

Monitoring Oracle Fusion Middleware

- Very important task for an Administrator
- Methods for Monitoring
 1. Oracle WebLogic Server Administration Console
 2. Fusion Middleware console
 3. Command Line


```
opmnctl status [scope] [options]
```

- Viewing General Information
- Monitoring an Oracle WebLogic Server Domain
- Monitoring an Oracle WebLogic Server Administration or Managed Server
- Monitoring a Cluster
- Monitoring a Component
- Monitoring Java EE Applications
- Monitoring SOA Composite Applications

Viewing General Information


- You can view the overall status of the Oracle Fusion Middleware environment from the home page of the farm using Fusion Middleware Control.
- This page lists the availability of all components, an application deployment summary, including SOA composites, if any SOA composite applications are deployed.

Deployments



Name	Status	Target
Application Deployments		
Internal Applications		
companyStoreAdmin	Up	AdminServer
companyStoreAdmin1	Down	AdminServer
conn1_2	Up	AdminServer
conn1_2	Up	Server1
conn1_2	Up	Server2
FMW Welcome Page	Up	AdminServer
FMW Welcome Page	Up	Server1
FMW Welcome Page	Up	Server2
LoanAppDemoPOJO	Up	bam_server1
LoanAppDemoPOJO1	Up	AdminServer
LoanAppDemoPOJO1	Down	Server1
LoanAppDemoPOJO1	Down	Server2
mdsappdb	Up	AdminServer
mdsappdb1	Up	Server1
mdsappdb2	Up	Server2
mtom-service	Down	bam_server1
oracle-bam(11.1.1)	Up	bam_server1
PsTestApp(V2.0,0000)	Down	AdminServer
PsTestApp(V2.0,0000)	Down	Server1
PsTestApp(V2.0,0000)	Down	Server2
PsTestApp(V2.0,1.1)	Down	AdminServer
PsTestApp(V2.0,1.1)	Down	Server1
PsTestApp(V2.0,1.1)	Down	Server2

Fusion Middleware



Name	Status	Host
WebLogic Domain		
soa_rc1_domain		
AdminServer	Down	
AdminServer	Up	stasa39.us.oracle.com
bam_server1	Up	stasa39.us.oracle.com
Cluster1		
Server1	Up	stasa39.us.oracle.com
Server2	Up	stasa39.us.oracle.com
ser-3	Down	
soa_server1	Down	
BAM		
OracleBamServer (bam)	Up	stasa39.us.oracle.com
OracleBamWeb (bam)	Up	stasa39.us.oracle.com
Metadata Repositories		
mds-FileRepos1		stasa39.us.oracle.com
mds-owsm		stasa39.us.oracle.com

Farm Resource Center

Before You Begin

- Introduction to Oracle Fusion Middleware
- Understanding Key Oracle Fusion Middleware Farm Concepts
- Overview of Oracle Fusion Middleware Administration Tools

Typical Administration Tasks

- Getting Started Using Oracle Enterprise Manager Fusion Middleware Control

Monitoring an Oracle WebLogic Server Domain

You can view the status of a domain, including the servers, clusters, and deployments in the domain in the domain home page of Fusion Middleware Control:

1. From the navigation pane, expand the farm, then WebLogic Domain.
2. Select the domain.

The domain home page is displayed, as shown in the following figure:

Summary ⚙️

General

Administration Server [AdminServer](#)
 Administration Server Host [stasa39.us.oracle.com](#)
 Administration Server Listen Port [7001](#)

To configure and manage this WebLogic Domain, use the [Oracle WebLogic Server Administration Console](#).

