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S316972 : Manage the Manager: Diagnosing and Tuning Oracle Enterprise Manager

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Agenda

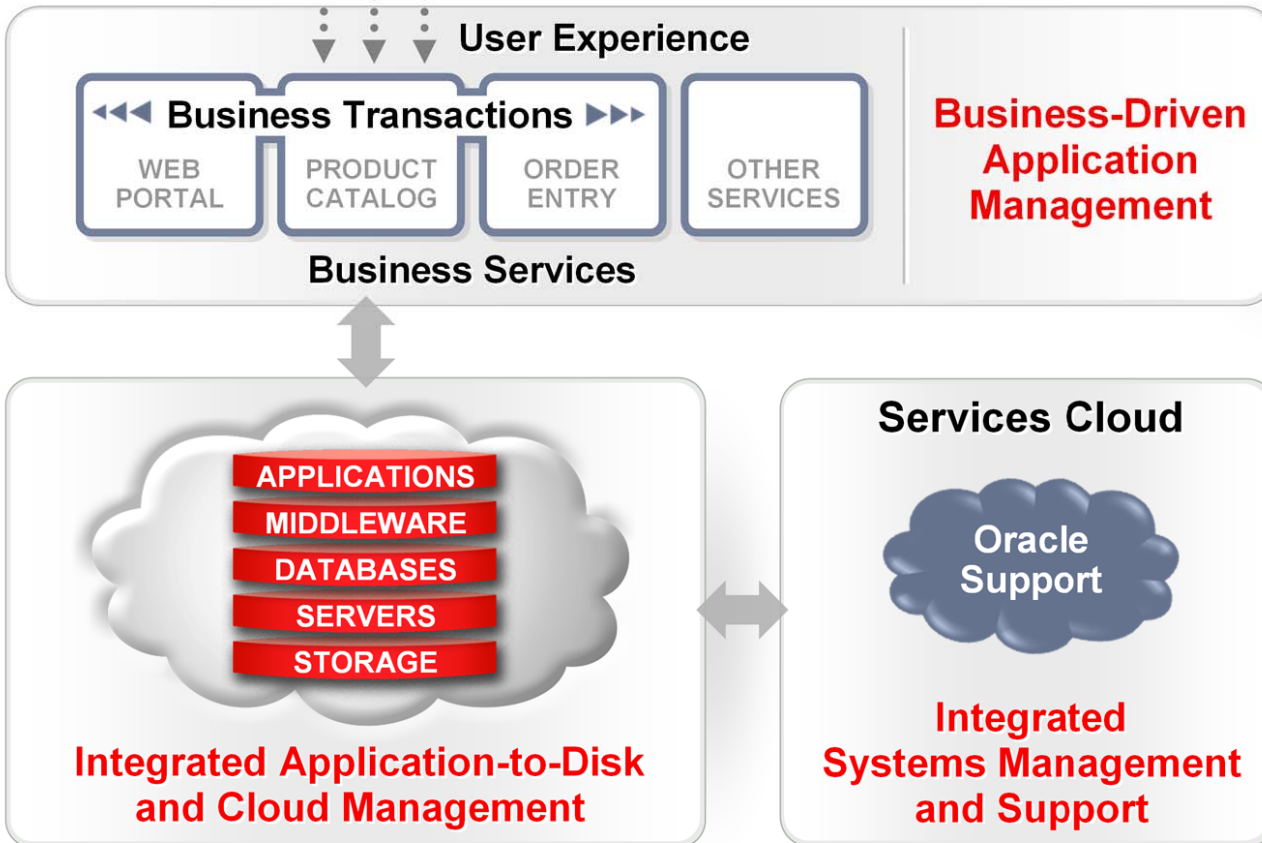
- Introduction to Oracle Enterprise Manager
- Monitoring and Optimizing the Infrastructure
- Diagnosing the Infrastructure
- Interacting with Support



Business-Driven IT Management



Business Users
and Customers



Business-Driven Application Management

- Understand business needs
- Manage from business perspective

Integrated Application-to-Disk & Cloud Management

- Eliminate management silos
- Create agile IT for dynamic business

Integrated Systems Management & Support

- Proactively identify and fix problems
- Maximize business productivity

Oracle Enterprise Manager is a Vital Part of the IT Infrastructure

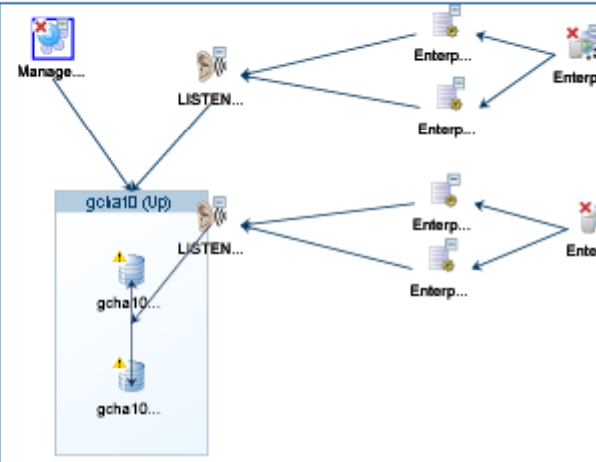
System: Grid Control

Page Refreshed Aug 21, 2010 1:23:54 PM PDT [Refresh](#)

[Home](#) [Charts](#) [Administration](#) [Components](#) [Topology](#)

View Data Real Time: 1

Overview

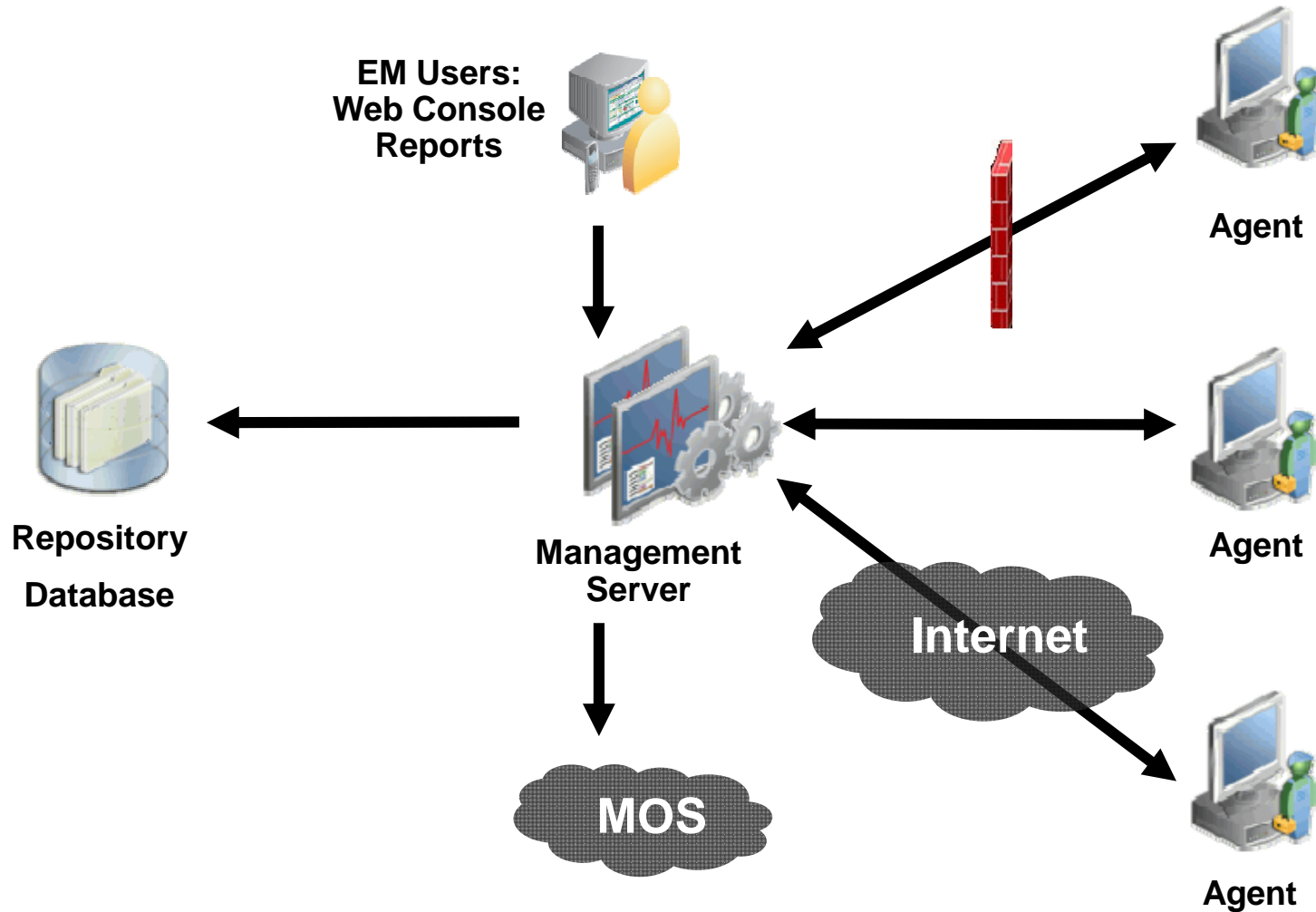


The screenshot displays the Oracle Enterprise Manager Grid Control interface. At the top, it shows the system name 'Grid Control', a refresh button, and navigation tabs for 'Home', 'Charts', 'Administration', 'Components', and 'Topology'. Below the navigation is a 'View Data' section with a 'Real Time' indicator. The main area is divided into two panes. The left pane, titled 'Overview', shows a small thumbnail of the topology diagram. The right pane shows a detailed topology diagram for a database instance named 'goka10 (Up)'. The diagram includes a 'Manage...' button, a 'LISTEN...' label, and several 'Enterp...' (Enterprise) components connected by arrows. Below the instance name, there are three database components labeled 'gcha10...'. The 'Selection Details' pane on the left shows the following information:

