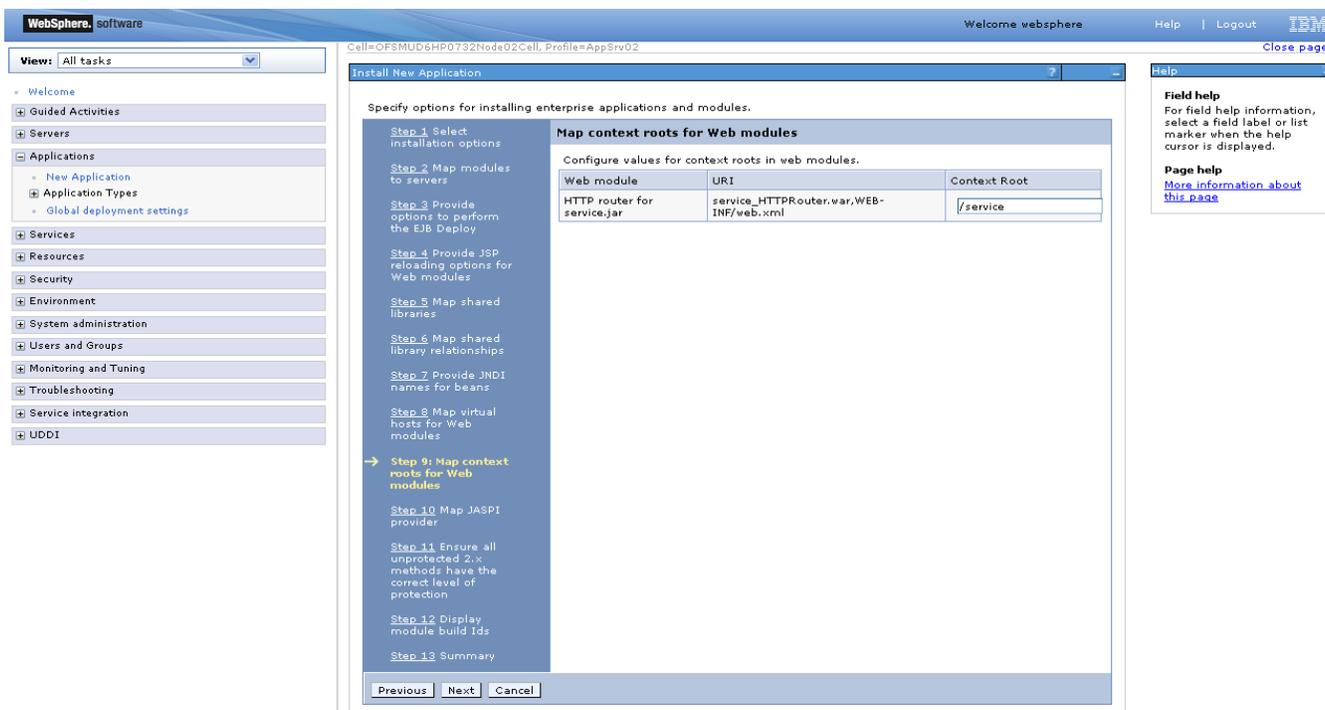
Field help
For field help information select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

33) On the screen "Map Virtual host", map web modules to the relevant virtual host & click Next.



34) On screen “Map Context roots”, map the web modules with respective context root. The context root has been configured in the deployable and the default context root being displayed can be used. If no context root is displayed, use the context root as mentioned for the application at the start of this section.



35) On screen “Map security roles to users or groups”, map the role “FCDBEJBRole” and map it with the user created before deploying the ear.

The screenshot shows the 'Install New Application' wizard in the IBM WebSphere Administration Console. The current step is 'Step 7: Map security roles to users or groups'. The wizard is titled 'Specify options for installing enterprise applications and modules.' The left sidebar shows the navigation tree with 'Users and Groups' selected. The main content area has a 'Map security roles to users or groups' section with a table below it. The table has four columns: 'Select', 'Role', 'Special subjects', 'Mapped users', and 'Mapped groups'. The 'FCDBEJBRole' is selected in the 'Role' column, and 'None' is selected in the 'Special subjects' column. The 'Mapped users' and 'Mapped groups' columns are empty. There are buttons for 'Map Users...', 'Map Groups...', and 'Map Special Subjects' above the table. At the bottom of the wizard, there are 'Previous', 'Next', and 'Cancel' buttons.

Select	Role	Special subjects	Mapped users	Mapped groups
<input checked="" type="checkbox"/>	FCDBEJBRole	None		

36) On the screen as show below, click “OK”.

WebSphere, software | Welcome websphere | Help | Logout | IBM | Close page

Cell=OFSMUD61M1D303Node01Cell, Profile=AppSrv03

New Application

New Application > Enterprise Applications > Map users/groups

Use this page to search for users or groups and add them to the selected roles.

- FCDBEJRole

Search and Select Users

Decide how many results to display, enter a search string (use * for wildcard), and click Search. Select users in the Available list and add them to the Selected list.

Display a maximum of results

Search string

Available:

Selected:

Help

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

37) On the screen as show below, click “Next”.

WebSphere, software | Welcome websphere | Help | Logout | IBM | Close page

Cell=OFSMUD61M1D303Node01Cell, Profile=AppSrv03

Install New Application

Specify options for installing enterprise applications and modules.

Map security roles to users or groups

Each role that is defined in the application or module must map to a user or group from the domain user registry, accessids: The accessids are required only when using cross realm communication in a multi domain scenario. For all other scenarios the accessid will be determined during the application start based on the user or group name. The accessids represent the user and group information that is used for Java Platform, Enterprise Edition authorization when using the WebSphere default authorization engine. The format for the accessids is user:realm/uniqueUserID, group:realm/uniqueGroupID. Entering wrong information in these fields will cause authorization to fail. AllAuthenticatedInTrustedRealms: This indicates that any valid user in the trusted realm be given the access.

Select	Role	Special subjects	Mapped users	Mapped groups
<input type="checkbox"/>	FCDBEJRole	None	FCDBEJBuser	

Help

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

38) On the screen as show below, select the role and associate it with the module by clicking on “Apply”. Now click on “Next”

The screenshot shows the 'Install New Application' wizard in the IBM WebSphere Administration Console. The left sidebar contains a navigation tree with categories like 'Welcome', 'Guided Activities', 'Servers', 'Applications', 'Services', 'Resources', 'Security', 'Environment', 'System administration', 'Monitoring and Tuning', 'Troubleshooting', 'Service integration', and 'UDDI'. The main content area is titled 'Install New Application' and displays a progress indicator for 10 steps. Step 8, 'Ensure all unprotected 2.x methods have the correct level of protection', is the active step. It includes a section for specifying security options with radio buttons for 'Uncheck', 'Exclude', and 'Role' (selected), and a dropdown menu for 'Role' set to 'FCDBEJBRole'. An 'Apply' button is visible below. A table lists the module 'ServiceEndPointEJB' with its URI and protection type 'FCDBEJBRole'. A 'Help' panel on the right provides field and page help information.

39) On the screen as show below, click “Next”.

The screenshot shows the 'Install New Application' wizard in the IBM WebSphere Administration Console, now at Step 9: 'Display module build IDs'. The left sidebar is identical to the previous screenshot. The main content area shows the progress indicator with Step 9 selected. The 'Display module build IDs' section contains a table with columns for 'Module', 'URI', and 'Build ID'. The table lists 'ServiceEndPointEJB' with its corresponding URI. A 'Help' panel on the right provides field and page help information.

40) On the “Summary” page, summary of selected installation options will be displayed. Verify the same and click “Next” to begin with application installation.

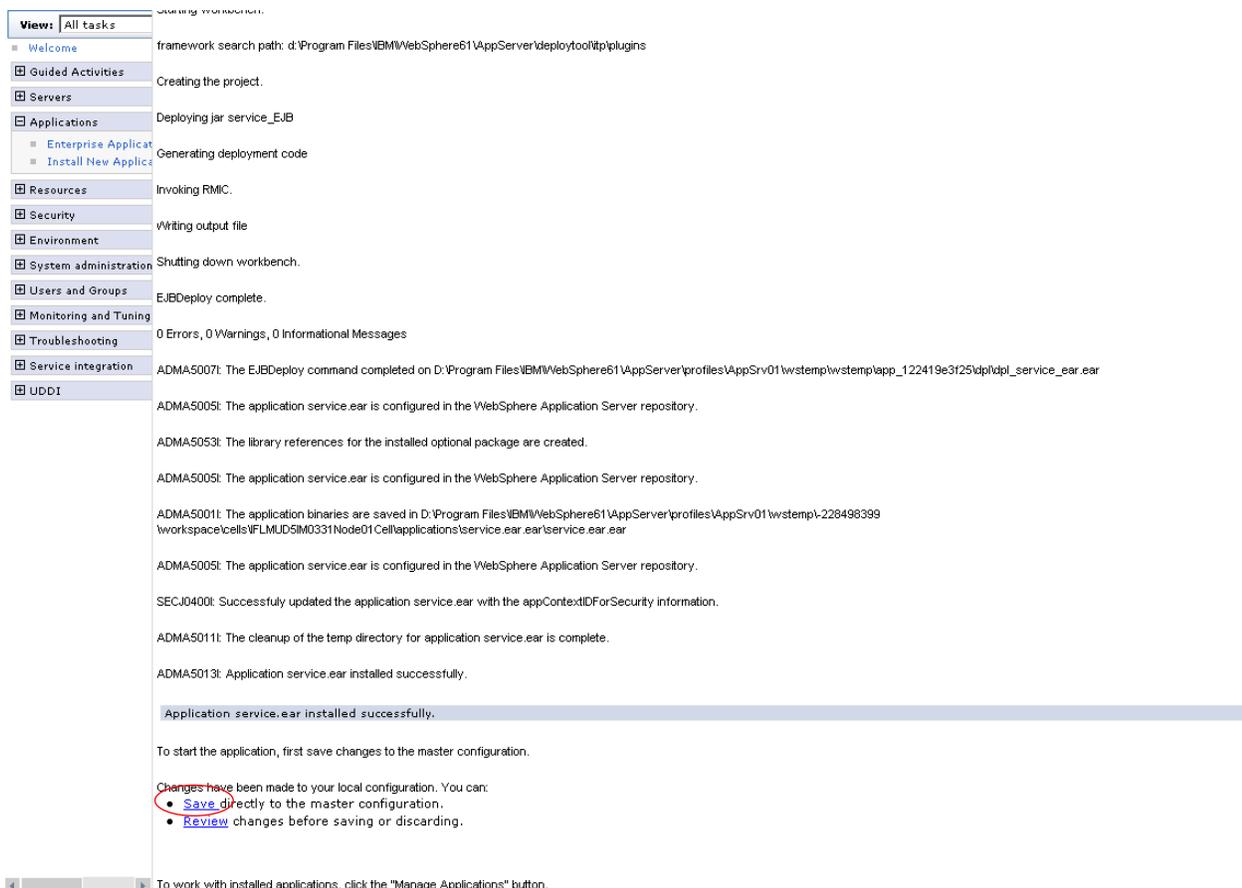
The screenshot displays the IBM WebSphere Administration Console interface during the 'Install New Application' process. The main window is titled 'Install New Application' and shows the 'Summary' step. The left-hand navigation pane lists various tasks, with 'Applications' expanded to show 'New Application' and 'Application Types'. The central area contains a summary table of installation options, and the right-hand pane provides help information.

Summary of installation options

Options	Values
Precompile JavaServer Pages files	No
Directory to install application	
Distribute application	Yes
Use Binary Configuration	No
Deploy enterprise beans	Yes
Application name	ServiceEndPointRI_jar
Create MBeans for resources	Yes
Override class reloading settings for Web and EJB modules	No
Reload interval in seconds	
Deploy Web services	No
Validate Input off/warn/fail	warn
Process embedded configuration	No
File Permission	.*\,dll=755#.*\,so=755#.*\,a=755#.*\,sl=755
Application Build ID	Unknown
Allow dispatching includes to remote resources	No
Allow servicing includes from remote resources	No
Business level application name	
Asynchronous Request Dispatch Type	Disabled
Allow EJB reference targets to resolve automatically	No
Deploy client modules	No
Client deployment mode	Isolated
Validate schema	No
Cell/Node/Server	Click here
Class path	
RMIC	
Database type	DB2UDB_V82
Database schema	
JDK compliance level	
Database access type	JDBC

At the bottom of the summary window, there are buttons for 'Previous', 'Finish', and 'Cancel'. The 'Finish' button is highlighted, indicating the next step in the process.

- 41) The next screen displays application installation status. On successful installation, click the link “Save” to save the installation.



- 1) In fcatsvc.xml set the following properties with username and password of the user created in above steps and restart the server.

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

7. Setup JDBC Datasource and Connection Pooling

7.1 Create Connection Pools

This activity will need to be repeated for all datasources (A1, B1A1 and B1AP).
The steps for both will be identical except where explicitly mentioned otherwise.

To create JDBC providers:

- 1) Admin Console: Click Resources → JDBC → JDBC Provider.
- 2) Select the scope for the new JDBC Provider to be created.
Select “Node=<node name>, Server=<server name>”

The screenshot shows the IBM WebSphere Admin Console interface. The main content area is titled "JDBC providers" and contains the following text:

JDBC providers
Use this page to edit properties of a JDBC provider. The JDBC provider object encapsulates the specific JDBC driver implementation class for access to the specific vendor database of your environment. Learn more about this task in a [guided activity](#). A guided activity provides a list of task steps and more general information about the topic.

Scope: Cell=OFSMUD6HP0732Node02Cell, Node=OFSMUD6HP0732Node02, Server=server1

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, [see the scope settings help](#).

Node=OFSMUD6HP0732Node02, Server=server1

Preferences

New... Delete

Select	Name	Scope	Description
<input type="checkbox"/>	Derby JDBC Provider	Node=OFSMUD6HP0732Node02,Server=server1	Derby embedded non-XA JDBC Provider
<input type="checkbox"/>	Oracle JDBC Driver	Node=OFSMUD6HP0732Node02,Server=server1	Oracle JDBC Driver
Total 2			

Figure 7.1

- 3) Click New.

