

EPM Infrastructure Deep Dive

Eric Helmer, VP Advanced Technical Services, ADI Strategies

John Booth, Director of Infrastructure/Integration Huron

Rob Donahue, Director of EPM Infrastructure, Rolta

Agenda

1. First Session – Eric Helmer - 30 mins
 - 11.1.2.x what's new and overall architecture
 - Installation/upgrade tips, tricks, and considerations
 - Patching best practices
2. Second Session – John Booth – 30 mins
 - Performance tuning
 - Backup/recovery
 - Disaster recovery
3. Third Session – Rob Donahue – 30 mins
 - Health monitoring
 - Troubleshooting
 - Logs and diagnostics
4. Q&A - 30 mins

EPM

What's New, Installation, Patching



Eric Helmer

VP Advanced IT services, ADI Strategies

 Oracle ACE Director

Contact Eric at:

ehelmer@adistrategies.com

Blog: <http://EricHelmer.wordpress.com>

Web: www.EricHelmer.com

Twitter: [@erichelmer](https://twitter.com/erichelmer)

Pre-System 9

Separate, Best of Breed

- ✓ Individual Separate Products
- ✓ No real single sign-on
- ✓ Individually installed
- ✓ No common look and feel or portal



System 9/11

Enterprise Class

- ✓ Integrated enterprise
- ✓ Complex architecture
- ✓ Seamless to end user
- ✓ Single sign-on
- ✓ Same look and feel



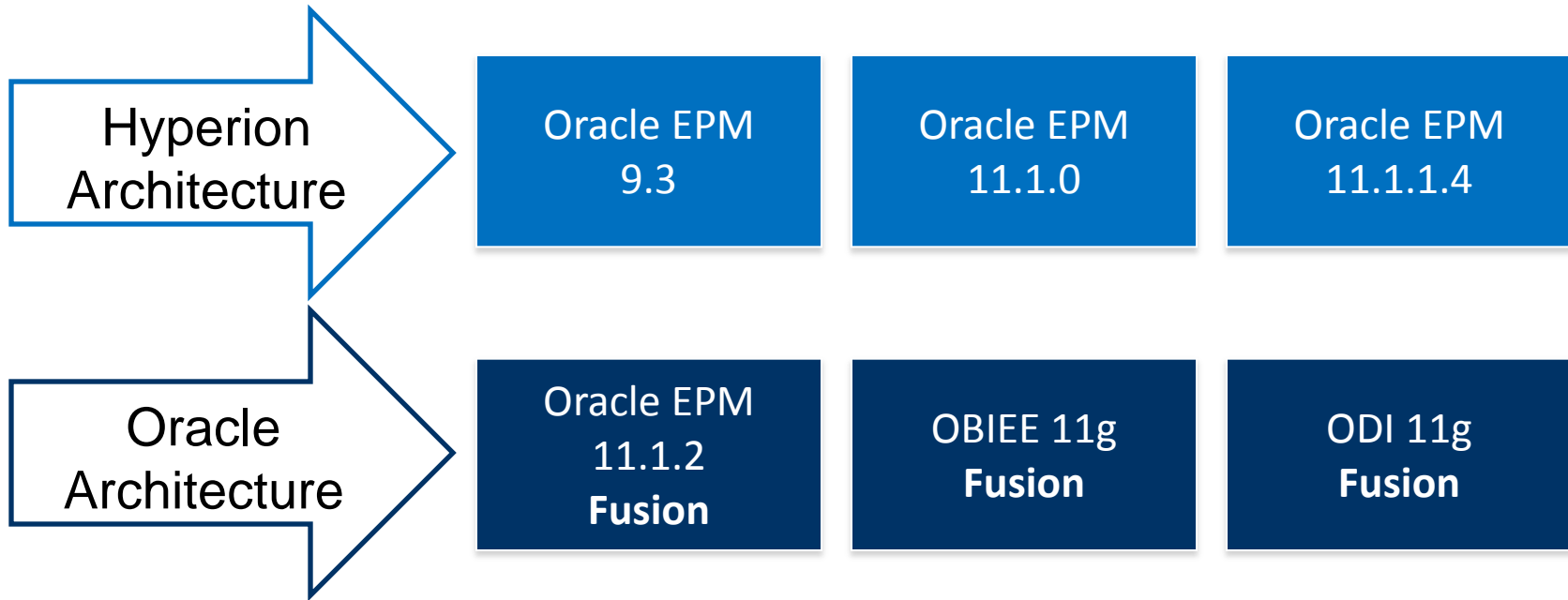
Modern Challenges

- ✓ Mixed Operating Systems, virtualized environments
- ✓ Outsourced IT departments
- ✓ Helpdesk integration, ticket systems, support
- ✓ 3rd party hosting companies
- ✓ Global implementations
- ✓ Formal design review
- ✓ System monitoring
- ✓ High availability/load balancing
- ✓ Disaster recovery
- ✓ Vulnerability testing, port scanning
- ✓ SSL/HTTPS
- ✓ Change Management, versioning systems
- ✓ Firewalls
- ✓ Automation and scheduling software
- ✓ OBIEE integration

Enterprise Class Solutions need Enterprise IT planning, design, and transition.

IT methodology must include full enterprise class roll-outs, meeting all Corporate IT challenges.