Selection Details
Type: OMS and Repository
Name: [Management Services and Repository](#)
Status: [Up](#)

- Enterprise class software
- Grows with the data center
- Just as important as the most critical application monitored

Enterprise Manager 3-Tier Architecture



Approaches to Monitoring Oracle Enterprise Manager

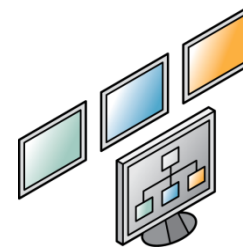
Reactive

- Outage
 - Time sensitive crisis (infrastructure is unavailable)
- Low or no availability
 - Downtime of an component (no monitoring visibility)
- Corrective Actions
 - Recovery (Example: Recover OMS configuration)



Proactive

- No Outage
 - Regular daily work
- Spot early-warning signs of trouble
 - Trending, events and analysis
- Preventive Measure
 - “Tune” what’s running before failure



I Want to be Proactive: Now What?

Need: accurate representation of the infrastructure



- Install Agents on every machine of the infrastructure
 - Keep discovered component information up-to-date
-

Need: timely notifications



- Correct warning and critical thresholds for metric
 - Subscribe to notifications for infrastructure metrics
-

Need: to analyze and prioritize in context



- Monitor cause and not effect
 - Rich set of diagnostic data available to do root-cause analysis
-

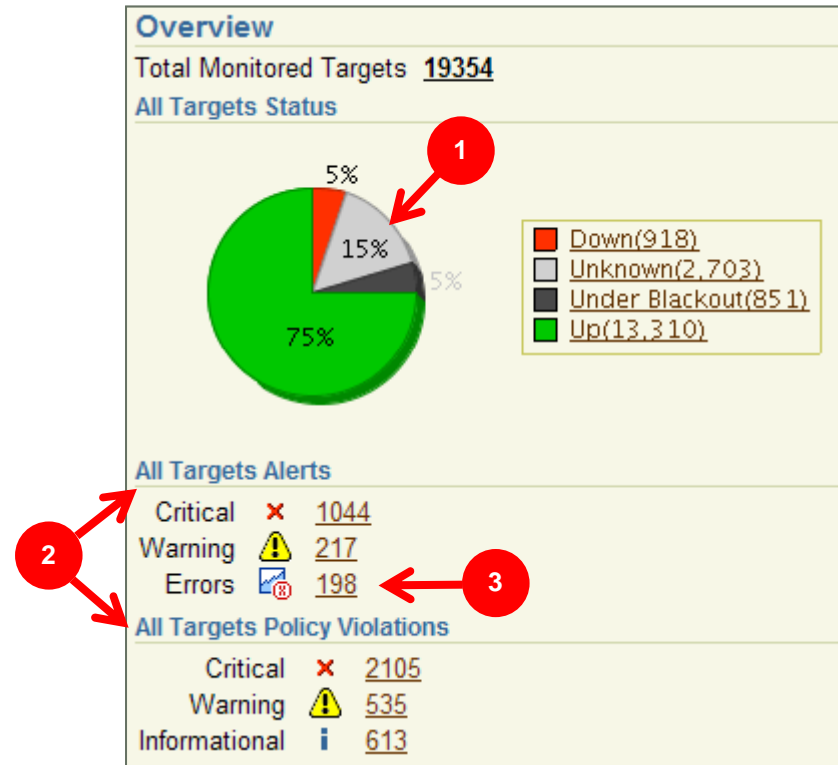
Need: trending



- Analyze and review (performance) data over period of time

What Are the Signs of a Healthy Environment?

- 1 Target Availability: Targets should be in a 'known' state: Not in 'unknown' or 'down' (unscheduled outage)
- 2 Alerts: Anomalies detected by Oracle Enterprise Manager should be corrected
- 3 Errors: Can be either infrastructure or target specific errors (Monitoring and Management is not happening as expected)



Agenda

- Introduction to Oracle Enterprise Manager
- **Monitoring and Optimizing the Infrastructure**
- Diagnosing the Infrastructure
- Interacting with Support



Best Practices for Managing the Manager

Use Available Product Features



ORACLE Enterprise Manager
Grid Control 11g

Setup Preferences Help Logout

Home Targets Deployments Alerts Compliance Jobs Reports My Oracle Support

Enterprise Manager Configuration **Management Services and Repository** Agents

Management Services and Repository

Latest Data Collected From Target Aug 2, 2010 2:41:51 PM

Overview Repository Operations Management Services Errors

- Oracle Enterprise Manager target monitoring
 - Monitor all tiers of the infrastructure
 - Repository database: Database monitoring features
 - Repository schema: Oracle Enterprise Manager monitoring (Self-Monitoring)
 - Management Server: Fusion Middleware management
 - Agents: Agent and Host monitoring
 - Use beacons to monitor network connectivity
 - Use Java Diagnostics (AD4J)
- Infrastructure rollups and aggregates
 - Use the Oracle Enterprise Manager system and service targets to drill down into the infrastructure

Database Tier

Monitoring the Repository Database

Repository Details

| | |
|--------------------|---|
| Host | repdb01.acme.com |
| Cluster Database | REPDB1_REPDB.ACME.COM |
| Version | 10.2.0.4.0 |
| Connect Descriptor | (DESCRIPTION= (ADDRESS=(PROTOCOL=TCP)(HOST=repdb1-vip.acme.com)(PORT=1521)) (ADDRESS=(PROTOCOL=TCP)(HOST=repdb2-vip.acme.com)(PORT=1521)) (CONNECT_DATA=(SERVICE_NAME=REPDB.ACME.COM))) |
| Tablespaces | USER_DATA MGMT_TABLESPACE MGMT_ECM_DEPOT_TS |
| Space Used | 610.63 GB of 938.10 GB |
| Last Backup | 2010-08-02 02:01:06 |

Health

- Database monitoring

Performance

- Database performance pages
- AWR / ADDM / ASH

Where to look

- Repository database homepage, the performance pages and the database advisors
- *Management Services and Repository* pages: Overview page

Database Tier

Repository Database Best Practices



Database in general:

- Make sure all database components are discovered (RAC, ASM, Data Guard, Listeners, ...)
- Use the database diagnostics tools (ADDM, AWR, ASH, other advisors...)
- Keep software up-to-date (Latest PSU bundle)

Specific for Oracle Enterprise Manager:

- Check job processes for the housekeeping jobs (DBMS_JOB and DBMS_SCHEDULER in 10g and above)
Metric = *DBMS Job Status*
- Use out-of-band 'Agent Response Action' for **Response** metric of the repository database

Defining an Agent Response Action

- An *Agent Response Action* is a type of *Corrective Action* that can be defined on any metric for either the warning or critical threshold violations
- Script (or OS command) executed by the Agent directly without any intervention of the Management Servers when an alert is triggered.

Edit Advanced Settings: Status

Corrective Actions

Critical <none>

Allow only one corrective action for this metric to run at any given time

Advanced Threshold Settings

Critical Threshold **Down**

Number of Occurrences

Collection Schedule **Every 5 Minutes**

Add Corrective Action

Create a new corrective action, reuse one already defined on this target, or apply one from

OS Command

- OS Command
- RMAN Script
- Security Policy Configuration
- Shutdown Database
- SQL Script
- Startup Database
- Statspack Purge
- Multi-Task
- Reuse Action...
- From Library...
- Agent Response Action**

[Home](#) | [Targets](#) | [Deployments](#)

