

REST API Services Deployment in WebSphere  
Oracle FLEXCUBE Investor Servicing  
Release 12.4.0.8.5  
[January] [2019]



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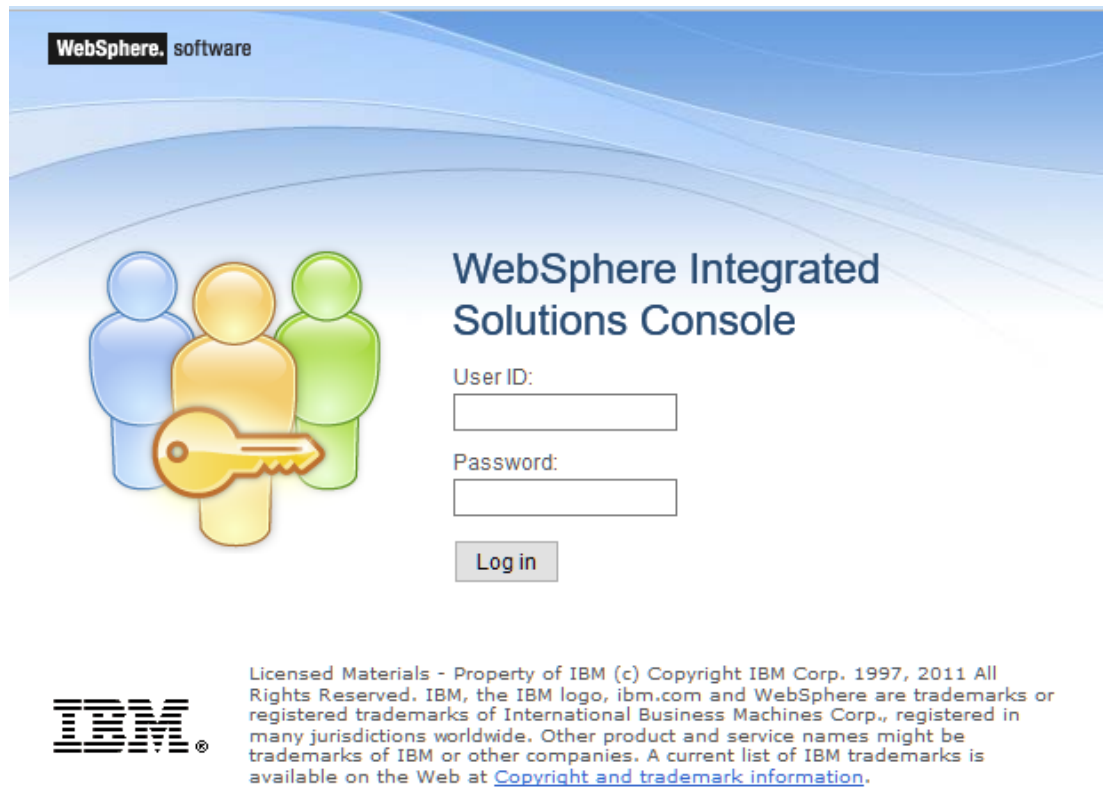
# 1. Oracle FLEXCUBE Investor Servicing Solutions

This document describes step to install REST Services into WebSphere application server in full.

## 1.1 REST API Services Full Deployment

Before deploying the EAR, please create a Datasource **jdbc/FCJDevDSSMS** that will be referring to the API DB. More details of creating the data source can be found in the Resource Creation document

Launch WebSphere console following screen will be displayed.



The image shows the WebSphere Integrated Solutions Console login screen. At the top left, it says "WebSphere. software". In the center, there is an illustration of three stylized human figures (blue, orange, and green) with a large yellow key in front of them. To the right of the illustration, the text "WebSphere Integrated Solutions Console" is displayed. Below this text are two input fields: "User ID:" and "Password:". Below the password field is a "Log in" button. At the bottom left is the IBM logo. At the bottom right, there is a block of small text: "Licensed Materials - Property of IBM (c) Copyright IBM Corp. 1997, 2011 All Rights Reserved. IBM, the IBM logo, ibm.com and WebSphere are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at [Copyright and trademark information](#)."

**UserID:** Enter user name password

Click on 'Log in' and the following screen is displayed:

The screenshot shows the WebSphere Integrated Solutions Console interface. The top navigation bar includes the WebSphere logo, the text 'software', the user 'Welcome was9005', and links for 'Help' and 'Logout'. The left sidebar contains a 'View:' dropdown set to 'All tasks' and a list of expandable menu items: 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 'Welcome' and contains a paragraph of introductory text. Below the text is a table with two columns: 'Suite Name' and 'Version'. The table contains one entry: 'WebSphere Application Server' with version '9.0.0.5'. On the right side, there is a 'About this Integrated Solutions Console' panel showing version information: 'Integrated Solutions Console, 9.0.0.5', 'Build Number: cf051738.01', 'Build Date: 9/18/17', and a copyright notice for IBM.

