

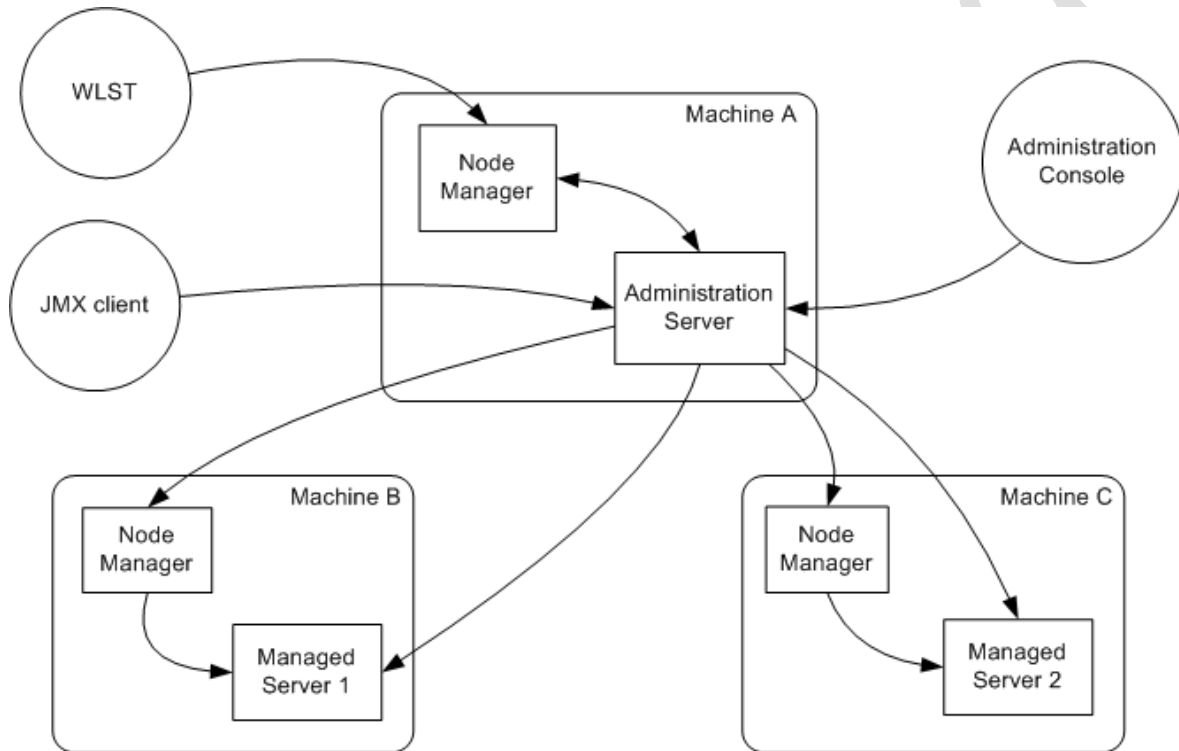
Node Manager and Deployment

Node Manager

A java program running on every node

The node manager starts up and runs as a separate java process from any managed server.

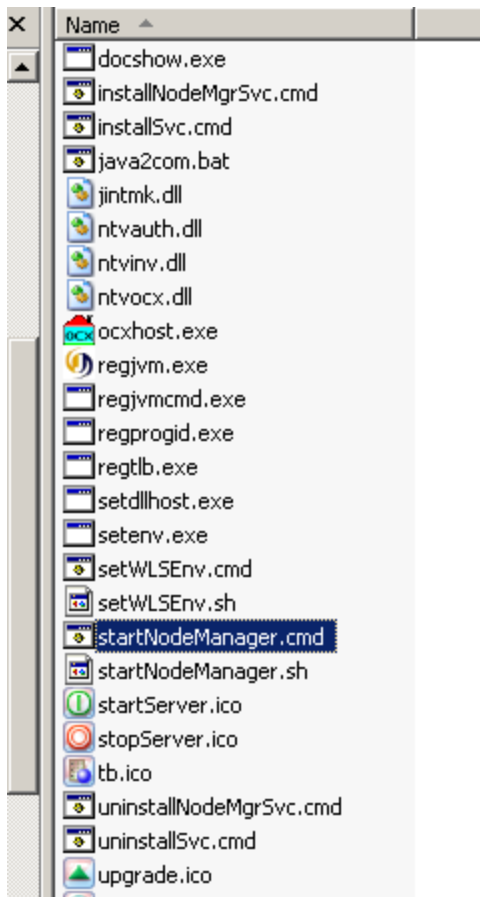
Can be used to start / stop and monitor servers and clusters within a single domain