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Database Tier

Monitoring The Repository

Health

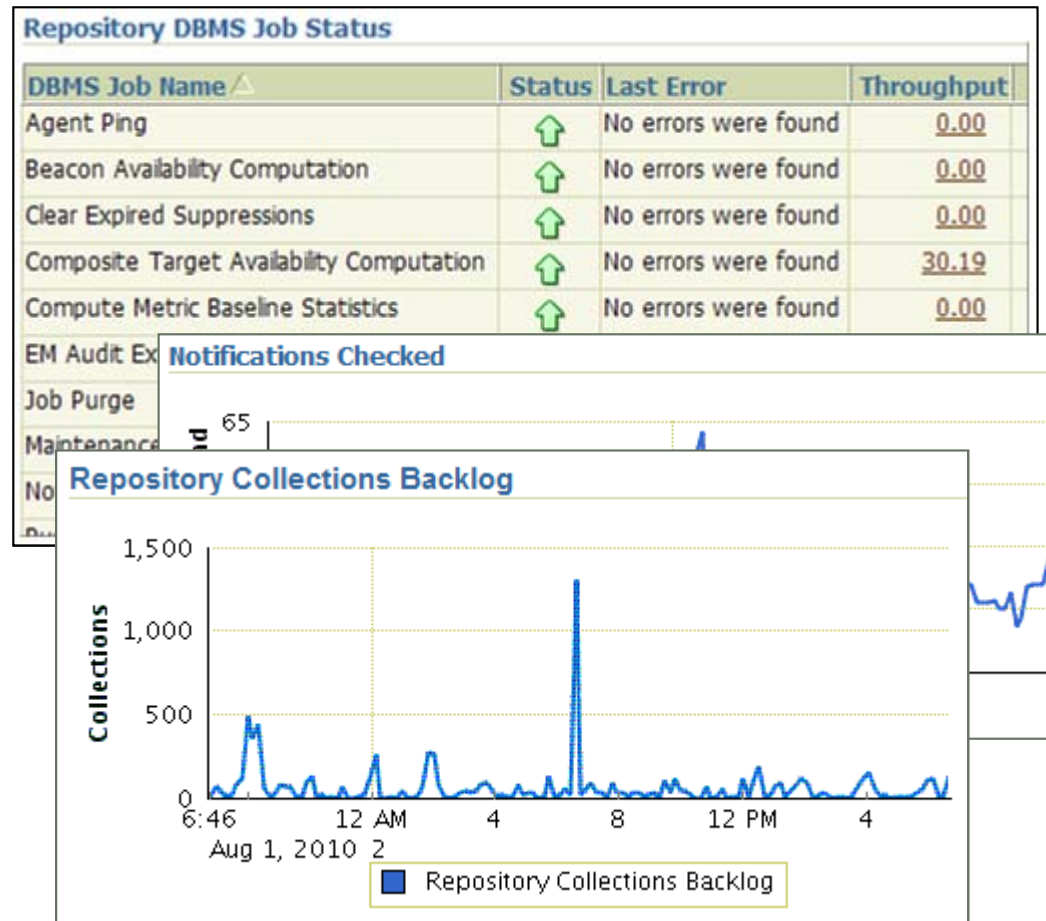
- Schema objects
- *Repository Operations* (Housekeeping jobs)

Performance

- Backlog indicators and throughput for incoming notifications and repository operations

Where to look

- *Management Services and Repository* pages: *Overview* and the *Repository Operations* page.



Database Tier

Repository Best Practices



Specific for Oracle Enterprise Manager:

- Alerts on Housekeeping jobs health
Metric = *DBMS Job Status*
- Setup notifications for backlog indicators
Metrics = *Collections Waiting To Run, Files Pending Load, Job Dispatcher Job Step Average Backlog, Notifications Waiting*
- Define Agent out-of-band 'Agent Response Action' for the **Response** and **Notification Status** metrics

Middle Tier

Monitoring The Management Server (OMS)

Health


- Application Server monitoring
 - WebLogic (WLS) starting EM11g
 - Application Server (OAS) for EM10g

Performance

- Middleware Management and Diagnostics packs
- JAVA Diagnostics (AD4J)

Where to look

- WebLogic homepage for the Management Server
- *Management Services and Repository pages*: Both the *Overview* and the *Management Services* pages

| General | | |
|---|----------------------------|---|
|  | Status | Up |
| | Start Time | May 3, 2010 7:33:16 PM |
| | Host | oms1.oracle.com |
| | Oracle Home | /u01/home/oracle/middleware/oms11g |
| | Oracle WebLogic Server | /secFarm_GCDomain/GCDomain/EMGC_OMS1 |
| | Application Deployment | /secFarm_GCDomain/GCDomain/EMGC_OMS1/emgc |
| | Heap Usage (MB) | 458 |
| | Active Repository Sessions | ✓ 3 |
| | Notifications Delivered | 0.00 |
| | | Over the past 10 minutes |
| | Upload Port | 4889 |
| | Secure Upload Port | 1159 |

Middle Tier

Best Practices



Application Server:

- Alerts for the Middleware stack events
- Setup log rotation for EM10g (Done out-of-box in EM11g)
- Keep software up-to-date
(Latest PSU bundle)

Oracle Enterprise Manager application:

- Setup notifications for performance and throughput indicators
Metrics = *Processing Time, Throughput Per Second*
- Define Agent out-of-band '*Agent Response Action*' for WebLogic
EMGC_OMS1 application up/down (11g) or Application server
OC4J_EM application up/down (10g)

Agent Tier

Monitoring Agents

Health

- Host Monitoring
- System errors

Performance

- Host management pages

Where to look

- *Management Agent* pages
- *Management Services and Repository Overview* page

The screenshot displays the Oracle Enterprise Manager 10g Grid Control interface. The main navigation bar includes 'Enterprise Manager Configuration | Management Services and Repository | Agents'. The 'Management Agents' section is active, showing a summary of agent status and an 'Overview' panel.

| Management Agents | |
|-------------------------------------|-------------|
| Targets Configured | <u>7101</u> |
| Targets Not Configured | <u>608</u> |
| Agents with Misconfiguration alerts | <u>24</u> |
| Blocked Agents | <u>2</u> |

| Overview | |
|--------------------------------------|--------------------|
| Management Services | <u>4</u> |
| Agents | <u>5099</u> |
| Clock Skewed Agents | <u>1262</u> |
| Agents in Questionable State | <u>13</u> |
| Deleted Targets | <u>53</u> |
| Duplicate Targets | <u>63</u> |
| Targets | <u>21269</u> |
| Administrators | <u>1049</u> |
| Active Management Service Repository | <u>412</u> |
| Sessions | <u>20957</u> |
| Severities Processed in Last Hour | <u>20957</u> |
| Average Time per Severity | <u>0.04 Sec(s)</u> |

Agent Tier

Best Practices



Oracle Enterprise Manager application:

- All Agents should be 'Up'
 - Use blackouts for scheduled maintenance
 - No 'blocked' Agents: Resync the Agent in case of recovery
- Timezone specified for the Agent has to match the timezone of the host
 - Compare the output of the 'date' command (Or TZ environment variable) with the `agentTZRegion` property of the `emd.properties` file
- Keep the OS clocks synchronized
 - Network Time Protocol (NTP) services can be used to synchronize os clocks
- Define Agent out-of-band notifications for failures detected by the watchdog
- Keep software up-to-date
(Latest PSU bundle)

Summary

Common infrastructure things to look at



- Backlog
 - Combination of pending work, throughput per second, and time spent per hour
- Target availability
 - To have up-to-date information, Agents need to be available, and targets need to be 'up'
- Check for errors
 - Always correct repeating errors first

*For more info on infrastructure best practices – Thu 10:30pm – Moscone S Rm 102
S316996: Oracle Enterprise Manager Grid Control Deployment Best Practices*

Agenda

- Introduction to Oracle Enterprise Manager
- Monitoring and Optimizing the Infrastructure
- Diagnosing the Infrastructure
- Interacting with Support



Diagnosing the Database Tier

Housekeeping jobs and operations

- Up-to-date CBO statistics for the repository tables and indexes
 - DBMS_SCHEDULER needs to be enabled for 10g (and beyond) repository databases:

```
exec dbms_scheduler.set_scheduler_attribute  
    ( ' SCHEDULER_DISABLED' , ' FALSE' );
```
 - For 10g repositories: The out-of-box 'GATHER_STATS_PROG' system job needs to be registered and enabled/running
 - For 11g and beyond: CBO gathering job part of database auto-tasks
- Enterprise Manager housekeeping jobs
 - Several jobs defined out-of-box to do housekeeping jobs
(See the *Repository Operations* page in the console)
 - These jobs should be active all the time
To start the jobs:

```
exec emd_maintenance.submit_em_dbms_jobs;
```
 - If repository database maintenance has to be done, they can be temporarily stopped:

```
exec emd_maintenance.remove_em_dbms_jobs;
```
 - Check the *DBMS Job Status* metric for the key performance indicators *throughput* and *time spend*

Diagnosing the Database Tier

Waits and (other) performance problems

- From the database performance page:
 - DBtime is the main key indicator for database performance (and throughput)
 - Wait events are indicators of bottlenecks too
Excessive 'wait' example: More than 50 milliseconds to do a redolog write flush in a RAC database
 - Drill down into the SQL or PL/SQL of the top consumers, and use the tuning advisors and wizards to get details
- Use ADDM/AWR/ASH reports
 - Check the DBtime and the wait events to identify resource intensive SQL and/or PL/SQL
- For RAC:
 - Make sure the database connections are balanced: Roughly equal number of sessions per instance

Diagnosing the Management Server

JAVA memory

- Default out-of-box JAVA heap size set to 512Mb
Increase heap to 1Gb for large(r) sites
- For Enterprise Manager 10g:
 - Edit the opmn.xml file (\$ORACLE_HOME/opmn/conf)
 - Change the *java-options* for the *OC4J_EM* process:
`-Xmx1024M -XX:MaxPermSize=256m`
- For Enterprise Manager 11g:
 - Edit the startEMServer.sh file
(`<GC_INST>/user_projects/domains/GCDomain/bin`)
 - Add the following lines at the bottom of the file:

```
if [ "${SERVER_NAME}" != "EMGC_ADMINSERVER" ] ; then
  USER_MEM_ARGS="-Xms256m -Xmx1024m -XX:MaxPermSize=512m - XX:CompileThreshold=8000 -XX:PermSize=128m"
  export USER_MEM_ARGS
fi
<GC_INST>/user_projects/domains/GCDomain/bin/startWebLogic.sh "$@"
```