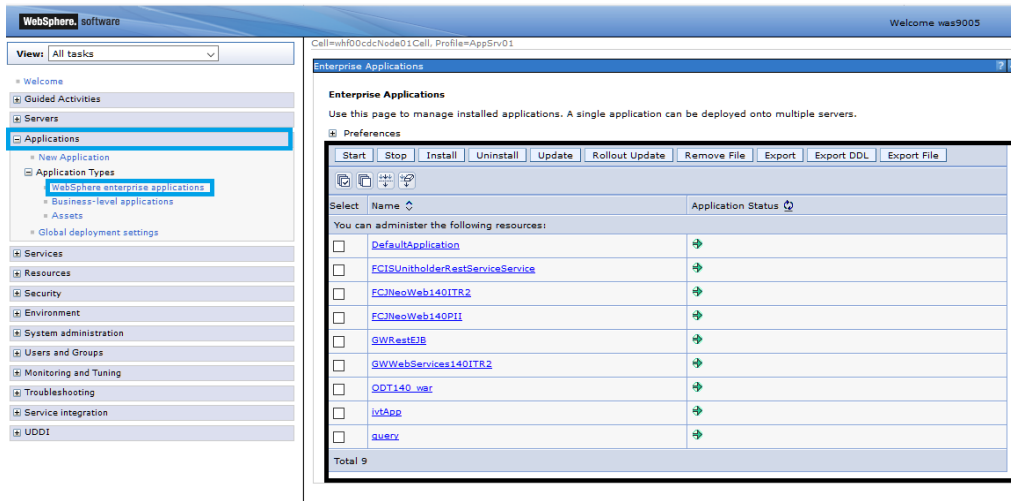
Suite Name	Version
<a href="#">WebSphere Application Server</a>	9.0.0.5

Expand Applications from the left panel and the following screen will be displayed.

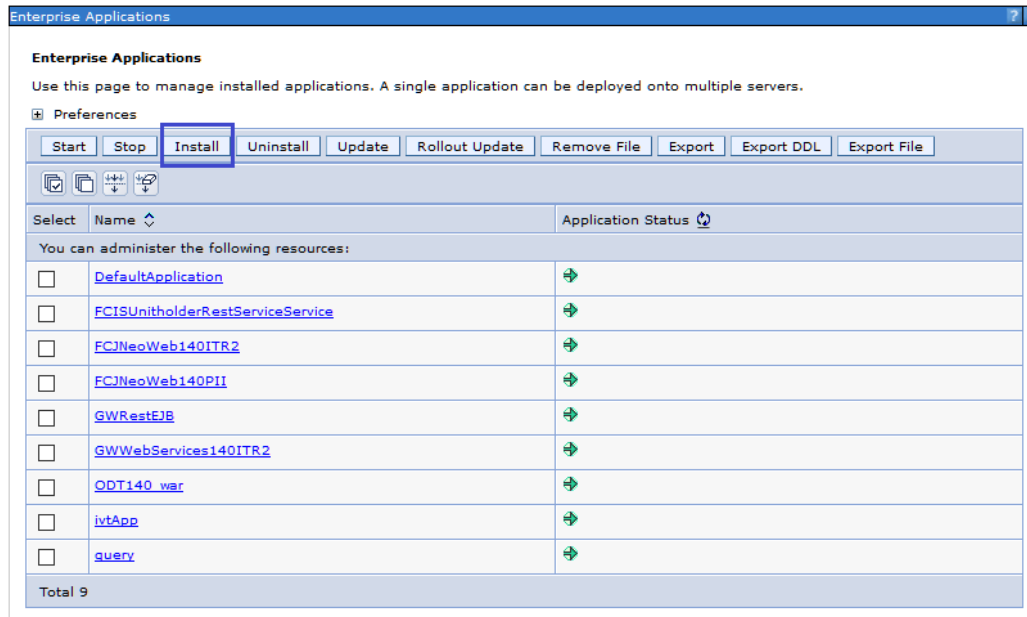
This screenshot shows the same WebSphere Integrated Solutions Console interface as the previous one, but with the 'Applications' menu item expanded. The 'Applications' menu is now open, showing sub-items: 'New Application', 'Application Types' (which is further expanded to show 'WebSphere enterprise applications', 'Business-level applications', and 'Assets'), and 'Global deployment settings'. The 'WebSphere enterprise applications' sub-item is highlighted with a blue box. The rest of the interface, including the top bar, other sidebar items, and the main content area with the 'Welcome' message and the table of product suites, remains the same.