- Node Manager is an optional tool.
- You can start/stop a Server without the Node Manager

Script location

E:\oracle\Middleware\wlserver_10.3\server\bin



Execute the script it will show the following message when node manager is up and running.

```
Domain name mappings:
soa_domain -> e:\Oracle\Middleware\user_projects\domains\soa_domain
<Apr 13, 2010 11:05:09 PM> <INFO> <soa_domain> <soa_server1> <Startup configuration properties loaded from "E:\oracle\Middleware\user_projects\domains\soa_domain\servers\soa_server1\data\nodemanager\startup.properties">
Apr 13, 2010 11:05:09 PM weblogic.nodemanager.server.ServerManager log
INFO: Startup configuration properties loaded from "E:\oracle\Middleware\user_projects\domains\soa_domain\servers\soa_server1\data\nodemanager\startup.properties"
<Apr 13, 2010 11:05:10 PM> <INFO> <Secure socket listener started on port 5,556>
Apr 13, 2010 11:05:10 PM weblogic.nodemanager.server.SSLListener run
INFO: Secure socket listener started on port 5,556
```

By default it listens on port 5556, if we want to run node manager on a different port

StartNodeManager.cmd server_name port_no

Deployment

To deploy from Admin Console, you must first create a deployable archive in Oracle JDeveloper or through the ant or WebLogic Scripting Tool (WLST) command line tools. The archive can consist of a single SOA composite application revision in a JAR file or multiple composite application revisions (known as a SOA bundle) in a ZIP file.

We can deploy the following into Oracle WebLogic Server:

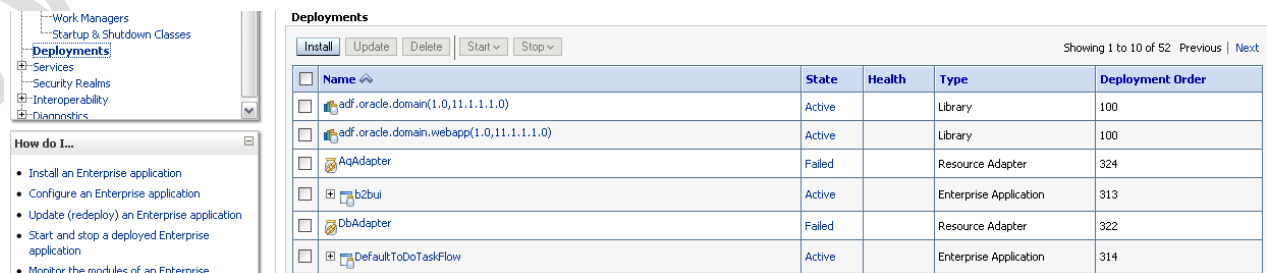
- A complete Java EE application packaged as an Enterprise Archive (EAR) file.
- Standalone modules packaged as Java Archive files (JARs) containing Web Services, Enterprise JavaBeans (EJBs), application clients (CARs), or resource adapters (RARs).
- An ADF application. Oracle Application Development Framework (Oracle ADF) is an end-to-end application framework that builds on Java Platform, Enterprise Edition (Java EE) standards and open-source technologies to simplify and accelerate implementing service-oriented applications.
- An Oracle SOA Suite composite application. A SOA composite application is a single unit of deployment that greatly simplifies the management and lifecycle of SOA applications.
- An Oracle WebCenter application. WebCenter applications differ from traditional Java EE applications in that they support run-time customization, including the application's pages, the portlets contained within these pages, and document libraries.

Deploying a JEE application.

Deploying a simple j2EE Application through admin console

We have prepackaged application called benefits.war.

