

HANDS ON LAB ON MULTITANANCY

LAB 1: MULTITANANCY CONFIGURATION

1. Start the database.

- i. Open a new terminal.
- ii. cd /u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab1/
- iii. ./startDB.sh

```
[oracle@localhost Desktop]$ cd /u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab1/
[oracle@localhost Lab1]$ ./startDB.sh
Processing Database instance "orcl": log file /u01/app/oracle/product/12.1.0/dbhome_1/startup.log
SQL*Plus: Release 12.1.0.2.0 Production on Thu Sep 17 09:41:22 2015
Copyright (c) 1982, 2014, Oracle. All rights reserved.

Connected to:
Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production
With the Partitioning, OLAP, Advanced Analytics and Real Application Testing options

SQL>
Pluggable database altered.

SQL>
Pluggable database altered.

SQL> Disconnected from Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Productio
n
With the Partitioning, OLAP, Advanced Analytics and Real Application Testing options
[oracle@localhost Lab1]$ █
```

Note: Wait until you see the bash prompt.

2. Starting the Domain.

- i. ./start-nm.sh

```
[oracle@localhost Lab1]$ ./start-nm.sh █
Initializing WebLogic Scripting Tool (WLST) ...
Welcome to WebLogic Server Administration Scripting Shell
Type help() for help on available commands

Launching NodeManager ...
Running startNodeManager.sh from the directory /u01/wins/wls1221/user_projects/domains/base_domain
./bin
NMProcess: NODEMGR_HOME is already set to /u01/wins/wls1221/user_projects/domains/base_domain/node
manager
```

Note: Go to next step after 5 seconds so that node manager starts properly.

ii. ./start-domain.sh

```
[oracle@localhost Lab1]$ ./start-domain.sh
Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

Connecting to Node Manager ...
<Sep 17, 2015 10:08:57 AM PDT> <Info> <Security> <BEA-090905> <Disabling the CryptoJ JCE Provider self-integrity check for better startup performance. To enable this check, specify -Dweblogic.security.allowCryptoJDefaul
tJCEVerification=true.>
<Sep 17, 2015 10:08:57 AM PDT> <Info> <Security> <BEA-090906> <Changing the default Random Number Generator i
n RSA CryptoJ from ECDRBG128 to HMACDRBG. To disable this change, specify -Dweblogic.security.allowCryptoJDefau
ltPRNG=true.>
<Sep 17, 2015 10:08:57 AM PDT> <Info> <Security> <BEA-090909> <Using the configured custom SSL Hostname Verif
ier implementation: weblogic.security.utils.SSLWLSSHostnameVerifier$NullHostnameVerifier.>
Successfully Connected to Node Manager.
Starting server AdminServer ...
Successfully started server AdminServer ...
Connecting to t3://localhost:7001 with userid weblogic ...
Successfully connected to Admin Server "AdminServer" that belongs to domain "base_domain".

Warning: An insecure protocol was used to connect to the server.
To ensure on-the-wire security, the SSL port or Admin port should be used instead.

Starting the following servers in Cluster, app-cluster : app-cluster-1,app-cluster-2
.....
.....
All servers in the cluster app-cluster are started successfully.
Disconnected from weblogic server: AdminServer

Exiting WebLogic Scripting Tool.
```

Note: This step may take 4-5 minute as it starts the Admin Server first, then both the managed server.

3. Configuration for Medrec Application for Domain Partition 1.

- i. Go to browser and type the URL <http://localhost:7001/em>
- ii. Enter **weblogic/welcome1** as **username/password**, do not check the box for Use Partition then click on **Login**.

Login to
Fusion Middleware Control 12c

Domain Domain_base_domain

* User Name	weblogic
* Password	*****

Use Partition

Login

- iii. In Enterprise Manager, Click on **WebLogic Domain -> Environment -> Virtual Targets.**

The screenshot shows the Oracle Enterprise Manager Fusion Middleware Control 12c interface. The top navigation bar displays the domain name "base_domain" and various system icons. On the left, there is a vertical navigation tree with categories like "Server", "Cluster", and "Deployment". The "Environment" node under "Server" is highlighted with a red box. The main content area shows a detailed configuration for the "Admin Server". The "Admin Server" section includes fields for "Name" (set to "AdminServer") and "Host" (set to "localhost"). Below this, a large list of configuration items is shown, many of which are also highlighted with red boxes: "Servers", "Server Templates", "Clusters", "Machines", "Domain Partitions", "OTD Runtimes", "Resource Groups", "Resource Group Templates", "Partition Work Managers", "Resource Consumption Managers", and "Virtual Hosts". At the bottom of this list, the "Virtual Targets" section is also highlighted with a red box.

iv. Click on **Create**.

The screenshot shows the "Virtual Targets" creation screen in Oracle Enterprise Manager. The top header indicates the domain is "base_domain" and the user is "weblogic". The sub-header shows the current location is "/Domain_base_domain/base_domain > Virtual Targets". The main area is titled "Virtual Targets" and features a toolbar with "View", "Create" (which is highlighted with a red box), "Delete", and "Edit" buttons. Below the toolbar is a table with columns: Name, Host Names, Uri Prefix, Target, Explicit Port, Port Offset, Partition Channel, and Used By. A message at the bottom states "No Virtual Targets found".

v. Enter **VT-Medrec-1** as Name and **/dp1** as Uri Prefix then click on **Next**.

base_domain ⓘ

General Targets

Create Virtual Target: General

* Name VT-Medrec-1

Uri Prefix /dp1

Partition Channel

Port Explicit Offset

Back Step 1 of 2 **Next** Cancel

vi. Select Cluster **app-cluster** as Target then click on **Create**.

base_domain ⓘ

General Targets

Create Virtual Target: Targets

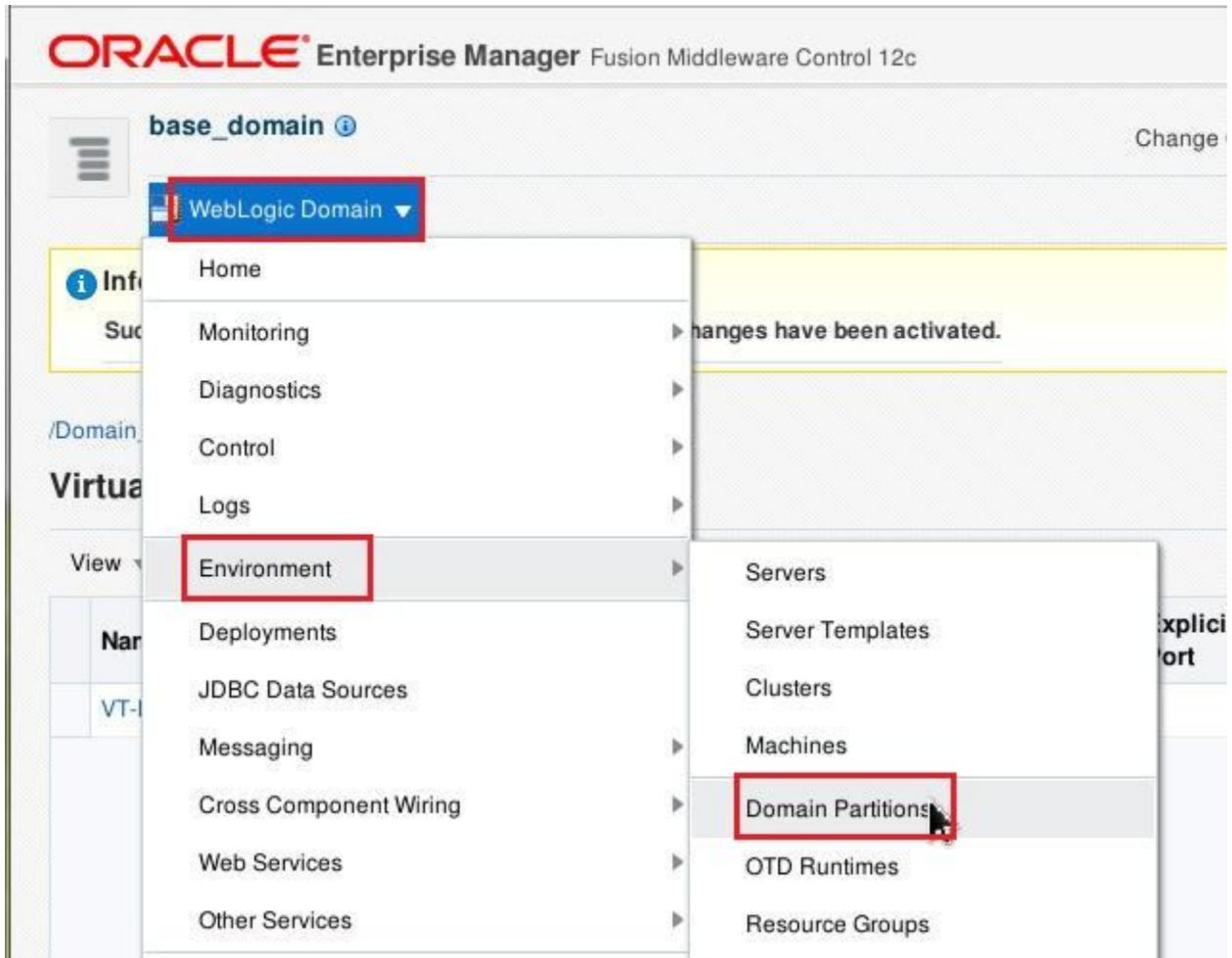
Choose a server or cluster to be associated with this virtual target.

Server

Cluster app-cluster

Back Step 2 of 2 **Create** Cancel

vii. Click on **WebLogic Domain -> Environment -> Domain Partitions**.



viii. Click on **Create**.

ix. Enter **dp1** as Name and leave others as default then click on **Next**.

ORACLE® Enterprise Manager Fusion Middleware Control 12c weblogic ▾

base_domain

General Available Targets Resource Group Summary

Create Domain Partition: General

Back Step 1 of 4 **Next** Cancel

Use this page to specify general attributes for this domain partition.

* Name	dp1
Security Realm	None
Primary Identity Domain	

Load Balancer Configuration

If you wish to use a load balancer to front-end this domain partition, choose an Oracle Traffic Director instance from the list of available instances shown below.

Use OTD for Load Balancing OTD Runtime None

- x. Check the left box near **VT-Medrec-1** and also check the box for **Set as Default** then click on **Next**.

ORACLE® Enterprise Manager Fusion Middleware Control 12c weblogic ▾

base_domain

General Available Targets Resource Group Summary

Create Domain Partition: Available Targets

Back Step 2 of 4 **Next** Cancel

Select the virtual targets that will be available for this domain partition to use. Note that virtual targets can only be used by one partition; so, only available virtual targets are listed below.

Select	Virtual Target	Set as Default
<input checked="" type="checkbox"/>	VT-Medrec-1	<input checked="" type="checkbox"/>

- xi. Enter **app1RG** as Resource Group name and **None** as Resource Group Template, Move the **VT-Medrec-1** virtual target to **Select targets** then click on **Next**.

ORACLE® Enterprise Manager Fusion Middleware Control 12c weblogic ▾ ...

base_domain ⓘ

General Available Targets **Resource Group** Summary

Create Domain Partition: Resource Group

A resource group needs to be created within a partition before you can deploy applications or resources. The resource group can optionally extend a resource group template specified at the domain level.

* Resource Group Name

Resource Group Template

Targets for the Resource Group

Available Targets	Selected Targets	Targets for the Resource Group
<input type="button" value=">"/> <input type="button" value=">>"/> <input type="button" value="<"/> <input type="button" value="<<"/>	<input style="border: 2px solid red; padding: 2px; width: 100px; height: 20px;" type="text" value="VT-Medrec-1"/> <input type="button" value="<"/> <input type="button" value=">"/> <input type="button" value="<<"/> <input type="button" value=">>"/>	<input type="button" value="<"/> <input type="button" value="<"/> <input type="button" value=">"/> <input type="button" value=">>"/>

Back Step 3 of 4 **Next** **Cancel**

xii. Verify the configuration and click on **Create**.

xiii. Check the box near **dp1** and click on **Control -> Start**. Press refresh icon to get correct status.

ORACLE® Enterprise Manager Fusion Middleware Control 12c WebLogic Domain ▾ weblogic ▾ ...

base_domain ⓘ

Change Center Logged in as **weblogic**

Sep 17, 2015 10:37:45 AM PDT

WebLogic Domain ▾

Information

Successfully created Domain Partition dp1. For additional configuration of the partition (resource overrides, partition work manager/resource consumption manager settings), navigate to the Partition home page and click on the Administration menu item in the Partition menu.