Suite Name	Version
<a href="#">WebSphere Application Server</a>	9.0.0.5

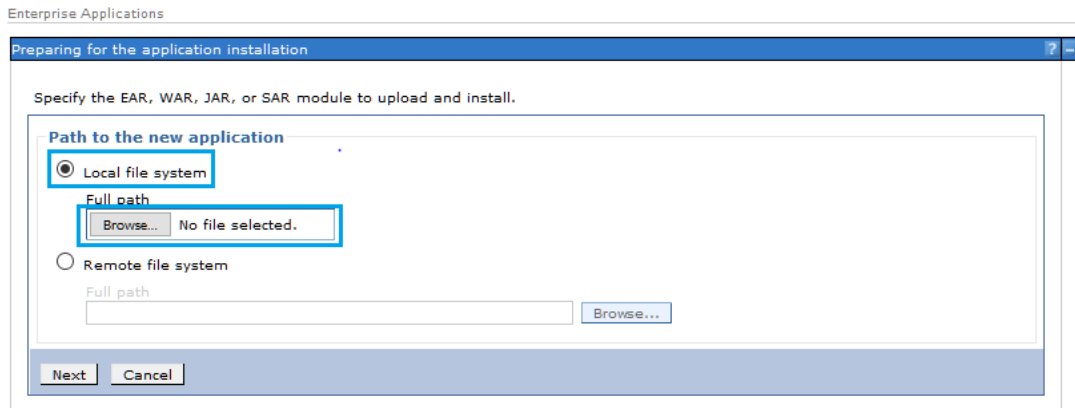
Expand Application Types >> WebSphere application type from the left panel and the following screen will be displayed.



Click on Install and the following screen will be displayed. Click Browse to select required rest EAR files.

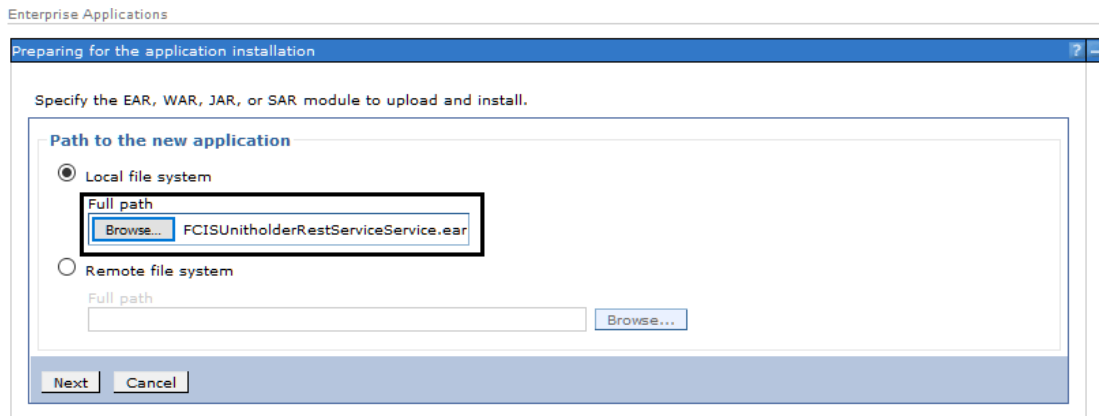


The following screen is displayed:



## Choose File

Browse and select the EAR file.



Click Next and the following screen will be displayed.

Enterprise Applications

Preparing for the application installation

Specify the EAR, WAR, JAR, or SAR module to upload and install.

**Path to the new application**

Local file system

Full path

Browse... FCISUnitholderRestServiceService.ear

Remote file system

Full path

Browse...

Next Cancel

Click Next and the following screen will be displayed.

Enterprise Applications

Preparing for the application installation

How do you want to install the application?

Fast Path - Prompt only when additional information is required.

Detailed - Show all installation options and parameters.

Choose to generate default bindings and mappings

Previous Next Cancel

Click Next and the following screen will be displayed.

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 virtual hosts for Web modules

Step 4: Metadata for modules

Step 5: 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  
FCISUnitholderRestServiceServ
- 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  
warn
- 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

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

\*.dll=755\*.so=755\*.\*\a=755\*.\*\sl=755

Application Build ID  
Unknown

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

Business level application name  
Create New BLA

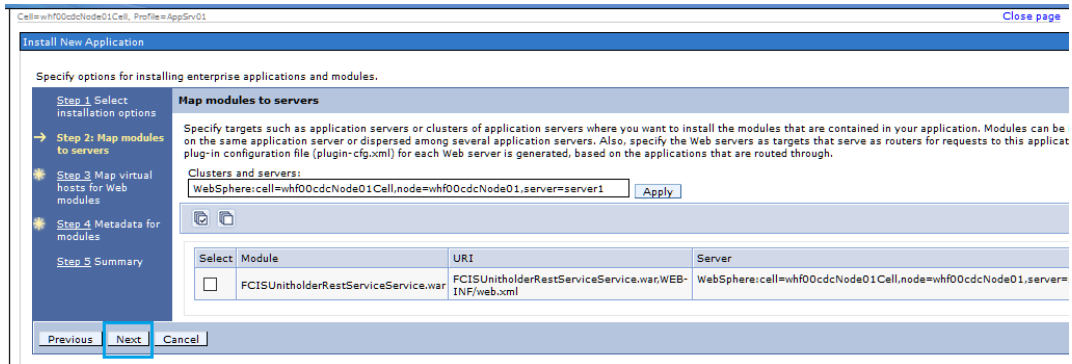
Asynchronous Request Dispatch Type  
Disabled