Servers ⚙️



Search ▶

Name	Status	Host	Cluster	Listen Port	Active Sessions
""	↓			Unavailab	Unavailabl
AdminServer	↑	stasa39.u		7001	7
Server1	↑	stasa39.u	Cluster1	17001	0
Server2	↑	stasa39.u	Cluster1	17011	0
bam_server1	↑	stasa39.u		9001	0
ser-3	↓			Unavailab	Unavailabl
soa_server1	↓			Unavailab	Unavailabl

Oracle WebLogic Domain Resource Center

Before You Begin

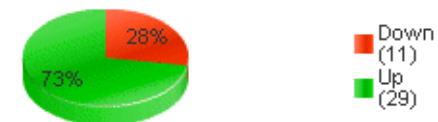
- ? What is a WebLogic Domain?
- ? Manage Oracle WebLogic Server with Fusion Middleware Control

Clusters ⚙️

Search ▶

Name	Servers	Cluster Address	Cluster Messaging Mode	Default Load Algorithm	Ses Rep Typ
Cluster1	2		Multicast	Round Robin	(No

Deployments ⚙️



Search ▶

Name	Status	Target
Application Deployments		
Internal Applications		
companyStoreAdmin	↑	AdminServer
companyStoreAdmin1	↓	AdminServer
conn1_2	↑	AdminServer
conn1_2	↑	Server1
conn1_2	↑	Server2
FMW Welcome Page Applic	↑	AdminServer
FMW Welcome Page Applic	↑	Server1
FMW Welcome Page Applic	↑	Server2
LoanAppDemoPOJO	↑	bam_server1
LoanAppDemoPOJO1	↑	AdminServer
LoanAppDemoPOJO1	↓	Server1
LoanAppDemoPOJO1	↓	Server2
mdsappdb	↑	AdminServer
mdsappdb1	↑	Server1
mdsappdb2	↑	Server2

- A general summary of the domain, along with link to the Oracle WebLogic Server Administration Console
- Information about the servers, both the Administration Server and the Managed Servers in the domain
- Information about the clusters in the domain
- Information about the deployments in the domain

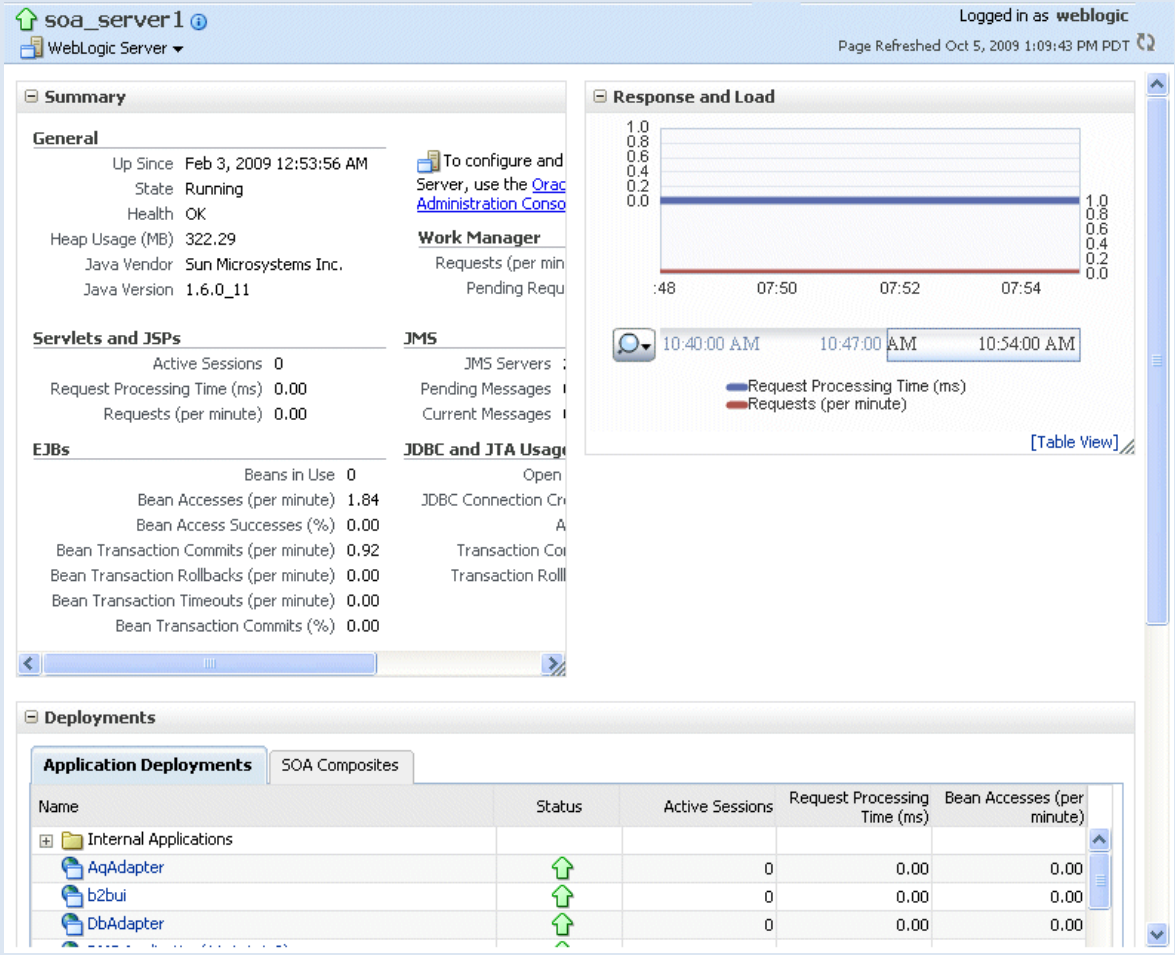
Monitoring an Oracle WebLogic Server Administration or Managed Server