Diagnosing the Management Server

OMS restarts

- OMS can restart:
 - Via the control programs (User initiated with emctl or opmnctl)
Check the emctl.log file for any user intervention
 - A JAVA error (JVM crash)
Check the:
OC4J~OC4J_EM~default_island~1 file (\$ORACLE_HOME/opmn/logs) – 10g
EMGC_OMS1.log file (<EM_DOMAIN_HOME>/servers/EMGC_OMS1/logs) – 11g
 - Hung JAVA thread (Health-monitor intervention)
- The health-monitor will initiate a shutdown if a thread is unresponsive for more than 15min
 - Message in the oms trace file in the form:
[HealthMonitor] ERROR emd.main restart
<reason for restart>
 - Cause is always a timeout:
 - Network related timeout: check for network or network configuration problems
 - Or - Performance bottleneck while processing data: check the repository database performance pages

Diagnosing the Management Server

Data Processing

- Loading data
 - Check loader backlog and loader throughput (rows/second) on the '*Management Services and Repository*' pages
Increase loader threads when needed (default of 1, maximum of 10 per OMS)
`em.loader.threadPoolSize=5`
 - Look for repeating loader errors from the *Errors* subtab of the '*Management Services and Repository*' pages
- Rollup and purge
 - The database DBtime and IO are the key performance indicators to tune for this work
- Loading and rollup of data is driven by the amount of metric data collected by the Agents
 - Collect the relevant data at the appropriate intervals (Usually different for development, test, production and mission critical targets)

Diagnosing the Management Server

Agent communication

- Go to the Agent homepage to check communication from the OMS to the Agent:
 - Real-time metric details fetched via the homepage
 - Any communication problems will be displayed then:
 - Agent not up (Agent not running on the machine)
 - Agent not responding
 - Firewall issues (Communication not allowed)
 - Unable to resolve the Agent hostname (nslookup problems)
 - ...
- Blocked Agents are not allowed to upload or communicate with the OMS anymore (See the *Blocked Agents* page for the list of affected Agents)
An Agent gets blocked after:
 - An incomplete recovery (information out of sync)
 - Administrator manually blocking the AgentUnblock the Agent via the button on the Agent homepage

Diagnosing the Agent

Metric workload

- Check the Agent metric workload

To check on the number of active metric collections:

```
$ emctl status agent scheduler
```

If the Agent can not execute the metric in time, the following message is logged in the agent trace file:

```
SchedEntry{<type>:<name>:<metric>}  
  exceed next scheduletime, delay=<number of seconds>
```

Reduce scheduling frequency of the metric if the problem persists

- Out-of-box the Agent can make up to 7 simultaneous connections to the database
 - When the Agent is monitoring several databases (more than 30), you can reduce the amount of OCI connections by modifying this parameter:
MaxOCIConnectionPerTarget=5
Minimum value of 3 required for this parameter

Diagnosing the Agent

Communication with the OMS

- Incoming requests from the OMS
 - Based on number of targets the Agent is monitoring
Warnings logged if too many simultaneous connections are coming:
WARN resman.socket: Incoming Socket max=25 reached !!
Increase number of potential simultaneous requests with this `emd.properties` parameter:
`MaxInComingConnections=50`
 - Administration task reply
Timeout errors will be logged if the Agent is overloaded:
ERROR Dispatcher: The remote api of type <n> has timed out
Increase API timeout with this `emd.properties` parameter:
`RemoteAPITimeout=600`
- Outgoing traffic (XML files to upload)
 - Check backlog with:
`$ emctl status agent`
 - Look in `emagent.trc` file for any upload errors
 - Check Management Servers for any performance bottlenecks

Sizing the Infrastructure

Checking Capacity

Database:

- Database performance and advisor pages
- Use the ADDM/AWR/ASH reports to:
 - Check Average Active Sessions
 - Look for bottlenecks (DB Time, Wait events, ...)

Additional Monitoring Links

Top Sessions and Top SQL data from ASH can be found on the Top Activity page.

- [Top Activity](#)
- [Top Consumers](#)
- [Duplicate SQL](#)
- [Blocking Sessions](#)
- [Hang Analysis](#)
- [Instance Locks](#)
- [Instance Activity](#)
- [Search Sessions](#)
- [Search SQL](#)
- [Snapshots](#)
- [AWR Baselines](#)
- [SQL Tuning Sets](#)
- [SQL Performance Analyzer](#)
- [SQL Monitoring](#)

Management Server:

- Management Services And Repository pages
- Determining capacity is a combination of:
 - Backlog indicators (Example: *Number of files in backlog*)
 - Throughput (Example: *Loader rows/second*)
 - Time spend per hour (Example: *Loader seconds run last hour*)

| |
|---|
| ▼ DBMS Job Status |
| DBMS Job Invalid Schedule |
| DBMS Job Processing Time (% of Last Hour) |
| DBMS Job UpDown |
| DBMS Job Throughput Per Second |

Sizing the Infrastructure

Scaling-out

Database:

- Start with standard database performance best practices
 - ADDM, AWR, ASH, ...
 - Optimizer/SQL tuning
 - ...
- Add instance to RAC
 - Update connection information for the Management Servers

Management Server:

- Tune operational parameters (emoms.properties)
 - Number of loader threads (*em.loader.threadPoolSize*)
 - Number of Grid Control job worker threads (*em.jobs.shortPoolSize*. *em.jobs.longPoolSize*)
 - ...
- Add another management node

Sizing the Infrastructure

Agent scaling

Work done by the Agent based on:

- Number of targets the Agent is monitoring
`$ emctl config agent listtargets`
- Number of metrics, and the frequency of the execution of those metrics
`$ emctl status agent scheduler`
- Warning and critical thresholds defined for the metric data
`$ emctl status agent target <name>,<type>`

Influence the workload by:

- Monitor targets based on business requirements
 - Production vs Development: Monitor what is required and needed
- The right thresholds for the monitored targets
 - Reduce the amount of state changes the Agent has to generate

Tune the Agent by:

- Updating the `emd.properties`:
 - `MaxInComingConnections`
 - `MaxOCIConnectionPerTarget`
 - `RemoteAPITimeout`
 - ...

Agenda

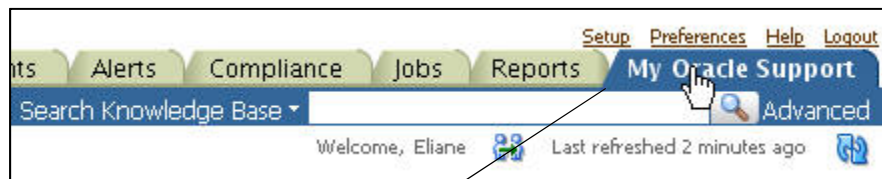
- Introduction to Oracle Enterprise Manager
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Diagnosing the Infrastructure

Use the *'My Oracle Support'* tab in Grid Control to:

- View patches and updates: Add Patches to a Patch Plan, Validate and Download
- Search the Knowledge Base (Includes Communities and Documentation) and **Tag your favorites**.
- Log a Service Request and upload the RDA for the Grid Control



Setting up *My Oracle Support*

- 1 Enter your *My Oracle Support* Account username and password as the login credentials
- 2 Setup proxy server to connect to external sites if needed for patching and security recommendations

The screenshot displays the Oracle Enterprise Manager Grid Control 11g interface. On the left, the 'Preferences' menu is open, with 'Preferred Credentials' selected. The main area shows a table of 'Preferred Credentials' for various target types. A red circle '1' highlights the 'My Oracle Support Preferred Credentials' section at the bottom, which includes a 'Set Credentials' link. On the right, a 'My Oracle Support' configuration window is shown, with a red circle '2' highlighting the 'My Oracle Support Connection Setting' section. This section has 'Manual proxy configuration' selected. Below it is a table for 'Protocol Proxy Server Host', 'Port', and 'Realm' for HTTP and HTTPS. A 'TIP' note states: 'If Https Proxy is not set, Http Proxy setting is used by default.' The 'Patch Search URL' is set to 'https://updates.oracle.com'.

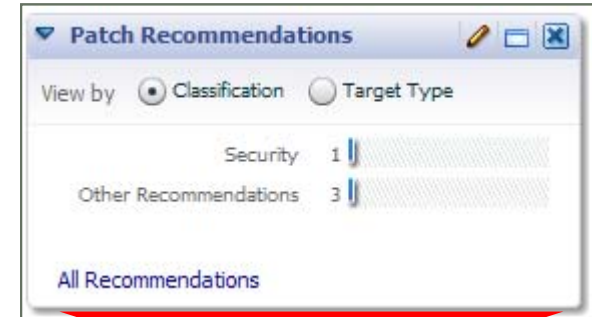
| Target Type | Total Targets | Targets with Credentials Set | Default Credentials |
|-------------------------------|---------------|------------------------------|---------------------|
| Listener | 3 | 3 | No |
| Oracle Fusion Middleware Farm | 1 | 1 | No |
| Oracle WebLogic Server | 2 | 2 | No |
| Application Deployment | 3 | 3 | No |
| Metadata Repository | 1 | 1 | No |
| CSA Collector | 1 | 0 | No |
| Agent | 3 | 2 | No |
| Host | 2 | 2 | No |
| Database Instance | 5 | 5 | No |
| Oracle WebLogic Domain | 1 | 1 | No |

| Protocol | Proxy Server Host | Port | Realm |
|----------|-------------------|------|-------|
| HTTP | | | |
| HTTPS | | | |

For install and configuration best practices, see session:
316996: Oracle Enterprise Manager Grid Control Deployment Best Practices

From Patch Recommendations to Patch Plan

- View patch recommendations
- Create Patch Plan Strategy
- Add patches to the Patch Plan
 - From a SR
 - From a Knowledge Document
 - From Recommendations
 - From a Patch Search
- Validate the Patch Plan
- Download and stage the patches



| Patch... | Classificati... | Description |
|----------|-----------------|-----------------------------------|
| 9654987 | Other Rec... | DATABASE PSU 11.1.0.7.4 (INCLU... |
| 9655014 | Security | CPUJUL2010 DATABASE 11.1.0.7 |
| 9705138 | Other Rec... | CREATE SEPARATE OSPATCHADV... |
| 9822322 | Other Rec... | CUMULATIVE FIXES FOR 11GC PA... |

Create Plan Wizard - OMS11GLinuxx8664 PP

Patches

The table below lists all the patches currently included in the patch plan. Add patches from Patch Recommendations or from Patch Search results.