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

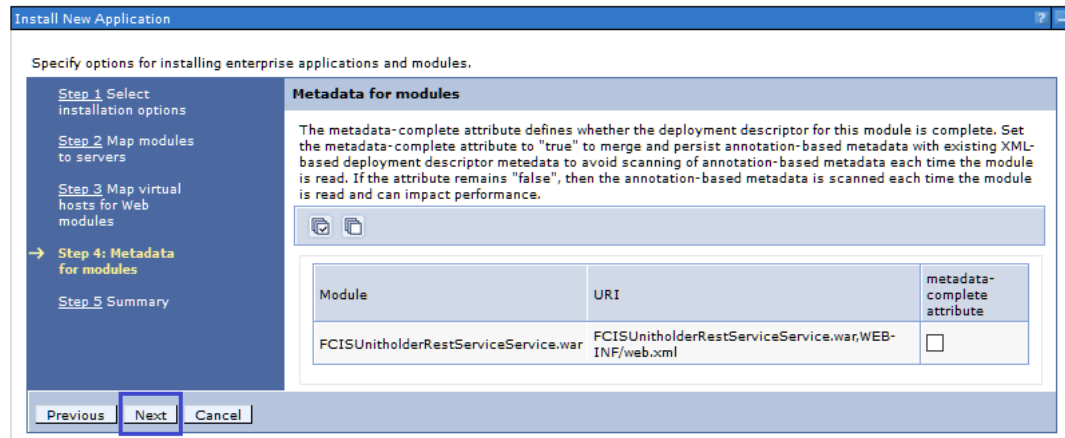
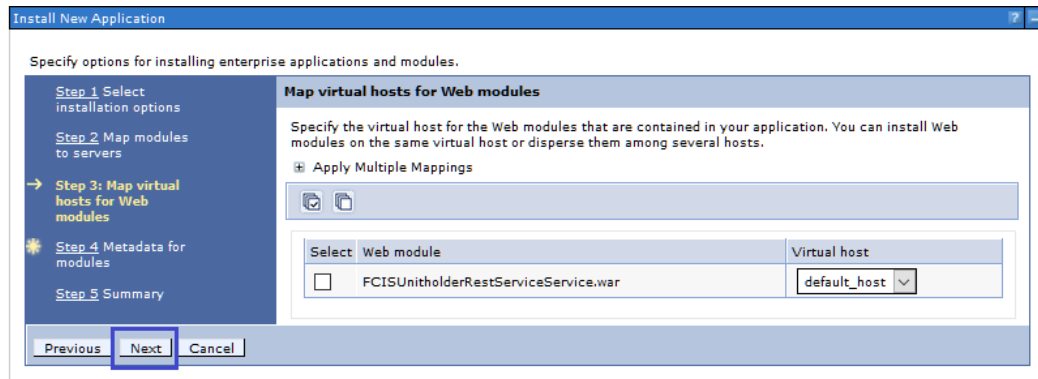
Next Cancel



Click Next and the following screen will be displayed.



Click Next and the following screen will be displayed.



Click Finish and the following screen will be displayed and Save the EAR deployed.

ADMA50161: Installation of FCISUnitholderRestServiceService started.

ADMA50671: Resource validation for application FCISUnitholderRestServiceService completed successfully.

ADMA50581: Application and module versions are validated with versions of deployment targets.

ADMA50051: The application FCISUnitholderRestServiceService is configured in the WebSphere Application Server repository.

ADMA50051: The application FCISUnitholderRestServiceService is configured in the WebSphere Application Server repository.

ADMA50811: The bootstrap address for client module is configured in the WebSphere Application Server repository.

ADMA50531: The library references for the installed optional package are created.

ADMA50051: The application FCISUnitholderRestServiceService is configured in the WebSphere Application Server repository.

ADMA50011: The application binaries are saved in /scratch/software/WebSphere/AppServer/profiles/AppSrv01/wstemp/1123733957/workspace/cells/whf00odcNo/FCISUnitholderRestServiceService.ear/FCISUnitholderRestServiceService.ear

ADMA50051: The application FCISUnitholderRestServiceService is configured in the WebSphere Application Server repository.

SECJ04001: Successfully updated the application FCISUnitholderRestServiceService with the appContextIDForSecurity information.