Latest Versions



Version History

Compatibilities

11.1.1 - 2008

- ✓ Most products are 32-bit
- ✓ Windows Server 2003 SP1 and SP2 (32-bit or 64-bit)
- ✓ IE 6 and 7, Office 2003 and 2007

11.1.2.0 - 2010

- ✓ Intended for a new install, but a lot will migrate
- ✓ No backward compatibility
- ✓ Full 64-bit binaries
- ✓ Windows server 2008 R1
- ✓ IE 7 and 8, Office 2003 and 2007

11.1.2.1 - 2010

- ✓ Upgrade path and backward compatibility
- ✓ 9.2.1, 9.3.3, 11.1.1.3 & 11.1.2
- ✓ Windows server 2008 R2
- ✓ Office 2010

11.1.2

Significantly different - **Fusion**

- Weblogic embedded and required
- Almost 100% 64-bit support (except FDM, Strat Fi, ODI)
- Significant changes in directory paths and folder organization
- Support for Server 2008 and IE 8 and FF 3.5, Office 2010
- Oracle HTTP server replaces Apache
- SSL termination at web server support
- Essbase clustering
- No more OpenLDAP!
- Better Logging mechanisms
- Exalytics Machine

11.1.2.2

- Websphere 7.0.0.19+ support
- MS Office 2010 64-bit
- Firefox 10.x and IE9
- Smart View to HSF
- No FR Print Server
- Compact Deployment
- New HFM and Planning UI (ADF)
- Calc. Manager replaces HBR
- Standalone client installers

11.1.2.3 Update

- ASO native in Planning
- FDM EE
- Vertical Clustering
- New Log analysis tool
- LCM change auditing
- Workspace OBIEE integration
- LCM more of an end user tool
- EPM LCM “cloning”
- IE 10

Types of Upgrades

- In-place – on top of existing servers
 - Requires Downtime
 - Cannot change Operating System
- Out-of-place – new hardware
 - Must install new, migrate applications
 - No downtime, cut-over when ready
 - Can refresh hardware and Operating system