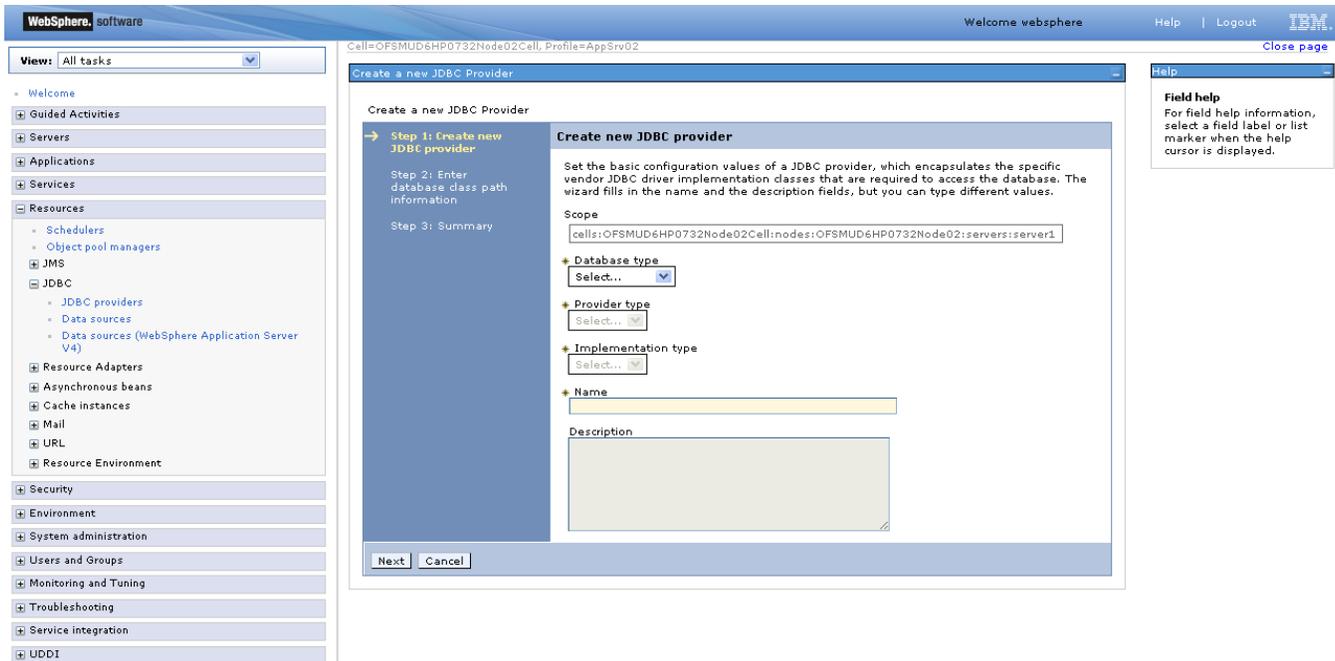


Figure 7.2

- 4) Select database type as Oracle
- 5) Select the provider type as Oracle JDBC Driver
- 6) Select the implementation type as Connection pool data source
(During BT datasource creation, select XA datasource)

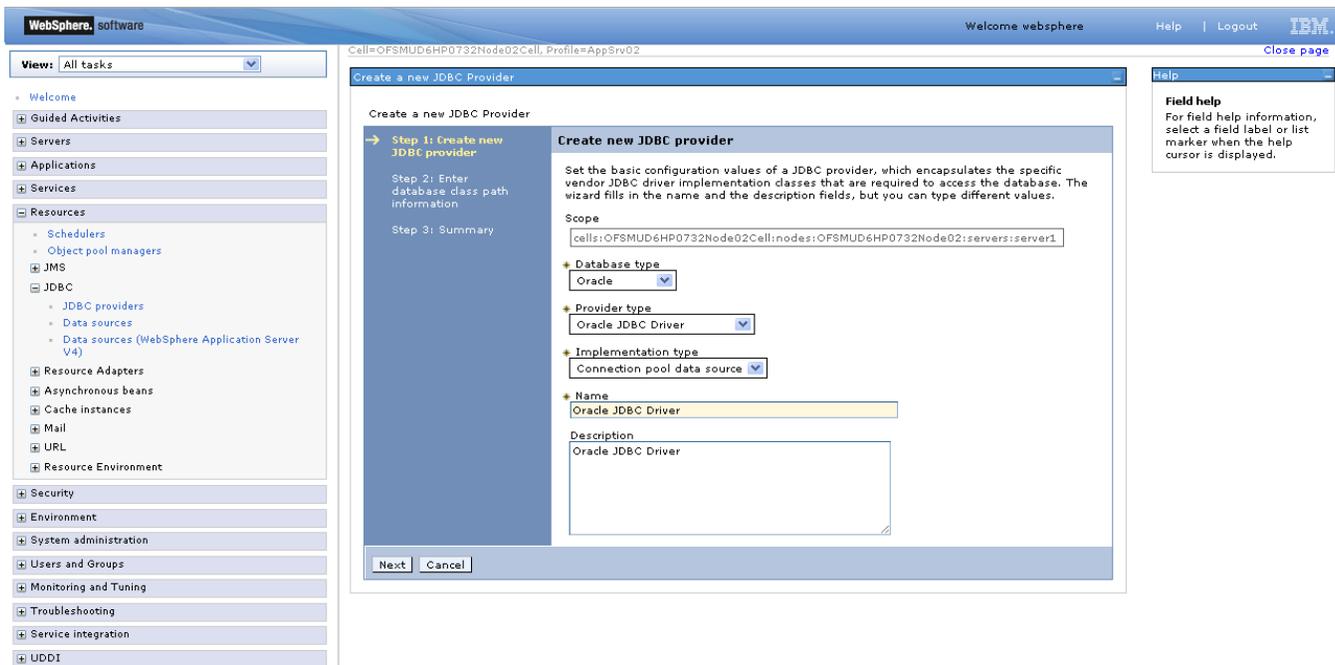


Figure 7.3

- 7) Click Next.
- 8) Enter the directory location as <FCDB BASE DIR>\system\build\extclasses\jars\oracle

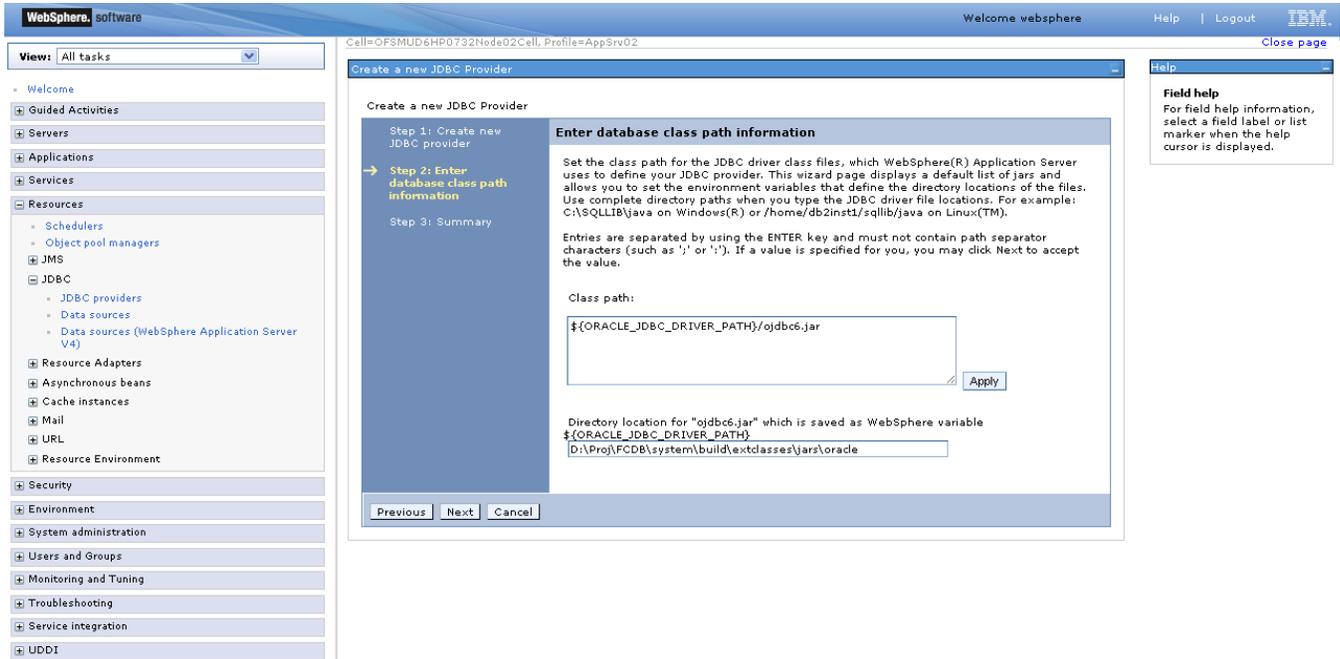


Figure 7.4

Note: Make sure oracle thin client has been installed successfully and set directory location for “ojdbc14.jar”

9) Click Next

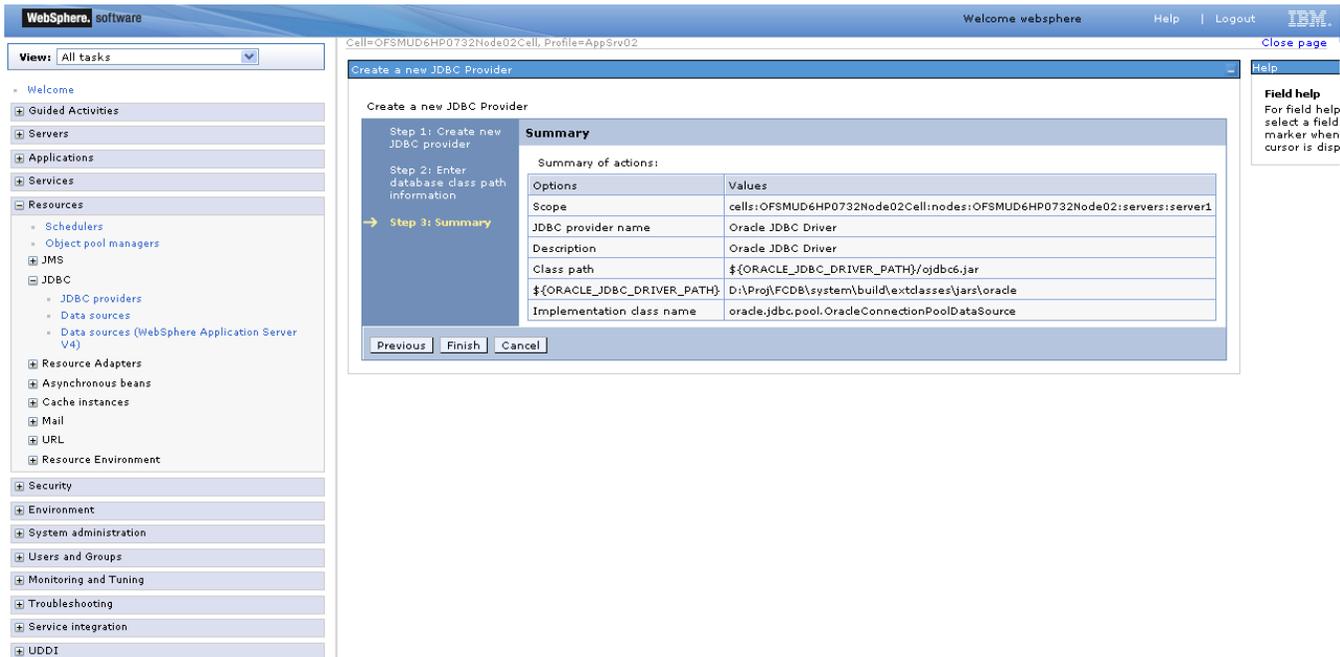


Figure 7.5

10) Click Finish

11) Click Save

The screenshot shows the IBM WebSphere Administration Console interface. The main content area is titled "JDBC providers" and displays a message box with the following text:

Messages

- Changes have been made to your local configuration. You can:
 - Save directly to the master configuration.
 - Review changes before saving or discarding.
- The server may need to be restarted for these changes to take effect.

Below the message box, the "JDBC providers" section is visible. It includes a description of the JDBC provider object and a table of resources. The table has columns for Name, Scope, and Description. The resources listed are:

Select	Name	Scope	Description
<input type="checkbox"/>	Derby JDBC Provider	Node=OFSMUD6HP0732Node02,Server=server1	Derby embedded non-XA JDBC Provider
<input type="checkbox"/>	Oracle JDBC Driver	Node=OFSMUD6HP0732Node02,Server=server1	Oracle JDBC Driver
Total 2			

The left sidebar shows the navigation menu with categories like Welcome, Guided Activities, Servers, Applications, Services, Resources, Security, Environment, System administration, Users and Groups, Monitoring and Tuning, Troubleshooting, Service integration, and UDDI. The right sidebar contains help information, including Field help, Page help, and Command Assistance.

Figure 7.6

7.2 Creating Data Source

This activity will need to be repeated for all datasources (Application and EHMS) e.g. A1,B1A1,B1AP etc.

The steps for both will be identical except where explicitly mentioned otherwise.

For creation of Data source:

- 1) Resources ->JDBC -> Data sources
(For BT datasource Resources ->JDBC -> Data sources)

The screenshot shows the 'Data sources' configuration page in the IBM WebSphere Administration Console. The page title is 'Data sources' and it includes a 'Data sources' section with instructions on how to edit settings. Below this, there is a 'Scope' section with a dropdown menu set to 'Node=OFSMUD6HP0732Node02, Server=server1'. A 'Preferences' section contains buttons for 'New...', 'Delete', 'Test connection', and 'Manage state...'. The main part of the page is a table listing existing data sources:

Select	Name	JNDI name	Scope	Provider	Description	Category
<input type="checkbox"/>	A1	A1	Node=OFSMUD6HP0732Node02,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	B1A1	B1A1	Node=OFSMUD6HP0732Node02,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	Default Datasource	DefaultDatasource	Node=OFSMUD6HP0732Node02,Server=server1	Derby JDBC Provider	Datasource for the WebSphere Default Application	

Total 3

Figure 7.2.4

2) After click on New, On the below screen , put Data Source Name & JNDI name and Click on “NEXT”.