ADMA50051: The application FCISUnitholderRestServiceService is configured in the WebSphere Application Server repository.

ADMA50051: The application FCISUnitholderRestServiceService is configured in the WebSphere Application Server repository.

ADMA51131: Activation plan created successfully.

ADMA50111: The cleanup of the temp directory for application FCISUnitholderRestServiceService is complete.

ADMA50131: Application FCISUnitholderRestServiceService installed successfully.

Application FCISUnitholderRestServiceService installed successfully.

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

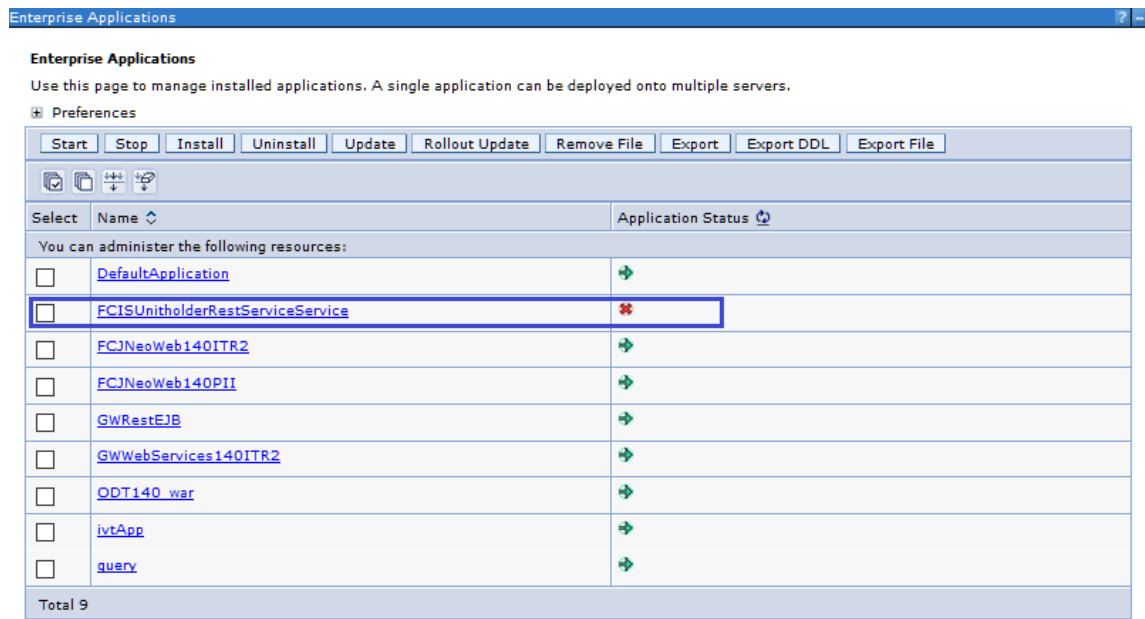
Changes have been made to your local configuration. You can:

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

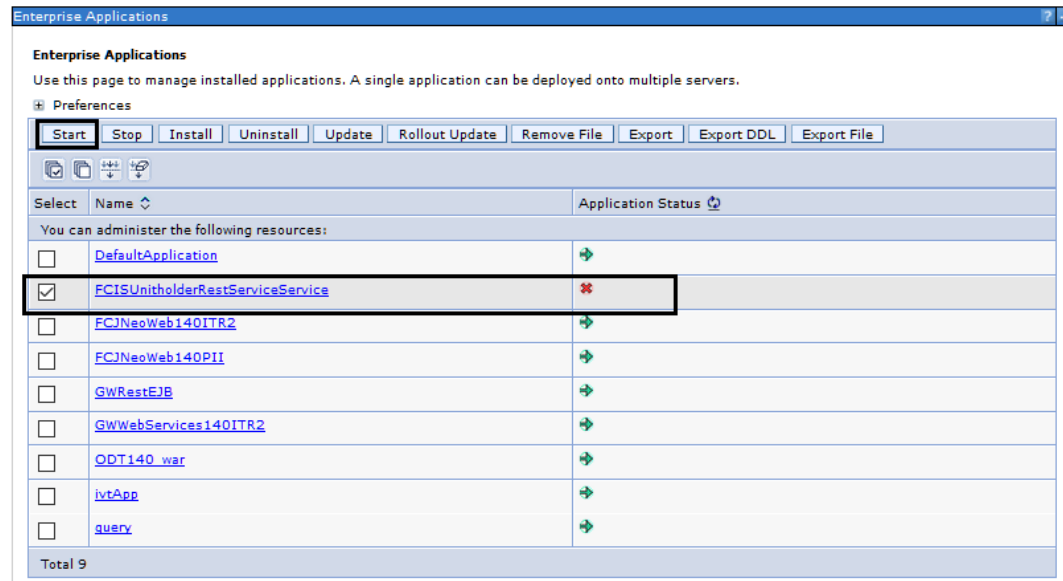
To work with installed applications, click the "Manage Applications" link.