Remove from Plan

| Patch Name | Type | Description | Target | Target Type |
|------------|-------------------|---|------------------------------------|--------------------|
| 9495798 | Searched Patch | MLR FOR DB PROVISIONING FIXES (11GCPL AND OTHER CRITICAL FIX... | Management Services and Repository | OMS and Repository |
| 9705138 | Recommended Patch | CREATE SEPARATE OSPATCHADVISOR.PAR AND DBPATCHADVISOR.P... | Management Services and Repository | OMS and Repository |
| 9822322 | Recommended Patch | CUMULATIVE FIXES FOR 11GC PATCHING DEPLOYMENT PROCEDURES ... | Management Services and Repository | OMS and Repository |

Specify General Information

Patches

You can add any patch to a plan via Patch Searching. A plan can include recommended patches and one-off patches which you may need for your environment. When you select a patch from the results of a patch search, there is an option to 'Add to

Knowledge Base

How to Browse and Search

By Category (HTML Portal)

| | |
|--|------------------------------------|
| GridControlCommonInstall | GridControlGeneric |
| MgmtGCCConsole | |
| MgmtAgent HA | |
| MgmtRepository HA | |
| MgmtService HA | |

Narrow the Search with Refinements

Refine Search Clear All

- Source
- All Sources > Knowledge Base
 - Product Category
 - Feature
 - Product Release
 - Task/Intent
 - Document Type
 - Updated
 - All Content
 - Updated Last 14 days (287)
 - Updated Last 30 days (579)
 - Updated Last 360 days (2400)

By Product

Browse Knowledge

Select Product

Enterprise Manager

Enterprise Manager for IAC

Enterprise Manager for list. Or choose from the list to browse articles for the product selected.

Enterprise Manager for RDBMS

Enterprise Manager Grid Control

Knowledge Articles

Alerts (100) Recently Updated (10)

DBMS_RCVMAN.LOCKFORCKPT shipped 8.1.7.3.2.8.1.7.4.0.9.0.1.3.0.Patchset

Use the Advanced Search

Search

In the source Knowledge Base

For items containing:

All these words oms starup fails with ORA-1017

The exact phrase

Any of these words OR OR

Knowledge Base

Search for an Error

- You get an error in the Grid Control Console ?
Copy/paste the error in the Knowledge Advanced Search Field

The image shows a sequence of steps for searching an error in the Oracle Knowledge Base. At the top, an error message from the Grid Control Console is displayed: "Error: - Proxy Test resulted in Exception. Error while reading data from URL https://elenoc-fr.fr.oracle.com:3872/emd/main/ Cannot establish proxy connection 502 Bad Gateway". A red box highlights the error text, and an arrow points to the search field in the Knowledge Browser. The search field contains the text "Patching Setup Cannot establish proxy connection 502". A second red box highlights the search results, with an arrow pointing to a specific article titled "Master Note for 10g Grid Control Enterprise Manager Communication and Upload issues [1086343.1 {1}]". A third red box highlights the article title, with an arrow pointing to a button labeled "Tag the Recommended Links".

Error Message: Error: - Proxy Test resulted in Exception. Error while reading data from URL https://elenoc-fr.fr.oracle.com:3872/emd/main/ Cannot establish proxy connection 502 Bad Gateway

Search Query: Patching Setup Cannot establish proxy connection 502

Search Results:

- Master Note for 10g Grid Control Enterprise Manager Communication and Upload issues [1086343.1 {1}]
- 12/12/2007 Problem: Targets Configure with Error "oracle.sysman.emSDK.emd.comm.CommException: Cannot establish proxy connection: 502 Bad Gateway" It is however possible ... Setup > Patching Setup & Connection
Tags: configure database; enterprise manager; grid control; patching setup [Article ID 344768.1]
- 02/04/2009 Initialization Error and 502 Proxy Error While Trying To Run A Patching Job Through Em (ISA Server N displays the following error : Cannot establish proxy connection: 502 Proxy Error (The specified Secure ... Setup >> Patching Setup >> P
Tags: cannot establish; enterprise manager; grid control; oms; patching setup [Article ID 427682.1]
- 27/07/2010 Master Note for 10g Grid Control Enterprise Manager Communication and Upload issues
Components via Firewall/Proxy? >: Sample Java Program to Test Thin JDBC Connection from the 10g OMS to the
Tags: management repository; communicate; agent unreachable; agent upload problems; communication error; connection refused; grid control; backlog [Article ID 1086343.1]

Log a Service Request (SR)

- You could not find your answer in the Knowledge Base?
Log a Service Request!

1

General Information

Problem Summary * Patching Setup fails with Cannot establish proxy connection 502

Problem Description * Patching Setup fails with Cannot establish proxy connection 502
Manual Proxy Configuration fails, Direct Connection Succeeds for the Agent

Error Message Number (if applicable) Providing this

Enter here the error message and/or restrictive keywords

Choose the Product Enterprise Manager Grid Control

2

Product * Enterprise Manager Grid Control

Product Version * 10.2.0.5

Product Languages * English

Platform * Linux x86-64

Platform Version * Oracle Enterprise Linux 5/Oracle VM

Choose the best Category and Sub Category related to the problem

3

Problem

Category * Grid Control Patching (with Deployment Procedures)

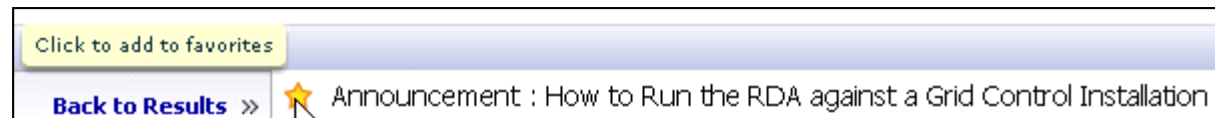
Sub-Category * Issues with Patching Setup and Patch Download

Log a Service Request (SR)

Upload RDA (Remote Diagnostics Agent)

Why is RDA needed:

- The RDA provides a complete and detailed state of your environment including:
 - Host, Network, ORACLE_HOMEs Configurations
 - Log and trace files, alerts and dumps(RDA features will be covered later in a few slides)
- The latest release of the RDA should be run just after the problem is detected using the Note 1057051.1 (Add this article to your favorites)



Benefits:

- The diagnosis can begin as soon as the SR is received without unnecessary SR updates to get the information needed.
- Providing the RDA at the SR Logging time decreases the Resolution Time.



Grid Control Collections and Healthchecks

Verifying the configuration

- Browse the configuration data collected by the Oracle Configuration Manager for the Enterprise Manager System

The image shows a sequence of screenshots from the Oracle Enterprise Manager console, illustrating the navigation path to view configuration data for an agent. The path is indicated by red arrows:

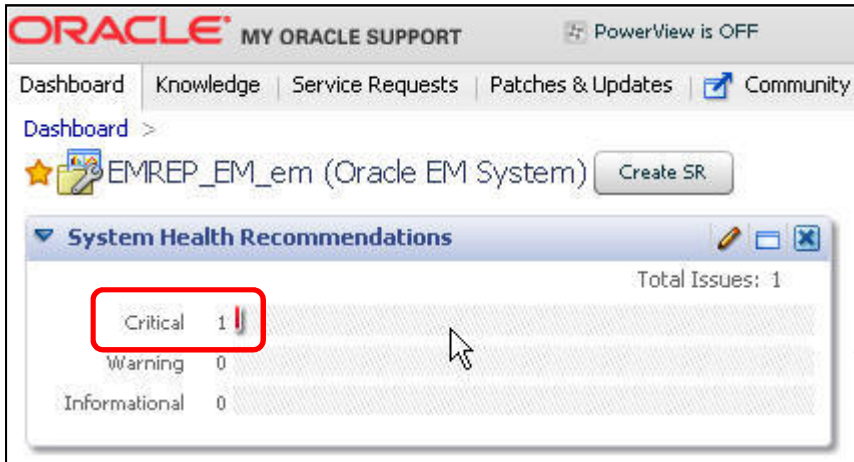
- System Details:** The 'Agent' icon in the table is highlighted with a red box. A blue arrow points from this icon to the 'Configuration' window.
- Configuration:** The 'EM Repository Monitored Agents' link is highlighted with a blue box. A red arrow points from this link to the 'Target Health' window.
- Target Health:** The 'Total Issues: 1' indicator is highlighted with a red box. A red arrow points from this indicator to the 'Target Patch Recommendations' window.