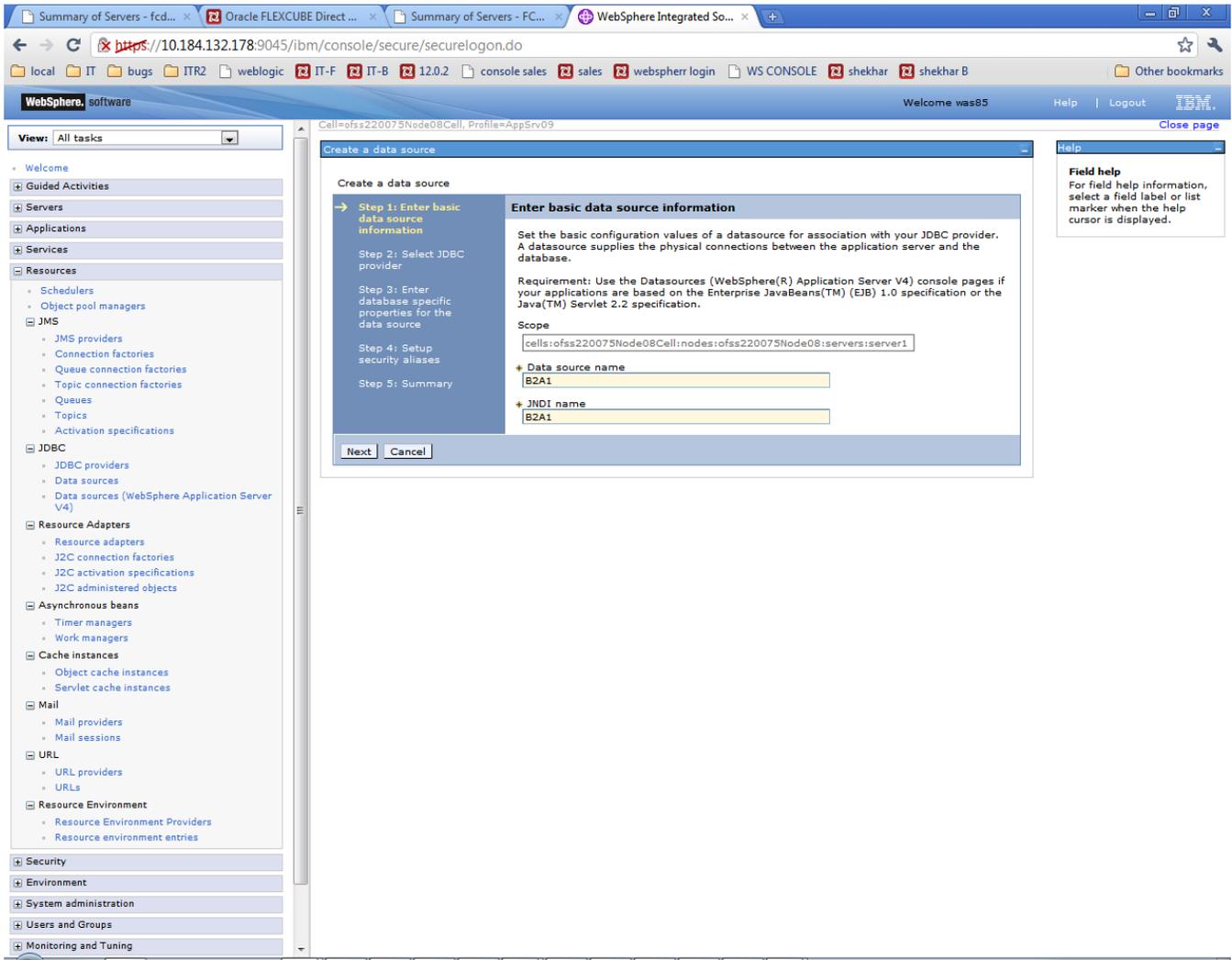


Figure 7.2.5

- 3) On the below screen , select radio “Select an existing JDBC provider” and select the value from drop down and click on NEXT..

The screenshot shows the IBM WebSphere Administration Console interface. The top navigation bar includes the WebSphere logo, the text "Welcome websphere", and links for "Help" and "Logout". The breadcrumb trail indicates the current location: "Cell=OFSMUD6HP0732Node02Cell, Profile=AppSrv02".

The left-hand navigation pane is expanded to show the "JDBC" section, with "JDBC providers" selected. The main content area is titled "Create a data source" and displays a multi-step wizard. The current step is "Step 2: Select JDBC provider".

Under "Select JDBC provider", there is a text instruction: "Specify a JDBC provider to support the datasource. If you choose to create a new JDBC provider, it will be created at the same scope as the datasource. If you are selecting an existing JDBC provider, only those providers at the current scope are available from the list." Below this text are two radio buttons: "Create new JDBC provider" (unselected) and "Select an existing JDBC provider" (selected). A dropdown menu below the radio buttons shows "Oracle JDBC Driver".

At the bottom of the wizard are three buttons: "Previous", "Next", and "Cancel".

On the right side, a "Field help" box contains the text: "For field help information, select a field label or list marker when the help cursor is displayed."

4) Fill value in the URL and click on NEXT.

URL format: jdbc:oracle:thin:@<DATABASE HOST>:<port>:<SERVICE_NAME>

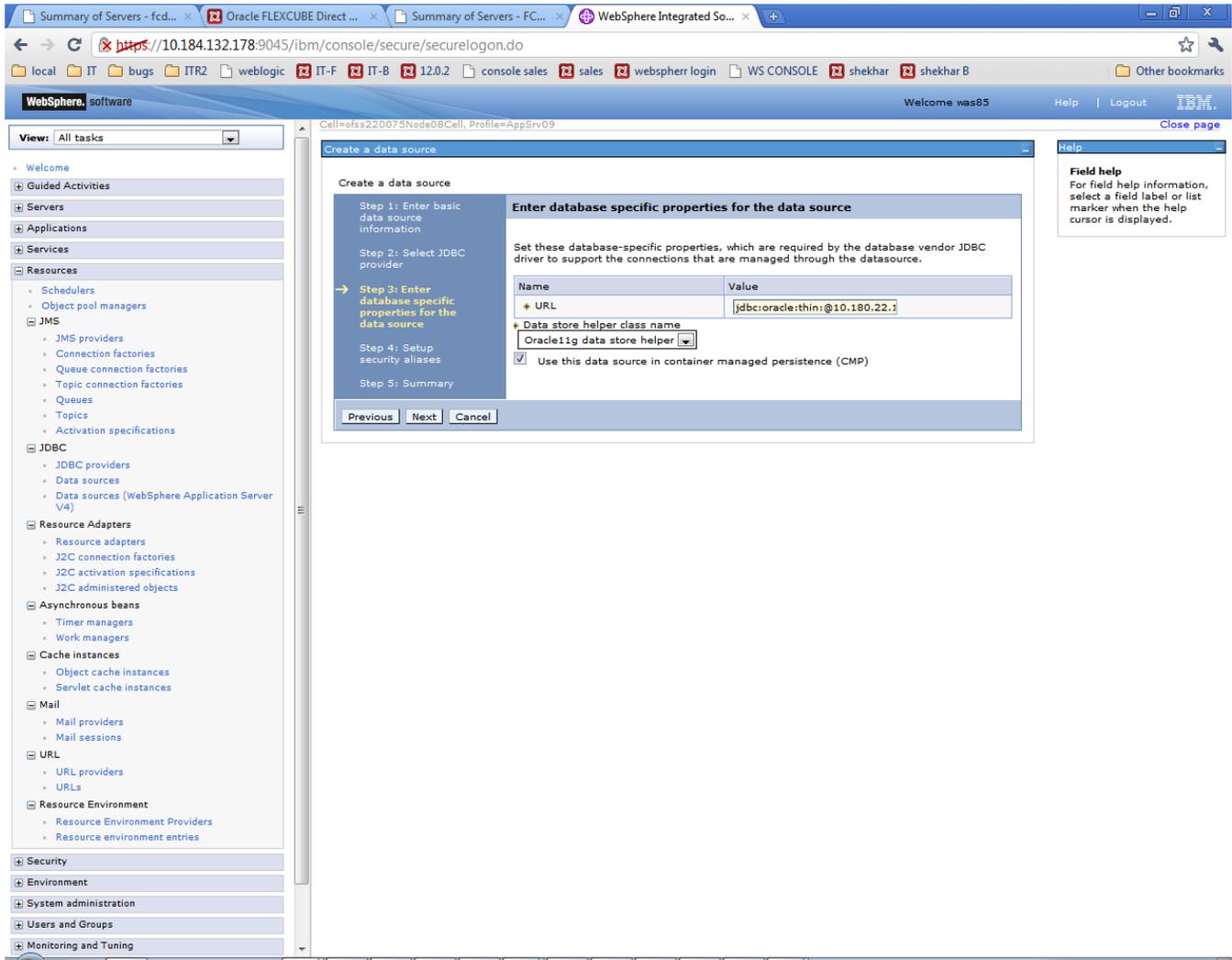


Figure 7.2.6

5) Setup Security aliases. Click 'Next'

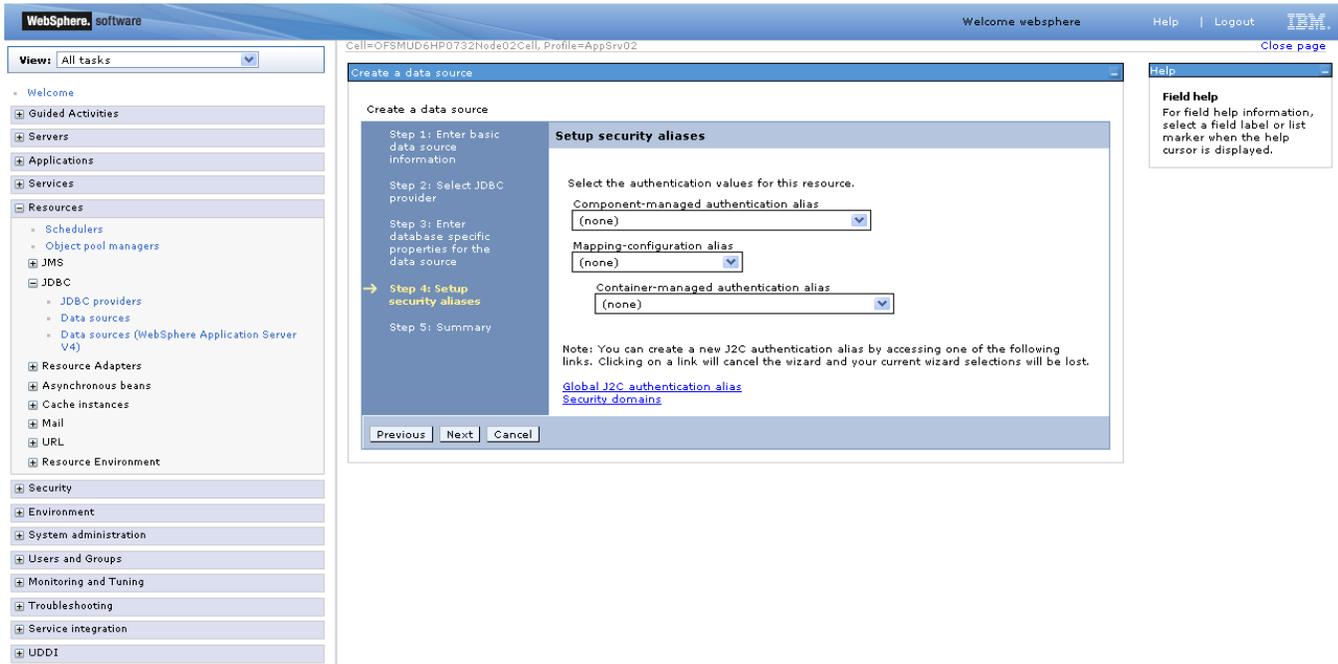


Figure 7.2.7

6) Review the Summary and click Finish

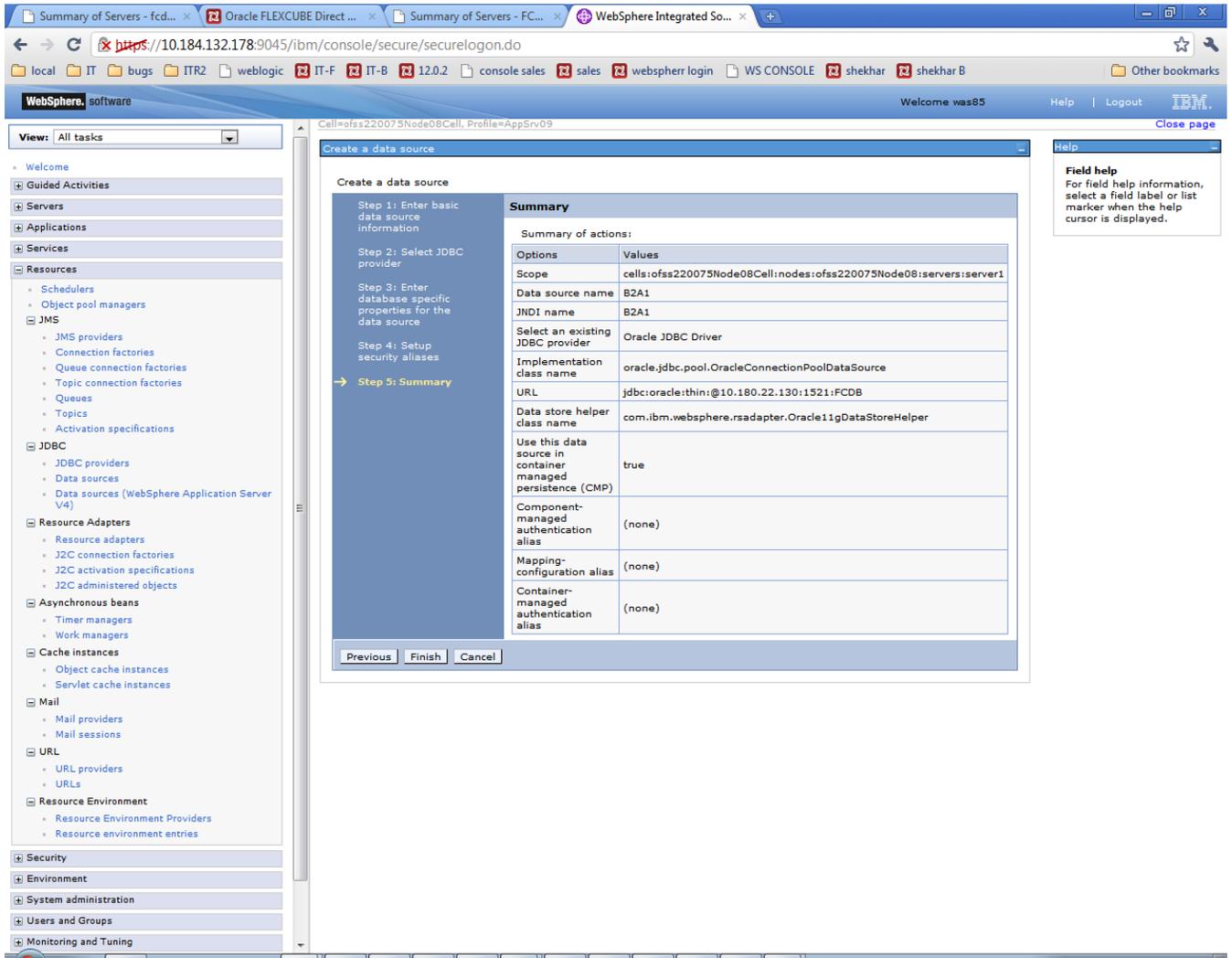


Figure 7.2.14

7) Click Save

The screenshot shows the IBM WebSphere Administration Console interface. The main content area is titled 'Data sources' and contains the following elements:

- Messages:** A warning message indicating that changes have been made to the local configuration. It lists two actions: 'Save directly to the master configuration' and 'Review changes before saving or discarding'. A secondary warning states that the server may need to be restarted for changes to take effect.
- Data sources:** A section explaining that this page is used to edit settings for a datasource associated with a selected JDBC provider. It includes a scope selector set to 'Node=ofss220075Node08, Server=server1'.
- Preferences:** A toolbar with buttons for 'New...', 'Delete', 'Test connection', and 'Manage state...'.
- Table:** A table listing existing data sources. The table has columns for 'Select', 'Name', 'JNDI name', 'Scope', 'Provider', 'Description', and 'Category'. Below the table, it indicates 'Total 5' resources.