[Manage Applications](#)

Once the EAR is deployed click on WebSphere enterprise applications following screen will be displayed where the deployed EAR can be found in resources column.



Check the application/EAR and click on Start the following screen will be displayed and your application will be in running.



The following screen is displayed:

The screenshot shows the 'Enterprise Applications' management interface. At the top, a 'Messages' box contains a green notification: 'Application FCISUnitholderRestServiceService on server server1 and node whf00cdcNode01 started successfully. The collection may need to be refreshed to show the current status.' Below this, the 'Enterprise Applications' section provides instructions and a 'Preferences' button. A toolbar contains buttons for 'Start', 'Stop', 'Install', 'Uninstall', 'Update', 'Rollout Update', 'Remove File', 'Export', 'Export DDL', and 'Export File'. A table lists the following resources:

Select	Name	Application Status
<input type="checkbox"/>	<a href="#">DefaultApplication</a>	➔
<input type="checkbox"/>	<a href="#">FCISUnitholderRestServiceService</a>	➔
<input type="checkbox"/>	<a href="#">FCJNeoWeb140ITR2</a>	➔
<input type="checkbox"/>	<a href="#">FCJNeoWeb140PII</a>	➔
<input type="checkbox"/>	<a href="#">GWRestEJB</a>	➔
<input type="checkbox"/>	<a href="#">GWWebServices140ITR2</a>	➔
<input type="checkbox"/>	<a href="#">ODT140_war</a>	➔
<input type="checkbox"/>	<a href="#">ivtApp</a>	➔
<input type="checkbox"/>	<a href="#">query</a>	➔

Total 9

Note: Above steps are same for GWRESTEJB also.

After installation click on the service (This step is done to generate swagger.json)

Select	Name	Application Status
<input type="checkbox"/>	<a href="#">DefaultApplication</a>	+
<input type="checkbox"/>	<a href="#">FCISUnitholderRestServiceService</a>	+
<input type="checkbox"/>	<a href="#">GWRestEJB</a>	+
<input type="checkbox"/>	<a href="#">ivtApp</a>	+
<input type="checkbox"/>	<a href="#">query</a>	+

Total 5

Click On Class loading and update detection

Enterprise Applications > **FCISUnitholderRestServiceService**

Use this page to configure an enterprise application. Click the links to access pages for further configuring of the application or its modules.

Configuration

**General Properties**

Name: FCISUnitholderRestServiceService

Application reference validation: Issue warnings

**Detail Properties**

- Target specific application status
- Startup behavior
- Application binaries
- Class loading and update detection**
- Request dispatcher properties
- JASPI provider
- Custom properties
- View Deployment Descriptor
- Last participant support extension

**Modules**

- Manage Modules
- Metadata for modules
- Display module build Ids

**Web Module Properties**

- Session management
- Context Root For Web Modules
- Environment entries for Web modules
- Initialize parameters for servlets
- JSP and JSF options
- Virtual hosts

**Enterprise Java Bean Properties**

- Default messaging provider references

**Client Module Properties**

Select Class loaded with local class loader first (parent last) and click Apply.

**General Properties**

**Class reloading options**

Override class reloading settings for Web and EJB modules

Polling interval for updated files  
 Seconds

**Class loader order**

Classes loaded with parent class loader first

Classes loaded with local class loader first (parent last)

**WAR class loader policy**

Class loader for each WAR file in application

Single class loader for application

Click Save.

Enterprise Applications

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.

[Enterprise Applications](#) > [FCISUnitholderRestServiceService](#) > [Class loader](#)

Use this page to configure the reloading of classes when application files are updated.

Configuration

**General Properties**

**Class reloading options**

Override class reloading settings for Web and EJB modules

Polling interval for updated files  
 Seconds

**Class loader order**

Classes loaded with parent class loader first

Classes loaded with local class loader first (parent last)