1. Log in to fmw console From the navigation pane, expand the farm, then WebLogic domain, and then the domain.

2. Select the server.

The server home page is displayed.

The following figure shows the home page for a Managed Server:



Monitoring a Cluster

1. From the navigation pane, expand the farm, then WebLogic Domain, and then the domain.

2. Select the cluster.

The cluster page is displayed, as shown in the following figure

Summary **General**

Cluster Address
Cluster Broadcast Channel
Session Replication Type (None)
Default Load Algorithm Round Robin
Cluster Messaging Mode Unicast

To configure and manage this WebLogic Cluster, use the [Oracle WebLogic Server Administration Console](#).

Servers Search

Name	Status	Host	Cluster	Listen Port
soa_server1		dadvmn06		8001
bam_server1		dadvmn06		9001

 Deployments Search

Name	Status	Target
Application Deployments		
Internal Applications		
Resource Adapters		
DefaultToDoTaskFlow		soa_server1
worklistapp		soa_server1
SOA		
soa-infra		soa_server1

Monitoring a Component

To monitor a Java component, such as WebCenter Spaces:

1. From the navigation pane, expand the farm, then the type of component, such as WebCenter, then the component, such as WebCenter Spaces.
2. Select the component. For example, select WebCenter Spaces. The component home page is displayed, as shown in the following figure:

Component home page

WebCenter Spaces ⓘ Logged in as **weblogic** | host: owcsvr01.us.oracle.com

WebCenter ▼ Page Refreshed Mar 31, 2009 10:38:14 AM PDT ↻

Related Components

WebCenter Spaces URL
<http://hostname.domain.com:8888/webcenter/spaces>
URL to access the WebCenter Spaces application being managed.

WebLogic Server
[WLS_Spaces](#)
WebLogic server instance where WebCenter Spaces is deployed.

J2EE Application
[webcenter](#)
J2EE application for WebCenter Spaces.

Metadata Repository
[mds-SpacesDS](#)
Repository where the metadata is stored.