/Domain_base_domain/base_domain > Domain Partitions

► Getting Started with Multi-Tenancy

Hide Pie Chart

Status State

Down (1) Shutdown(1)

Name	Status	OTD Partition	Realm	Default Targets	Available Targets	Resource Groups
dp1				VT-Medrec-1	VT-Medrec-1	

View ▾ Create Delete Control Import Export

Control:

ORACLE Enterprise Manager Fusion Middleware Control 12c

base_domain

WebLogic Domain weblogic

Change Center Logged in as weblogic

Sep 17, 2015 10:39:49 AM PDT

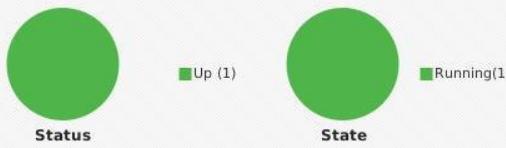
/Domain_base_domain/base_domain > Domain Partitions

Domain Partitions

Domain Partitions are the building blocks of WebLogic Server Multi-Tenancy (MT). Multi-Tenancy permits multiple client organizations to share a domain, improving efficiency and reducing operation costs. Before creating a Domain Partition, you must first create one or more virtual targets. Look at the Getting Started topics for more information.

▶ Getting Started with Multi-Tenancy

▲ Hide Pie Chart



Status State

View Create Delete Control Import Export

Name	Status	State	OTD Partition	Realm	Default Targets	Available Targets	Resource Groups
dp1		Running			VT-Medrec-1	VT-Medrec-1	

Domain Partitions 1 of 1

xiv. Click on the Domain Partition **dp1**.

xv. Click on **Domain Partition -> Administration -> Resource Group**.

ORACLE Enterprise Manager Fusion Middleware Control 12c

dp1

Domain Partition Start Up Shut Down... Sep 17, 2015 10:40:54 AM PDT

Change Center Logged in as weblogic Auto Refresh Off

Info Key to the JRF Metrics the JRF

Monit Metric the JRF

Resou Metric the JRF

Deplo Metric the JRF

Home Monitoring Diagnostics Control Logs Deployments JDBC Data Sources Messaging Coherence Caches Web Services Other Services Administration Routing Topology Security System MBean Browser

General Available Targets Medrec-1 Open JDBC Connections 0 JDBC Connection Creates (per minute) 0.00 Active Transactions Unavailable Transaction Commits (per minute) Unavailable Transaction Rollbacks (per minute) Unavailable

Resource Groups Load Balancer Configuration Medrec-1 Notes

JDBC and JTA Usage

Resource Usage

CPU Usage (%) Unavailable Open Files Unavailable

xvi. Click on Resource Group **app1RG**.

xvii. Creation of Datasource.

a. Select the **Services** tab.

b. Choose JDBC tab, click on **Create -> Generic Data Source**.

The screenshot shows the Oracle Enterprise Manager Fusion Middleware Control 12c interface. The top navigation bar includes 'WebLogic Domain' and 'weblogic'. The main title is 'ORACLE® Enterprise Manager Fusion Middleware Control 12c'. Below the title, it says 'dp1'. The breadcrumb path is '/Domain_base_domain/base_domain/dp1 > Resource Groups > Resource Group : app1RG'. The 'Services' tab is selected. Under the 'Services' tab, the 'JDBC' tab is selected. A red box highlights the 'Create' button in the toolbar. A dropdown menu is open over the 'Create' button, showing options: 'Generic Data Source' (which is highlighted with a red box), 'GridLink Data Source', and 'Multi Data Source'. The main content area displays a table with columns: Name, JNDI Name, Type, and Targets. The table is currently empty, showing 'No system d'. At the bottom right of the table, it says 'JDBC Data Sources 0 of 0'. The bottom left of the table shows 'Columns Hidden 4'.

c. Enter **MedRecGlobalDataSourceXA** as Data Source Name and **jdbc/MedRecGlobalDataSourceXA** as JNDI Name, and then click on **Select**.

d. Select **Oracle** as Database Type and "**Oracle's Driver (Thin XA) for service connections; Versions: Any**" as JDBC Driver then click on **OK**. Click on **Next**.

ORACLE® Enterprise Manager Fusion Middleware Control 12c

weblogic ▾ ...

Data Source Properties Connection Properties Transaction Properties Select Targets Review

Create a JDBC Data Source: Data Source Properties

Back Step 1 of 5 **Next** Cancel

Applications get a database connection from a data source by looking up the data source on the Java Naming and Directory Interface (JNDI) tree and then requesting a connection. The data source provides the connection to the application from its pool of database connections.

Use this page to define the general configuration options for this JDBC data source.

* Data Source Name **MedRecGlobalDataSourceXA**

Scope Resource group "app1RG" in domain partition "dp1"

Type Generic

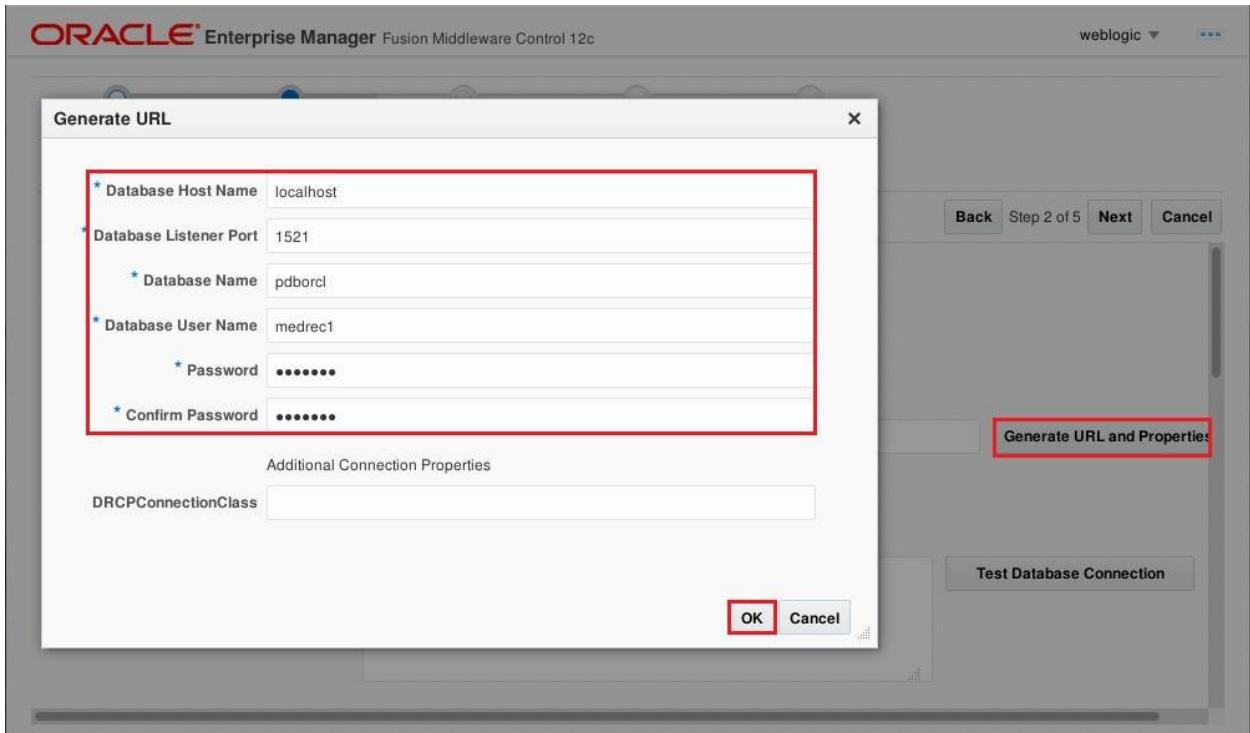
Database Type Oracle

* Driver Class Name **oracle.jdbc.xa.client.OracleXADataSource** **Select...**

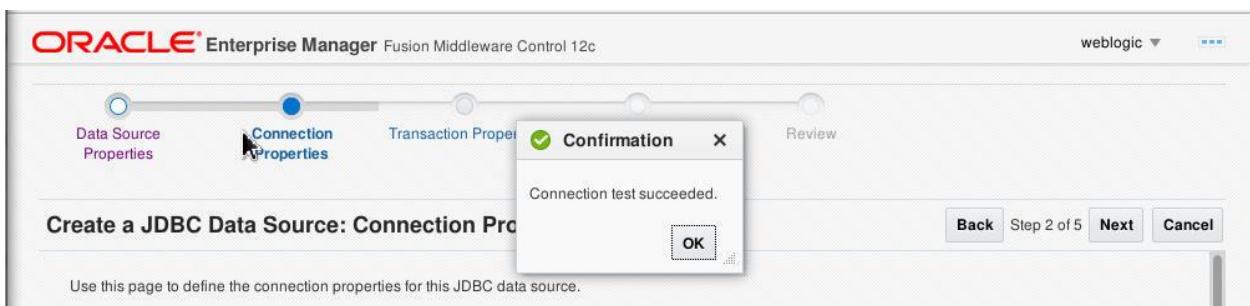
JNDI Name **jdbc/MedRecGlobalDataSourceXA**

e. Click on **Generate URL and Properties** and Enter the following:

Host Name:	localhost
Listen Port:	1521
Database Name:	pdborcl
User Name:	medrec1
Password:	medrec1
Confirm Password	medrec1
Click OK.	



f. Click on **Test Database Connection** to verify the connection. Click **Next**.



g. Leave Default on Transaction Options and click on **Next**.

h. Verify the configuration and click on **Create**.

xviii. Adding User to Default Realm.

- Click on **Weblogic Domain -> Security -> Users and Groups**.

- In **Users** tab, click on **Create**.
- Enter the following then click on **Create**.

Name:	administrator
Description:	Medrec Admin
Provider:	Default Authenticator
Password:	administrator123
Confirm Password:	administrator123

The screenshot shows the Oracle Enterprise Manager Fusion Middleware Control 12c interface. The top navigation bar includes the ORACLE logo, the title 'Enterprise Manager Fusion Middleware Control 12c', and a 'WebLogic Domain' dropdown set to 'weblogic'. The status bar at the bottom right shows the date and time: 'Sep 17, 2015 10:56:54 AM PDT'.

The main window displays the 'Users and Groups' section under 'base_domain'. A modal dialog box titled 'Create a User' is open, specifically the 'User Properties' tab. The form fields are as follows:

- * Name: administrator
- Description: Medrec Admin
- * Provider: DefaultAuthenticator
- Password: [REDACTED]
- * Confirm Password: [REDACTED]

The 'Create' button at the bottom right of the modal is highlighted with a red box. The 'Users' tab of the main interface is visible in the background, showing existing users like 'LCMUser', 'OracleSystemUser', and 'weblogic'. The 'Create' button in the main interface is also highlighted with a red box.

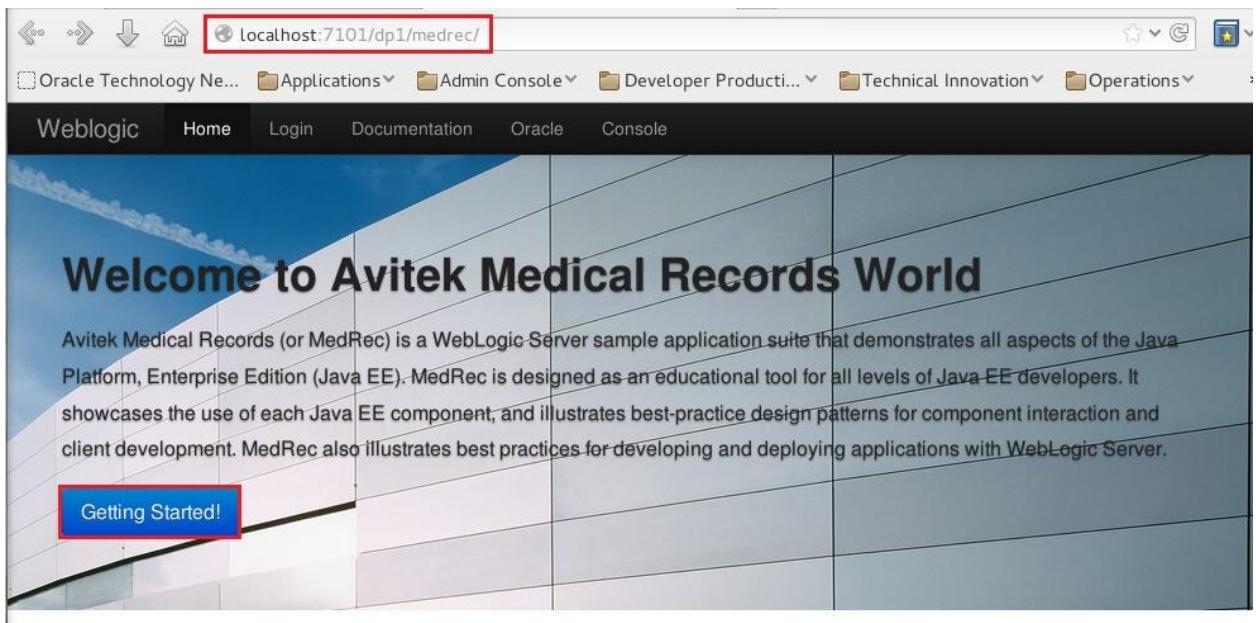
xix. Configuring Other Resources.