The 'Target Patch Recommendations' window shows the following details:

- View by: Classification Target Type
- Other Recommendations: 0
- Security: 0
- No recommendations to report. [Learn Why...](#)
- Requires collector version 10.3.2 or newer. [Learn More...](#)

Grid Control Collections and Healthchecks

Health Recommendations



ORACLE MY ORACLE SUPPORT PowerView is OFF

Dashboard Knowledge Service Requests Patches & Updates Community

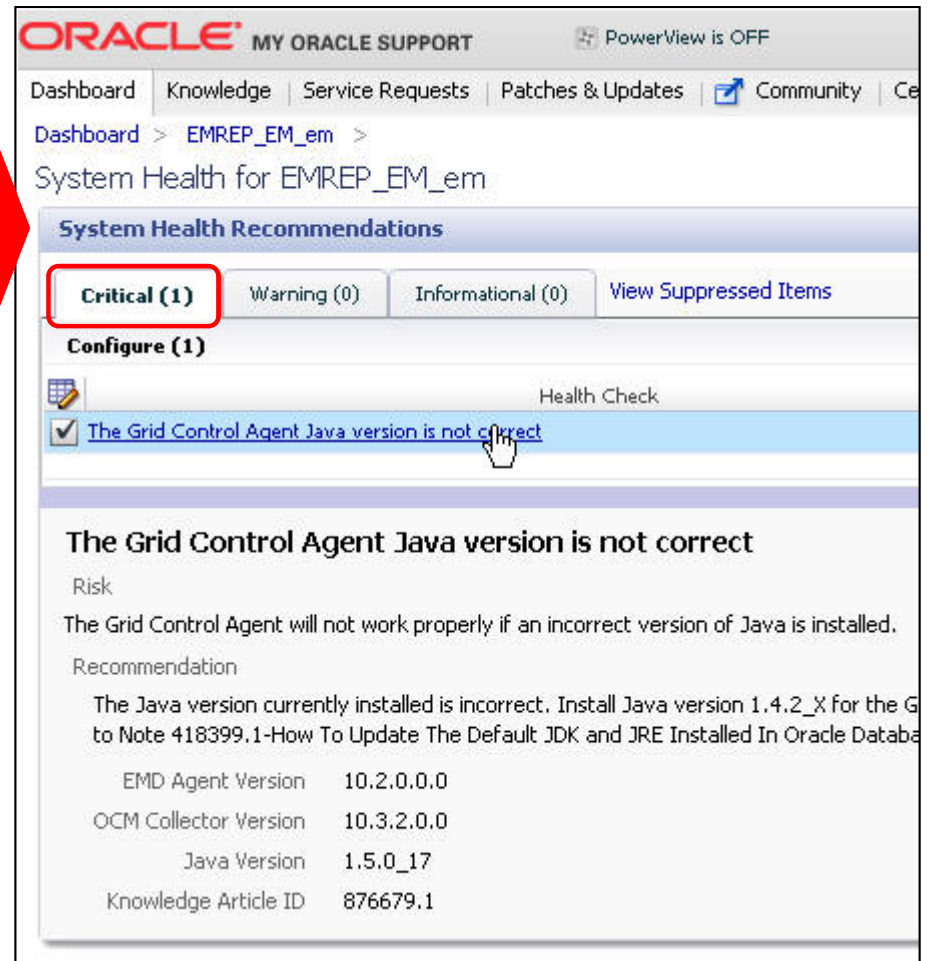
Dashboard >

EMREP_EM_em (Oracle EM System) Create SR

System Health Recommendations Total Issues: 1

| | |
|---------------|---|
| Critical | 1 |
| Warning | 0 |
| Informational | 0 |

- Check the Alerts
- Highlight each alert to get the details
- Read the article displayed related to the alert and take the actions provided to clear the alert.
- New collections and Health checks are released every 4 month, stay tuned.



ORACLE MY ORACLE SUPPORT PowerView is OFF

Dashboard Knowledge Service Requests Patches & Updates Community

Dashboard > EMREP_EM_em >

System Health for EMREP_EM_em

System Health Recommendations

Critical (1) Warning (0) Informational (0) View Suppressed Items

Configure (1)

Health Check

[The Grid Control Agent Java version is not correct](#)

The Grid Control Agent Java version is not correct

Risk

The Grid Control Agent will not work properly if an incorrect version of Java is installed.

Recommendation

The Java version currently installed is incorrect. Install Java version 1.4.2_X for the G to Note 418399.1-How To Update The Default JDK and JRE Installed In Oracle Databa

| | |
|-----------------------|------------|
| EMD Agent Version | 10.2.0.0.0 |
| OCM Collector Version | 10.3.2.0.0 |
| Java Version | 1.5.0_17 |
| Knowledge Article ID | 876679.1 |

EMDIAG – Enterprise Manager Diagnostics

EMDIAG:

- Set of diagnostic tools for Oracle Enterprise Manager
 - Repository side diagnostics (repvfy)
 - Agent side diagnostics (agtvfy)
- Can diagnose (verify mode) or dump out reports (dump and show commands)
- Regular updates and enhancements

Where to get it:

- *My Oracle Support* note:
[421053.1](#): EMDiagkit Download and Master Index

EMDIAG – Enterprise Manager Diagnostics

REPVFY – Repository verification

Install and setup:

- Extract ZIP file in `$ORACLE_HOME/emdiag`
- Install (or upgrade) the REPVFY packages:
 `$ repvfy install`
 `$ repvfy upgrade`

How to use it:

- Verification:
 `$ repvfy verify <module> -level <number>`
- Showing or dumping information
 `$ repvfy dump <command>`
 `$ repvfy show <command>`
- Use help screens for details command-line usage:
 `$ repvfy help all`
 `$ repvfy help <command>`

EMDIAG – Enterprise Manager Diagnostics

AGTVFY – Agent verification

Install and setup:

- Extract ZIP file in `$ORACLE_HOME/emdiag`
- No special setup needed

How to use it:

- Verification:

```
$ agtvfy verify <module> -level <number>
```

- Showing information

```
$ agtvfy show <command>
```

- Use help screens for details command-line usage:

```
$ agtvfy help all
```

```
$ agtvfy help <command>
```

RDA – Remote Diagnostics Agent

11G Grid Control

RDA 4.21 Main Index

- [Overview](#)
- [Operating System Setup](#)
- [User Profile](#)
- [Performance](#)
- [Network](#)
- [Oracle Net](#)
- [Oracle Installation](#)
- Enterprise Manager Server
 - [Oracle Management Server Home](#)
 - [Common Product Home](#)
 - Oracle WebTier Instance
 - [Associated Oracle Home](#)
 - [Oracle HTTP Server](#)
 - [OPMN](#)
 - [Instance Home](#)
 - [Oracle HTTP Server](#)
 - [OPMN](#)
 - [Oracle WebLogic Server Overview](#)
 - [Oracle](#)
 - [EMG](#)
 - [EMG](#)
- [EM Agent](#)
- [External D](#)

10G Grid Control

RDA 4.21 Main Index

- [Overview](#)
- [Operating System Setup](#)
- [User Profile](#)
- [Performance](#)
- [Network](#)
- [Oracle Net](#)
- [Oracle Installation](#)
- [Enterprise Manager Server](#)
- [EM Agent \(elenoc-fr.fr.oracle.com:3872\)](#)
- [External Data Collection](#)

- The RDA for Grid Control covers the Management Server (OMS) and the underlying stack (Application Server or WebLogic), the OMS Monitoring Agent and the Repository through the EMDIAG tool Repvfy
- You can answer from one place, from any Browser, any configuration question you have on your Grid Control OMS setup and health
- You can browse all the log and trace files to find out more details on an error, alert or performance issue.
- Just download and unzip the RDA to get it installed on your host – Document Id [Note 314422.1](#)
- Once you have built your RDA configuration file, just run it using `rda.sh` or `rda.cmd -s <setup_file_name>.cfg`
- More in Document Id [1057051.1](#))

RDA – Remote Diagnostics Agent

Analyzing the output

The screenshot displays the Oracle Management Server Home interface. On the left, a tree view shows the navigation structure. On the right, the 'emctl Command' menu is expanded, showing a list of commands and their corresponding output.

Status & Configuration

- Oracle Management Server Home
 - OMS Secure Status
 - emctl Command Output**
 - Product Information
 - OMS Configuration
 - \$OH/sysman/admin
 - nsupportedtzs.lst
 - supportedtzs.lst
 - tmappings.lst
 - \$OH/sysman/config
 - emInstanceMapping.properties
 - httpd_em.conf
 - httpd_em.conf.template
 - ocamm.properties
 - /u01/app/oracle/product/gc_inst/em/EMGC_OMS1
 - emgc.properties
 - Memory Dump
 - OMS Upload Receive File/Directory Details
 - log_errors
 - Log Files
 - \$OH/sysman/log/schemamanager
 - emschema.log
 - /u01/app/oracle/product/gc_inst/em/EMGC_OMS1/sysman/log
 - emctl.log
 - emoms.log
 - emoms.trc
 - secure.log
 - Cfgtoollogs Files
 - \$OH/cfgtoollogs/cfgfw
 - CfmLogger_2010-04-15_12-45-53-PM.log
 - CfmLogger_2010-04-15_12-59-03-PM.log
 - QuiConfigVariables_2010-04-15_12-45-55-PM.log
 - QuiConfigVariables_2010-04-15_12-59-05-PM.log
 - emmdscreate_2010_04_15_AD_13_23_18_EDT.log
 - encap_oms_2010-04-15_12-59-04-PM.log
 - oracle_sysman_plugin_virtualization.oms_2010-04-15_12-45-53-PM.log
 - oracle_sysman_plugin_virtualization.oms_2010-04-15_12-59-03-PM.log

emctl Command

- [emctl getversion oms](#)
- [emctl status oms](#)
- [emctl list oms](#)
- [emctl dump omsthread](#)
- [emctl config oms -list repos details](#)
- [emctl list properties -module emoms](#)
- [emctl list properties -module logging](#)
- [emctl status oms -details](#)
- [emctl status emkey](#)
- [emctl partool check](#)

emctl getversion oms

OMS version
Oracle Enterprise Manager 11g Release 1 Grid Control
Copyright (c) 1996, 2010 Oracle Corporation. All rights reserved.
Enterprise Manager 11g OMS Version 11.1.0.1.0
[Back to top](#)

emctl status oms

Current OMS status
Oracle Enterprise Manager 11g Release 1 Grid Control
Copyright (c) 1996, 2010 Oracle Corporation. All rights reserved.
WebTier is Up
Oracle Management Server is Up
[Back to top](#)

emctl list oms

OMS list
Oracle Enterprise Manager 11g Release 1 Grid Control
Copyright (c) 1996, 2010 Oracle Corporation. All rights reserved.
OMS Instance(s) associated with current Oracle Home:
EMGC_OMS1*
[Back to top](#)