UPGRADING

Upgrade Methodology

1
Pre-
Installation

2
Installation


3
Migration

4
Post-
Installation

5
Training &
Go-Live

The Three Keys to Success

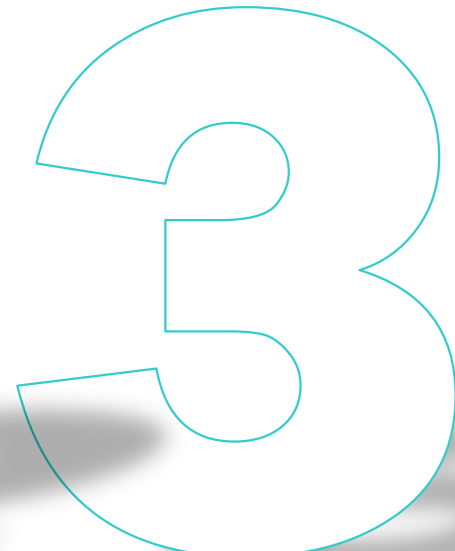
Establish the Team and Methodology



A Project Manager



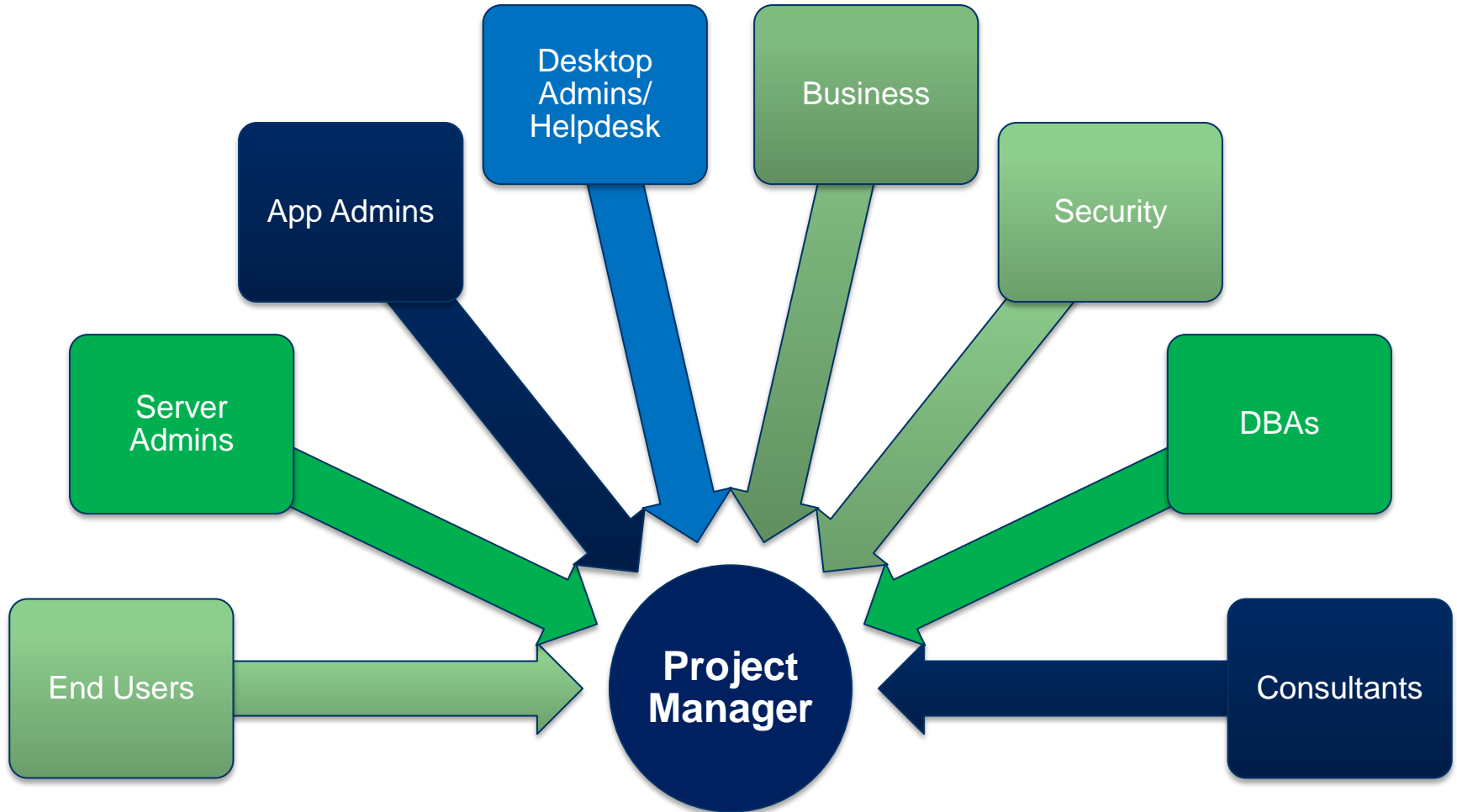
A Project Manager



A Project Manager

Project Management

Most Solidify a Partnership Between IT and Finance!



DESIGN GOALS

Proper IT Design

- Server sizing
- Disk systems
- Memory usage

Performance



- High availability
- Backups
- Clustering
- Disaster Recovery

Reliability



- Right sizing
- Virtualization
- Load balancing

Scalability



Inputs to IT Architecture

User Population

- ✓ Named, Concurrent
- ✓ Where are the users?

User Profile

- ✓ How many Planning, HFM, Essbase users?
- ✓ How will end-users access system

Tolerance to Downtime

- ✓ High availability design?

Multiple Environments

- ✓ DEV, Test, Training, UAT, PROD, DR

End-user Desktop

- ✓ Admin Rights?

Internal IT Standards

- ✓ Operating System
- ✓ Helpdesk / Monitoring
- ✓ 3rd Party Standards

Migration Strategy

- ✓ Who?
- ✓ Frequency?
- ✓ QC Procedures

Backups

- ✓ Procedures, backup windows
- ✓ Disaster Recovery

Security Requirements

- ✓ SSL? Firewalls?
- ✓ External Authentication

Enterprise IT design

Linium's Advanced EPM Hardware Design Services

- ✓ **Enterprise Class IT design**, best practices, scalability, availability
- ✓ Shift from IT being simply necessary to being a **competitive advantage** and part of the **strategic vision** and **business direction**

Virtual vs. Physical

In-House vs. Hosting

Scalability

Backup / Recovery

High Availability

Helpdesk Integration

Automated Monitoring

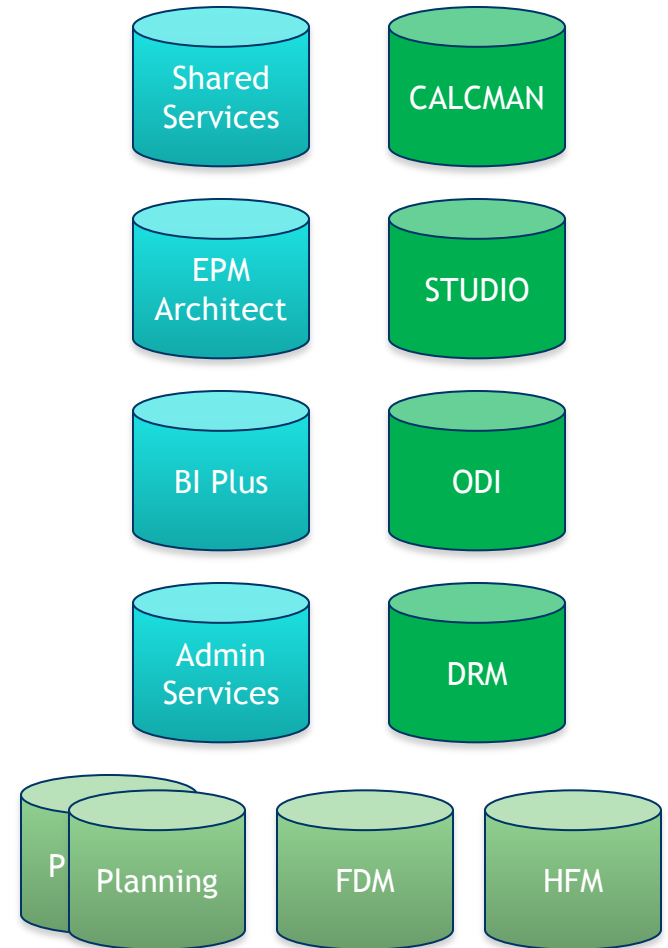
Maintainability

Security / SSL / HTTPS

Disaster Recovery

Database Design

- ✓ Shared Services
- ✓ EPM Architect
- ✓ Business Intelligence
 - Used by Workspace, FR, WA, IR
- ✓ Analytic Administration Services
- ✓ Calculation Manager
- ✓ Essbase Studio
- ✓ Oracle Data Integrator
- ✓ Data Relationship Manager
- ✓ Strategic Finance
- ✓ More for Planning, HFM, FDM, etc.