Select	Name	JNDI name	Scope	Provider	Description	Category
<input type="checkbox"/>	A1	A1	Node=ofss220075Node08,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	B1A1	B1A1	Node=ofss220075Node08,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	B1AP	B1AP	Node=ofss220075Node08,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	B2A1	B2A1	Node=ofss220075Node08,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	Default Datasource	DefaultDatasource	Node=ofss220075Node08,Server=server1	Derby JDBC Provider	Datasource for the WebSphere Default Application	

Total 5

Figure 7.2.15

8) New DataSource will be created.

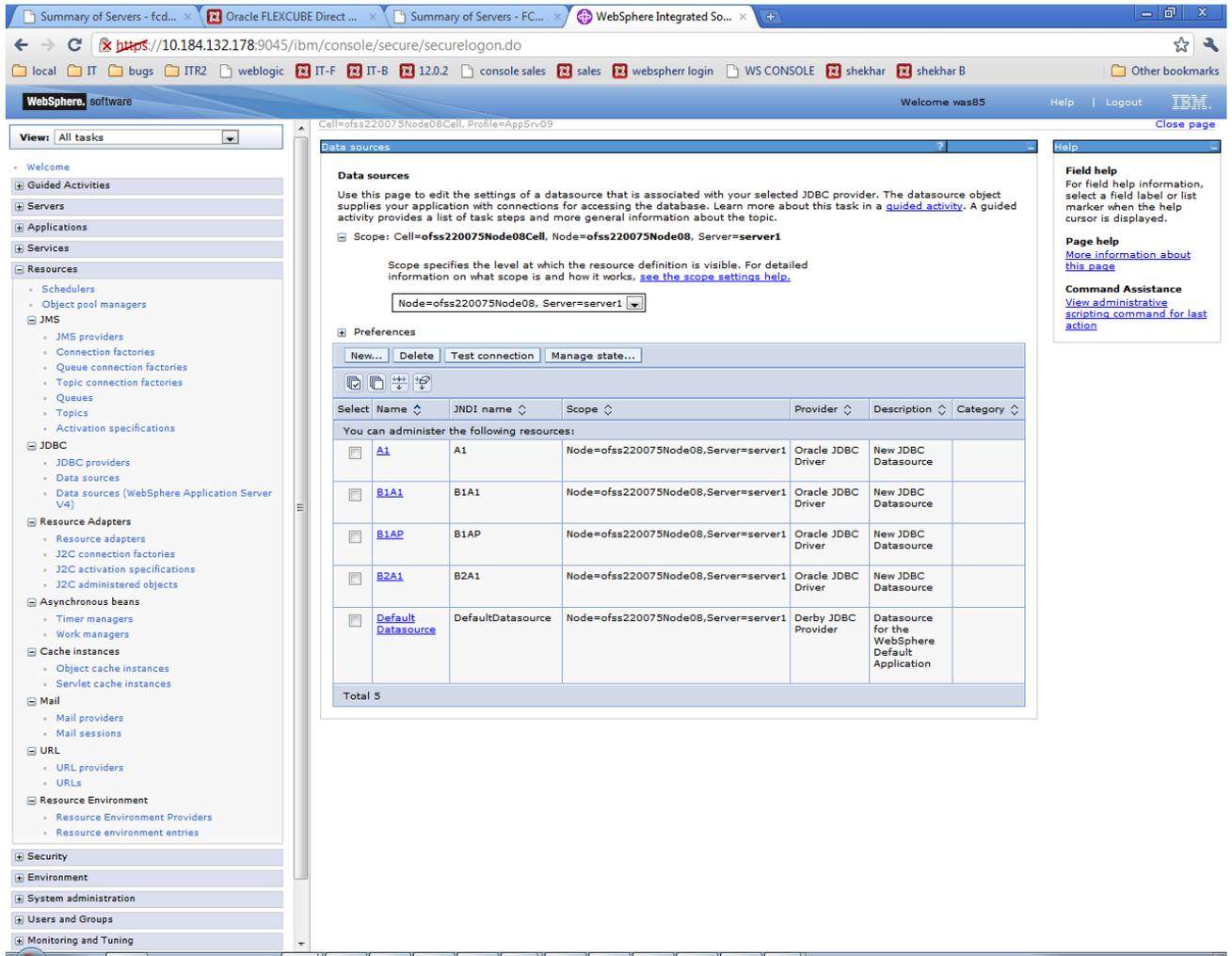


Figure 7.2.16

Steps to be followed for authentication of data.

9) Click on newly created DataSource.

The screenshot shows the IBM WebSphere Administration Console interface. The main content area is titled 'Data sources' and contains the following information:

Data sources
Use this page to edit the settings of a datasource that is associated with your selected JDBC provider. The datasource object supplies your application with connections for accessing the database. Learn more about this task in a [guided activity](#). A guided activity provides a list of task steps and more general information about the topic.

Scope: Cell=**ofss220075Node08Cell**, Node=**ofss220075Node08**, Server=**server1**

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, [see the scope settings help](#).

Node=**ofss220075Node08**, Server=**server1**

Preferences
New... Delete Test connection Manage state...

Select	Name	JNDI name	Scope	Provider	Description	Category
You can administer the following resources:						
<input type="checkbox"/>	A1	A1	Node=ofss220075Node08,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	B1A1	B1A1	Node=ofss220075Node08,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	B1AP	B1AP	Node=ofss220075Node08,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	B2A1	B2A1	Node=ofss220075Node08,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	Default Datasource	DefaultDatasource	Node=ofss220075Node08,Server=server1	Derby JDBC Provider	Datasource for the WebSphere Default Application	
Total 5						

The left sidebar shows a navigation tree with categories like 'Resources', 'JDBC', 'Resource Adapters', 'Asynchronous beans', 'Cache instances', 'Mail', 'URL', 'Resource Environment', 'Security', 'Environment', 'System administration', 'Users and Groups', and 'Monitoring and Tuning'. The 'JDBC' category is expanded, showing 'Data sources' as the selected item.

10) On configuration screen, click on 'JAAS - J2C authentication data' (under 'Related Items')

The screenshot displays the IBM WebSphere Administration Console interface. The browser address bar shows the URL: `https://10.184.132.178:9045/ibm/console/secure/securelogin.do`. The console header indicates the user is logged in as 'was85'.

The left-hand navigation pane shows a tree view of resources, with 'JDBC' expanded to show 'Data sources'. The main content area is titled 'Data sources > B2A1' and contains the following sections:

- Configuration:** Includes a 'Test connection' button.
- General Properties:**
 - Scope: `cells:ofss220075Node08Cell:nodes:ofss220075Node08:servers:server1`
 - Provider: Oracle JDBC Driver
 - Name: B2A1
 - JNDI name: B2A1
 - Use this data source in container managed persistence (CMP)
 - Description: New JDBC Datasource
 - Category: (empty)
- Additional Properties:** Includes links for 'Connection pool properties', 'WebSphere Application Server data source properties', and 'Custom properties'.
- Related Items:** Includes a link for 'JAAS - J2C authentication data'.
- Data store helper class name:**
 - Select a data store helper class. A dropdown menu shows 'Oracle11g data store helper (com.ibm.websphere.rsadapter.Oracle11gDataStoreHelper)'. Other options include 'Specify a user-defined data store helper'.
- Security settings:**
 - Component-managed authentication alias: (none)
 - Mapping-configuration alias: (none)

On the right side, there is a 'Help' section with 'Field help' and 'Page help' instructions.

11) Click New

The screenshot shows the IBM WebSphere Administration Console interface. The browser address bar displays the URL: `https://10.184.132.178:9045/ibm/console/secure/login.do`. The page title is "Data sources" and the breadcrumb navigation is "Data sources > B2A1 > JAAS - J2C authentication data".

The main content area contains the following text and controls:

- Data sources > B2A1 > JAAS - J2C authentication data**
- Specifies a list of user identities and passwords for Java(TM) 2 connector security to use.
- Prefix new alias names with the node name of the cell (for compatibility with earlier releases)
-
- Preferences**
-
- Icons for copy, paste, add, and refresh.
- Table with columns: Select, Alias, User ID, and Description.

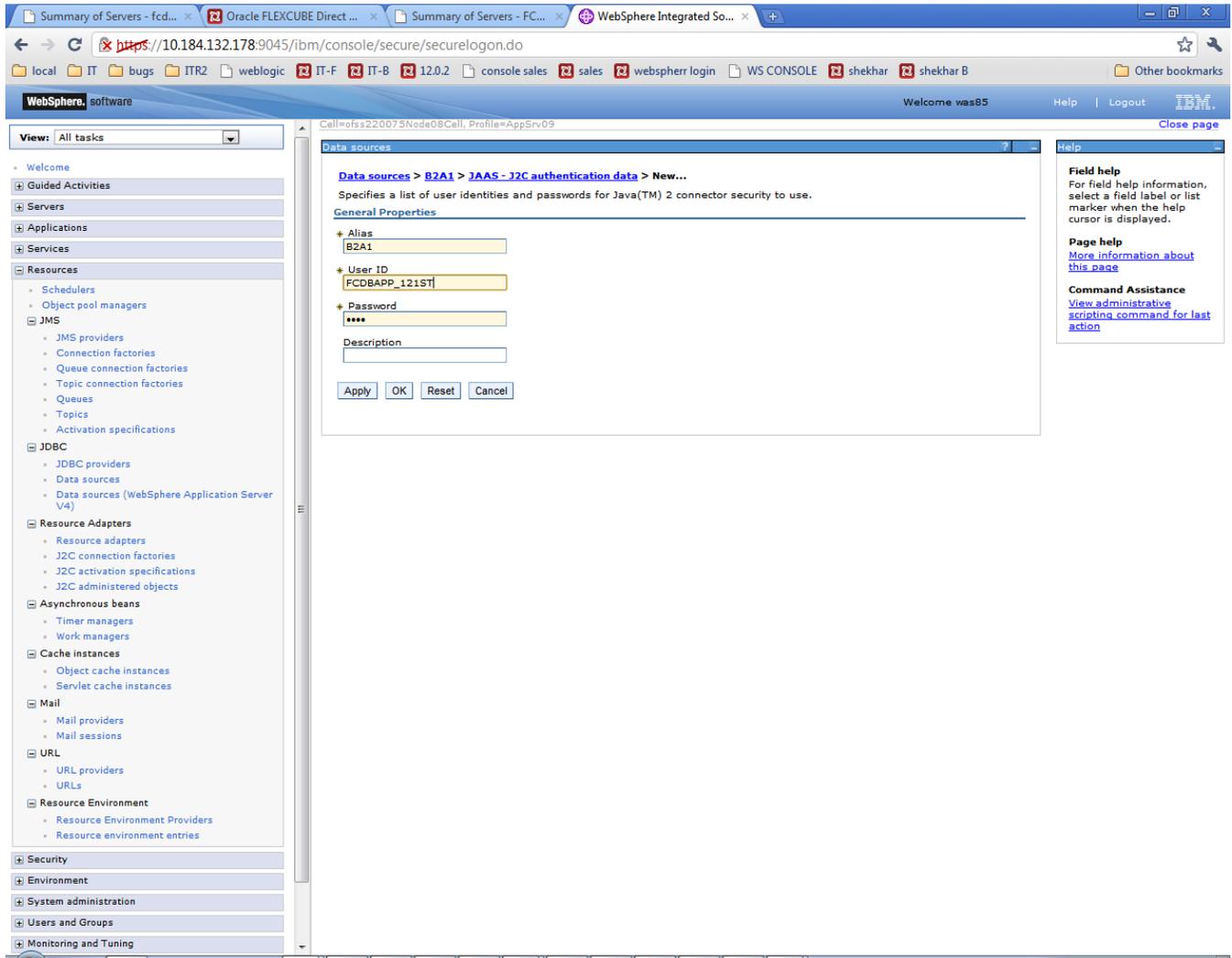
The table content is as follows:

Select	Alias	User ID	Description
You can administer the following resources:			
<input type="checkbox"/>	ofss220075Node08/A1	FCDBAPP_FCDBTEST05	
<input type="checkbox"/>	ofss220075Node08/B1A1	FCDBB001_FCDBTEST05	
<input type="checkbox"/>	ofss220075Node08/B1AP	FCDBB001_FCDBTEST05	
Total 3			

On the right side, there is a "Help" panel with sections for "Field help", "Page help", and "Command Assistance".

The left sidebar shows a navigation tree with categories like "Resources", "Security", "Environment", "System administration", "Users and Groups", and "Monitoring and Tuning".

12) Enter Alias, DB user Id and Password. And click 'Apply'.