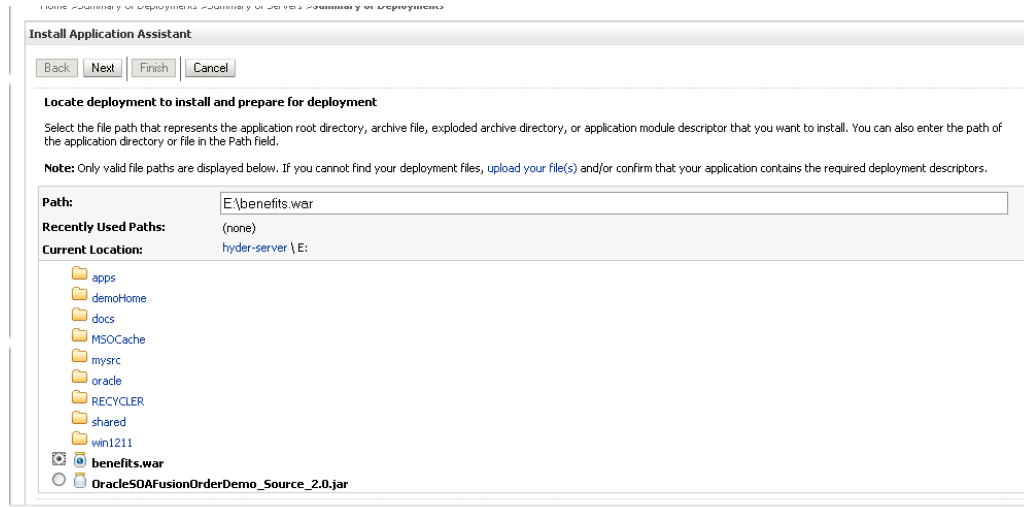
- 1.Login to the Admins console
- 2.Navigate to domain_name—>deployments



Name	State	Health	Type	Deployment Order
adf.oracle.domain(1.0,11.1.1.1.0)	Active		Library	100
adf.oracle.domain.webapp(1.0,11.1.1.1.0)	Active		Library	100
AqAdapter	Failed		Resource Adapter	324
b2bui	Active		Enterprise Application	313
DbAdapter	Failed		Resource Adapter	322
DefaultToDoTaskFlow	Active		Enterprise Application	314

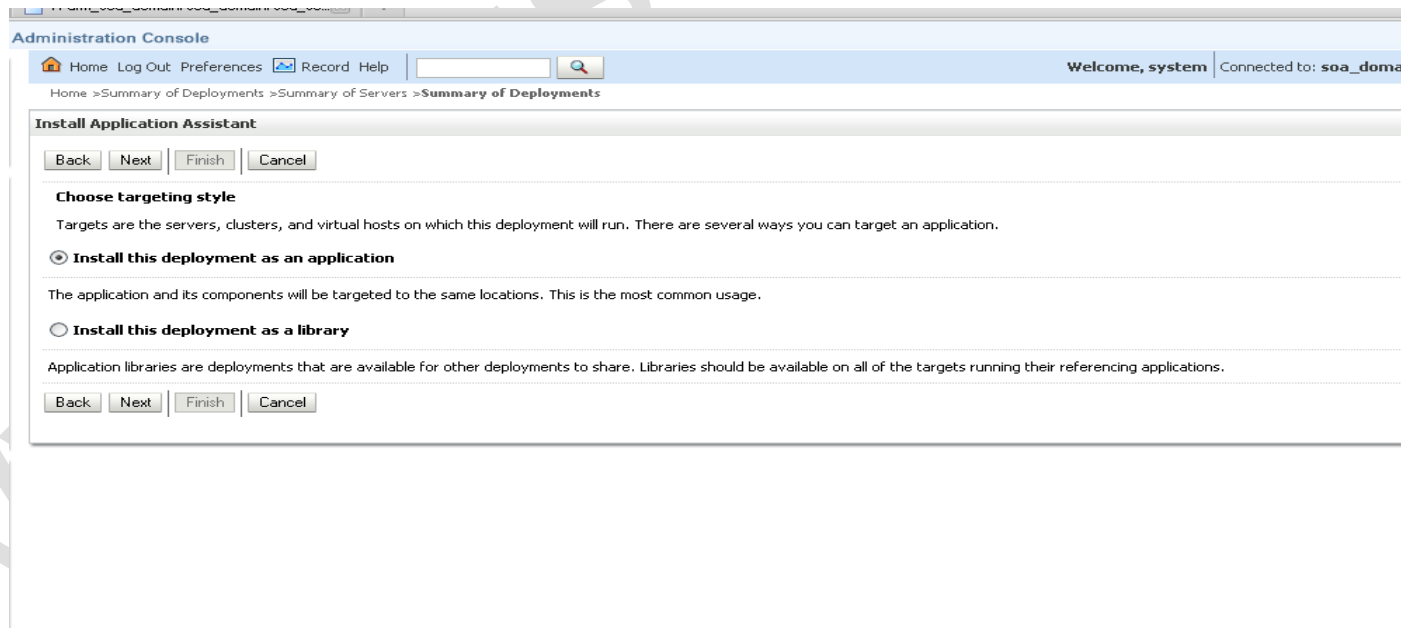
3. Click on install button.