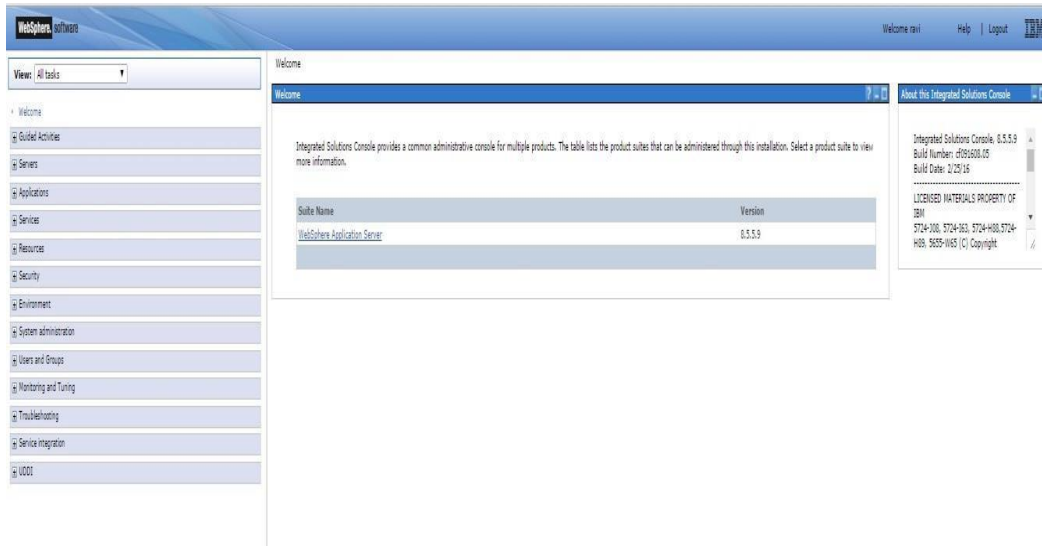
## 1.2 Enabling Logs for REST Application

Launch WebSphere console following screen will be displayed.

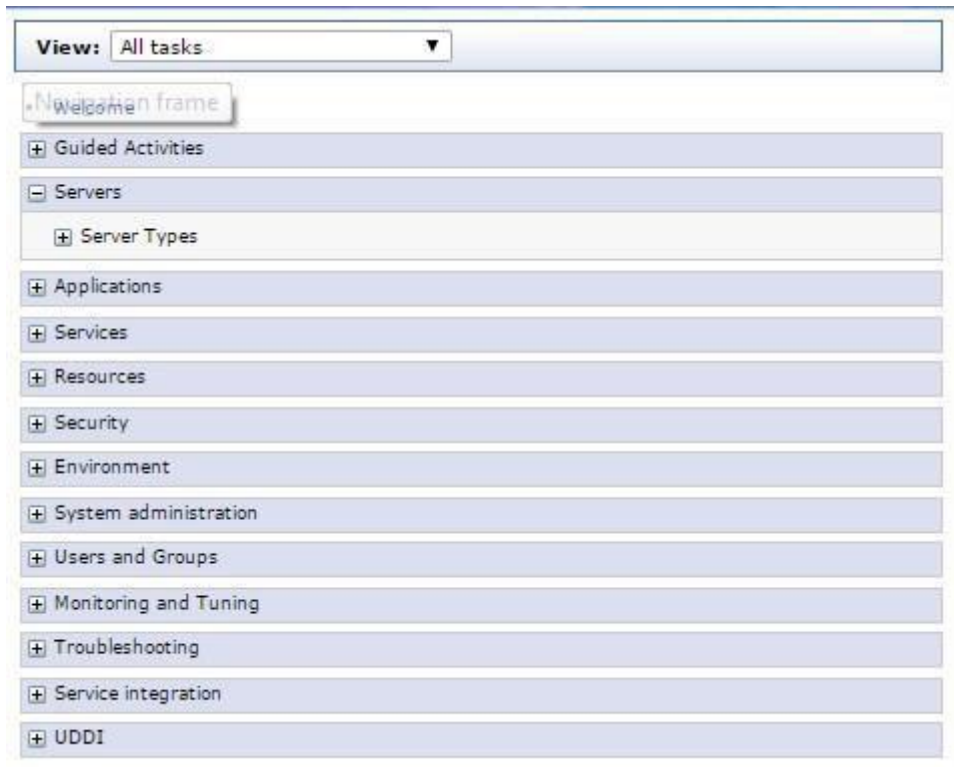


**User ID:** Enter user name

Click on 'Log in' and the following screen is displayed:



Expand 'Servers' from the left panel and the following screen is displayed:





Expand 'Server Type' and Click WebSphere application servers and the following screen is displayed:

Cell=ofis222433Node01Cell\_Profile=AppSrv01

**Application servers**

Use this page to view a list of the application servers in your environment and the status of each of these servers. You can also use this page to change the status of a specific application server.