- ./MedrecInDP1.sh

```
[oracle@localhost Lab1]$ ./MedrecInDP1.sh
```

xx. Accessing Medrec Application.

- Go to browser and type the URL: <http://localhost:7101/dp1/medrec/>
- Click on Getting Started.



c. Under Patient, Click on I'm New Here

A screenshot of the 'Patient' application page. The top navigation bar includes 'Weblogic', 'Home', 'Login', 'Documentation', 'Oracle', and 'Console'. The main content area has a heading 'Administrator view and manage users.' with a sub-image of a doctor. Below it, text explains the administrator's role in managing patient profiles. Two buttons, 'Login' and 'View Existing Users', are shown. The 'View Existing Users' button is highlighted with a red box. Below this section, another image shows a smiling patient. To its right, the word 'Patient' is highlighted with a red box, followed by a description of the patient's role in viewing and editing their own medical history. A 'Login' button and an 'I'm New Here' button are shown; the 'I'm New Here' button is highlighted with a red box.

d. Enter the following then click on Submit.

Email:	weblogic@oracle.com
Password:	welcome1
Confirm Password:	welcome1
First Name:	Ankit
Last Name:	Pandey
Gender:	Male
DOB:	Jun 23, 1988
SSN:	123456788

Weblogic Home Login Documentation Oracle Console

Account

The Patient application allows patients to log in, edit their profile information, or request that their profile be added to the system. Patients can also view prior medical records of visits with their physician.

*Email	weblogic@oracle.com
*Password	*****
*Confirm Password	*****

Name

*First Name	Middle Name	*Last Name
Ankit		Pandey

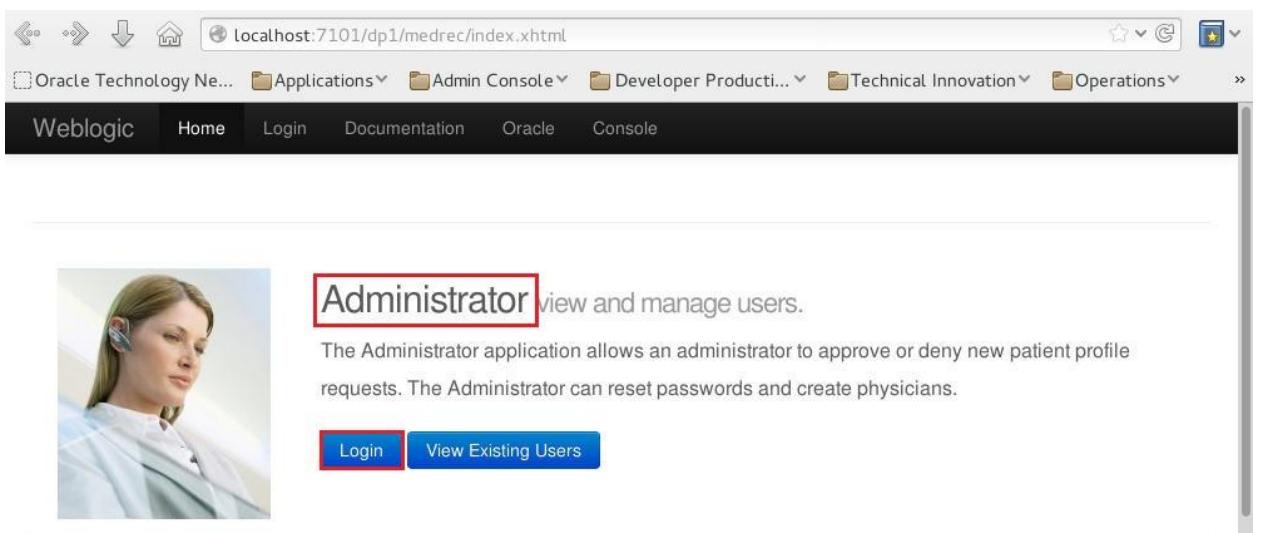
Personal Info

*Gender	Male
*DOB	Sep 1, 2015
*SSN	325436547

Phone

Thank you for registering with us! Your registration will be processed by MedRec Administration. Once approved, you will receive an email with instructions on how to log into MedRec to view your medical record.

- e. Click on Getting Started again on Medrec Home Page.
- f. Under Administrator, click on Login.



- g. Enter **administrator/administrator123** as username and password.

Administrator

x

Please sign in.

Username

administrator

Password

Sign In

h. Under Pending Requests, click on Go.

administrator Administrator Home Logout

Successful Login.

Pending requests.

View pending applicant details and approve or deny requests.

Go

Statistics

Generate reports with financial statistics for patients, physicians, and prescriptions over a specified time period.

Go

- i. Click on the Email Id, and then click on Approve.
- j. Click on Logout.

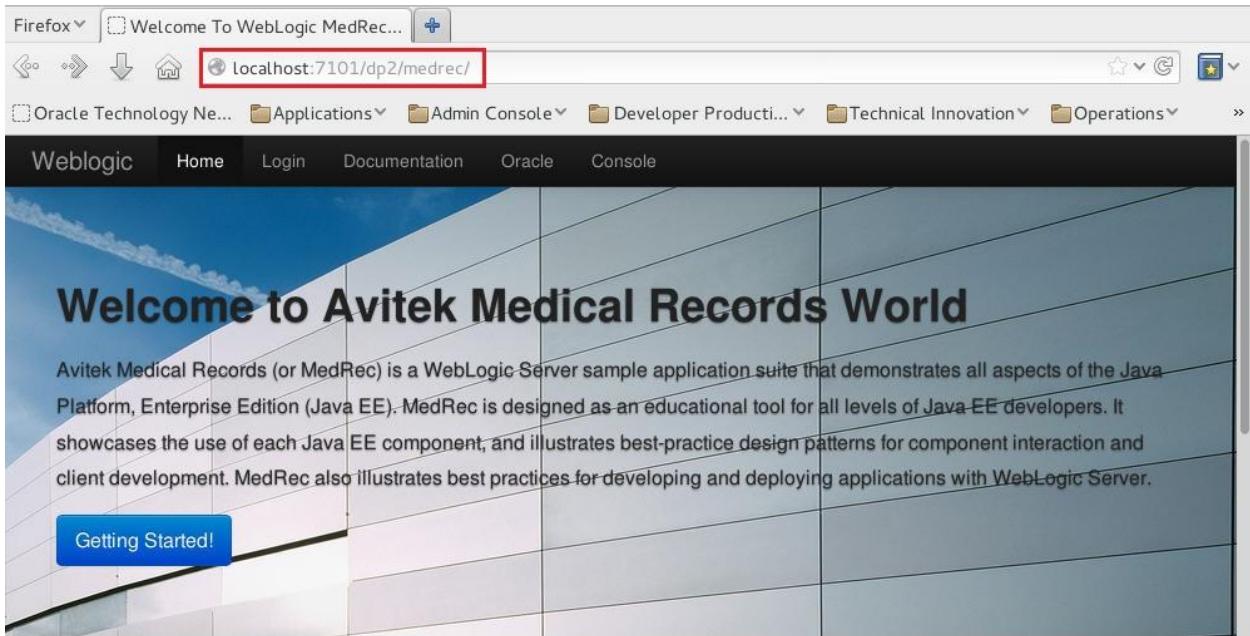
administrator Administrator Home Logout

Successfully approved or denied the registration request.

- k. You can login as weblogic@oracle.com/welcome1 as username/password as Patient.
- l. You can view your record summary, and you can also have interaction with physician.

The screenshot shows a web-based medical application. At the top, there is a navigation bar with the following items: 'Ankit Pandey' (highlighted with a red box), 'Patient Home', 'Profile', 'Chat Room', and 'Logout' (also highlighted with a red box). Below the navigation bar, a green success message box displays the text 'Successful Login.' with a close button ('x'). The main content area is divided into two sections. The left section, titled 'View Record Summary', contains the text 'Look up your medical records, and view your visit and prescription history.' followed by a blue 'Go' button. The right section, titled 'Interaction with Physicians', contains the text 'Click 'Join' to connect to the chat server. You can then select a physician to chat with from the list of online physicians. Choose one to join his or her chat room. If there are no physicians in the list except Eliza, then no physicians are currently online so that no chat room is available. Eliza is a special robot physician. You could chat one-to-one with her directly or you can use the 'Physician App' to have a real physician open the chat room.' followed by a blue 'Go' button.

4. Configuration for Medrec Application for Domain Partition 2.
 - i. Open a new terminal.
 - ii. cd /u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab1/
 - iii. ./MedrecInDP2.sh
 - iv. Go to browser and type the URL: <http://localhost:7101/dp2/medrec/>



The MedRec User Type

To begin using MedRec, click the **Start Using MedRec** button below.
From there you can begin by registering as a new patient or you can

Documentation

Avitek Medical Records (or MedRec) is a comprehensive sample application that demonstrates how to use Oracle WebLogic Server and

- v. As both this application has exactly same JNDI name used within application, JNDI name of Datasource, JMS connection factory, mail sessions, Distributed Queue.
 - vi. Click on Getting Started!
 - vii. Under **Patient**, Click on Login, Try to login with weblogic@oracle.com/welcome1. You will not be able to login. As both medrec application is connected to different database. So in Multitenant WebLogic Server, you can deploy exactly same application with same configuration but with different database and there will be no JNDI conflict in domain.
5. Configuration of Day Trader application for domain partition 3.
- i. cd /u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab1/
 - ii. ./DayTraderInDP3.sh
 - iii. Access Day Trader Application.
 - a. Go to browser and type the URL: <http://localhost:7101/dp3/daytrader/>
 - b. Click on **Configuration** tab, click on “**Re-populate Day Trader Database**”.

Firefox Welcome To WebLogic Med... DayTrader Localhost:7101/dp3/daytrader/ Oracle Technology Ne... Applications Admin Console Developer Product... Technical Innovation Operations

DAYTRADER
PERFORMANCE BENCHMARKING

Home Trading & Portfolios Configuration Primitives FAQ

Benchmark Configuration Tools	Description
Reset DayTrader (to be done before each run)	Reset the DayTrader runtime to a clean starting point by logging off all users, removing new registrations and other general cleanup. For consistent results this URL should be run before each Trade run.
Configure DayTrader run-time parameters	This link provides an interface to set configuration parameters that control DayTrader run-time characteristics such as using EJBs or JDBC. This link also provides utilities such as setting the UID and Password for a remote or protected database when using JDBC.
(Re)-create DayTrader Database Tables and Indexes	This link is used to (a) initially create or (b) drop and re-create the DayTrader tables. A DayTrader database should exist before doing this action , the existing DayTrader tables, if any, are dropped, then new tables and indexes are created. Please stop and re-start the Daytrader application (or your application server) after this action and then use the "Repopulate DayTrader Database" link below to repopulate the new database tables.
(Re)-populate DayTrader Database	This link is used to initially populate or re-populate the DayTrader database with fictitious users (uid:0, uid:1, ...) and stocks (s:0, s:1, ...). First all existing users and stocks are deleted (if any). The database is then populated with a new set of DayTrader users and stocks. This option does not drop and recreate the Daytrader db tables.

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c. Choose following Options then click on **Update Config**.