13) Click 'Save'

The screenshot shows the IBM WebSphere Integrated Solutions console interface. The browser address bar indicates the URL: <https://10.184.132.178:9045/ibm/console/secure/securelogin.do>. The console header displays "WebSphere, software" and "Welcome was85". The left navigation pane shows a tree view of the configuration hierarchy, with "Data sources" expanded to "B2A1 > JAAS - J2C authentication data > B2A1". The main content area shows a "Messages" box with a warning icon and the following text: "Changes have been made to your local configuration. You can: Save directly to the master configuration. Review changes before saving or discarding. The server may need to be restarted for these changes to take effect." Below the messages, the breadcrumb path is "Data sources > B2A1 > JAAS - J2C authentication data > B2A1", followed by the description: "Specifies a list of user identities and passwords for Java(TM) 2 connector security to use." The "General Properties" section contains the following fields: "Alias" (B2A1), "User ID" (FCDBAPP_121ST), "Password" (masked with asterisks), and "Description" (empty). At the bottom of the form are buttons for "Apply", "OK", "Reset", and "Cancel". A "Help" panel on the right side of the console provides "Field help", "Page help", and "Command Assistance" information.

14) Newly created JAAS - J2C authentication data will be displayed.

The screenshot shows the IBM WebSphere Administration Console interface. The browser address bar displays `https://10.184.132.178:9045/ibm/console/secure/securelogin.do`. The page title is "WebSphere, software" and the user is logged in as "was85". The left navigation pane shows a tree view of resources, with "Data sources" expanded under "J2C". The main content area displays the configuration for "Data sources > B2A1 > JAAS - J2C authentication data".

The configuration page includes the following text:

Data sources > B2A1 > JAAS - J2C authentication data
 Specifies a list of user identities and passwords for Java(TM) 2 connector security to use.

Prefix new alias names with the node name of the cell (for compatibility with earlier releases)

Preferences

Select	Alias	User ID	Description
You can administer the following resources:			
<input type="checkbox"/>	ofss220075Node08/A1	FCDBAPP_FCDBTEST05	
<input type="checkbox"/>	ofss220075Node08/B1A1	FCDBB001_FCDBTEST05	
<input type="checkbox"/>	ofss220075Node08/B1AP	FCDBB001_FCDBTEST05	
<input type="checkbox"/>	ofss220075Node08/B2A1	FCDBAPP_121ST	
Total 4			

On the right side, there is a "Help" panel with sections for "Field help", "Page help", and "Command Assistance".

15) Go to the data source to which JAAS - J2C authentication data has to be applied.

The screenshot shows the IBM WebSphere Administration Console interface. The main content area is titled 'Data sources' and contains the following information:

Data sources
 Use this page to edit the settings of a datasource that is associated with your selected JDBC provider. The datasource object supplies your application with connections for accessing the database. Learn more about this task in a [guided activity](#). A guided activity provides a list of task steps and more general information about the topic.

Scope: Cell=ofss220075Node08Cell, Node=ofss220075Node08, Server=server1

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, [see the scope settings help](#).

Node=ofss220075Node08, Server=server1

Preferences

New... Delete Test connection Manage state...

Select	Name	JNDI name	Scope	Provider	Description	Category
You can administer the following resources:						
<input type="checkbox"/>	A1	A1	Node=ofss220075Node08,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	B1A1	B1A1	Node=ofss220075Node08,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	B1AP	B1AP	Node=ofss220075Node08,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	B2A1	B2A1	Node=ofss220075Node08,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	Default Datasource	DefaultDatasource	Node=ofss220075Node08,Server=server1	Derby JDBC Provider	Datasource for the WebSphere Default Application	
Total 5						

The left-hand navigation pane shows a tree view with categories like 'Guided Activities', 'Servers', 'Applications', 'Services', 'Resources', 'JMS', 'JDBC', 'Resource Adapters', 'Asynchronous beans', 'Cache instances', 'Mail', 'URL', 'Resource Environment', 'Security', 'Environment', 'System administration', 'Users and Groups', and 'Monitoring and Tuning'. The 'JDBC' category is expanded, showing 'Data sources' as the selected item.

16) On configuration screen, under Security Settings, select the proper alias for Component-managed authentication alias and Container-managed authentication alias and click Apply

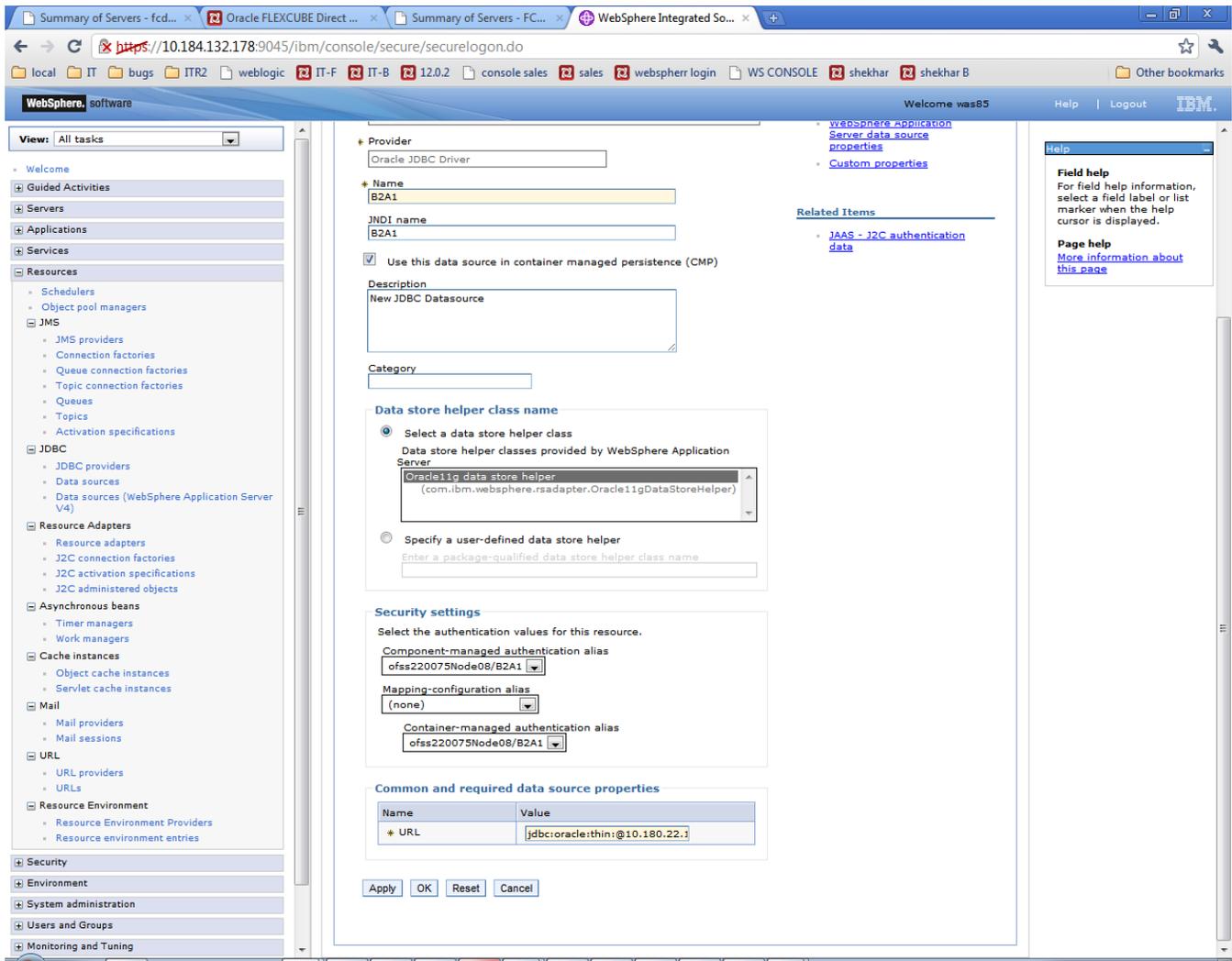


Figure 6.2.17

17) Click 'Save'

The screenshot displays the IBM WebSphere Administration Console interface. The browser address bar shows the URL `https://10.184.132.178:9045/ibm/console/secure/securelogin.do`. The console header includes the text "WebSphere, software" and "Welcome was85".

The left-hand navigation pane shows a tree structure with categories like "Guided Activities", "Servers", "Applications", "Services", "Resources", "JMS", "JDBC", "Resource Adapters", "Asynchronous beans", "Cache instances", "Mail", "URL", "Resource Environment", "Security", "Environment", "System administration", "Users and Groups", and "Monitoring and Tuning".

The main content area is titled "Data sources" and shows a configuration page for a data source named "B2A1". At the top, a "Messages" box contains a warning: "Changes have been made to your local configuration. You can: Save directly to the master configuration. Review changes before saving or discarding. The server may need to be restarted for these changes to take effect." Below this, a "Data sources > B2A1" section provides instructions: "Use this page to edit the settings of a datasource that is associated with your selected JDBC provider. The datasource object supplies your application with connections for accessing the database."

The configuration page is divided into several sections:

- Configuration**: Includes a "Test connection" button.
- General Properties**:
 - Scope**: `cells:ofss220075Node08Cell:nodes:ofss220075Node08:servers:server1`
 - Provider**: Oracle JDBC Driver
 - Name**: B2A1
 - JNDI name**: B2A1 (with a tooltip: "The required display name for the resource.")
 - Use this data source in container managed persistence (CMP)
 - Description**: New JDBC Datasource
 - Category**: (empty)
- Additional Properties**:
 - [Connection pool properties](#)
 - [WebSphere Application Server data source properties](#)
 - [Custom properties](#)
- Related Items**:
 - [JAAS - J2C authentication data](#)
- Data store helper class name**:
 - Select a data store helper class
 - Data store helper classes provided by WebSphere Application Server
 - Oracle11g data store helper (com.ibm.websphere.rsadapter.Oracle11gDataStoreHelper)
 - Specify a user-defined data store helper
 - Enter a package-qualified data store helper class name

18) Test the new created DataSource. JDBC >Data sources>select data source and click on Test connection

The screenshot shows the IBM WebSphere Administration Console interface. The main content area is titled 'Data sources' and contains the following information:

Data sources
 Use this page to edit the settings of a datasource that is associated with your selected JDBC provider. The datasource object supplies your application with connections for accessing the database. Learn more about this task in a [guided activity](#). A guided activity provides a list of task steps and more general information about the topic.

Scope: Cell=ofss220075Node08Cell, Node=ofss220075Node08, Server=server1

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, [see the scope settings help](#).

Node=ofss220075Node08, Server=server1

Preferences: New... Delete Test connection Manage state...

Select	Name	JNDI name	Scope	Provider	Description	Category
<input type="checkbox"/>	A1	A1	Node=ofss220075Node08,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	B1A1	B1A1	Node=ofss220075Node08,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	B1AP	B1AP	Node=ofss220075Node08,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	B2A1	B2A1	Node=ofss220075Node08,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	Default Datasource	DefaultDatasource	Node=ofss220075Node08,Server=server1	Derby JDBC Provider	Datasource for the WebSphere Default Application	

Total 5

The left sidebar shows the navigation tree with 'Data sources' selected under 'JDBC'. The right sidebar contains help and command assistance links.

Success screen will be displayed (shown underneath) stating the test connection operation for database at node is successful.

WebSphere, software

Welcome websphere Help | Logout IBM

Cell=OFSMUD6HP0732Node02Cell, Profile=AppSrv02

View: All tasks

Messages

The test connection operation for data source B1A1 on server server1 at node OFSMUD6HP0732Node02 was successful.

Data sources

Use this page to edit the settings of a datasource that is associated with your selected JDBC provider. The datasource object supplies your application with connections for accessing the database. Learn more about this task in a [guided activity](#). A guided activity provides a list of task steps and more general information about the topic.

Scope: Cell=OFSMUD6HP0732Node02Cell, Node=OFSMUD6HP0732Node02, Server=server1

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, [see the scope settings help](#).

Node=OFSMUD6HP0732Node02, Server=server1

Preferences

New... Delete Test connection Manage state...

Select	Name	JNDI name	Scope	Provider	Description	Category
You can administer the following resources:						
<input type="checkbox"/>	A1	A1	Node=OFSMUD6HP0732Node02,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	B1A1	B1A1	Node=OFSMUD6HP0732Node02,Server=server1	Oracle JDBC Driver	New JDBC Datasource	
<input type="checkbox"/>	Default Datasource	DefaultDatasource	Node=OFSMUD6HP0732Node02,Server=server1	Derby JDBC Provider	Datasource for the WebSphere Default Application	
Total 3						

Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)

Command Assistance
[View administrative scripting command for last action](#)

8. Integration of WebSphere MQ6 with WAS

Only those modules which require deployment on Message Queue e.g. the Bulk module and configuration of JMS on the server need to follow the setup steps mentioned below for integration of Web sphere MQ6 with Weblogic server.

Pre-requisites:

Integration of WebSphere MQ6 including creation of queue manager, queues etc must be complete as per the reference doc attached "**Oracle_FLEXCUBE_Direct_Banking_Websphere_MQ_6**".

Path of the directory containing following jars should be given in websphere variable - MQ_INSTALL_ROOT

- com.ibm.mq.jar
- com.ibm.mqjms.jar
- com.ibm.mq.jmqi.jar
- com.ibm.mq.commonservices.jar
- dhbcore.jar
- fscontext.jar
- Providerutil.jar

8.1 Create JMS Module

1) Click on “Resources→JMS Providers”

Select the scope from the dropdown as shown in below screenshot and then click on “WebSphere MQ messaging provider”

The screenshot shows the IBM WebSphere Administration Console interface. The left-hand navigation pane is expanded to 'Resources' > 'JMS' > 'JMS providers'. The main content area displays the configuration for 'JMS providers'. A dropdown menu for 'Scope' is open, showing the selected option: 'Node=OFSMUD6HP0732Node02, Server=server1'. Below this, there is a table of resources:

Select	Name	Description	Scope
	Default messaging provider	Default messaging provider	Node=OFSMUD6HP0732Node02,Server=server1
	WebSphere MQ messaging provider	WebSphere MQ messaging provider	Node=OFSMUD6HP0732Node02,Server=server1

The 'WebSphere MQ messaging provider' row is circled in red. The table footer indicates 'Total 2'.