Pre-Installation

Download
Documentation and
Software

Consultant Access
Accounts, Work Area

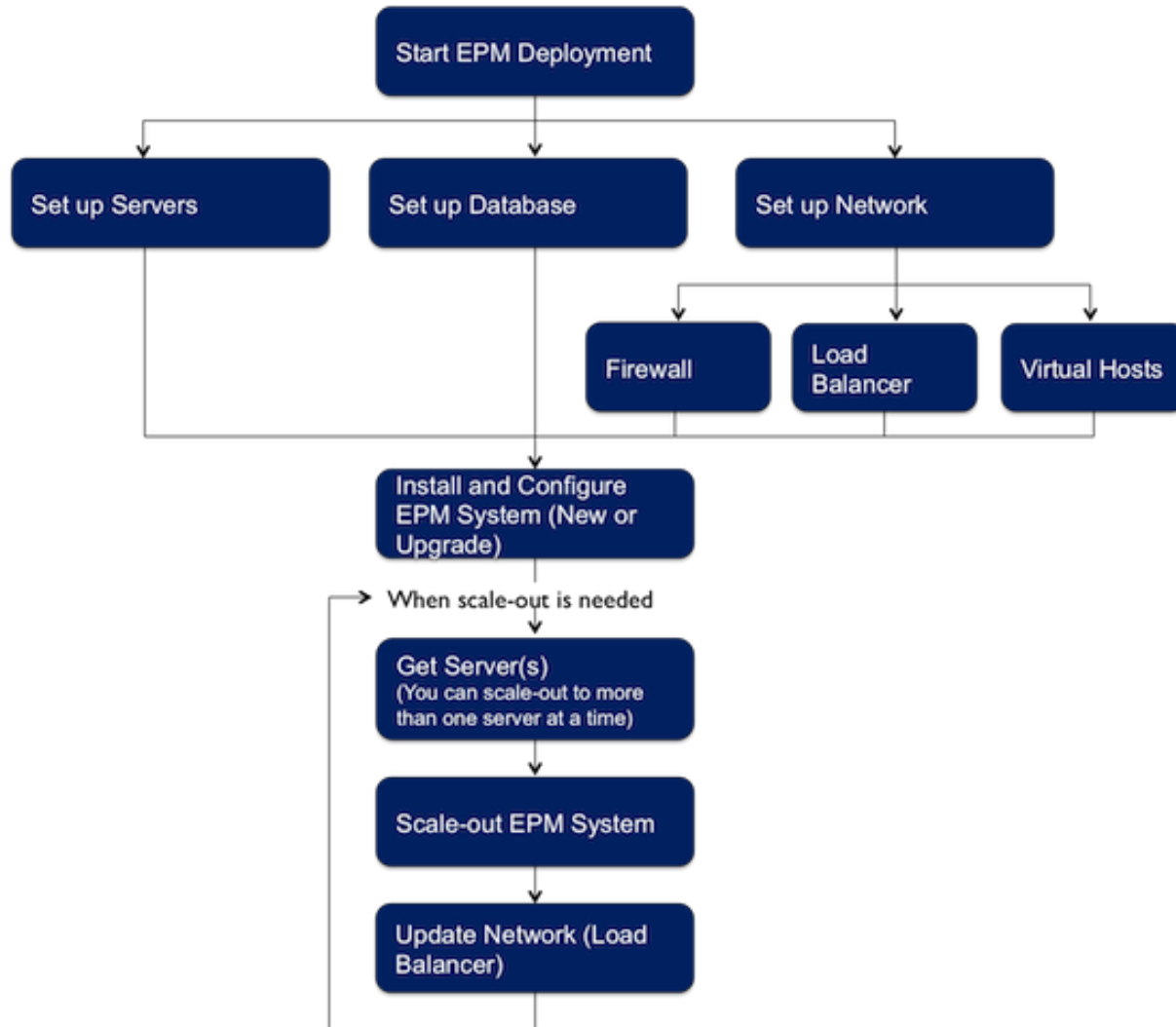
Create needed
System Accounts

Disable Unnecessary
Services, Virus
Scanning

Database Client and
Connectivity Testing

Prepare Servers

Installation Process



Migration / Upgrade Objects

Security

Reports

Applications (i.e.
Planning, Essbase,
HFM, FDM)

Data

ETL and
Automation

Business rules to
Calc Manager
conversion

Go-live / Operational Readiness

Parallel close, user acceptance, conference room pilots

Monitoring agents

Helpdesk and ticketing systems

Support procedures, on-call and responsibility

Performance testing and tuning

Disaster recovery testing/documentation

Backup/recovery testing

Business continuity, redundancy testing

Security hardening

Patching

- Patch Sets (PSU's)
 - Should be installed in all environments
 - Ie .100, .200, .300....
- Patch Set Exception
 - On-off situational only
 - Non round numbers