4. The following page will appear, prompting to enter the location of application we want to deploy.



5. select benefits.war and click on next button.

6. The following page will be displayed, prompting for the type of application.



7. Set this to default value, install this deployment as an application.

8. click next, the following page will appear, prompting to select the server where you want to install the application.

Install Application Assistant

Select deployment targets

Select the servers and/or clusters to which you want to deploy this application. (You can reconfigure deployment targets later)

Available targets for benefits :

Servers
<input type="checkbox"/> AdminServer
<input type="checkbox"/> bam_server1
<input checked="" type="checkbox"/> soa_server1

9. Select a server and click next.

10.

71 dm_soa_domain / soa_domain / soa_se... |

Back Next Finish Cancel

Optional Settings

You can modify these settings or accept the defaults

General

What do you want to name this deployment?

Name:

Security

What security model do you want to use with this application?

- DD Only: Use only roles and policies that are defined in the deployment descriptors.**
- Custom Roles: Use roles that are defined in the Administration Console; use policies that are defined in the deployment descriptors.**
- Custom Roles and Policies: Use only roles and policies that are defined in the Administration Console.**
- Advanced: Use a custom model that you have configured on the realm's configuration page.**

Source accessibility

How should the source files be made accessible?

- Use the defaults defined by the deployment's targets**
- Copy this application onto every target for me**

Recommended selection.

During deployment, the files will be copied automatically to the managed servers to which the application is targeted.

11.set all values to default, click next

Install Application Assistant

Back

Next

Finish

Cancel

Review your choices and click Finish

Click Finish to complete the deployment. This may take a few moments to complete.

Additional configuration

In order to work successfully, this application may require additional configuration. Do you want to review this application's configuration after co

Yes, take me to the deployment's configuration screen.

No, I will review the configuration later.

Summary

Deployment: E:\benefits.war

Name: benefits

Staging mode: Use the defaults defined by the chosen targets

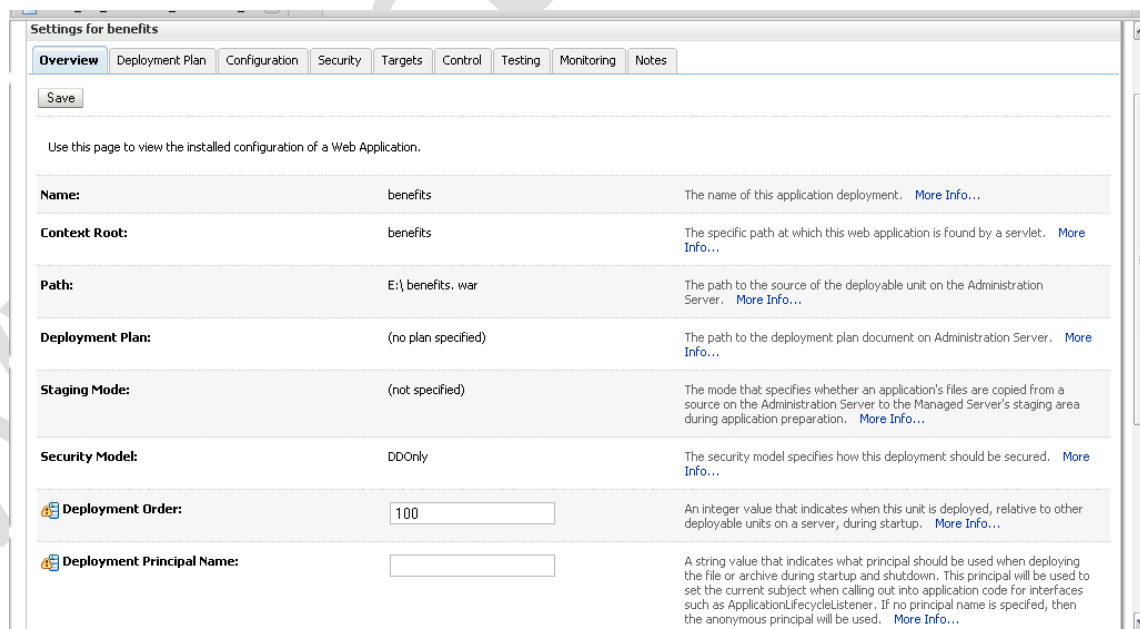
Security Model: DDOnly: Use only roles and policies that are defined in the deployment descriptors.