Run Time Mode:	Full EJB 3
JPA Layer:	Hibernate
Order Processing Mode:	Synchronous



DAYTRADER
PERFORMANCE BENCHMARKING

Home Trading & Portfolios Configuration Primitives FAQ

NOTE: Parameters settings will return to default on server restart. To make configuration settings persistent across application server stop/starts, edit the servlet init parameters for each DayTrader servlet. This is described in the [DayTrader FAQ](#).

Run-Time Mode	Run Time Mode determines server implementation of the TradeServices to use in the DayTrader application Enterprise Java Beans including Session, Entity and Message beans or Direct mode which uses direct database and JMS access. See DayTrader FAQ for details.
JPA Layer	JPA Layer determines what kind of JPA Implementation Daytrader EJB classes use. Typically, Apache Geronimo uses OpenJPA, and RedHat JBoss 5 uses Hibernate.
Order-Processing Mode	Order Processing Mode determines the mode for completing stock purchase and sell operations. Synchronous mode completes the order immediately. Asynchronous_2-Phase performs a 2-phase commit over the EJB Entity/DB and MDB/JMS transactions. See DayTrader FAQ for details.

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- d. Once it is done, go to terminal.
- e. ./correctDB.sh
- f. Close the terminal.
- g. Click on **Trading & Portfolios** tab, Enter **uid:0/xxx** as username/password then click on **Login**.
- h. Click on **Quotes/Trade**, Click on buy to purchase a share.
- i. Click on **Portfolio**, Verify the Order then click on Sell.
- j. Again click on Portfolio, to verify the Sell of share.
- k. Click on **Log off**.

LAB 2: EXPORT /IMPORT DOMAIN PARTITION

1. Stop and remove the domain partition dp1 from base_domain.
 - i. cd /u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab2/
 - ii. ./stopDP1.sh

```
[oracle@localhost Lab2]$ ./stopDP1.sh
Initializing WebLogic Scripting Tool (WLST) ...
Welcome to WebLogic Server Administration Scripting Shell
Type help() for help on available commands
Connecting to t3://localhost:7001 with userid weblogic ...
Successfully connected to Admin Server "AdminServer" that belongs to domain "base_domain".
Warning: An insecure protocol was used to connect to the server.
To ensure on-the-wire security, the SSL port or Admin port should be used instead.
Location changed to edit tree.
This is a writable tree with DomainMBean as the root.
To make changes you will need to start an edit session via startEdit().
For more help, use help('edit').

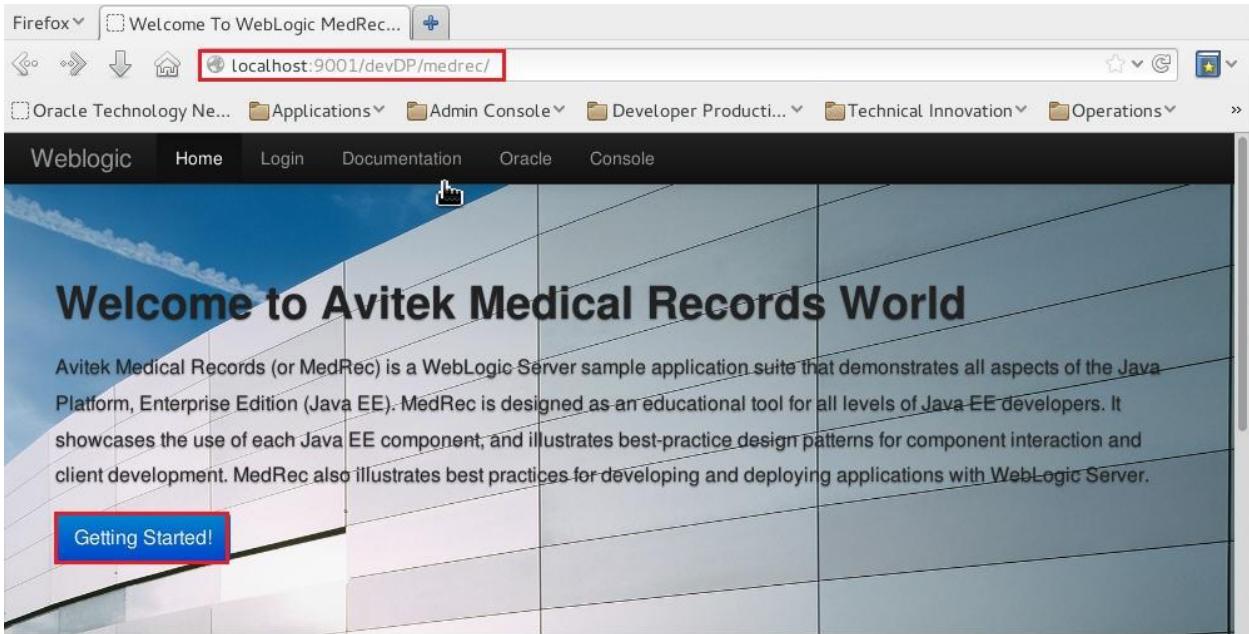
Starting an edit session ...
Started edit session, be sure to save and activate your changes once you are done.
Activating all your changes, this may take a while ...
The edit lock associated with this edit session is released once the activation is completed.
Activation completed
Starting an edit session ...
Started edit session, be sure to save and activate your changes once you are done.
Activating all your changes, this may take a while ...
The edit lock associated with this edit session is released once the activation is completed.
Activation completed
Disconnected from weblogic server: AdminServer
[oracle@localhost Lab2]$
```

- iii. Go to browser and type the URL: <http://localhost:7101/dp1/medrec/>
- iv. Confirm that page return “Error 404—Not Found”.



2. Accessing Medrec Application on Single Server (Admin Server) domain.
 - i. cd /u01/wls/wls1221/user_projects/domains/dev_domain/
 - ii. ./startWebLogic.sh

- iii. Go to browser and access the application on
<http://localhost:9001/devDP/medrec>
- iv. Click on Getting Started.



- v. Under Patient, Click on Login.
- vi. Enter fred@golf.com/weblogic as username/password then click on login.
- vii. Verify the Execution of Application then click on Logoff.

The screenshot shows a web browser window with the URL localhost:9001/devDP/medrec/patient/patientHome.xhtml. The page title is "Patient Home". The top navigation bar includes links for "Patient Home", "Profile", "Chat Room", and "Logout". A red box highlights the "Logout" link. Below the navigation bar, a green success message box displays "Successful Login." A red box highlights this message. On the left, there's a section titled "View Record Summary" with a "Go" button. On the right, there's a section titled "Interaction with Physicians" with a "Go" button. At the bottom of the page, there's a footer with links to Oracle Home, Products and Services, Industries, Support, Store, Partners, Communities, and About, along with copyright information.

3. Exporting the Domain Partition.

- i. Go to browser and type the URL: <http://localhost:9001/console>
- ii. Enter weblogic/welcome1 as Username/Password then click on Login.

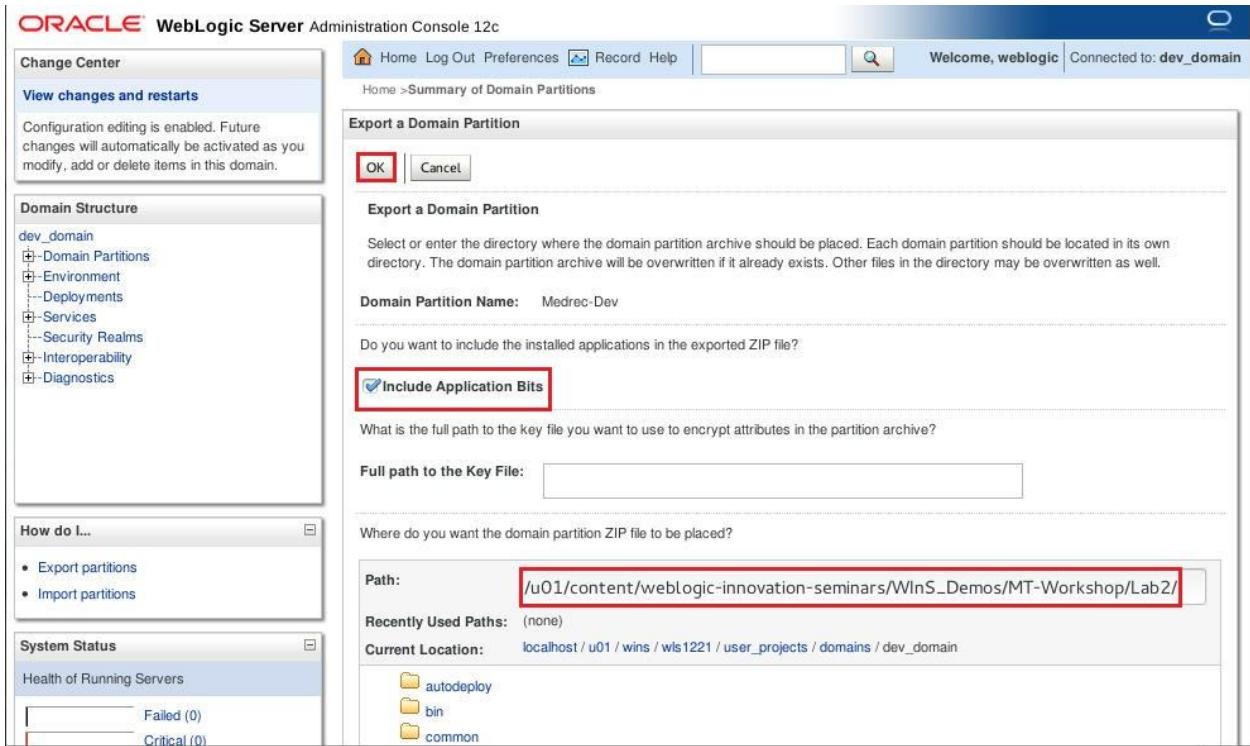
The screenshot shows a web browser window with the URL localhost:9001/console/Login/LoginForm.jsp. The page title is "ORACLE® WebLogic Server Administration Console 12c". The main background features a large "12c" logo. On the right side, there is a "Welcome" login form with fields for "Username" (weblogic) and "Password" (represented by a series of dots). A "Login" button is located at the bottom right of the form. A red box highlights the "Username" and "Password" fields.

- iii. On left Side, Click on Domain Partition, and then check the box near to "Medrec-Dev" then click on Export.

The screenshot shows the Oracle WebLogic Server Administration Console 12c interface. The left sidebar shows the 'Domain Structure' with 'Domain Partitions' selected. The main content area is titled 'Summary of Domain Partitions' and contains a table of domain partitions. One row in the table, 'Medrec-Dev', is highlighted with a red box. The 'Export' button in the table header is also highlighted with a red box. The table has columns for Name, Resource Groups, Default Target(s), and State. The 'Name' column is sorted by Name. The 'State' column shows 'RUNNING'. The table footer indicates 'Showing 1 to 1 of 1'.

Name	Resource Groups	Default Target(s)	State
Medrec-Dev	app1RG	VT-Medrec-1	RUNNING

- iv. Select the box for “Include Application Bits” and enter **/u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab2/** as Path then click on OK.



- v. Verify the creation of Medrec-Dev.zip and Medrec-Dev-attribute.json in **/u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab2/** directory.
- vi. ls -ltra **/u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab2/**

```
[oracle@localhost Lab2]$ ls -ltra /u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab2/
total 2764
-rwxrwx---. 1 oracle oracle      380 Sep 16 23:50 stopDP1.py
drwxrwx---. 2 oracle oracle    4096 Sep 16 23:50 .
-rwxrwx---. 1 oracle oracle     266 Sep 16 23:50 stopDP1.sh
drwxr-xr-x. 8 oracle oracle    4096 Sep 16 23:50 ..
-rwxrwx---. 1 oracle oracle    3226 Sep 17 11:40 Medrec-Dev-attributes.json
-rwxrwx---. 1 oracle oracle 2808015 Sep 17 11:40 Medrec-Dev.zip
[oracle@localhost Lab2]$
```

4. Importing the Domain Partition.

- i. Go back to EM console of base_domain. Go to browser and type the URL: <http://localhost:7001/em>.
- ii. Enter **weblogic/welcome1** as Username/Password and click on Login.
- iii. Click on **WebLogic Domain-> Environment ->Domain Partition**.