Preferences

Name	Node	Host Name	Version
You can administer the following resources:			
server1	ofis222433Node01	ofis222433.in.oracle.com	ND 8.5.5.9
Total 1			

Click server1 and the following screen is displayed:

**General Properties**

Name: server1  
Node name: ofis222433Node01

Run in development mode  
 Parallel start  
 Start components as needed

Access to internal server classes: Allow

Server-specific Application Settings

ClassLoader policy: Multiple  
Class loading mode: Classes loaded with parent class loader first

Apply OK Reset Cancel

**Container Settings**

- Session management
- SIP Container Settings
- Web Container Settings
- Portlet Container Settings
- EJB Container Settings
- Container Services
- Business Process Services

**Applications**

- Installed applications

**Server messaging**

- Messaging engines
- Messaging engine inbound transports
- WebSphere MQ Inbound transports
- SIB service

**Server Infrastructure**

- Java and Process Management
- Administration
  - Java SDKs

**Communications**

- Ports
- 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

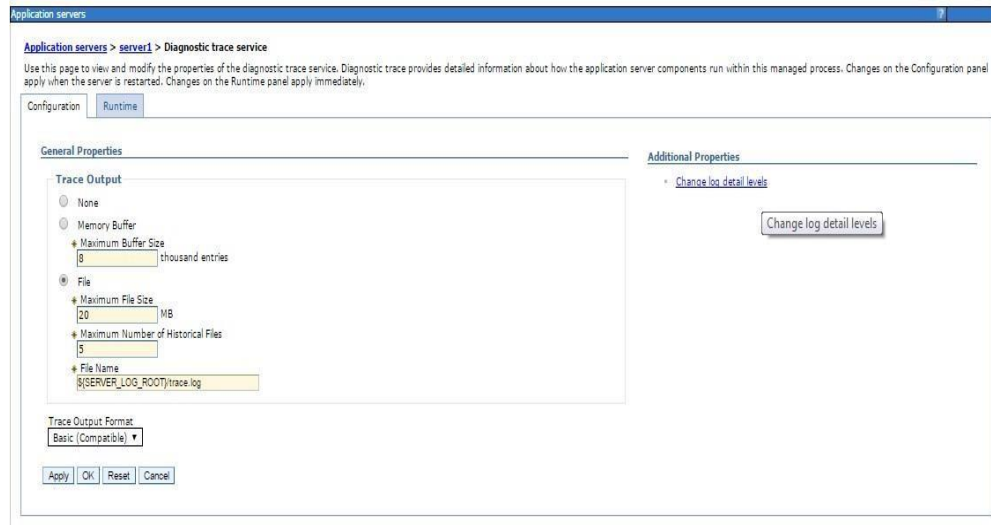
**Troubleshooting**

- NCSA access and HTTP error logging
- Diagnostic trace service
- Logging and tracing
- Change log detail levels (Use this page to view and modify the properties for the diagnosti

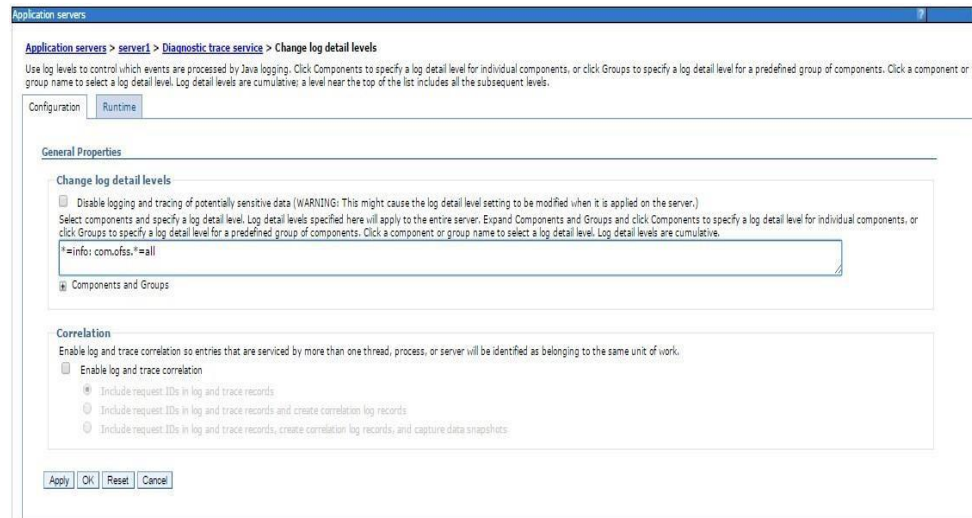
**Additional Properties**

- Class loader viewer service
- Endpoint listeners
- Debugging service
- Thread pools
- Reliable messaging state
- Web server plugin properties

Click Diagnostic trace service and the following screen is displayed:



Click Change log detail levels and the following screen is displayed:



Change log detail levels

Add the entry com.off.\*=all to the existing entry (i.e., now it will be \*=info: com.ofss.\*=all)

Restart the server post the change

The logs will now be written into the log area that is specified in the configuration Application servers > server1 > Diagnostic trace service.



REST API SERVICES Deployment in WebSphere  
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Oracle Financial Services Software Limited  
Oracle Park  
Off Western Express Highway  
Goregaon (East)  
Mumbai, Maharashtra 400 063  
India

Worldwide Inquiries: Phone: +91 22 6718 3000  
Fax: +91 22 6718 3001  
<https://www.oracle.com/industries/financial-services/index.html>

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