EPM Tuning, Backup, and DR



ORACLE
ACE

John A. Booth



@johnaboorth



metavero.com



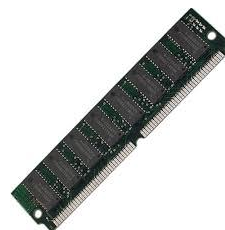
+1.224.545.8820

Tuning



- Virtual Machine
- Operating System
- Relational Database
- Web Server
- Java Server
- Application

Tuning: Virtual Machine



Size as if were physical machines; disable power saving in physical machine BIOS

#1 performance killer is shared resources

- Physical Server has VM's exceeding 2:1 – I prefer closer to 1:1 on Analytic Apps e.g. HFM, HSF, Essbase. On very busy (overcommitted) servers more cores can lead to less performance
- On Analytic Apps ensure you have THICK disk provisioning - FIXED (Hyper-V 2012) or EAGER ZERO (VMWare)

Do not use Hyper-V 2008

Tuning: Operating System

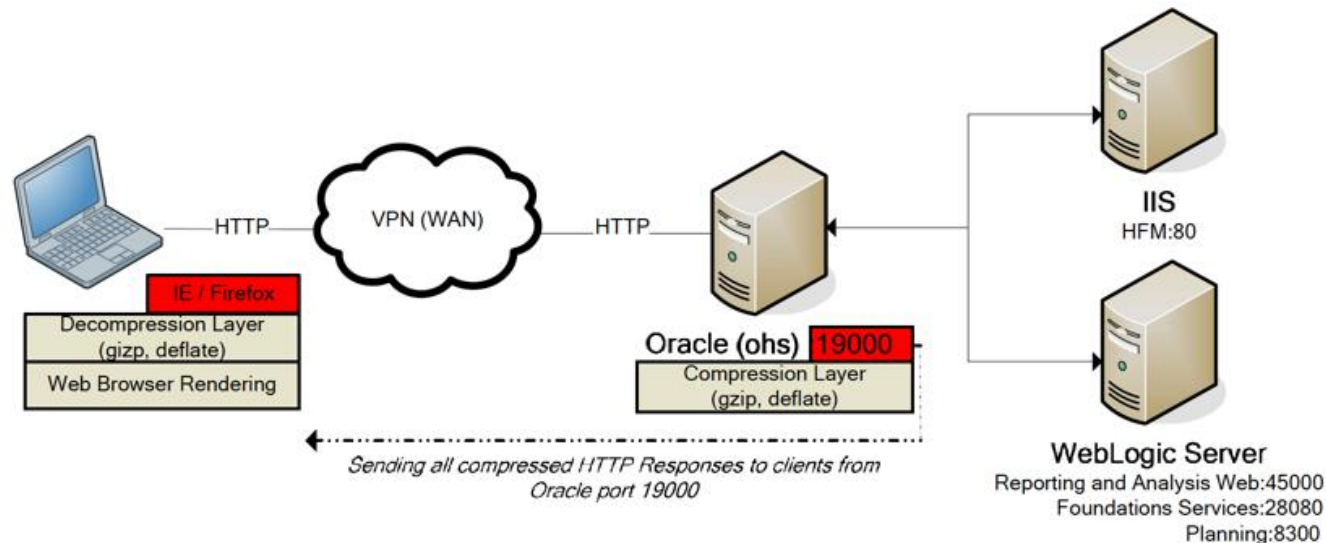
- Network Settings e.g. Max Ports, Time to Reuse Ports, ...
- Disable power saving features; CPU, disk, ...
- Disable real-time AV scans on analytic data stores e.g. Essbase, HSF
- Consider impact of port driven AV scans e.g. port 80, 443, 19000, DCOM, all the JVM ports. Recommend you exempt from port scanning
- Windows: `AdditionalDelayedWorkerThreads`, `AdditionalCriticalWorkerThreads`

Tuning: Relational Database

- Storage speed (HFM, FDM/FDM EE, HPCM)
- Open Cursors (HFM)
- Temporary space (HFM/FDM/FDM EE)
 - On SQL Server have one tempdb per core of SQL Server
- RAM
 - SGA sizing for Oracle
 - % of RAM for SQL Server
- Number of allowed Connections / Sessions
- Allow for auto growth by at least 100 MB

Tuning: Web Server

- Offloading of SSL
- Compression especially for global deployments



- Threads
- Timeouts

Tuning: Java Server (WebLogic)

- General
 - Tune your minimum / maximum heap sizes
 - Tune stack sizes where appropriate e.g. Planning
 - Timeouts
- WebLogic
 - Maximum data source connections; see tuning guides
 - Native IO drivers on platforms where applicable
 - 64-bit Solaris platforms including Exalytics as of June 2014 deploy with a 32-bit AdminServer which leads to slow JVM starts

Tuning: Application

- RA Framework – disable harvester and transformer when Interactive Reports are not used; broker connection settings to 500, heap settings
- Planning – OLAP Connections
- Essbase – DB Settings, Essbase.cfg, opmn.xml
- Financial Management – Registry Settings