Resource Center

Typical Before You Begin Tasks

- [Introducing WebCenter Spaces](#)
- [Getting WebCenter Spaces Up and Running](#)

Typical Administration Tasks

- [Starting and Stopping WebCenter Spaces](#)
- [Configuring Services for WebCenter Spaces](#)
- [Monitoring the Performance of WebCenter Spaces](#)
- [Exporting and Importing WebCenter Spaces](#)

Security

- [Securing WebCenter Spaces](#)
- [Connecting WebCenter Spaces to Identity Store](#)
- [Managing Users and Roles](#)

Other Resources

- [WebCenter Spaces on Oracle Technology Network](#)
- [WebCenter Spaces Forum](#)

Group Space Page Response

10:34 AM 10:38 10:42 10:46
31 March 2009

10:38:16 AM

Average Page Processing Time (ms)

[Table View]

Most Active Group Spaces

new3103091
testblank012

Access Count

[Table View]
More Info ...

Slowest Group Spaces

Group Spaces with Most Errors

No errors have been reported

Monitoring Java EE Applications

1. From the navigation pane, expand Application Deployments, then select the application to monitor.

The application's home page is displayed.

2. In this page, you can view a summary of the application's status, entry points to the application, Web Services and modules associated with the application, and the response and load.

The following figure shows a portion of the application's home page:

Summary

General

State: Active
 Deployed To: Server1

To configure and manage this application, click [Application Deployment](#) or [Server Administration](#).

Servlets and JSPs

Active Sessions: 0
 Request Processing Time (ms): 0.00
 Requests (per minute): 0.00

Work Manager

Requests (per minute): 0.00
 Pending Requests: 0

Modules

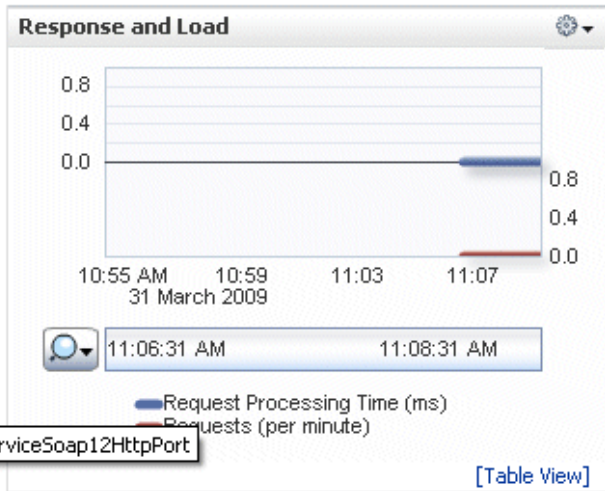
List of Core Java EE modules is not available for applications in remote weblogic domains.

Module Name	Module Type
No Modules found	

Entry Points

Web Modules

Name	Test Point
TestCaseProjects-SampleWebS	http://stasa39.us.oracle.com



Web Services

Service Name	Port	Test
SampleWebServices!SampleWe	SampleWebServiceS	

SampleWebServiceSoap12HttpPort

Most Requested

Servlets and JSPs | Java JEE Web Services

Name	Web Module	Requests Processed	Average Client Processing Time (ms)	Requests (per minute)	Total Client Processing Time (s)
SampleWebServiceS	TestCaseProjects-Sa	0	0.00	0.00	0.
WebServiceServlet	TestCaseProjects-Sa	0	0.00	0.00	0.

Monitoring SOA Composite Applications

1. From the navigation pane, expand SOA, then soa-infra. Select the application to monitor.
The application's home page is displayed.
2. From this page, you can monitor the running instances, faults and rejected messages, and component metrics.

SOA composite home page

OrderBookingComposite [1.0] Logged in as weblogic | host stada74.us.oracle.com

SOA Composite Page Refreshed Oct 5, 2009 1:27:50 PM PDT

Running Instances 44 | Total 44 | Active Retire ... Shut Down... Test Settings...