The screenshot shows the Oracle Enterprise Manager Fusion Middleware Control 12c interface. The left sidebar has sections for Server, Cluster, Deployment, and Monitoring. Under 'base_domain', the 'WebLogic Domain' dropdown is selected. The 'Environment' option is highlighted with a red box. The main panel shows the 'Admin Server' configuration, with 'Name' set to 'AdminServer' and 'Host' set to 'localhost'. Under the 'Domain Partitions' section, there is a table listing three servers, all of which are 'Running'. The table has columns for 'Server', 'Machine', and 'State'.

- iv. Click on Import. Click on Browse button, Select the file Medrec-Dev.zip from **/u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab2/** directory then click on OK.

The screenshot shows a file selection dialog box. The 'Current Location' is set to **/u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab2/**. The table lists four files:

Select	Name	Size (Byte)	Date Modified
<input type="radio"/>	Medrec-Dev-attributes.json	3226	Sep 17, 2015
<input checked="" type="radio"/>	Medrec-Dev.zip	2808015	Sep 17, 2015
<input type="radio"/>	stopDP1.py	380	Sep 16, 2015
<input type="radio"/>	stopDP1.sh	266	Sep 16, 2015

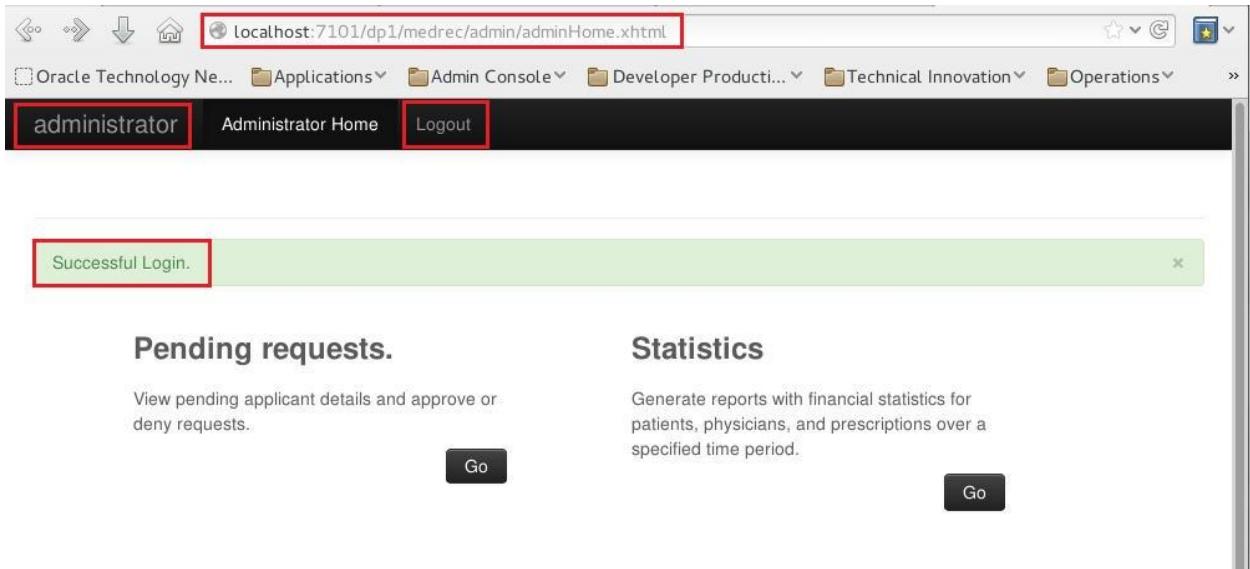
At the bottom, it says 'Selected File or Directory : /u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab2/Medrec-Dev.zip' and has 'OK' and 'Cancel' buttons.

- v. Click on OK.

- vi. Initially it will have State “**Unknown**”. Wait for 1 or 2 minute, click on Refresh icon to get the current state.
- vii. Once the status for Medrec-Dev domain partition is **Shutdown**, check the box, near Medrec-Dev then click on **Control -> Start**. Click on the Refresh icon to get the current state.

Name	Status	OTD Partition	Realm	Default Targets	Available Targets	Resource Groups
dp2	Up			VT-Medrec-2	VT-Medrec-2	
dp3	Running			VT-daytrader	VT-daytrader	
Medrec-Dev	Shutdown			VT-Medrec-1	VT-Medrec-1	

- viii. Go browser and type the URL: <http://localhost:7101/dp1/medrec/>
- ix. Click on “**Getting Started!**” Under Administrator, click on Login.
- x. Enter administrator/administrator123 as Username/Password then click on Sign in.
- xi. Click on Logout.



Note: As we have VT-Medrec-1 as Virtual target in both the domains base_domain and dev_domain. In base_domain, we have added administrator user to default security realm. So as this domain partition becomes part of this domain. It also uses the default security realm.

- xii. Stop the Weblogic Server running in dev_domain, by pressing Ctrl +C in terminal in which Admin Server is running.

LAB 3: RESOURCE CONSUMPTION MANAGEMENT

1. Enabling RCM by adding extra arguments in Server JAVA_OPTION Arguments.
 - i. cd /u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab3/
 - ii. ./stop-cluster.sh
 - iii. vi
/u01/wins/wls1221/user_projects/domains/base_domain/bin/setDomainEnv.sh
 - iv. Add the below options **-XX:+UnlockCommercialFeatures -XX:+ResourceManagement -XX:+UseG1GC** in JAVA_OPTIONS as shown below.

```
JAVA_OPTIONS="-XX:+UnlockCommercialFeatures -XX:+ResourceManagement
-XX:+UseG1GC ${JAVA_OPTIONS} ${JAVA_PROPERTIES}"
export JAVA_OPTIONS
```

```

File Edit View Search Terminal Help
# your domain, be sure to edit the setDomainEnv in the associated domain on
# each machine.
#
# -Djava.security.manager
# -Djava.security.policy=location of weblogic.policy
# -Djavax.security.jacc.policy.provider=weblogic.security.jacc.simpleprovider.SimpleJACCPolicy
# -Djavax.security.jacc.PolicyConfigurationFactory.provider=weblogic.security.jacc.simpleprovider.PolicyConfigurationFactoryImpl
# -Dweblogic.security.jacc.RoleMapperFactory.provider=weblogic.security.jacc.simpleprovider.RoleMapperFactoryImpl

EXTRA_JAVA_PROPERTIES="-Djavax.management.builder.initial=weblogic.management.jmx.mbeanserver.WLSMBeanServerBuilder ${EXTRA_JAVA_PROPERTIES}"
export EXTRA_JAVA_PROPERTIES

JAVA_PROPERTIES="-XX:+UnlockCommercialFeatures -XX:+ResourceManagement -XX:+UseG1GC ${JAVA_PROPERTIES} ${EXTRA_JAVA_PROPERTIES}"
export JAVA_PROPERTIES

pushd ${LONG_DOMAIN_HOME}

# Clustering support (edit for your cluster!)

if [ "${ADMIN_URL}" = "" ] ; then
    # The then part of this block is telling us we are either starting an admin server OR we are non-clustered
    CLUSTER_PROPERTIES=""
    export CLUSTER_PROPERTIES
else
    CLUSTER_PROPERTIES="-Dweblogic.management.server=${ADMIN_URL}"
    export CLUSTER_PROPERTIES
fi

if [ "${LOG4J_CONFIG_FILE}" != "" ] ; then
    JAVA_PROPERTIES="${JAVA_PROPERTIES} -Dlog4j.configuration=file:${LOG4J_CONFIG_FILE}"
-- INSERT --
362,1   67%

```

v. ./start-cluster.sh

```

[oracle@localhost Lab3]$ vi /u01/wins/wls1221/user_projects/domains/base_domain/bin/setDomainEnv.sh
[oracle@localhost Lab3]$ ./start-cluster.sh

Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

Connecting to t3://localhost:7001 with userid weblogic ...
Successfully connected to Admin Server "AdminServer" that belongs to domain "base_domain".

Warning: An insecure protocol was used to connect to the server.
To ensure on-the-wire security, the SSL port or Admin port should be used instead.

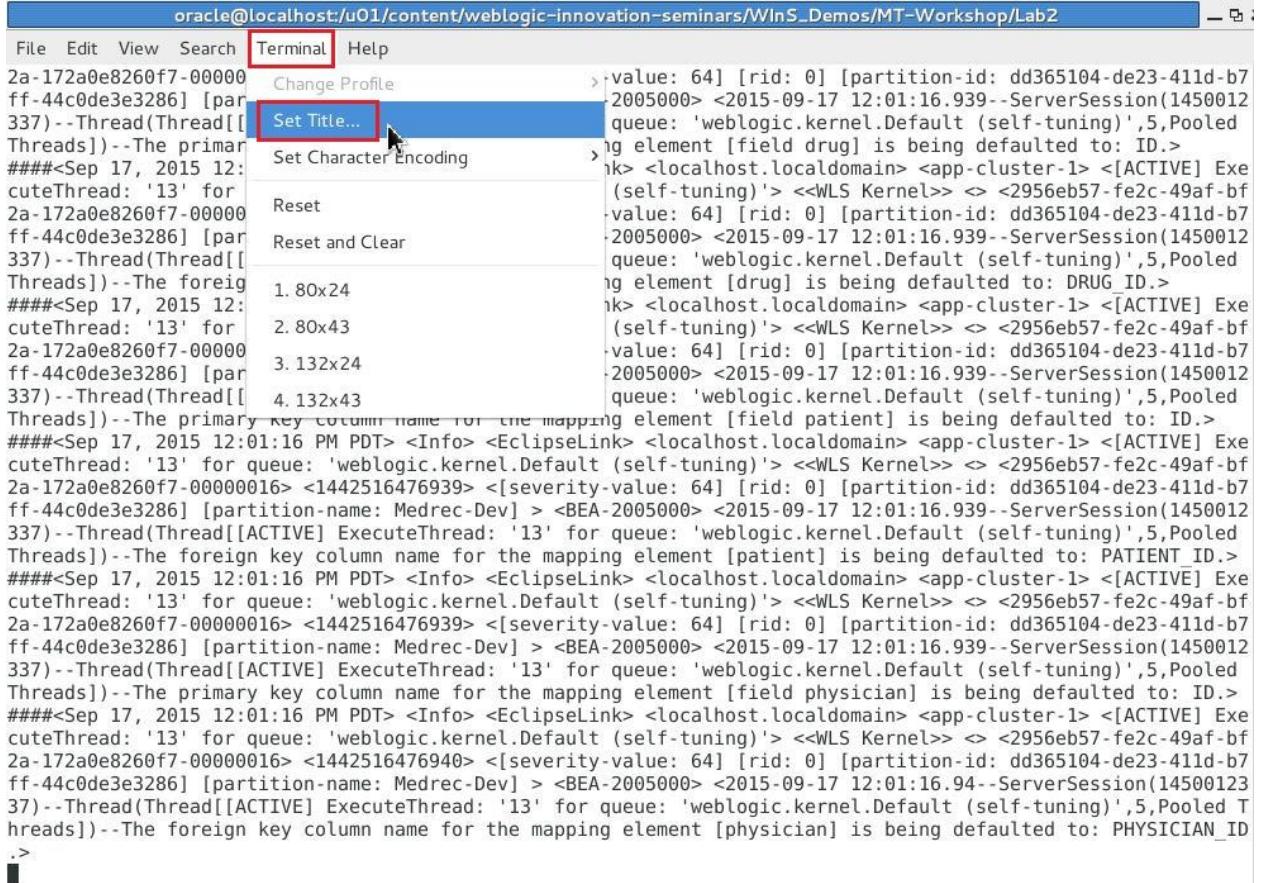
Location changed to edit tree.
This is a writable tree with DomainMBean as the root.
To make changes you will need to start an edit session via startEdit().
For more help, use help('edit').

Starting an edit session ...
Started edit session, be sure to save and activate your changes once you are done.

Starting the following servers in Cluster, app-cluster : app-cluster-1,app-cluster-2
.....
.....
.....
All servers in the cluster app-cluster are started successfully.
Activating all your changes, this may take a while ...
The edit lock associated with this edit session is released once the activation is completed.
Activation completed
Disconnected from weblogic server: AdminServer
[oracle@localhost Lab3]$ 