Backup and Recovery

Scope

Procedure

Implement

Test
Test
Test

- Identify scope
- Identify procedure
- Implement procedure
- Test procedure

Backup and Recovery

- Backup Production and Non-Production
 - Although non-prod is less critical, it is more expensive to perform re-work Vs. restore lost work
- Data retention
 - Be able to go back 30 days
 - Be able to go back to point in time up to 3 months
 - Be able to go back to individual quarter ends up to 12 months
- O/S, Install user home directory, Registry (Win), Data folders, and Application Installation

Backup and Recovery

- **HOT vs COLD; HOT is non-invasive**
- **DO** test your backup strategy – there are many sad stories about the backup that doesn't work

NEVER: Restore Shared Services DB to another environment

HINT: LCM for shared services role provisioning as well as granular items you may want to restore with minimal IT involvement e.g. Calcs, Rules, Grids, Forms, Reports, ...

Backup and Recovery

Area	Technique
Base Application	File system backups (and registry for Windows)
VM's	Snapshots/point in time of full machine
Foundation	LCM exports of ROLE security
BIPlus	Relational and File Backups (RM1)
Essbase	File backup for key artifacts: *.sec, *.otl, *.csc, *.rul, *.rep, ... Data Options: 1. Full Archive + Transactions 2. Exports of data e.g. Calc Data Export, Level 0 3. PAGE/INDEX files
FDM	Relational and File Backups (FDMData)
HFM	Relational Backups
HSF	File Backups (HSFData)

Disaster Recovery



- Identify Application Criticality
- Identify Recovery Point Objective (RPO)
- Implement Recovery Time Objective (RTO)
- Test procedure

Disaster Recovery: Good Practices

- **Don't put your eggs in one basket:** Ensure Disaster Recovery Center is in location least likely to be affected by an event in your primary data center
- **If it's not tested, don't count on it:** Yearly recovery test of critical applications

Disaster Recovery: Options

- Maintain production in two data centers in sync at all times
- Restore to a dedicated environment
- Restore over a QA/TEST environment
- Full restore to an isolated network (VLAN)
 - Identical to production in every sense; requires duplicated architecture for whole environment e.g. AD/LDAP, DNS, networks, ...
 - Usually the least amount of work for the application teams

Disaster Recovery: Terms

- Application Criticality – What critical processes are impacted when my system is down?
- Recovery Point Objective (RPO) – amount of data lost
- Recovery Time Objective (RTO) – time to recover from last recovery point

Resources

Oracle EPM Tuning Guide

EPM 11.1.2.2 and 11.1.2.3 Infrastructure Tuning Guide (Doc ID 1595920.1)

Oracle VM-3 10GbE Network Performance Tuning

<http://www.oracle.com/technetwork/server-storage/vm/ovm3-10gbe-perf-1900032.pdf>

Virtually all the time

<https://blogs.oracle.com/jsavit/>

VMWare Tuning for latency sensitive workloads

<http://www.vmware.com/files/pdf/techpaper/VMW-Tuning-Latency-Sensitive-Workloads.pdf>

Performance Tuning Guidelines for Hyper-V 2012 (Windows Server 2012 R2)

<http://msdn.microsoft.com/en-us/library/windows/hardware/dn529133.aspx>

11.1.2.3 EPM Deploy and Installation Documentation

http://docs.oracle.com/cd/E40248_01/nav/portal_1.htm

Troubleshooting EPM



Rob Donahue

Rolta

rob.donahue@rolta.com

 @EPMTechTips

614.937.5428

ROLTA

ORACLE Platinum
Partner

Types of Issues

- Issues can be categorized into 2 buckets
 - Isolated – A problem that occurred once
 - i.e. Workspace crashed on Monday
 - Systemic – A problem that continually occurs with some frequency
 - i.e. Planning crashes regularly during close cycles
- There is not a lot of point in trying to find the root cause of an isolated issue
 - It's difficult and time consuming to try and often the effort yields little information
 - Just walk away...
- Systemic issues need to have some root cause analysis done
 - It is important to determine the cause of the issue to prevent it from continuing to happen
 - Restarting Planning 3 times a week during close is not a resolution

Resolving an Issue

- Once the issue has been triaged & the scope and impact is known one can go about the effort trying to resolve the issue
- The process of troubleshooting is more of an art than a skill that can be taught
- Like anything however there are principles which can be learned and applied when the need arises

The goal of troubleshooting is not to determine ‘why’ so much as to find a resolution to the issue

Resolving an Issue: What you need to know

- In order to be able to effectively troubleshoot an issue in an Oracle EPM environment one must have a grasp of:
 - Basic architecture of the products deployed in the environment
 - Understanding of the where's, what's & how's the Web, Application & Data tiers behave
 - Understanding of the inter-dependencies for the applications & tiers
 - Location of log & property files
 - Remember not just the Oracle EPM logs are relevant. The Web Application server or Event logs might contain important information
 - Note: Log Locations changed beginning with 11.1.2 & are grouped under
`<EPM_MIDDLEWARE_HOME>/user_projects/<epm_systemN>/diagnostics/logs`
 - Basic understanding of Java Web Application servers & HTTP processing