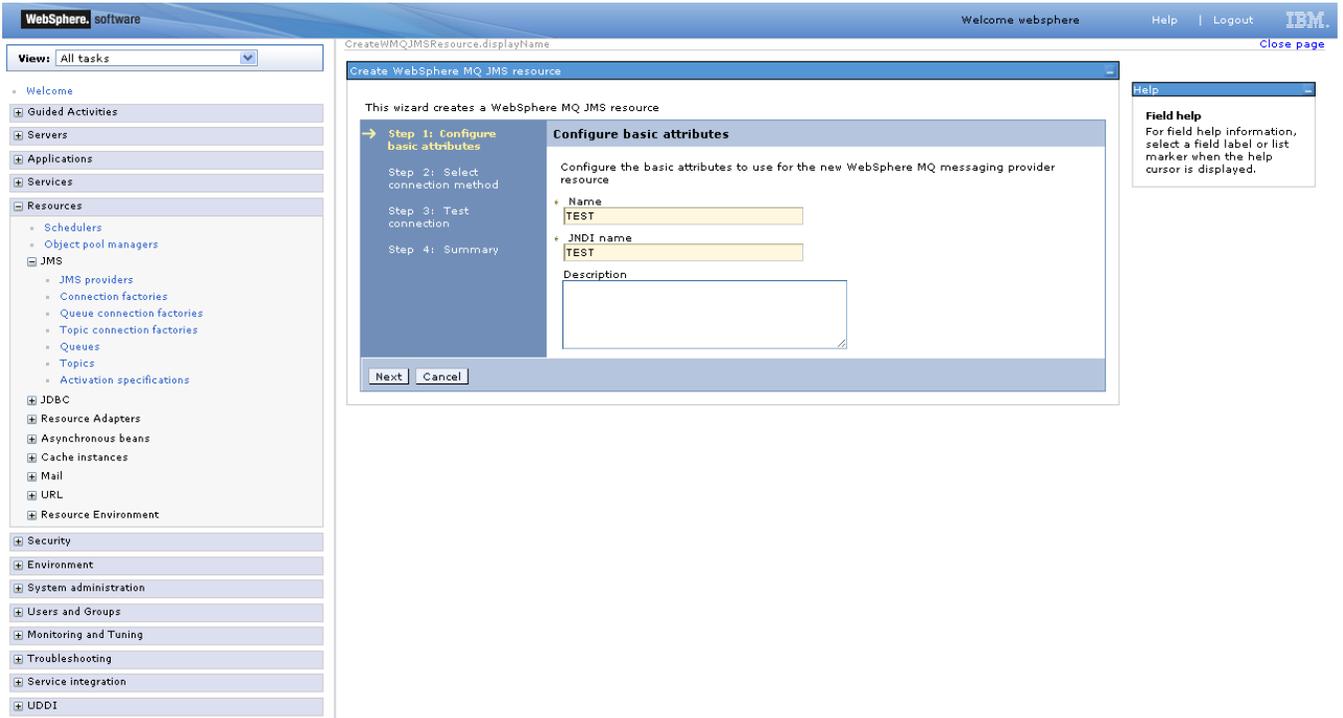
2) Click on “Queue connection factories”

The screenshot shows the IBM WebSphere Administration Console interface. The left-hand navigation pane is expanded to 'Resources' > 'JMS' > 'Queue connection factories'. The main content area displays the configuration for a 'WebSphere MQ messaging provider'. Under the 'Additional Properties' section, the 'Queue connection factories' link is highlighted with a red circle. Other visible links include 'Connection factories', 'Topic connection factories', 'Queues', 'Topics', 'Activation specifications', and 'Resource adapter properties'. The 'General Properties' section shows fields for 'Scope', 'Name', 'Description', and 'Native library path'. A 'Disable WebSphere MQ' checkbox is also present.

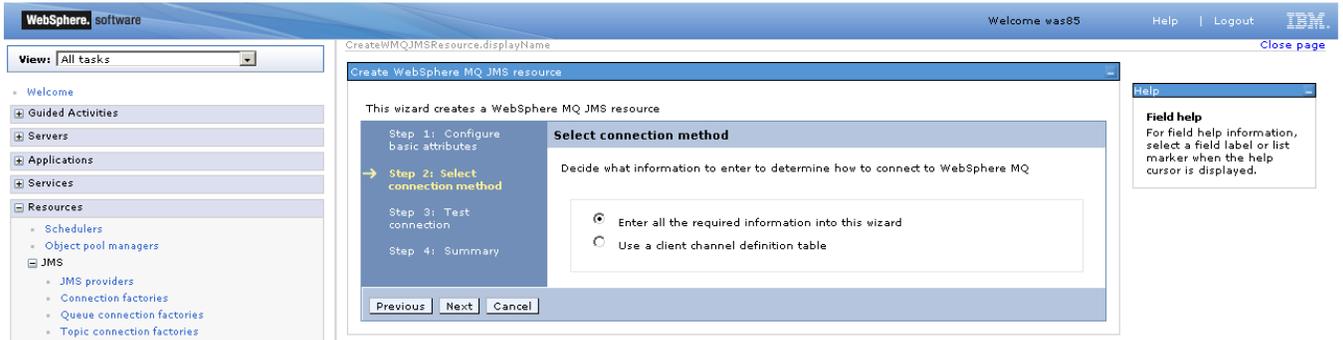
3) On “Queue connection factories screen” click on new.

The screenshot shows the 'Queue connection factories' screen in the IBM WebSphere Administration Console. The left-hand navigation pane is expanded to 'Resources' > 'JMS' > 'Queue connection factories'. The main content area displays the 'Preferences' section, which includes a 'New' button circled in red. Below the buttons is a table with columns for 'Select', 'Name', 'JNDI name', 'Provider', 'Description', and 'Scope'. The table currently shows 'None' and a 'Total 0' at the bottom.

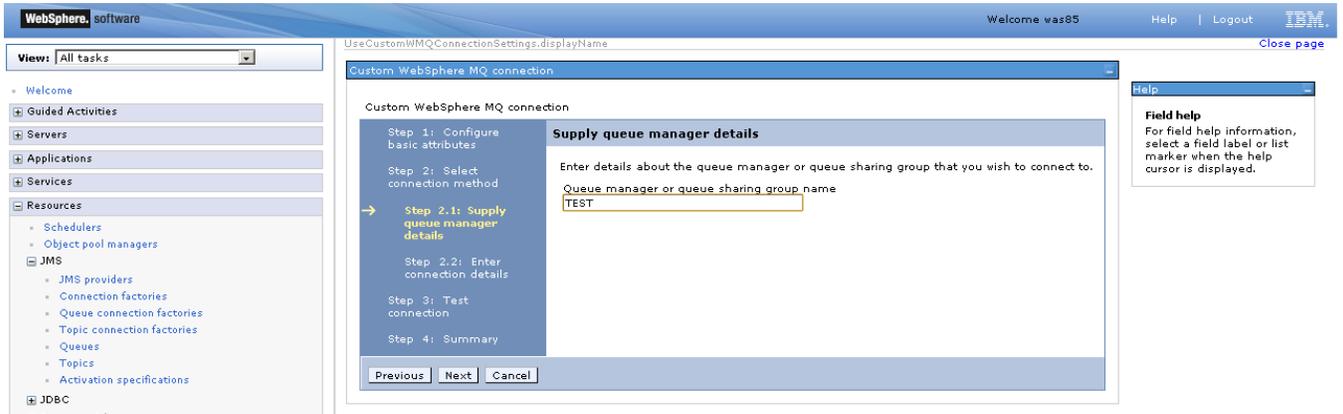
4) Enter the name of the Connection factory and JNDI name and click next



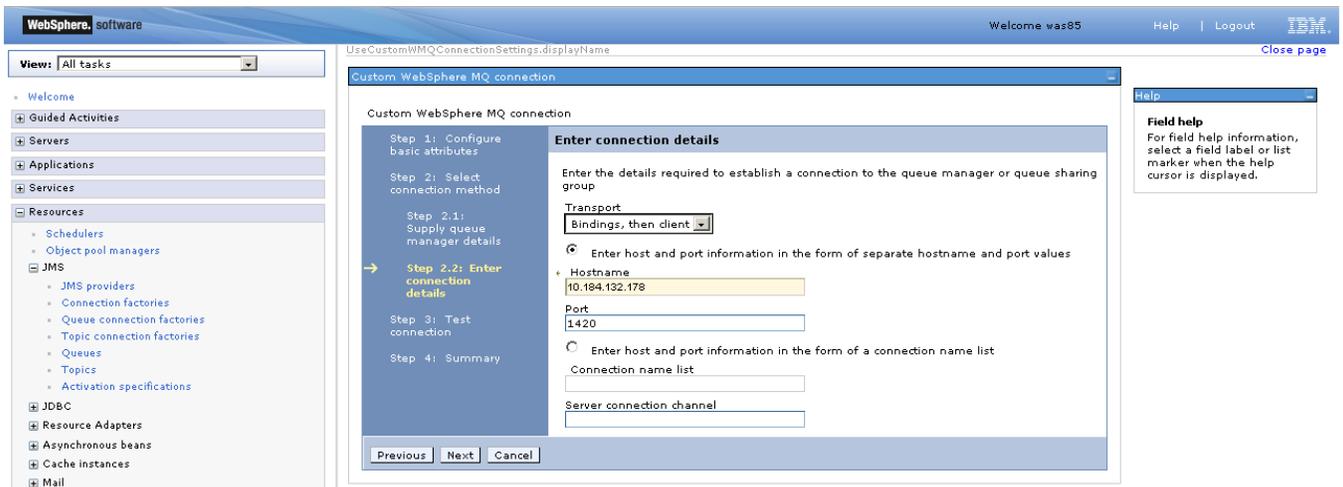
5) On "Select Connection method" screen, select *Enter all the required information into this wizard* option and click next



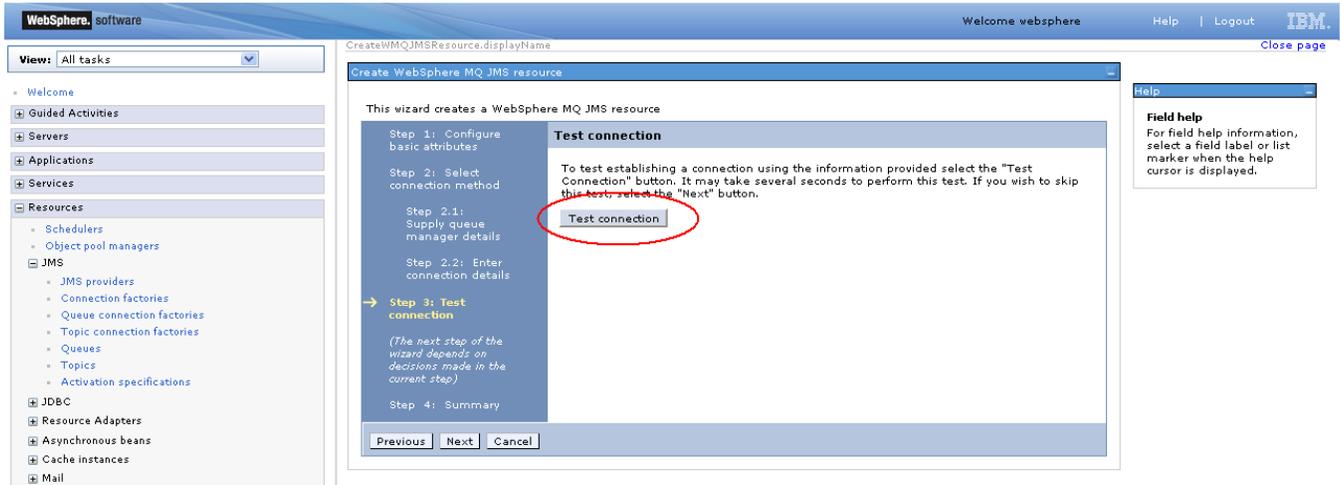
- 6) On “Supply queue manager details” screen enter the name of queue manager. Please note that this name must be same as queue manager name on websphere MQ. Now click next



- 7) On “Enter connection details” screen enter the hostname or IP of the MQ host and port no and click next



8) On 'Test connection' screen click on test connection button



9) If everything entered on the previous screens is correct then it will display success message as shown below otherwise it will give an error.



10) On summary screen click finish



11) On the screen shown below click save.

Cell=ofss220075Node08Cell, Profile=AppSrv09

Messages

Changes have been made to your local configuration. You can:

- Save directly** to the master configuration.
- Review** changes before saving or discarding.

The server may need to be restarted for these changes to take effect.

JMS providers > WebSphere MQ messaging provider > Queue connection factories

A queue connection factory is used to create connections to the associated JMS provider of the JMS queue destinations, for point-to-point messaging.

Preferences

New Delete

Select	Name	JNDI name	Provider	Description	Scope
<input type="checkbox"/>	TEST	TEST	WebSphere MQ messaging provider	TEST	Node=ofss220075Node08,Server=server1
<input type="checkbox"/>	test	test	WebSphere MQ messaging provider	test	Node=ofss220075Node08,Server=server1
Total 2					

12) Queue connection factory is now created and will be shown in the list as shown in the screenshot below:

Cell=ofss220075Node08Cell, Profile=AppSrv09

JMS providers > WebSphere MQ messaging provider > Queue connection factories

A queue connection factory is used to create connections to the associated JMS provider of the JMS queue destinations, for point-to-point messaging.

Preferences

New Delete

Select	Name	JNDI name	Provider	Description	Scope
<input type="checkbox"/>	TEST	TEST	WebSphere MQ messaging provider	TEST	Node=ofss220075Node08,Server=server1
<input type="checkbox"/>	test	test	WebSphere MQ messaging provider	test	Node=ofss220075Node08,Server=server1
<input type="checkbox"/>			WebSphere MQ messaging provider		Node=ofss220075Node08,Server=server1
Total 2					

8.2 Creating Destinations

1. Click on “Resources→JMS Providers”

Select the scope from the dropdown as shown in below screenshot and then click on “WebSphere MQ messaging provider”

The screenshot shows the WebSphere Administration Console interface. On the left is a navigation tree with 'Resources' expanded to 'JMS' and 'JMS providers' selected. The main content area displays the 'JMS providers' configuration page. At the top, the scope is set to 'Node=OFSMUD6HP0732Node02, Server=server1', which is circled in red. Below this, a table lists the available providers:

Select	Name	Description	Scope
<input type="checkbox"/>	Default messaging provider	Default messaging provider	Node=OFSMUD6HP0732Node02,Server=server1
<input checked="" type="checkbox"/>	WebSphere MQ messaging provider	WebSphere MQ messaging provider	Node=OFSMUD6HP0732Node02,Server=server1

The 'WebSphere MQ messaging provider' row is circled in red. A 'Help' sidebar on the right provides field and page help information.