```

- vi. tail -f /u01/wins/wls1221/user_projects/domains/base_domain/servers/app-cluster-1/logs/app-cluster-1.log
- vii. In this terminal, Click on Enter Terminal -> Set Title and app-cluster-1 then click on **OK**. We will use these logs to monitor resource consumption manager lab.



```

oracle@localhost:/u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab2
File Edit View Search Terminal Help
2a-172a0e8260f7-00000 Change Profile
ff-44c0de3e3286] [par 337)--Thread(Thread[[ Threads])--The primary
####<Sep 17, 2015 12: cuteThread: '13' for
2a-172a0e8260f7-00000 ff-44c0de3e3286] [par 337)--Thread(Thread[[ Threads])--The foreign
####<Sep 17, 2015 12: cuteThread: '13' for
2a-172a0e8260f7-00000 ff-44c0de3e3286] [par 337)--Thread(Thread[[ Threads])--The primary key column name for the mapping element [field patient] is being defaulted to: ID.>
####<Sep 17, 2015 12:01:16 PM PDT> <Info> <EclipseLink> <localhost.localdomain> <app-cluster-1> <[ACTIVE]> ExecuteThread: '13' for queue: 'weblogic.kernel.Default (self-tuning)'> <> <WLS Kernel>> <> <2956eb57-fe2c-49af-bf 2a-172a0e8260f7-00000016> <1442516476939> <severity-value: 64] [rid: 0] [partition-id: dd365104-de23-411d-b7 ff-44c0de3e3286] [partition-name: Medrec-Dev] > <BEA-2005000> <2015-09-17 12:01:16.939--ServerSession(1450012 337)--Thread(Thread[[ACTIVE] ExecuteThread: '13' for queue: 'weblogic.kernel.Default (self-tuning)',5,Pooled Threads])--The foreign key column name for the mapping element [patient] is being defaulted to: PATIENT_ID.>
####<Sep 17, 2015 12:01:16 PM PDT> <Info> <EclipseLink> <localhost.localdomain> <app-cluster-1> <[ACTIVE]> ExecuteThread: '13' for queue: 'weblogic.kernel.Default (self-tuning)'> <> <WLS Kernel>> <> <2956eb57-fe2c-49af-bf 2a-172a0e8260f7-00000016> <1442516476939> <severity-value: 64] [rid: 0] [partition-id: dd365104-de23-411d-b7 ff-44c0de3e3286] [partition-name: Medrec-Dev] > <BEA-2005000> <2015-09-17 12:01:16.939--ServerSession(1450012 337)--Thread(Thread[[ACTIVE] ExecuteThread: '13' for queue: 'weblogic.kernel.Default (self-tuning)',5,Pooled Threads])--The primary key column name for the mapping element [field physician] is being defaulted to: ID.>
####<Sep 17, 2015 12:01:16 PM PDT> <Info> <EclipseLink> <localhost.localdomain> <app-cluster-1> <[ACTIVE]> ExecuteThread: '13' for queue: 'weblogic.kernel.Default (self-tuning)'> <> <WLS Kernel>> <> <2956eb57-fe2c-49af-bf 2a-172a0e8260f7-00000016> <1442516476940> <severity-value: 64] [rid: 0] [partition-id: dd365104-de23-411d-b7 ff-44c0de3e3286] [partition-name: Medrec-Dev] > <BEA-2005000> <2015-09-17 12:01:16.94--ServerSession(1450012 37)--Thread(Thread[[ACTIVE] ExecuteThread: '13' for queue: 'weblogic.kernel.Default (self-tuning)',5,Pooled T hreads])--The foreign key column name for the mapping element [physician] is being defaulted to: PHYSICIAN_ID
->

```

2. Assign Heap Usage Policy.
 - i. Go to FMW control <http://localhost:7001/em>.
 - ii. Enter weblogic/welcome1 as Username/Password then click on Login.
 - iii. Click on **WebLogic Domain ->Environment ->Domain Partition**.
 - iv. Check the box near Medrec-Dev domain and click on **Control -> Stop**. Click on **OK** on Confirmation window.

ORACLE® Enterprise Manager Fusion Middleware Control 12c

base_domain ① WebLogic Domain weblogic Sep 17, 2015 12:07:36 PM PDT

/Domain_base_domain/base_domain > Domain Partitions

▶ Getting Started with Multi-Tenancy

▲ Hide Pie Chart

Status State

Up (3) Running (3)

Name	Status	OTD Partition	Realm	Default Targets	Available Targets	Resource Groups
dp2	Up			VT-Medrec-2	VT-Medrec-2	
dp3	Up	Running		VT-daytrader	VT-daytrader	
Medrec-Dev	Up	Running		VT-Medrec-1	VT-Medrec-1	

Domain Partitions 3 of 3

- v. Verify the partition is in Shutdown State by click on refresh icon to refresh the page.

ORACLE® Enterprise Manager Fusion Middleware Control 12c

base_domain ① WebLogic Domain weblogic Sep 17, 2015 12:10:04 PM PDT

/Domain_base_domain/base_domain > Domain Partitions

Domain Partitions

Domain Partitions are the building blocks of WebLogic Server Multi-Tenancy (MT). Multi-Tenancy permits multiple client organizations to share a domain, improving efficiency and reducing operation costs. Before creating a Domain Partition, you must first create one or more virtual targets. Look at the Getting Started topics for more information.

▶ Getting Started with Multi-Tenancy

▲ Hide Pie Chart

Status State

Down (1) Up (2) Running (2) Shutdown (1)

Name	Status	State	OTD Partition	Realm	Default Targets	Available Targets	Resource Groups
dp2	Up	Running			VT-Medrec-2	VT-Medrec-2	
dp3	Up	Running			VT-daytrader	VT-daytrader	

- vi. Click on **WebLogic Domain->Environment -> Resource Consumption Managers.**

ORA
Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain weblogic

base_domain

WebLogic Domain

Home
Monitoring
Diagnostics
Control
Logs
Environment
Deployments
JDBC Data Sources
Messaging
Cross Component Wiring
Web Services
Other Services
Administration
Refresh WebLogic Domain
Routing Topology

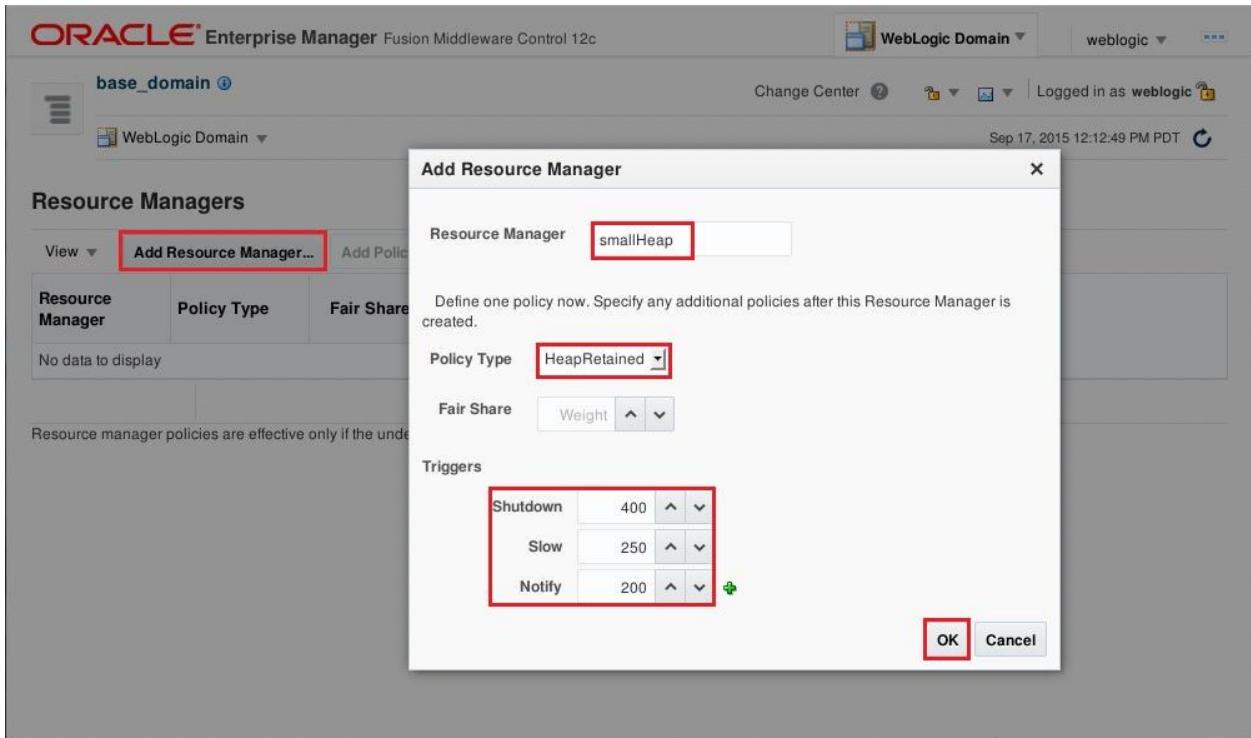
Servers
Server Templates
Clusters
Machines
Domain Partitions
OTD Runtimes
Resource Groups
Resource Group Templates
Partition Work Managers
Resource Consumption Managers

Running(2)
Shutdown(1)

Default Targets	Available Targets	Resource Groups
VT-Medrec-2	VT-Medrec-2	
VT-daytrader	VT-daytrader	

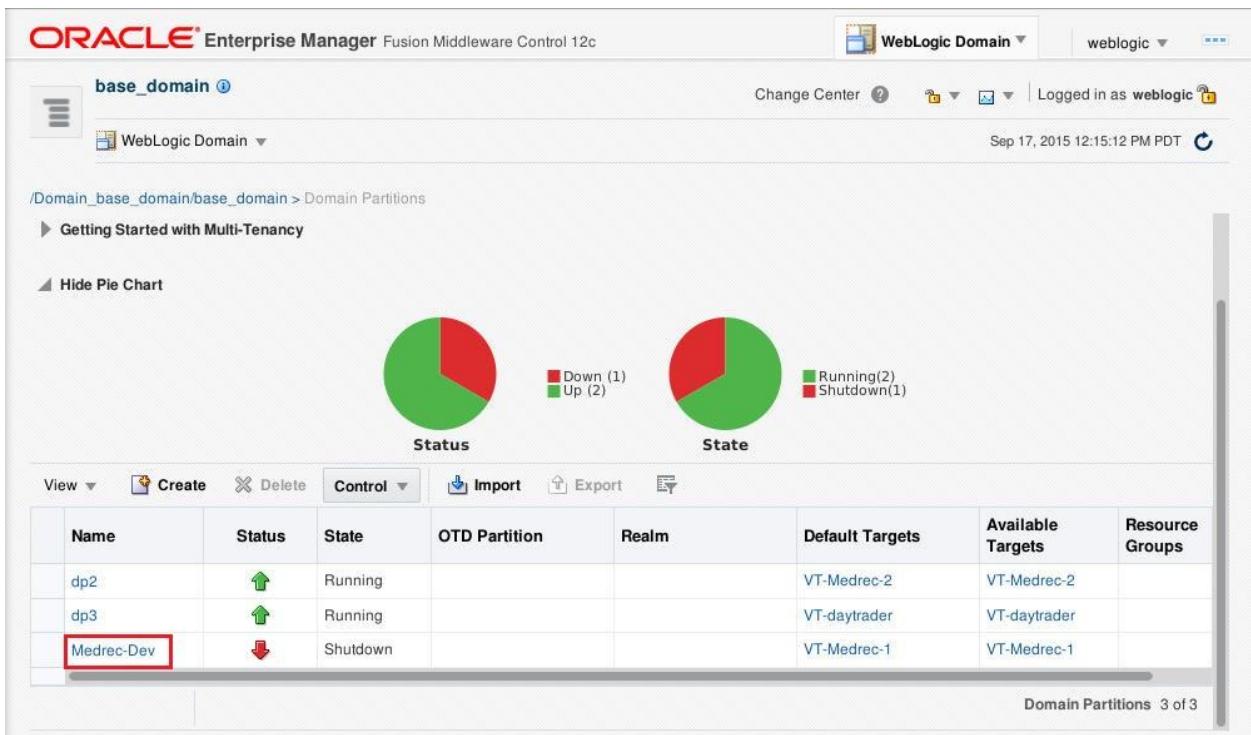
vii. Click on **Add Resource Manager** and enter the following value then click on **OK**.

Resource Manager:	smallHeap
Policy Type:	HeapRetained
Shutdown:	400
Slow:	250
Notify:	200



viii. Associate the Resource Manager with Medrec-Dev domain partition.

- Click on **WebLogic Domain -> Environment->Domain Partition** then click on **Medrec-Dev**.