Oracle EPM 11 Architecture

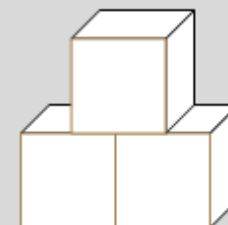
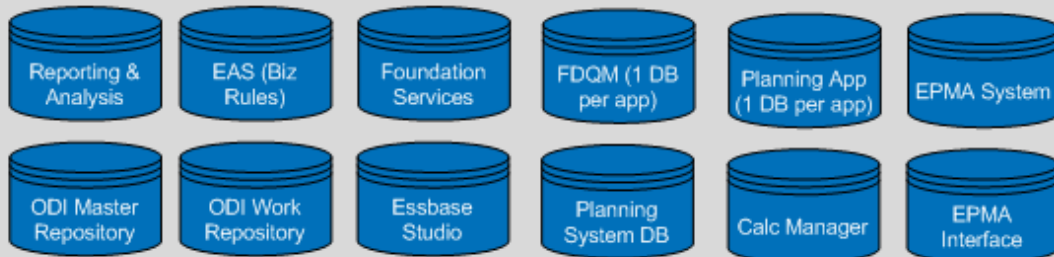
Web



Application



Data



Essbase

Troubleshooting 101

- Locate the problem
 - Example: A user says that they cannot run reports
 - This is a pretty generic statement so in order to help steer the troubleshooting the general source of the issue needs to be located
 - Can the user login to workspace?
 - Can they see the report they want to run?
 - Does the report open when they attempt to run it?
 - What error is given to the user?
 - Based on the answers to these questions one would be able to determine if the issue is with Workspace, Financial Reporting, Essbase or security allowing one to focus the troubleshooting on a targeted area
 - Be sure to capture any error messages to be used in later research

Troubleshooting 101

- Trace the problem
 - Once the general component or location of the issue is identified then the process of tracing the issue can begin
 - Review the log files and system logs for the identified component and try to correlate any errors in the logs with the time the error was known to occur.
 - This may lead you to another component, don't be afraid to follow the trail where it leads
 - It may be required to increase the logging on a particular component to capture additional information about the problem before a good trace can be captured

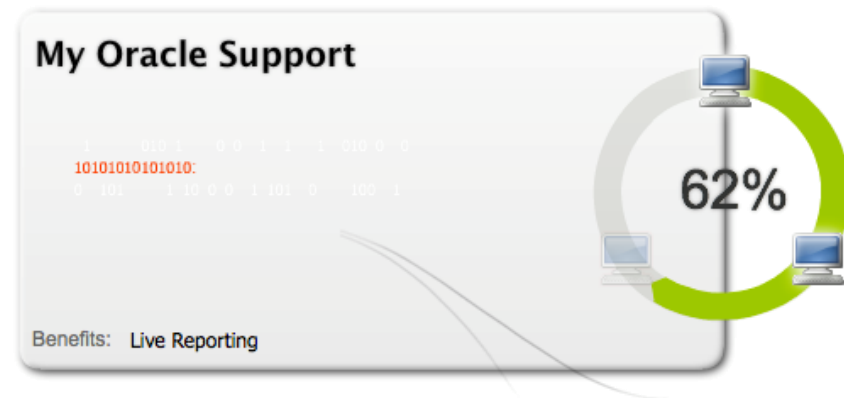
Troubleshooting 101: Trust No One!

- Verify the problem
 - Don't take anyone's word on anything
 - If the problem is repeatable then try to replicate the issue
 - If the problem seems localized to a single user to a special situation then witness the issue
 - If possible walk through the issue with the user at their desk or via an online meeting tool
 - Get screen prints

Troubleshooting 101: Where to Look for Help

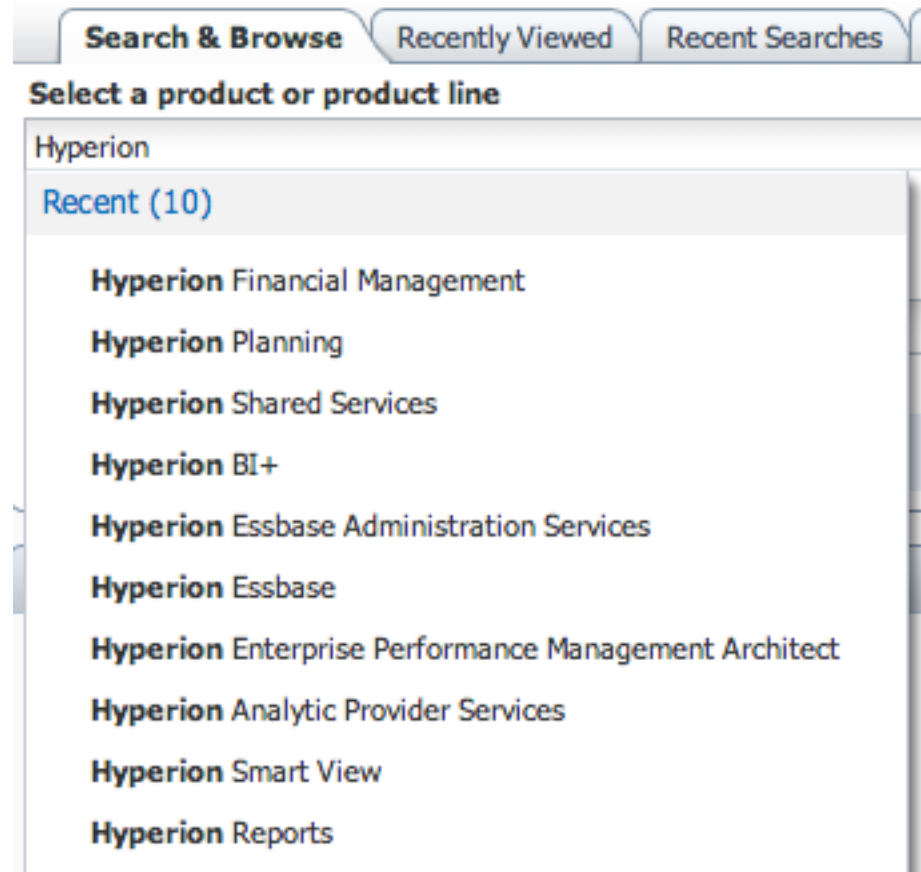
- Oracle Support Knowledge Base
 - It is actually useful!
 - No Really!