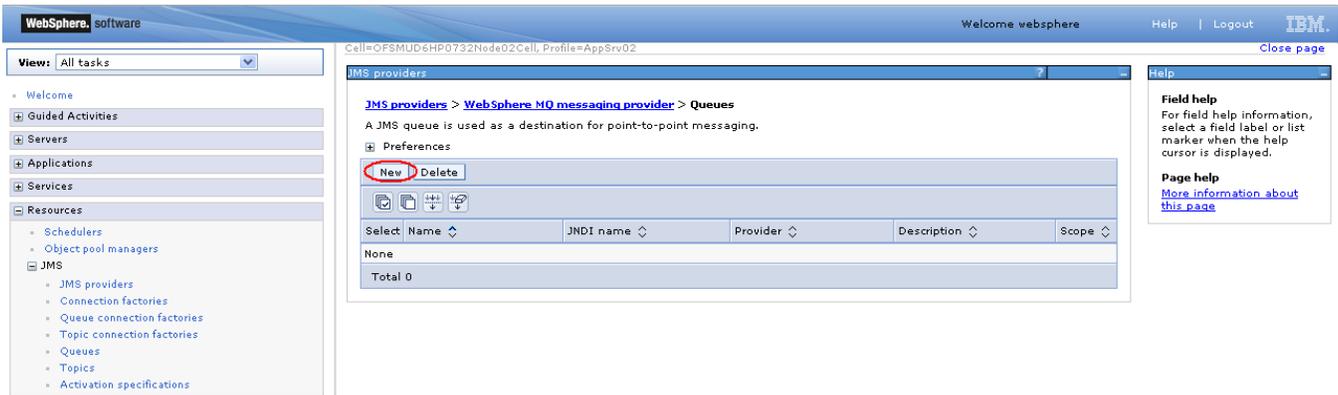
2. Click on “Queues”

The screenshot shows the configuration page for the 'WebSphere MQ messaging provider'. The 'General Properties' section includes:

- Scope: Node=OFSMUD6HP0732Node02,Server=server1
- Name: WebSphere MQ messaging provider
- Description: WebSphere MQ messaging provider
- Native library path: (empty text box)
- Disable WebSphere MQ

The 'Additional Properties' section on the right lists various configuration options, with 'Queues' circled in red. An 'OK' button is located at the bottom of the configuration area. A 'Help' sidebar on the right provides field and page help information.

3. Click on New

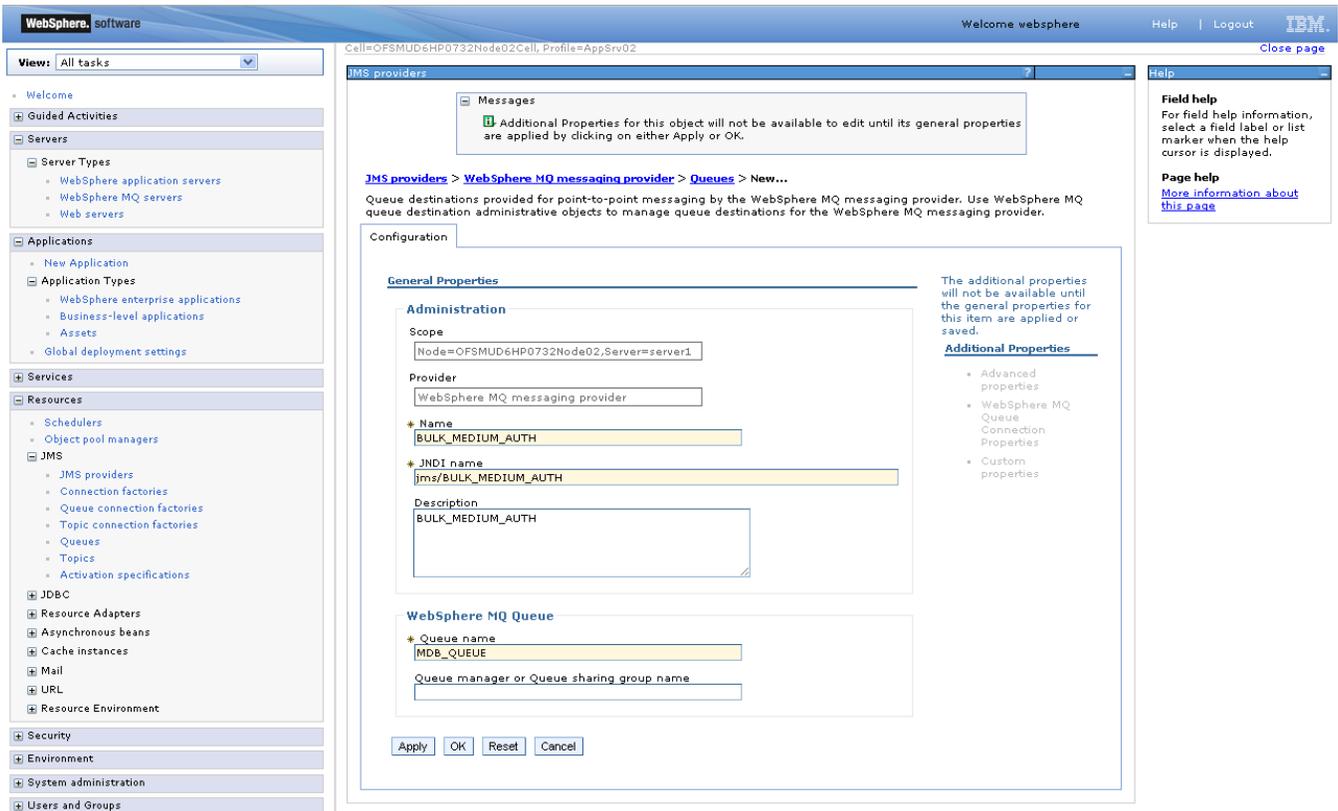


4. Specify following details and save settings.

NAME: `<request_queue_name>`

JNDI NAME: `<request_queue_JNDI_name>`

WebSphere MQ Queue Name: `<base_queue_name>`



5. Click on apply

6. Click on “Websphere MQ queue connection properties” as shown in the screenshot below.

The screenshot shows the IBM WebSphere MQ configuration console. The left-hand navigation pane is expanded to 'Resources' > 'JMS' > 'JMS providers' > 'WebSphere MQ messaging provider' > 'Queues' > 'BULK_MEDIUM_AUTH'. The main content area displays the configuration for this queue. Under the 'Additional Properties' section, the 'WebSphere MQ Queue Connection Properties' link is circled in red. Other visible fields include 'Name' (BULK_MEDIUM_AUTH), 'JNDI name' (jmsz/BULK_MEDIUM_AUTH), and 'Queue name' (MDB_QUEUE).

7. Enter queue manager hostname, queue manager port number and server connection channel name and click OK.

This screenshot shows the 'WebSphere MQ connection properties' configuration page for the 'BULK_MEDIUM_AUTH' queue. The 'Queue manager host' field contains '10.184.132.178', the 'Queue manager port' is '1420', and the 'Server connection channel name' is 'SYSTEM.DEF.SVRCONN'. The 'User ID' and 'Password' fields are currently empty. The 'Apply' button is highlighted.

8. Again click OK on the screen shown below.

The screenshot shows the IBM WebSphere Administration Console interface. On the left is a navigation tree with categories like Servers, Applications, Services, and Resources. The main content area is titled 'JMS providers' and shows a configuration page for a queue named 'BULK_MEDIUM_AUTH'. A message box at the top states: 'Changes have been made to your local configuration. You can: Save directly to the master configuration. Review changes before saving or discarding. The server may need to be restarted for these changes to take effect.' The configuration form has sections for 'Administration' and 'WebSphere MQ Queue'. The 'Administration' section includes fields for Name (BULK_MEDIUM_AUTH), JNDI name (jms/BULK_MEDIUM_AUTH), and Description (BULK_MEDIUM_AUTH). The 'WebSphere MQ Queue' section includes fields for Queue name (MDB_QUEUE) and Queue manager or Queue sharing group name. At the bottom of the form are buttons for Apply, OK, Reset, and Cancel. A 'Help' panel on the right provides field and page help information.

9. Click on save as shown in the below screen.

This screenshot shows the same configuration page as above, but with a 'Preferences' section visible below the configuration form. A red circle highlights the 'Save directly' button in the 'Messages' warning box. The 'Preferences' section includes a table with the following data:

Select	Name	JNDI name	Provider	Description	Scope
<input type="checkbox"/>	BULK_MEDIUM_AUTH	jms/BULK_MEDIUM_AUTH	WebSphere MQ messaging provider	BULK_MEDIUM_AUTH	Node=OFSMUD6HP0732Node02,Server=server1
Total 1					

The 'Messages' warning box also contains the text: 'A JMS queue is used as a destination for point-to-point messaging.' The 'Help' panel on the right now includes 'Command Assistance' information.