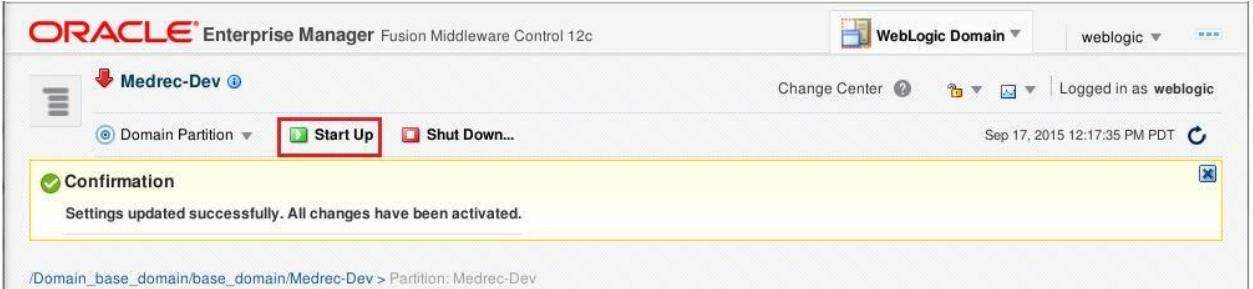
- Click on **Domain Partition ->Administration -> Resource Sharing**.

The screenshot shows the Oracle WebLogic Server Administration Console. The top navigation bar includes 'Medrec-Dev' (with a red arrow icon), 'Change Center', 'Logged in as weblogic', and the date 'Sep 17, 2015 12:17:35 PM PDT'. Below the navigation is a toolbar with icons for 'Domain Partition', 'Start Up', and 'Shut Down...'. The main content area shows the path '/Domain_base_domain/base_domain/Medrec-Dev > Partition: Medrec-Dev'. A red box highlights the 'Resource Sharing' tab in the top navigation bar of the partition configuration page. The page content describes the Resource Sharing policy for the partition, mentioning the Partition Work Manager and Resource Consumption Manager. It includes sections for 'Partition Work Manager Configuration' (radio buttons for 'No Partition Work Manager', 'Use a Partition Work Manager configured for the domain', and 'Specify the Partition Work Manager settings for this domain partition'), and 'Resource Manager Configuration' (radio buttons for 'No Resource Manager', 'Use a Resource Manager configured for the domain' with a dropdown set to 'smallHeap', and 'Use a partition specific resource manager'). Buttons for 'Save' and 'Revert' are located at the bottom right.

c. Under **Resource Manager Configuration**, and Select “**Use a Resource Manager configured for the domain**” and choose “**smallHeap**” then click on **Save**.

This screenshot is identical to the one above, showing the 'Resource Sharing' tab selected in the Partition: Medrec-Dev configuration page. The 'Resource Manager Configuration' section is highlighted with a red box around the 'smallHeap' dropdown in the 'Use a Resource Manager configured for the domain' option. The other options ('No Resource Manager' and 'Use a partition specific resource manager') are also visible.

ix. Click on **Start Up** near Domain partition.



- x. cd /u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab3/
- xi. ./DeployHeap.sh

```
[oracle@localhost Lab3]$ ./DeployHeap.sh
Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

Connecting to t3://localhost:7001 with userid weblogic ...
Successfully connected to Admin Server "AdminServer" that belongs to domain "base_domain".

Warning: An insecure protocol was used to connect to the server.
To ensure on-the-wire security, the SSL port or Admin port should be used instead.

Location changed to edit tree.
This is a writable tree with DomainMBean as the root.
To make changes you will need to start an edit session via startEdit().
For more help, use help('edit').

Starting an edit session ...
Started edit session, be sure to save and activate your changes once you are done.
Deploying application from /u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab3/heapApp.war
to targets (upload=false) ...
<Sep 17, 2015 12:21:45 PM PDT> <Info> <J2EE Deployment SPI> <BEA-260121> <Initiating deploy operation for application, heapApp [archive: /u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/Lab3/heapApp.war], to configured targets.>
You have an edit session in progress, hence WLST will not block for your deployment to complete.
Started the Deployment of Application. Please refer to the returned WLSTProgress object or variable LAST to track the status.
Activating all your changes, this may take a while ...
The edit lock associated with this edit session is released once the activation is completed.
Activation completed
Disconnected from weblogic server: AdminServer
<Sep 17, 2015 12:21:52 PM PDT> <Warning> <JNDI> <BEA-050001> <WLContext.close() was called in a different thread than the one in which it was created.>
[oracle@localhost Lab3]$
```

- xii. Go back to browser and type the URL: <http://localhost:7101/dp1/heapApp/>.
- xiii. Enter 160 in **Allocate Heap** then click on Submit then observe the logs of app-cluster-1 managed server.
- xiv. Enter 50 in **Allocate Heap** then click on Submit then observe the logs of app-cluster-1 managed server.

```
####<Sep 17, 2015 12:23:28 PM PDT> <Notice> <RCM>
<localhost.localdomain> <app-cluster-1> <Thread-52> <weblogic> <> <2956eb57-fe2c-49af-bf2a-172a0e8260f7-00000034> <1442517808893> <[Notifying Quota Reached For Partition: Medrec-Dev] [severity-value: 32] [rid: 0:4] [Previous Usage: 202428128] [partition-id: dd365104-de23-411d-b7ff-44c0de3e3286] [Resource Name:>
```

```

com.oracle.weblogic.rcm.framework.base.HeapRetainedResourceAttributes]
[Current Usage: 211825888] [partition-name: Medrec-Dev] > <BEA-2165799>
<RCM Notification Message: Given quota has been reached for the partition and a
notify action has been executed.>
####<Sep 17, 2015 12:24:03 PM PDT> <Info> <Health> <localhost.localdomain>
<app-cluster-1> <weblogic.GCMonitor> <> <> <2956eb57-fe2c-49af-
bf2a-172a0e8260f7-00000009> <1442517843237> <[severity-value: 64] [rid: 0]
[partition-id: 0] [partition-name: DOMAIN] > <BEA-310002> <21% of the total
memory in the server is free.>
```

```

app-cluster-1
File Edit View Search Terminal Help
#####
<Sep 17, 2015 12:22:59 PM PDT> <Info> <ServletContext-/heapApp> <localhost.localdomain> <app-cluster-1> <[ACTIVE] ExecuteThread: '0' for queue: 'weblogic.kernel.Default (self-tuning)'> <> <2956eb57-fe2c-49af-bf2a-172a0e8260f7-00000047> <1442517779668> <[severity-value: 64] [rid: 0] [partition-id: dd365104-de23-411d-b7ff-44c0de3e3286] [partition-name: Medrec-Dev] > <BEA-000000> <JspServlet: param pageCheckSeconds initialized to: 1>
#####
<Sep 17, 2015 12:22:59 PM PDT> <Info> <ServletContext-/heapApp> <localhost.localdomain> <app-cluster-1> <[ACTIVE] ExecuteThread: '0' for queue: 'weblogic.kernel.Default (self-tuning)'> <> <2956eb57-fe2c-49af-bf2a-172a0e8260f7-00000047> <1442517779669> <[severity-value: 64] [rid: 0] [partition-id: dd365104-de23-411d-b7ff-44c0de3e3286] [partition-name: Medrec-Dev] > <BEA-000000> <JspServlet: param encoding initialized to: null>
#####
<Sep 17, 2015 12:22:59 PM PDT> <Info> <ServletContext-/heapApp> <localhost.localdomain> <app-cluster-1> <[ACTIVE] ExecuteThread: '0' for queue: 'weblogic.kernel.Default (self-tuning)'> <> <2956eb57-fe2c-49af-bf2a-172a0e8260f7-00000047> <1442517779683> <[severity-value: 64] [rid: 0] [partition-id: dd365104-de23-411d-b7ff-44c0de3e3286] [partition-name: Medrec-Dev] > <BEA-000000> <JspServlet: param superclass initialized to null>
#####
<Sep 17, 2015 12:22:59 PM PDT> <Info> <ServletContext-/heapApp> <localhost.localdomain> <app-cluster-1> <[ACTIVE] ExecuteThread: '0' for queue: 'weblogic.kernel.Default (self-tuning)'> <> <2956eb57-fe2c-49af-bf2a-172a0e8260f7-00000047> <1442517779689> <[severity-value: 64] [rid: 0] [partition-id: dd365104-de23-411d-b7ff-44c0de3e3286] [partition-name: Medrec-Dev] > <BEA-000000> <JspServlet: param workingDir initialized to: /u01/wins/wls1221/user_projects/domains/base_domain/partitions/Medrec-Dev/system/servers/app-cluster-1/tmp/_WL_user/heapApp/ru7jtk>
#####
<Sep 17, 2015 12:22:59 PM PDT> <Info> <ServletContext-/heapApp> <localhost.localdomain> <app-cluster-1> <[ACTIVE] ExecuteThread: '0' for queue: 'weblogic.kernel.Default (self-tuning)'> <> <2956eb57-fe2c-49af-bf2a-172a0e8260f7-00000047> <1442517779701> <[severity-value: 64] [rid: 0] [partition-id: dd365104-de23-411d-b7ff-44c0de3e3286] [partition-name: Medrec-Dev] > <BEA-000000> <JspServlet: initialization_complete>
#####
<Sep 17, 2015 12:23:28 PM PDT> <Notice> <RCM> <localhost.localdomain> <app-cluster-1> <Thread-52> <weblogic> <> <2956eb57-fe2c-49af-bf2a-172a0e8260f7-00000034> <1442517808893> <[Notifying Quota Reached For Partition: Medrec-Dev] [severity-value: 32] [rid: 0:4] [Previous Usage: 202428128] [partition-id: dd365104-de23-411d-b7ff-44c0de3e3286] [Resource Name: com.oracle.weblogic.rcm.framework.base.HeapRetainedResourceAttributes] [Current Usage: 211825888] [partition-name: Medrec-Dev] > <BEA-2165799> <RCM Notification Message: Given quota has been reached for the partition and a notify action has been executed.>
#####
<Sep 17, 2015 12:24:03 PM PDT> <Info> <Health> <localhost.localdomain> <app-cluster-1> <weblogic.GCMonitor> <> <> <2956eb57-fe2c-49af-bf2a-172a0e8260f7-00000009> <1442517843237> <[severity-value: 64] [rid: 0] [partition-id: 0] [partition-name: DOMAIN] > <BEA-310002> <21% of the total memory in the server is free.>
```

- xv. Enter 50 in **Allocate Heap** then click on Submit then observe the logs of app-cluster-1 managed server.

```

#####
<Sep 17, 2015 12:26:09 PM PDT> <Notice> <RCM>
<localhost.localdomain> <app-cluster-1> <Thread-51> <weblogic> <> <2956eb57-fe2c-
49af-bf2a-172a0e8260f7-00000034> <1442517969737> <[Slow Action Quota Reached
For Partition: Medrec-Dev] [Current Usage: 284744072] [severity-value: 32] [Previous
Usage: 272825472] [Was Required action to Slow the Partition is executed?: true]
[Resource Name:
com.oracle.weblogic.rcm.framework.base.HeapRetainedResourceAttributes]
[partition-id: dd365104-de23-411d-b7ff-44c0de3e3286] [partition-name: Medrec-Dev]
```