Target Summary

Components 

Targets

12. click finish and the deployment configuration screen will be presented.





Settings for benefits

Overview | Deployment Plan | Configuration | Security | Targets | Control | Testing | Monitoring | Notes

Save

Use this page to view the installed configuration of a Web Application.

Name:	benefits	The name of this application deployment. More Info...
Context Root:	benefits	The specific path at which this web application is found by a servlet. More Info...
Path:	E:\benefits.war	The path to the source of the deployable unit on the Administration Server. More Info...
Deployment Plan:	(no plan specified)	The path to the deployment plan document on Administration Server. More Info...
Staging Mode:	(not specified)	The mode that specifies whether an application's files are copied from a source on the Administration Server to the Managed Server's staging area during application preparation. More Info...
Security Model:	DDOnly	The security model specifies how this deployment should be secured. More Info...
 Deployment Order:	<input type="text" value="100"/>	An integer value that indicates when this unit is deployed, relative to other deployable units on a server, during startup. More Info...
 Deployment Principal Name:	<input type="text"/>	A string value that indicates what principal should be used when deploying the file or archive during startup and shutdown. This principal will be used to set the current subject when calling out into application code for interfaces such as ApplicationLifecycleListener. If no principal name is specified, then the anonymous principal will be used. More Info...

13. navigate back to deployments.

Deployments

Install Update Delete Start Stop

<input type="checkbox"/>	Name ^	State	Health	Type
<input type="checkbox"/>	adf.oracle.domain(1.0,11.1.1.1.0)	Active		Library
<input type="checkbox"/>	adf.oracle.domain.webapp(1.0,11.1.1.1.0)	Active		Library
<input type="checkbox"/>	AqAdapter	Failed		Resource A
<input type="checkbox"/>	+ b2bui	Active		Enterprise
<input checked="" type="checkbox"/>	+ benefits	Failed		Web Applic
<input type="checkbox"/>	DbAdapter	Failed		Resource A
<input type="checkbox"/>	+ DefaultToDoTaskFlow	Active		Enterprise
<input type="checkbox"/>	+ DMS Application (11.1.1.1.0)	Active	OK	Web Applic
<input type="checkbox"/>	+ em	Active	OK	Enterprise
<input type="checkbox"/>	emai	Active		Library

Install Update Delete Start Stop

Start

- Servicing all requests
- Servicing only administration requests

14. select the benefits application and click on start→servicing all requests as shown above.

15. once the application is active we can click the application and testing tab under the settings.

Settings for benefits

Overview Deployment Plan Configuration Security Targets Control **Testing** Monitoring Notes

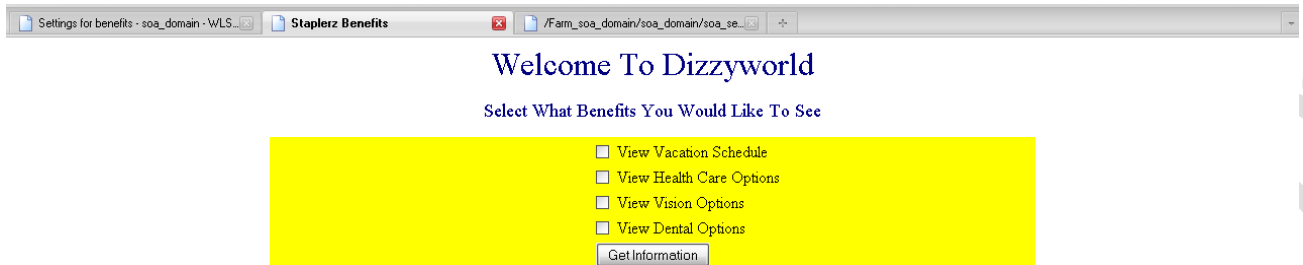
Use this page to test that the deployment of the Web application component (WAR file) was successful.

Deployment Tests

Name ^	Test Point	Comments
benefits		
default	http://192.168.0.101:7001/benefits	Default url on server AdminServer
welcome.html	http://192.168.0.101:7001/benefits/welcome.html	Welcome file welcome.html on server AdminServer

Showing 1 to 1 of 1 Previous

16. click on url and the applications welcome page will be displayed.