RDA – Remote Diagnostics Agent

EMDIAG information

- EMDIAG needs to be installed in the repository prior to running the RDA
- Browse the diagnostics data and drill down to the details

- Enterprise Manager Server
 - Oracle Management Server Home

Oracle Management Server Home

- Abbreviations
- EMDIAG Kit
- EMDIAG Kit Log Files
 - /u01/app/oracle/product/10.2.0/db_1/admin/orcl/repvfy/log

Violations Detected during Last 15 Days

| Module | Identifier | Label | Last Verified | Verif |
|---------------|------------|--|----------------------|-------|
| AGENTS | 110 | Agents not marked as potentially down | 20-Aug-2010 13:02:05 | |
| AGENTS | 113 | Agents not uploading any data | 20-Aug-2010 13:02:05 | |
| JOB | 129 | Job backlog (jobs) | 20-Aug-2010 13:02:05 | |
| JOB | 109 | Orphaned Job Execution Steps | 20-Aug-2010 13:02:05 | |
| JOB | 105 | Scheduled job Executions with no valid steps | 26-Aug-2010 05:46:25 | |
| JOB | 116 | Stuck wait executions | 20-Aug-2010 13:02:05 | |
| METRICS | 113 | Invalid default frequency for backup metric | 26-Aug-2010 05:46:25 | |
| NOTIFICATIONS | 708 | Processed messages left in notification queue | 18-Aug-2010 04:26:48 | |
| NOTIFICATIONS | 3 | Unassigned notification queues | 20-Aug-2010 13:02:07 | |
| POLICIES | 103 | Outstanding violations for obsoleted metric keys | 26-Aug-2010 05:46:25 | |
| REPOSITORY | 601 | Database Timezone mismatch | 18-Aug-2010 04:26:51 | |
| REPOSITORY | 702 | Obsoleted DBMS_LOCK_ALLOCATED information | 18-Aug-2010 04:26:51 | |
| REPOSITORY | 710 | Processed messages left in admin queue | 18-Aug-2010 04:26:51 | |

601. Database Timezone mismatch

| OS time | OS TZ | DB time | DB TZ |
|----------------------|--------|----------------------|--------|
| 08-JUL-2010 18:12:23 | -04:00 | 08-JUL-2010 14:12:23 | +00:00 |

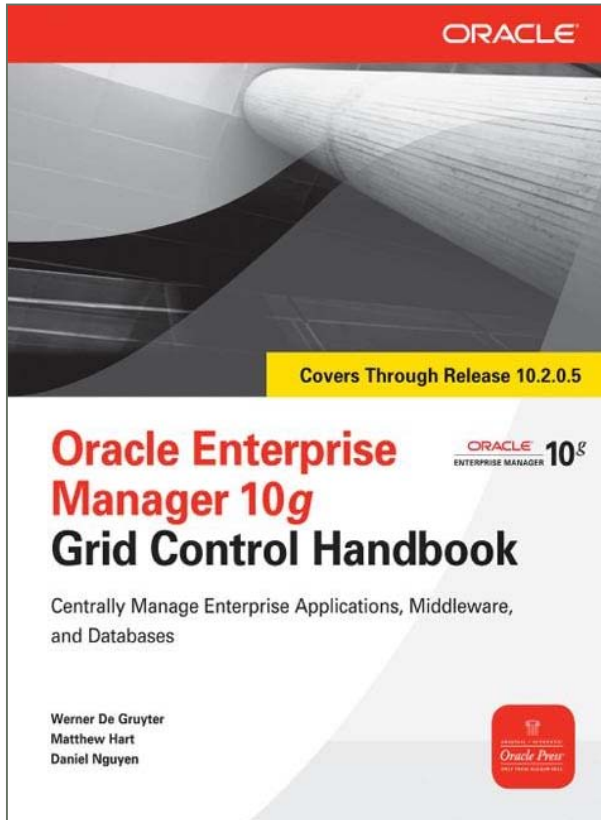


Q & *A*

Appendix



Grid Control Handbook



Tips, tricks and best practices for:

- *Implementation*
 - Installation and configuration
 - Scalability and High-Availability
- *Operational aspects*
 - Common target monitoring and administration
 - Infrastructure maintenance
 - Debugging and diagnostics

Additional Oracle Enterprise Manager Sessions

Monday, Sept. 20

| Monday, Sept. 20 | Location |
|---|-----------------------|
| 3:30 pm - General Session: Enterprise IT and Cloud Computing | Moscone S Rm 102 |
| 3:30 p.m.- "Lost in Transaction": Managing Business Transactions across Distributed Systems | Moscone S Rm 310 |
| 3:30 p.m.- Accelerate/Streamline Your Unicode Migration: Oracle Unicode Migration Assistant | Moscone S Rm 252 |
| 3:30 p.m. - Avoiding SQL Performance Regressions: New Techniques for Solving an Old Problem | Moscone S Rm 303 |
| 3:30 p.m - Business-Driven Application Management and End-to-End Performance Diagnostics | Moscone W L3, Rm 3024 |
| 5:00 p.m.- Application Change & Configuration Management: Tales from the Trenches | Moscone S Rm 102 |
| 5:00 p.m.- Mission Accomplished: Virtualization Powered by Oracle Enterprise Manager | Moscone S Rm 305 |
| 5:00 p.m.- Managing Oracle WebLogic Server: New Features and Best Practices | Moscone W L3, Rm 3024 |

Additional Oracle Enterprise Manager Sessions

Tuesday, Sept. 21

| Tuesday, Sept. 21 | Location |
|--|-----------------------|
| 11:00 am - General Session: Business-Driven IT with Oracle Enterprise Manager 11g | Moscone S Rm102 |
| 11:00 am - Managing the Oracle Ecosystem on a Cloud Platform: Oracle Enterprise Manager | Moscone S Rm 309 |
| 02:00 pm - Smart Database Administration: Cool New Features for Power DBAs | Moscone S Rm104 |
| 02:00 pm - Application Testing in the Cloud: Smart Testing for Agile Enterprises | Moscone W L2, Rm 2010 |
| 03:30 pm - Oracle Identity Management Administration Best Practices | Moscone S Rm 309 |
| 03:30 pm - Latest on Oracle Application Change Management Pack for Oracle E-Business Suite | Moscone W L2, Rm 2024 |
| 03:30 pm - Deploy New Database Features Risk-Free with Database Replay | Moscone S Rm 102 |
| 05:00 pm SQL Tuning for Smarties, Dummies, and Everyone in Between | Moscone S Rm 104 |
| 05:00 pm - Oracle Enterprise Manager Ops Center for OS and Hardware Management | Moscone S 270 |

Additional Oracle Enterprise Manager Sessions

Wednesday, Sept. 22

| Wednesday, Sept. 22 | Location |
|---|------------------------------|
| 10:00 am - Manage the Manager: Diagnosing and Tuning Oracle Enterprise Manager | Moscone S Rm 102 |
| 11:30 am - Maximizing Database Performance: Performance Tuning with DB Time | Moscone S Rm 104 |
| 11:30 am - Make Upgrades Uneventful Using Oracle Enterprise Manager and My Oracle Support | Moscone S Rm 310 |
| 12:30 pm – Extracting Real Value from Your Data with Apache Hadoop | Hilton Hotel, Plaza B |
| 01:00 pm - Reducing the Risk of SOA Transactions | Marriott Marquis, Salon 6 |
| 01:00 pm - SQL Tuning Roundtable with Oracle Gurus | Moscone S Rm102 |
| 04:45 pm - Strategies for Monitoring Large Datacenters with Oracle Enterprise Manager | Moscone S Rm102 |
| 04:45 pm - Oracle SOA Management Best Practices, Tips, and Techniques | Moscone W L3, Rm 3018 |
| 04:45 pm - Oracle E-Business Suite Technology: Vision, Release Overview, Product Roadmap | Moscone W L3, Rm 3002 / 3004 |