10. Repeat the above steps for response queue with following details:

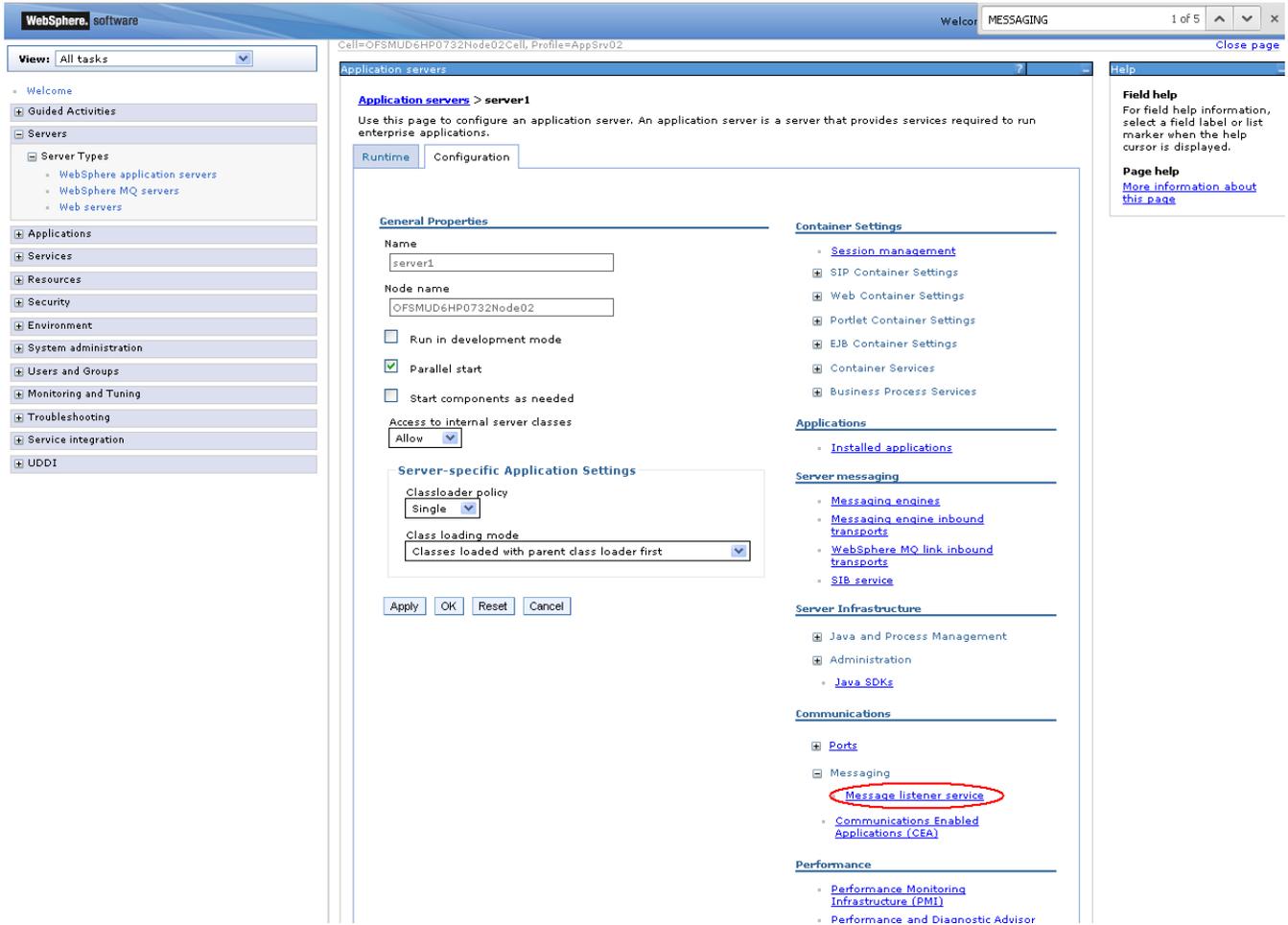
NAME: <*response_queue_name*>

JNDI NAME: < *response_queue_JNDI_name*>

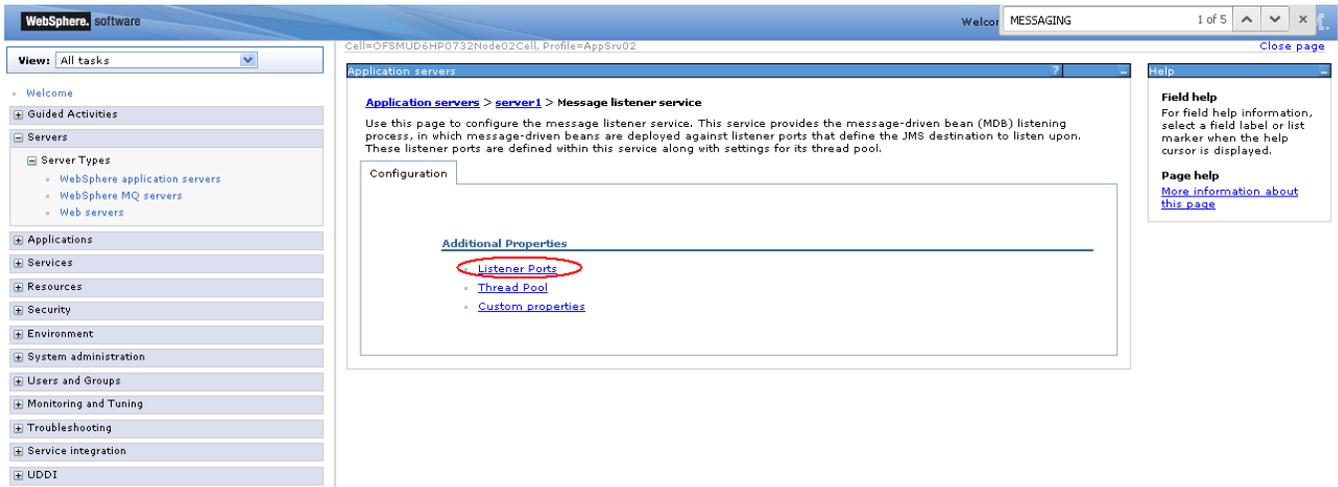
BASE QUEUE NAME: <*base_queue_name*>

8.3 Creation of Listeners

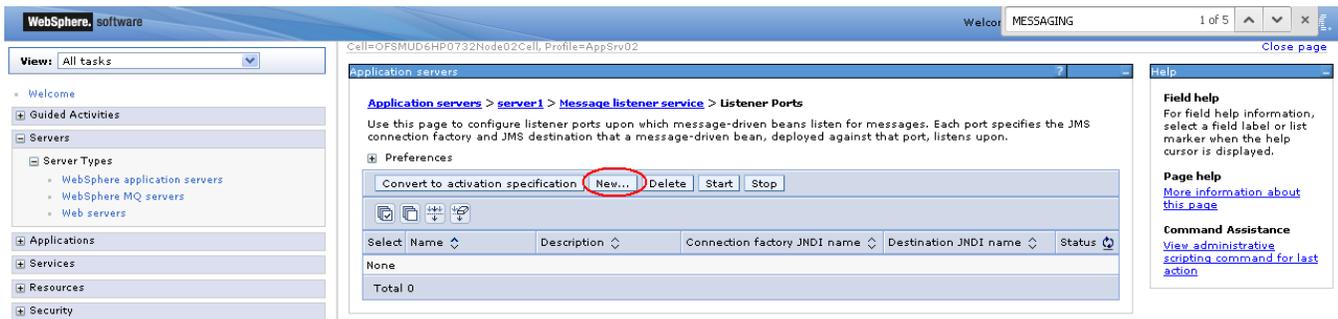
- a) “ Click on Server→ Websphere application Server → Server name → Click on Messaging > Message Listener Service”



b) Click on Listener ports.



c) Click "New" as shown in the screen below.

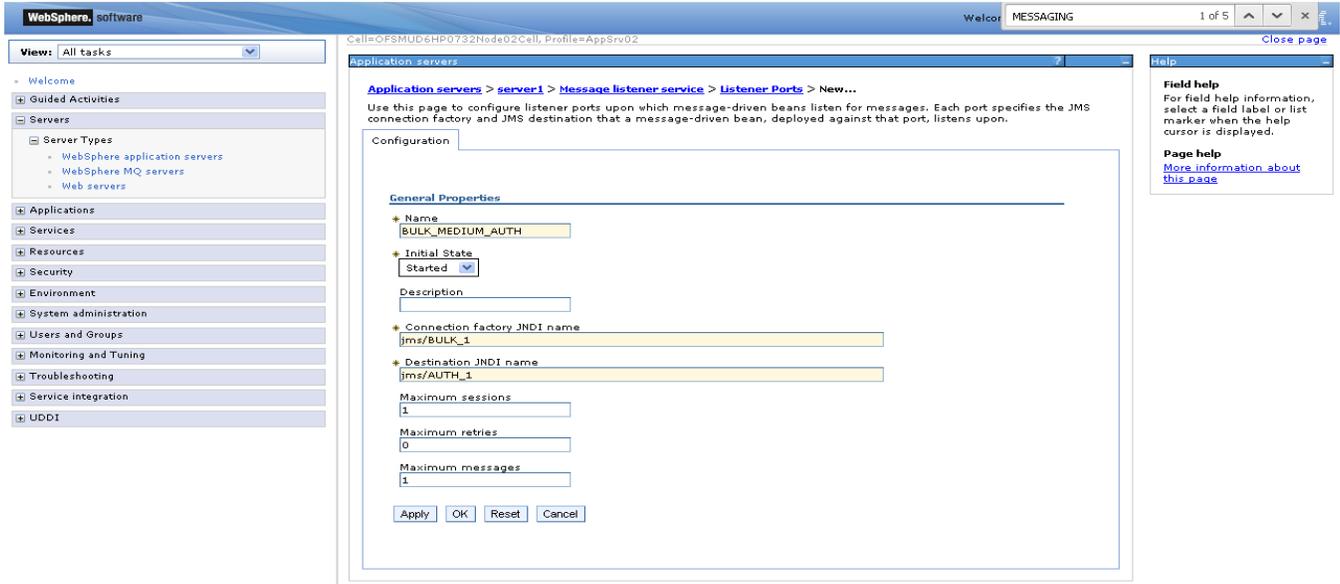


d) Enter details as mentioned below table

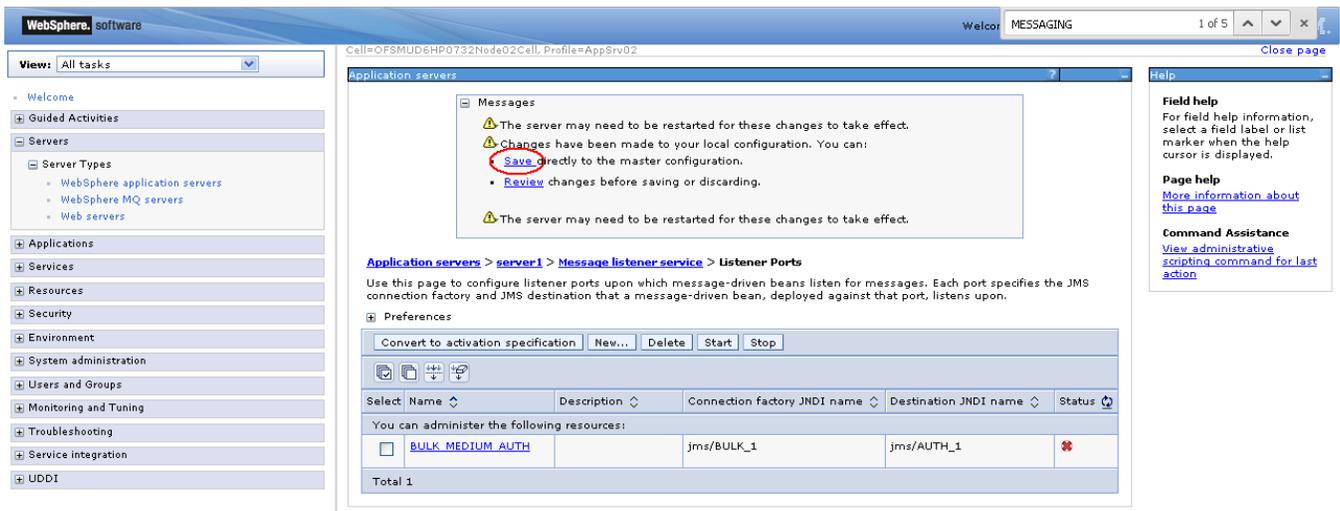
Connection factory JNDI: < *connection_factory_JNDI_name* >

Destination JNDI name: <response_queue_JNDI_name>

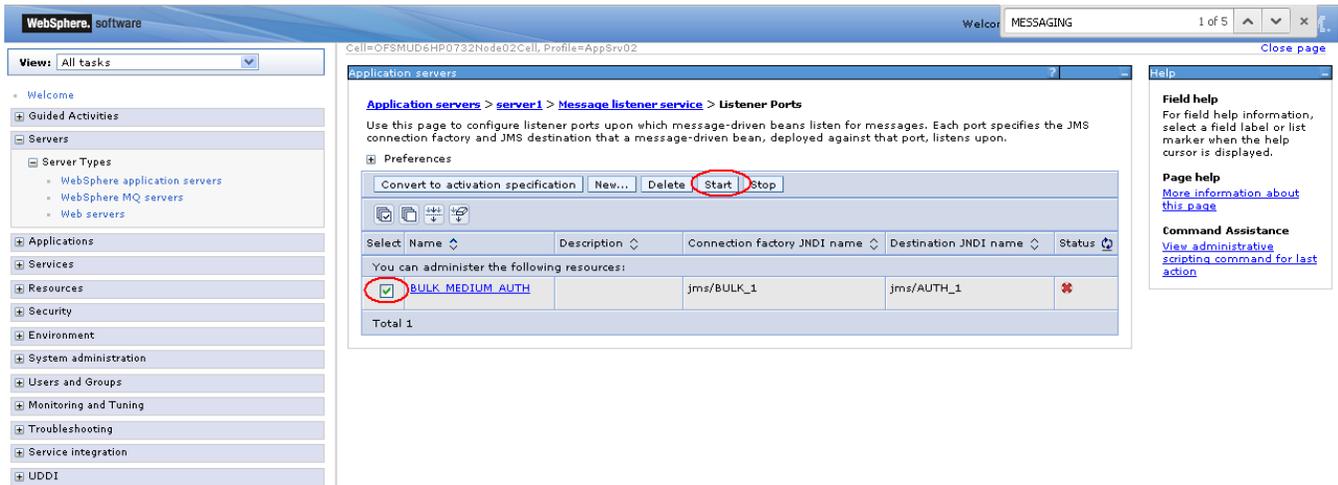
After entering all required information click OK.



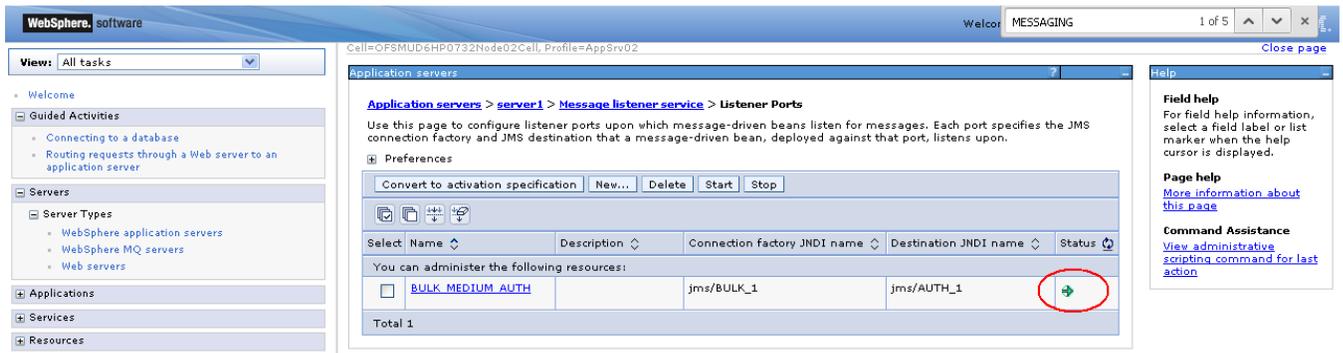
e) Now click on save as shown in the below screen.



f) Now select the listener and click on start as shown in the screenshot below.



g) If the listener started successfully then the status of the listener will turn green as shown in the screenshot below and if it is not started it will display the error and the status will remain red.



Third Party Setup

For third party Listeners, destination queues and connection factories should be created separately with respective names.

Connection Factory: TPCF

Request Queue name: THIRDPARTYINQ

Response Queue name: THIRDPARTYOUTQ

Two listeners should be created for In and Out Queue.

Bulk Setup

For Bulk file upload, following destination queues, connection factory and message listeners have to be created:

Connection factory JNDI name (as in btqueuesetup table): e.g. jms/BULK_1

Following queues have to be configured (JNDI name as in btqueuesetup table) for each step:

Name	JNDI Name	Base queue name
AUTH	jms/AUTH_1	AUTH
AUTHREJECT	jms/AUTHREJECT_1	AUTHREJECT
COMPLETE	jms/COMPLETE_1	COMPLETE
DECRYPT	jms/DECRYPT_1	DECRYPT
PREPROCESS	jms/PREPROCESS_1	PREPROCESS
PROCESS	jms/PROCESS_1	PROCESS
RESPONSE	jms/RESPONSE_1	RESPONSE
UPLOAD	jms/UPLOAD_1	UPLOAD

For each destination, there will be a message listener:

Name	Connection factory JNDI name	Destination JNDI Name
BULK_MED_AUTH	jms/BULK_1	jms/AUTH_1
BULK_MED_AUTHREJ	jms/BULK_1	jms/AUTHREJECT_1
BULK_MED_COMPLETE	jms/BULK_1	jms/COMPLETE_1
BULK_MED_DECRYPT	jms/BULK_1	jms/DECRYPT_1
BULK_MED_PREPROCESS	jms/BULK_1	jms/PREPROCESS_1
BULK_MED_PROCESS	jms/BULK_1	jms/PROCESS_1
BULK_MED_RESPONSE	jms/BULK_1	jms/RESPONSE_1
BULK_MED_UPLOAD	jms/BULK_1	jms/UPLOAD_1

Update following properties in MSTPROPERTIES table of FCDB.

- FCAT.SEND.FACTORY.LOOKUP.NAME=<connection_factory_JNDI_name>
- FCAT.SEND.QUEUE.LOOKUP.NAME=<request_queue_JNDI_name>
- FCAT.SEND.QUEUE.NAME=<request_queue_JNDI_name>
- FCAT.SEND.PORT.NO=<Queue_Manager_port>
- FCAT.SEND.SERVER.NAME=< Queue_Manager_server_ip>
- FCAT.SEND.QMANAGER.NAME=<Queue_Manager_Name>
- CLONE.Q.CLASS.NAME=com.iflex.fcat.queue.JFQaIMQJMS
- FCAT.SEND.CONTEXT.FACTORY=com.ibm.websphere.naming.WsnInitialContextFactory
- FCAT.SEND.PROVIDER.URL=iiop://< FCDB_SERVER_IP>:<FCDBSERVER_BOOTSTRAP_PORT>

8.4 Deployments on application Server

Deploy the following jars on application server:

ClonedQueueReceiverMDB_jar: to listen response queue.

ThirdPartyReceiverMDB_jar: to listen third party response queue.

TPT_sim.jar

Bulk Deployables:

- ✓ BulkEventHandlerEJB.jar
- ✓ StepName_MDB.jar
 - StepName is Log queue name as in btqueuesetup table.
 - e.g UPLOAD_MDB.jar

9. DB Creation

For completing the DB setup kindly refer to the document –
“Oracle_FLEXCUBE_Direct_Banking_Database_Setup“