Undeployment.

1. Navigate to domain → deployments

2. select the the application you want to undeploy and stop the application.

Summary of Deployments

Control Monitoring

This page displays a list of Java EE applications and stand-alone application modules that have been installed to this domain. Installed applications and modules can be started, stopped, updated (redeployed), or deleted from the domain by first selecting the application name and using the controls on this page.

To install a new application or module for deployment to targets in this domain, click the Install button.

[Customize this table](#)

Deployments

Install Update Delete Start Stop

Showing 1 to 10 of 53 Previous Next

Name	State	Health	Type	Deployment Order
adf.oracle.domain(1.0,11.1.1.1.0)	Active		Library	100
adf.oracle.domain.webapp(1.0,11.1.1.1.0)	Active		Library	100
AqAdapter	Failed		Resource Adapter	324
b2bui	Active		Enterprise Application	313
benefits	Active	OK	Web Application	100

3. select the application and click on delete button.

Home > benefits > Summary of Deployments > Summary of Environment > Summary of Deployments > benefits > Summary of Deployments > Summary of Environment > **Summary of Deployments**

Messages

- ✔ All changes have been activated. No restarts are necessary.
- ✔ Selected Deployments were deleted.

Summary of Deployments

SOA Application

For testing purpose we will deploy a preconfigured soa-application provided by oracle which is Fod(Fusion order demo)

For your reference, the full FOD demo is [here](#):

Steps

1.
 - a. Install soa suite11g(database, rcu, soa)
 - b. Install jdeveloper 11g (available for download from OTN)

2.	Once you have a working SOA Suite installation, download the demo: http://bpel.us.oracle.com/demos/SOA11gFusionOrderDemo/OracleSOAFusionOrderDemo_Source_2.0.jar [3 Mb]
3.	Unzip the demo zip file somewhere on your hard drive. The rest of the document will refer to the unzipped location as <code>demoHome</code> .
4.	Start your WebLogic admin and managed servers.
5.	Open <code>demoHome/bin/build.properties</code> using a text editor.
6.	Set all of the properties appropriate for your environment. You can ignore the properties between the "INTERNAL SEED PROPERTIES" comments. If you're on Windows, remember to use the double backslash notation. e.g., <code>oracle.home=C:\\Oracle\\Middleware\\jdev_11gR1</code> In particular, it's most likely you'll need to set the following properties: <code>oracle.home</code> <code>orderbooking.file.adapter.dir</code> (make sure this directory exists) <code>admin.server.host</code> <code>admin.server.port</code> <code>managed.server.host</code> <code>managed.server.port</code> <code>server.user</code> <code>server.password</code> <code>server.targets</code> <code>soa.server.oracle.home</code> <code>jdbc-userid</code> <code>jdbc-password</code> <code>jdbc-url</code>
7.	Save your changes and open a command line in <code>demoHome/bin</code> .
8.	Check your version of ant: <code>ant -version</code> It should be a recent version, e.g., 1.7 or higher. If it's not, or you don't have ant installed, add the following to your path:

Middleware/home_11gR1/modules/org.apache.ant_1.7.0/bin

Try `ant -version` again. If you get errors about missing libraries (e.g., `tools.jar`) then try setting this environment variable:

```
ANT_HOME=/oracle/Middleware/home_11gR1/modules/org.apache
.ant_1.7.0
```

You may also need this:

```
JAVA_HOME=/oracle/Middleware/home_11gR1/jdk160_11
```

Hint: In my (Linux) environment, I needed to do the following in order for ant to succeed. You may not need to do this, but if you have issues it might help you. Note that there are 4 commands shown, though it may look like more if the text is wrapping.

```
% JAVA_HOME=/oracle/Middleware/home_11gR1/jdk160_11
% export
ANT_HOME=/oracle/Middleware/home_11gR1/modules/org.apache
.ant_1.7.0
% export PATH=$ANT_HOME/bin:$PATH
% ant server-setup-seed-deploy-test
```