Additional Oracle Enterprise Manager Sessions

Thursday, Sept. 23

| Thursday, Sept. 23 | Location |
|---|-------------------------------|
| 09:00 am - Oracle WebLogic Server Management for Oracle DBAs | Marriott Marquis, Salon 9 |
| 09:00 am - Enabling Database as a Service Through Agile Self-Service Provisioning | Moscone S. Room 102 |
| 09:00 am - Reduce TCO with Oracle Application Management Pack for Oracle EBusiness Suite | Moscone W L2, Rm 2024 |
| 10:30 am - Best Practices for Managing Your PeopleSoft Applications | Marriott Hotel, Golden Gate A |
| 10:30 am - Oracle Enterprise Manager Grid Control Deployment Best Practices | Moscone S. Room 102 |
| 10:30 am - Managing Sun SPARC Servers with Oracle Enterprise Manager Ops Center | Moscone S. Room 252 |
| 10:30 am - Heterogeneous Data Masking: Oracle, SQL Server and DB2 Database Best Practices | Moscone S. Room 306 |
| 12:00 pm - Scalable Enterprise Data Processing for the Cloud with Oracle Grid Engine | Moscone S. Room 310 |
| 12:00 pm - Spot Problems Before Your Users Call: User Experience Monitoring for Oracle Apps | Marriott Hotel, Golden Gate A |
| 12:00 pm - Reduce Problem Resolution Time with Oracle Database 11g Diagnostic Framework | Moscone S. Room 102 |

Additional Oracle Enterprise Manager Sessions

Thursday, Sept. 23

| Thursday, Sept. 23 | Location |
|---|-------------------------------|
| 1:30 pm - Patching Enterprise-wide Databases: Automation Techniques and Real-World Insights | Moscone S. Room 310 |
| 1:30 pm - Managing User Experience: Lessons from eBay | Marriott Hotel, Golden Gate A |
| 1:30 pm - Deep Java Diagnostics and Performance Tuning: Expert Tips and Techniques | Marriott Marquis, Salon 9 |
| 1:30 pm - Oracle Enterprise Manager Configuration Management Unleashed: Top 10 Expert Tips | Marriott Marquis, Salon 6 |
| 1:30 pm - Oracle Enterprise Manager Security Best Practices | Moscone S. Room 102 |
| 3:00 pm - The X-Files: Managing the Oracle Exadata and Highly Available Oracle Databases | Moscone S. Room 102 |
| 3:00 pm - Monitoring and Diagnosing Oracle RAC Performance with Oracle Enterprise Manager | Moscone S. Room 310 |

Oracle Enterprise Manager Hands On Labs

| Monday September 20, 2010 | | |
|------------------------------|---|--|
| 03:30 pm - 04:30 pm | Database Performance Diagnostics and Tuning | Marriott Hotel, Salon 12/13, YB Level |
| 05:00 pm - 06:00 pm | Provisioning, Patch Automation, and Configuration Management Pack | Marriott Hotel, Salon 12/13, YB Level |
| 05:00 pm - 06:00 pm | Oracle Application Mgmt. Pack for Oracle E-Business Suite: Monitor/Clone | Marriott Marquis, Nob Hill |
| Tuesday September 21, 2010 | | |
| 11:00 am - 12:00 pm | Using Oracle Application Change Management Pack for Oracle E-Business Suite | Marriott Marquis, Nob Hill |
| 12:30 pm - 01:30 pm | Database and Application Testing | Marriott Hotel, Salon 12/13, YB Level |
| 02:00 pm - 03:00 pm | Oracle Fusion Middleware Management | Marriott Hotel, Salon 12/13, YB Level |
| 03:30 pm - 04:30 pm | Provisioning, Patch Automation, and Configuration Management Pack | Marriott Hotel, Salon 12/13, YB Level |
| Wednesday September 22, 2010 | | |
| 04:45 pm - 05:45 pm | Database and Application Testing | Marriott Hotel, Salon 12/13, YB Level |
| 04:45 pm - 05:45 pm | Oracle Application Mgmt. Pack for Oracle E-Business Suite: Monitor/Clone | Marriott Marquis, Nob Hill |
| Thursday September 23, 2010 | | |
| 09:00 am - 10:00 am | Database Performance Diagnostics and Tuning | Marriott Hotel, Salon 12/13, YB Level |
| 10:30 am - 11:30 am | Oracle Fusion Middleware Management | Marriott Hotel, Salon 12/13, YB Level |

Oracle Enterprise Manager Demogrounds

| DEMO TITLE | LOCATION |
|---|----------------------|
| Oracle Real Application Testing: Database Replay | Moscone West |
| Oracle Real Application Testing: SQL Performance Analyzer | Moscone West |
| Self-Managing Database: Automatic Performance Diagnostics | Moscone West |
| Self-Managing Database: Automatic Fault Diagnostics | Moscone West |
| Self-Managing Database: Automatic Application and SQL Tuning | Moscone West |
| Real User Monitoring with Oracle Enterprise Manager | Moscone South - S021 |
| Application Quality Management: Application Testing Suite | Moscone South - S022 |
| Siebel CRM Application Management | Moscone South - S024 |
| Real User Monitoring with Oracle Enterprise Manager | Moscone West |
| Oracle WebLogic Server Management and Java Diagnostics | Moscone West |
| SOA Management with Oracle Enterprise Manager | Moscone West |
| Oracle Business Transaction Management | Moscone West |
| Push Button Provisioning and Patch Automation | Moscone West |
| Smart Configuration Management | Moscone West |
| Oracle Enterprise Manager Ops Center | Moscone West |
| Managing the Enterprise Private Cloud | Moscone West |
| System Management, My Oracle Support, and Oracle Enterprise Manager | Moscone West |
| Self Managing Database: Change Management for DBAs | Moscone West |
| Oracle Enterprise Manager: Complete Datacenter Management | Moscone West |
| Self-Managing Database: Data Masking for DBAs | Moscone West |

Oracle Enterprise Manager 11g Resource Center

Access Videos, Webcasts, White Papers, and More

Oracle.com/enterprisemanager11g

The screenshot shows the Oracle Enterprise Manager 11g Resource Center website. At the top left is the Oracle logo. The navigation bar includes links for Home, Solutions, Launch Webcast, and Events and Community. On the right of the navigation bar, it says "Stay Connected:" followed by social media icons for Facebook, LinkedIn, Twitter, and YouTube. The main header features the "ORACLE ENTERPRISE MANAGER 11g" logo and the text "Business-Driven IT Management". Below the header is a large image of a person's silhouette interacting with a grid of data visualizations. To the right of this image is a red box with the text "Watch the Launch Event Webcast" and "Introducing Oracle Enterprise Manager 11g". Below this, it lists the presenters: Charles Phillips, President, Oracle and Richard Sarwal, Senior Vice President, Oracle. A red "WATCH NOW" button is positioned below the presenter names. The main content area is divided into three columns. The first column is titled "EMPOWER IT. DRIVE BUSINESS VALUE." and lists three key features: "Integrated Application-to-Disk Management", "Business-Driven Application Management", and "Integrated Systems Management and Support". The second column is titled "MAKE THE RIGHT IT DECISIONS" and lists two key benefits: "Improve customer satisfaction. Increase IT efficiency. Achieve ROI of up to 149% in three years." and "Get the ROI reports, customer case studies, white papers, and videos to help you make the right IT investments." An "Access Now" button is located at the bottom of this column. The third column is titled "PUT YOUR IT MANAGEMENT TO THE TEST" and lists one key benefit: "Take the assessment quiz that measures the effectiveness of your current management practices." and "Discover where and how you can achieve greater business value and exceptional IT efficiency." A "Start Now" button is located at the bottom of this column. At the bottom of the page, the text "SOFTWARE. HARDWARE. COMPLETE." is displayed on the left, and a footer with links for "About Oracle", "Contact Us", "Legal Notices", "Terms of Use", and "Your Privacy Rights" is on the right.

ORACLE

Home Solutions Launch Webcast Events and Community Stay Connected:

ORACLE ENTERPRISE MANAGER 11g Business-Driven IT Management

Watch the Launch Event Webcast

Introducing Oracle Enterprise Manager 11g

Presented by:

Charles Phillips, President, Oracle
Richard Sarwal, Senior Vice President, Oracle

WATCH NOW

EMPOWER IT. DRIVE BUSINESS VALUE.

Increase business agility and efficiency with integrated IT management. Only Oracle gives you the power of:

- Integrated Application-to-Disk Management
- Business-Driven Application Management
- Integrated Systems Management and Support

MAKE THE RIGHT IT DECISIONS

Improve customer satisfaction. Increase IT efficiency. Achieve ROI of up to 149% in three years.

Get the ROI reports, customer case studies, white papers, and videos to help you make the right IT investments.

Access Now

PUT YOUR IT MANAGEMENT TO THE TEST

Take the assessment quiz that measures the effectiveness of your current management practices.

Discover where and how you can achieve greater business value and exceptional IT efficiency.

Start Now

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Oracle Enterprise Manager Reference Information

Information available on Oracle website:

<http://www.oracle.com/us/products/enterprise-manager/index.html>

Blogs:

<http://blogs.oracle.com/oem>

Forums:

[MyOracle Forums](#) -> [Technology Products & Solutions](#) -> [Enterprise Manager](#)

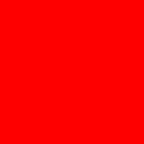
High Availability Reference Information

Information available on Oracle website:

- [Oracle Maximum Availability Architecture \(MAA\)](#)
- [Enterprise Manager Best Practices](#)

High Availability Forum:

[Configuring Enterprise Manager for High Availability](#)



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Oracle OpenWorld
Beijing 2010

December 13–16, 2010



Oracle OpenWorld

Latin America 2010

December 7–9, 2010

Oracle Products Available Online



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