Dashboard | Instances | Faults and Rejected Messages | Unit Tests | Policies

Recent Instances

Show Only Running Instances Running 44 Total 44

Instance ID	Name	Conversation ID	State	Start Time
20006		med:DB8195201034	---	Oct 3, 2009 6:10:07 PM
20005			---	Oct 3, 2009 5:52:50 PM
20004		med:144BCA101021	---	Oct 3, 2009 3:48:34 PM
20003			---	Oct 3, 2009 3:47:40 PM
20002			---	Oct 3, 2009 3:47:37 PM

[Show All](#)

Recent Faults and Rejected Messages

Show only system faults

Error Message	Recovery	Fault Time	Fault Location	Composite Instance ID
No faults found				

[Show All](#)

Component Metrics

Name	Component Type	Total Instances	Running Instances	Faulted Instances	
				Recoverable	Non Recoverable
FulfillOrder	Mediator	3	0	0	0
PartnerSupplierMe	Mediator	3	0	0	0

Oracle FMW Logging

- Most Oracle Fusion Middleware components write diagnostic log files in the Oracle Diagnostic Logging (ODL) format. Log file naming and the format of the contents of log files conforms to an Oracle standard and, by default, the diagnostic messages are written in text format

Benefits of ODL

- The capability to limit the total amount of diagnostic information saved.
- Older segment files are removed and newer segment files are saved in chronological fashion.
- Components can remain active, and do not need to be shutdown, when older diagnostic logging files are deleted.

ODL Messages and ODL Log Files

Using ODL, diagnostic messages are written to log files and each message includes information, such as the time, component ID, and user.

The following example shows an ODL format error messages from Oracle SOA Suite:

```
[2009-10-23T10:54:00.206-07:00] [soa_server1]
[NOTIFICATION] [] [oracle.mds] [tid:[STANDBY].ExecuteThread:
'1' for queue: 'weblogic.kernel.Default (self-tuning)']
[userId: <anonymous>] [ecid:
000I3K7DCnAhKB5JZ4Eyf19wAgN000001,0] [APP: wsm-pm]
"Metadata Services: Metadata archive (MAR) not found."
```

Viewing Log Files

- Fusion Middleware Control
- Download a log file to your local client and view the log files using another tool.
- the WLST command-line tool.

Basic Security Concepts

Authentication deals with the question

"Who is trying to access services?" In any system or application it is important to ensure that the identity of the entity or caller trying to access a resource is appropriately identified. In a multitier application, the entity or caller can be a human user, a business application, a host, or one entity acting on behalf of (or impersonating) another entity.

Authorisation

Authorization deals with the question

"Who can perform tasks on resources?"

Resources are typically expressed in terms of URL patterns for Web applications, and method permissions for EJBs. Authorization is on a per-role basis, with appropriate permissions being assigned to each defined role in an application.

Java Security Model

- The Java security model is based on controlling the operations that a class can perform
- when it is loaded into a running environment. For this reason, this model is called
- code-centric or code-based.
- More specific to developers writing the code

Java Authentication and Authorization Service

- The Java Authentication and Authorization Service (JAAS) is a Java package
- integrated with Java SDK, Standard Edition, v 1.4, that supplements the Java security model.
- Oracle Platform Security Services (OPSS) includes a scalable JAAS provider, uses JAAS as a standard mechanism for fine-grained authorization, and supports JAAS authorization for both Web-based and EJB-based applications.

Deploying Secure Applications

- An application can be deployed to an Oracle WebLogic Server using any of the following tools: the Oracle WebLogic Server Administration Console, Oracle Enterprise Manager Fusion Middleware Control, or Oracle JDeveloper.
- The tool recommended to deploy it depends on the application type and environment

- During development, the application is typically deployed with Oracle JDeveloper to the embedded Oracle WebLogic Server.
- Once the application transitions to test or production environments, it is typically deployed with Fusion Middleware Control or the Oracle WebLogic Server Administration Console.

- Using Oracle JDeveloper, a developer develops an Oracle ADF application into which Oracle ADF security is included with the Oracle ADF Security Wizard.
- Application users and groups, authorization policies, and credentials are copied by Oracle JDeveloper to the integrated WebLogic Server, into which the application is auto-deployed during the test cycles in that environment.
- The developer creates an application EAR file which packs policies and credentials.
- The domain administrator deploys the EAR file to a remote Oracle WebLogic Server using Fusion Middleware Control.