9. From the command line, run this command to validate your properties:

```
ant -p
```

Successful output should look something like this:

```
$ ant -p
Buildfile: build.xml
 [echo] Ant: Apache Ant version 1.7.0 compiled on December 13
2006 Java: 1.6
 [input] skipping input as property server.password has already
been set.
Trying to override old definition of datatype wldeploy
Main targets:
  build.src.zip          creates the source distribution
  clean                 cleans up the SOA fusion order demo
app
  compile-build-all    Compiles and builds all artifacts
  compile-deploy-all   builds all artifacts and deploys
them
  createMDSConnections seed the mds connection information
based on the properties in build.properties
  jdeveloper-setup-seed one shot client side setup, with
mds config, seed of jms, demo users and token replacement
  removeDemoUsers      remove bpm demo user community
  removeFodJmsResources removes the FOD jms resources
  seedB2BAgreements     seed b2b trading partner agreements
```

```

seedDemoUsers          seed bpm demo user community
seedFodJmsResources    creates the needed jms resources
server-cleanup-all     Undeploy all artifacts from server
server-setup-seed-deploy-test one shot server side deployment,
including test
setupWorkspaceForJdeveloperUse Setup the SOA FOD application for
jdeveloper use
Default target: build.src.zip

```

If you encounter any errors, fix them before proceeding.

1 From the command line, run this command:

0. `ant server-setup-seed-deploy-test`

Wait for the **BUILD SUCCESSFUL** message, it typically takes about 10 minutes. If you get errors, fix them before proceeding.

Monitor the application through em

The screenshot displays the Oracle Enterprise Manager 11g Fusion Middleware Control interface. The main window shows the 'Farm_soa_domain' configuration. A large green progress indicator at the top indicates that the domain is 'Up (30)'. Below this, a table lists various components and their status:

Name	Status	Target
Application Deployments		
Internal Applications		
Resource Adapters		
DefaultToDoTaskFlow	Up	soa_server1
oracle-bam(11.1.1)	Up	bam_server1
OrderApprovalHumanTask	Up	soa_server1
SOATestDemoApp	Up	soa_server1
WebServices_WebLogicFusionOrderDemo_CreditCardAut	Up	soa_server1
workstapp	Up	soa_server1
SOA		
soa-infra	Up	soa_server1
BamOrderBookingComposite [1.0]	Up	soa_server1
OrderSDOComposite [1.0]	Up	soa_server1
PartnerSupplierComposite [1.0]	Up	soa_server1

On the right side, the 'Fusion Middleware' section shows a table of services and their status:

Name	Status	Host
WebLogic Domain		
soa_domain		
AdminServer	Up	hyder-server
bam_server1	Up	hyder-server
soa_server1	Up	hyder-server
BAM		
OracleBamServer (bam_server1)	Up	hyder-server
OracleBamWeb (bam_server1)	Up	hyder-server
Metadata Repositories		
mids-owsm		hyder-server
mids-soa		hyder-server
User Messaging Service		
usermessagingdriver-email (bam_server1)	Up	hyder-server
usermessagingdriver-email (soa_server1)	Up	hyder-server
usermessagingserver (bam_server1)	Up	hyder-server
usermessagingserver (soa_server1)	Up	hyder-server

At the bottom, the 'Farm Resource Center' provides links for 'Before You Begin' and 'Typical Administration Tasks'.

Overview of DataSources

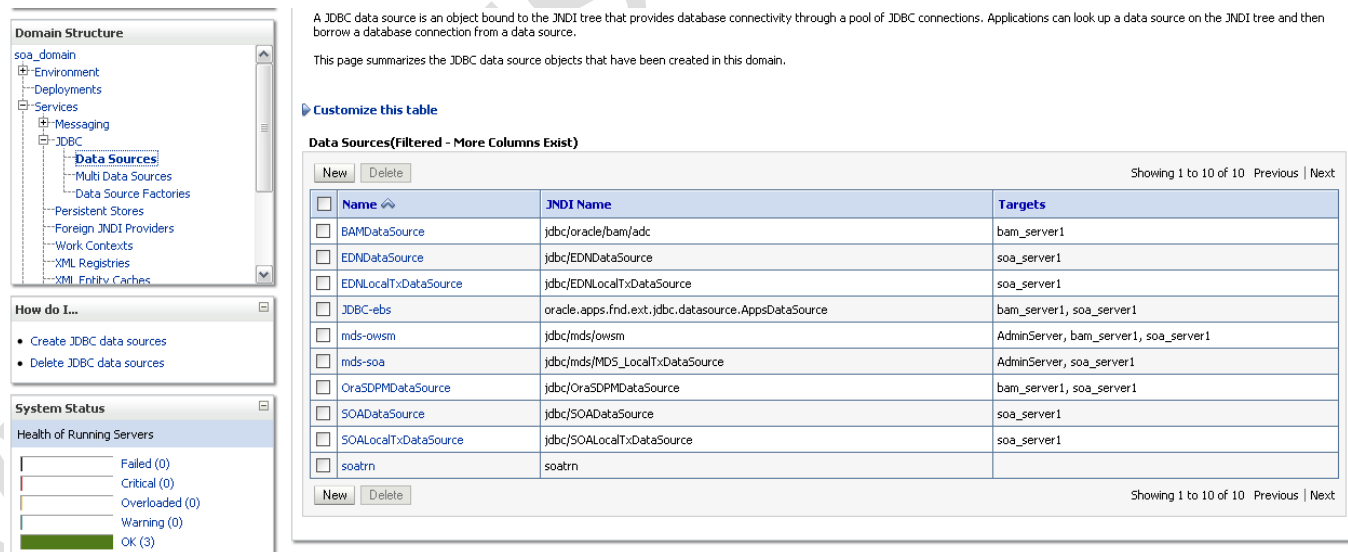
A **data source** is a Java object that application components use to obtain connections to a relational database. Specific connection information, such as URL or user name and password, are set on a data source object as properties and do not need to be explicitly defined in an application's code. This abstraction allows applications to be built in a portable manner, because the application is not tied to a specific back-end database.