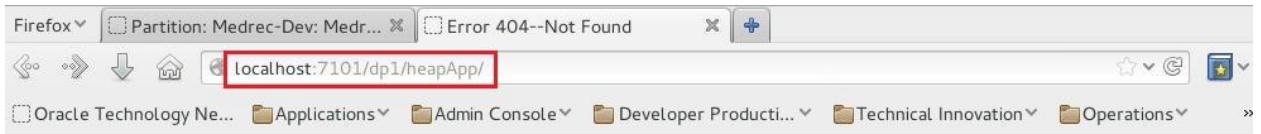
[rid: 0:3] > <BEA-2165800> <RCM Slow Message: Given quota has been reached for the partition and a slow action has been executed.>

```
####<Sep 17, 2015 12:26:09 PM PDT> <Notice> <RCM> <localhost.localdomain> <app-cluster-1> <Thread-51> <weblogic> <> <2956eb57-fe2c-49af-bf2a-172a0e8260f7-00000034> <1442517969737> <[Slow Action Quota Reached For Partition: Medrec-Dev] [Current Usage: 284744072] [severity-value: 32] [Previous Usage: 272825472] [Was Required action to Slow the Partition is executed?: true] [Resource Name: com.oracle.weblogic.rcm.framework.base.HeapRetainedResourceAttributes] [partition-id: dd365104-de23-411d-b7ff-44c0de3e3286] [partition-name: Medrec-Dev] [rid: 0:3] > <BEA-2165800> <RCM Slow Message: Given quota has been reached for the partition and a slow action has been executed.>
```

xvi. Enter 150 in **Allocate Heap** then click on Submit then observe the logs of app-cluster-1 managed server.

```
####<Sep 17, 2015 12:26:09 PM PDT> <Notice> <RCM> <localhost.localdomain> <app-cluster-1> <Thread-51> <weblogic> <> <2956eb57-fe2c-49af-bf2a-172a0e8260f7-00000034> <1442517969737> <[Slow Action Quota Reached For Partition: Medrec-Dev] [Current Usage: 284744072] [severity-value: 32] [Previous Usage: 272825472] [Was Required action to Slow the Partition is executed?: true] [Resource Name: com.oracle.weblogic.rcm.framework.base.HeapRetainedResourceAttributes] [partition-id: dd365104-de23-411d-b7ff-44c0de3e3286] [partition-name: Medrec-Dev] [rid: 0:3] > <BEA-2165800> <RCM Slow Message: Given quota has been reached for the partition and a slow action has been executed.>
####<Sep 17, 2015 12:28:12 PM PDT> <Notice> <RCM> <localhost.localdomain> <app-cluster-1> <Thread-53> <weblogic> <> <2956eb57-fe2c-49af-bf2a-172a0e8260f7-00000034> <1442518092544> <[severity-value: 32] [Proposed Usage: 449121936] [rid: 0:5] [partition-id: dd365104-de23-411d-b7ff-44c0de3e3286]> <[Shutdown Action Quota Reached For Partition: Medrec-Dev] [Resource Name: com.oracle.weblogic.rcm.framework.base.HeapRetainedResourceAttributes] [Current Usage: 449476920] [partition-name: Medrec-Dev]> <BEA-2165801> <RCM Shutdown Message: Given quota has been reached for the partition and a shutdown action has been executed.>
####<Sep 17, 2015 12:28:12 PM PDT> <Notice> <Partition Lifecycle> <localhost.localdomain> <app-cluster-1> <[ACTIVE] ExecuteThread: '13' for queue: 'weblogic.kernel.Default (self-tuning)'> <<WLS Kernel>> <> <2956eb57-fe2c-49af-bf2a-172a0e8260f7-00000048> <1442518092550> <[severity-value: 32] [rid: 0] [partition-id: dd365104-de23-411d-b7ff-44c0de3e3286] [partition-name: Medrec-Dev]> <BEA-2192303> <The partition lifecycle operation "FORCE_SHUTDOWN" for partition "Medrec-Dev" is initiated.>
####<Sep 17, 2015 12:28:12 PM PDT> <Info> <Deployer> <localhost.localdomain> <app-cluster-1> <[ACTIVE] ExecuteThread: '13' for queue: 'weblogic.kernel.Default (self-tuning)'> <<WLS Kernel>> <> <2956eb57-fe2c-49af-bf2a-172a0e8260f7-00000048> <1442518092570> <[severity-value: 64] [rid: 0] [partition-id: dd365104-de23-411d-b7ff-44c0de3e3286] [partition-name: Medrec-Dev]> <BEA-149059> <Module medrec/physician of application physician is transitioning from STATE_ACTIVE to STATE_ADMIN on server app-cluster-1.>
####<Sep 17, 2015 12:28:12 PM PDT> <Info> <Deployer> <localhost.localdomain> <app-cluster-1> <[ACTIVE] ExecuteThread: '13' for queue: 'weblogic.kernel.Default (self-tuning)'> <<WLS Kernel>> <> <2956eb57-fe2c-49af-bf2a-172a0e8260f7-00000048> <1442518092575> <[severity-value: 64] [rid: 0] [partition-id: dd365104-de23-411d-b7ff-44c0de3e3286] [partition-name: Medrec-Dev]> <BEA-149060> <Module medrec/physician of application physician successfully transitioned from STATE_ACTIVE to STATE_ADMIN on server app-cluster-1.>
####<Sep 17, 2015 12:28:12 PM PDT> <Info> <Deployer> <localhost.localdomain> <app-cluster-1> <[ACTIVE] ExecuteThread: '13' for queue: 'weblogic.kernel.Default (self-tuning)'> <<WLS Kernel>> <> <2956eb57-fe2c-49af-bf2a-172a0e8260f7-00000048> <1442518092575> <[severity-value: 64] [rid: 0] [partition-id: dd365104-de23-411d-b7ff-44c0de3e3286] [partition-name: Medrec-Dev]> <BEA-149059> <Module common.jar of application physician is transitioning from STATE_ACTIVE to STATE_ADMIN on server app-cluster-1.>
```

xvii. Refresh the page, <http://localhost:7101/dp1/heapApp/> which return 404 and confirm shutdown of the domain partition Medrec-dev in managed server 1.



From RFC 2068 *Hypertext Transfer Protocol -- HTTP/1.1:*

10.4.5 404 Not Found

The server has not found anything matching the Request-URI. No indication is given of whether the condition is temporary or permanent.

If the server does not wish to make this information available to the client, the status code 403 (Forbidden) can be used instead. The 410 (Gone) status code SHOULD be used if the server knows, through some internally configurable mechanism, that an old resource is permanently unavailable and has no forwarding address.

Note: As this domain partition is target to virtual target which is target at cluster which consists of two managed servers. So this domain partition stopped working on managed server 1, but if you access the application on managed server 2, you still will be able to access the application in this domain partition. If similar things happen in managed server 2 and domain partition shutdown on managed server 2 as well, then domain partition will be shutdown

OPTIONAL: SECURITY ISOLATION

1. Creating a New Security Realm.
 - i. Go to browser and type the URL: <http://localhost:7001/console>.
 - ii. Enter **weblogic/welcome1** as username/password then click on Login.
 - iii. Under Domain Structure, click on **Security Realms**.
 - iv. Click on **New**.

Summary of Security Realms

A security realm is a container for the mechanisms—including users, groups, security roles, security policies, and security providers—that are used to protect WebLogic resources. You can have multiple active security realms in a WebLogic Server domain, but only one can be set as the default security realm, which is reserved for domain administrative purposes.

This Security Realms page lists each security realm that has been configured in this WebLogic Server domain. Click the name of the realm to explore and configure that realm.

New	Delete	Showing 1 to 1 of 1 Previous Next					
<input type="button" value="New"/>	<input type="button" value="Delete"/>	<table border="1"> <thead> <tr> <th>Name</th> <th>Default Realm</th> </tr> </thead> <tbody> <tr> <td>myrealm</td> <td>true</td> </tr> </tbody> </table>		Name	Default Realm	myrealm	true
Name	Default Realm						
myrealm	true						
<input type="button" value="New"/>	<input type="button" value="Delete"/>	Showing 1 to 1 of 1 Previous Next					

- v. Enter **mynewrealm** as Name; check the box for “**Create default providers within new realm**” and “**Ignore Deploy Credential Mapping**” then click on **OK**.

Create a New Realm

Realm Properties

The following properties will be used to identify your new realm.

* Indicates required fields

What would you like to name your new realm?

* Name:

Valid security realms must include a number of providers, each of which is responsible for some aspect of the overall security framework. You can use either the WebLogic Server supplied providers or your own custom providers.

Create default providers within this new realm

To avoid overwriting new credential mapping information with old information in a weblogic-ra.xml deployment descriptor file, check the Ignore Deploy Credential Mapping setting below.

Ignore Deploy Credential Mapping

- vi. Click on **mynewrealm**.

vii. Click on **Users and Groups -> Users** tab.

viii. Click on New.

This page displays information about each user that has been configured in this security realm.

Customize this table

Users (Filtered - More Columns Exist)

<input type="checkbox"/>	Name	Description	Provider
There are no items to display			

New Delete Showing 0 to 0 of 0 Previous | Next

New Delete Showing 0 to 0 of 0 Previous | Next

ix. Enter the following then click on OK.

Name:	administrator
Description:	Domain Partition 2 users
Provider:	Default Authenticator
Password:	welcome1
Confirm Password:	welcome1

Create a New User

OK | Cancel

User Properties

The following properties will be used to identify your new User.

* Indicates required fields

What would you like to name your new User?

* Name:

How would you like to describe the new User?

Description:

Please choose a provider for the user.

Provider:

The password is associated with the login name for the new User.

* Password:

* Confirm Password:

OK | Cancel

- x. Click on Activate changes.
- xi. Assign the **mynewrealm** security realm to domain partition **Medrec-Dev**.
 - a. Click on **Domain Partitions**, then on **Control** tab.
 - b. Check the box near Medrec-Dev and click on **Shutdown ->Force Shutdown Now**.

Change Center

View changes and restarts

Pending changes exist. They must be activated to take effect. You may activate them now. Otherwise, they will be automatically activated when you next modify, add or delete items in this domain.

Domain Structure

- base_domain
 - Domain Partitions
 - Environment
 - Deployments
 - Services
 - Security Realms
 - Interoperability
 - Diagnostics
 - Log Files
 - Diagnostic Modules
 - Built-in Diagnostic Modules
 - Diagnostic Images
 - Request Performance
 - Archives

Summary of Domain Partitions

Control

This page lists the state of the domain partitions in this WebLogic Server domain.

Name	Default	State	Status of Last Action
dp2	VT-Medrec-2	RUNNING	TASK COMPLETED
dp3	VT-daytrader	RUNNING	TASK COMPLETED
Medrec-Dev	VT-Medrec-1	RUNNING	TASK COMPLETED

- c. Once domain partition shutdown, click on Medrec-Dev.
- d. In Configuration-> General tab, Under Use Realm, select mynewrealm then click on Save.

Settings for Medrec-Dev

General

Use this page to view or change the configuration of a domain partition. Only the targets that have been selected on the Targets page will be available and shown on this page.

Select Default Targets:

Available:

Chosen:

VT-Medrec-1

Select default targets for this domain partition. These targets will be applied for any resource group that does not specify a target. [More Info...](#)

Use Realm: mynewrealm

Select a realm to use for this domain partition. [More Info...](#)

- e. Click on Domain Partitions, then on Control tab.

f. Select the box near Medrec-Dev and click on Start.

The screenshot shows the Oracle WebLogic Server Administration Console interface. On the left, there's a sidebar titled 'Domain Structure' with a tree view of the 'base_domain'. The 'Domain Partitions' node is expanded and highlighted with a red box. On the right, the main panel displays the 'Summary of Domain Partitions' page. The 'Control' tab is active. Below it, a message says 'This page lists the state of the domain partitions in this WebLogic Server domain.' A table titled 'Domain Partitions' shows the following data:

	Name	Default Target(s)	State	Status of Last Action
<input type="checkbox"/>	dp2	VT-Medrec-2	RUNNING	TASK COMPLETED
<input type="checkbox"/>	dp3	VT-daytrader	RUNNING	TASK COMPLETED
<input checked="" type="checkbox"/>	Medrec-Dev	VT-Medrec-1	SHUTDOWN	TASK COMPLETED

xii. Verified that we have two security realms in different domain partition in single domain.

- a. Go to browser and type the URL:
<http://localhost:7101/dp1/medrec/index.xhtml>
- b. Under Administrator, click on Login.
- c. Login with old security realm credential that is administrator/administrator123.
- d. You must get “Incorrect username or password!”.
- e. Login with new security realm credential that is administrator/welcome1.
- f. Click on Logout.
- g. Go to browser and type the URL:
<http://localhost:7101/dp2/medrec/index.xhtml>
- h. Under Administrator, click on Login.
- i. Login with new security realm credential that is administrator/welcome1.
- j. You must get “Incorrect username or password!”.
- k. Login with old security realm credential that is administrator/administratior123.
- l. Click on Logout.

Clean UP

1. Cleaning Up Environment.

- i. cd /u01/content/weblogic-innovation-seminars/WInS_Demos/MT-Workshop/CleanUp
- ii. ./stopDP.sh
- iii. ./stop-nm.sh
- iv. Delete the domain.
 - a. rm -Rf /u01/wins/wls1221/user_projects/domains/base_domain
 - b. rm -Rf /u01/wins/wls1221/user_projects/domains/dev_domain
 - c. rm -Rf /u01/wins/wls1221/user_projects/applications/base_domain