The database can change without affecting the application code. Applications use the Java Naming and Directory Interface (JNDI) API to access a data source object. The application uses a JNDI name that is bound to the data source object. The JNDI name is logical and can be mapped to any data source object. Like data source properties, using JNDI provides a level of abstraction, since the underlying data source object can change without any changes required in the application code. The end result is the details of accessing a database are transparent to the application.

Configure a Datasource

1.Login to admin console

2.Navigate to domain_name→services→JDBC→Data Souces



A JDBC data source is an object bound to the JNDI tree that provides database connectivity through a pool of JDBC connections. Applications can look up a data source on the JNDI tree and then borrow a database connection from a data source.

This page summarizes the JDBC data source objects that have been created in this domain.

[Customize this table](#)

Data Sources (Filtered - More Columns Exist)

<input type="checkbox"/>	Name	JNDI Name	Targets
<input type="checkbox"/>	BAMDataSource	jdbc/oracle/bam/adc	bam_server1
<input type="checkbox"/>	EDNDataSource	jdbc/EDNDataSource	soa_server1
<input type="checkbox"/>	EDNLocalTxDataSource	jdbc/EDNLocalTxDataSource	soa_server1
<input type="checkbox"/>	JDBC-eba	oracle.apps.fnd.ext.jdbc.datasource.AppsDataSource	bam_server1, soa_server1
<input type="checkbox"/>	mds-owsm	jdbc/mds/owsm	AdminServer, bam_server1, soa_server1
<input type="checkbox"/>	mds-soa	jdbc/mds/MDS_LocalTxDataSource	AdminServer, soa_server1
<input type="checkbox"/>	OraSDPMDDataSource	jdbc/OraSDPMDDataSource	bam_server1, soa_server1
<input type="checkbox"/>	SOADDataSource	jdbc/SOADDataSource	soa_server1
<input type="checkbox"/>	SOALocalTxDataSource	jdbc/SOALocalTxDataSource	soa_server1
<input type="checkbox"/>	soatrnr	soatrnr	

Showing 1 to 10 of 10 Previous | Next

3.Click new to create a new datasource.

4.Give the ds name and jndi name

Provide driver type as oracle and select Database driver

Back

Next

Finish


Cancel

JDBC Data Source Properties


The following properties will be used to identify your new JDBC data source.

* Indicates required fields

What would you like to name your new JDBC data source?

 * Name:

What JNDI name would you like to assign to your new JDBC Data Source?

 JNDI Name:

What database type would you like to select?

Database Type:

What database driver would you like to use to create database connections? Note: * indicates that the driver is explicitly supported by Oracle WebLogic Server.

Database Driver:

Click next—next

5.provide database details

Create a New JDBC Data Source

Connection Properties

Define Connection Properties.

What is the name of the database you would like to connect to?

Database Name:

What is the name or IP address of the database server?

Host Name:

What is the port on the database server used to connect to the database?

Port:

What database account user name do you want to use to create database connections?

Database User Name:

What is the database account password to use to create database connections?

Password:

Confirm Password:

6. Test configuration and click finish