<http://support.oracle.com>



Troubleshooting 101: Where to Look for Help



- EPM Information broken up by product lines



Troubleshooting 101: Where to Look for Help

- Navigating the Results

ORACLE MY ORACLE SUPPORT PowerView is Off Rob (Available) (0) Contact Us Help

Dashboard Knowledge Service Requests Patches & Updates Community Certifications Systems Collector More...  

Document Display

Search: EPMA [Back to Results](#)

- EPMA Data Synchronization on Dynamic Accounts (1577499.1)
- Oracle Hyperion Financial Management and EPMA (1073289.1)
- Hyperion EPMA Server Service Does Not Start (1675783.1)
- EPMA Server Windows Service Does Not Start (1352022.1)
- Task Assistant: Hyperion Financial Management and EPMA Issues (1566505.2)**
- Duplicate Requests Sent From Oracle HTTP Server to EPMA (1329742.1)
- Deploy Option is Greyed Out in EPMA Application Library (853151.1)
- Hyperion Enterprise Performance Management Architect (EPMA) Failover Support (1313265.1)
- Data Load Option "Replace By Security" EPMA Data Synchronizer (1588083.1)
- Error "404 Not Found" When Accessing EPMA From Workspace (1293561.1)

[Load More...](#) [Back to Results](#)

★ Task Assistant: Hyperion Financial Management and EPMA Issues (Doc ID 1566505.2) [To Bottom](#)

Selection(s)

HFM EPMA Issues

- Common HFM EPMA Issues
- Common HFM Errors
- Configuration
- Resources and references

Additional Clarification

Please select an option above to begin clarifying the Issue you are experiencing.

What error(s) are you experiencing?

Check all relevant errors for the Issue you've Identified

Solution(s)

Possible Solutions will appear once you make your selection.

Related

Products

- Enterprise Performance Management and Business Intelligence > Enterprise Performance Management > Financial Management > Hyperion Financial Management > BPM Architect > BPM Architect

Keywords

EPMA; HYPERION FINANCIAL MANAGEMENT

[Back to Top](#)

Troubleshooting 101: Where to Look for Help

Custom Google Search

- Oracle Discussions, IT Toolbox Discussions & Network 54

<http://bit.ly/mMmHof>

Refine results by Version for business rules error:

[Version 9.3](#)

[Version 9.2](#)

[Version 9.0](#)

[Version 11](#)

[Business rules connctet - "Error connecting to Essbase server ...](#)

Dec 18, 2007 ... Hi, I'm have just installed planning 9.3.1 (not 9.3.0.1) and have installed the sample application that now comes with it.

businessintelligence.ittoolbox.com/.../business-rules-connctet-error-connecting-to-essbase-server-hplanningsampap-1778961

[OTN Discussion Forums : Business Rules ...](#)

1 post - 1 author - Last post: Apr 25

When I patched prod, and then redeployed the web servers, **business rules** is now failing. This **error** is in the planning log: java.lang. ...

forums.oracle.com/forums/thread.jspx?threadID=2212669&tstart=0

[Essbase Users: Business Rules: Error Connecting to Essbase ...](#)

1 post

Business Rules: Error Connecting to Essbase/Planning 931. January 25 2008 at 12:09 PM
No score for this post, Anonymous from IP address 70.8.122.128 ...

www.network54.com/.../Business+Rules+Error+Connecting+to+Essbase-Planning+931

[OTN Discussion Forums : two business rules runtime errors ...](#)

6 posts - 4 authors - Last post: Dec 17, 2009

The **business rules** looks very nice but I got two runtime **errors**, The first I have to deploy twice else I got a wdsl **error** ...

forums.oracle.com/forums/thread.jspx?messageID=3975133&tstart=0

[Business rules connctet - "Error connecting to Essbase server ...](#)

Dec 19, 2007 ... Hi Daniel, I assume you are using shared services. Following are the steps which we followed for resolution of the issue: - The ...

businessintelligence.ittoolbox.com/.../business-rules-connctet-error-connecting-to-essbase-server-hplanningsampap-1783491

[OTN Discussion Forums : Business Rules Error in V11.1.1.2 ...](#)

2 posts - 1 author - Last post: Mar 19, 2010

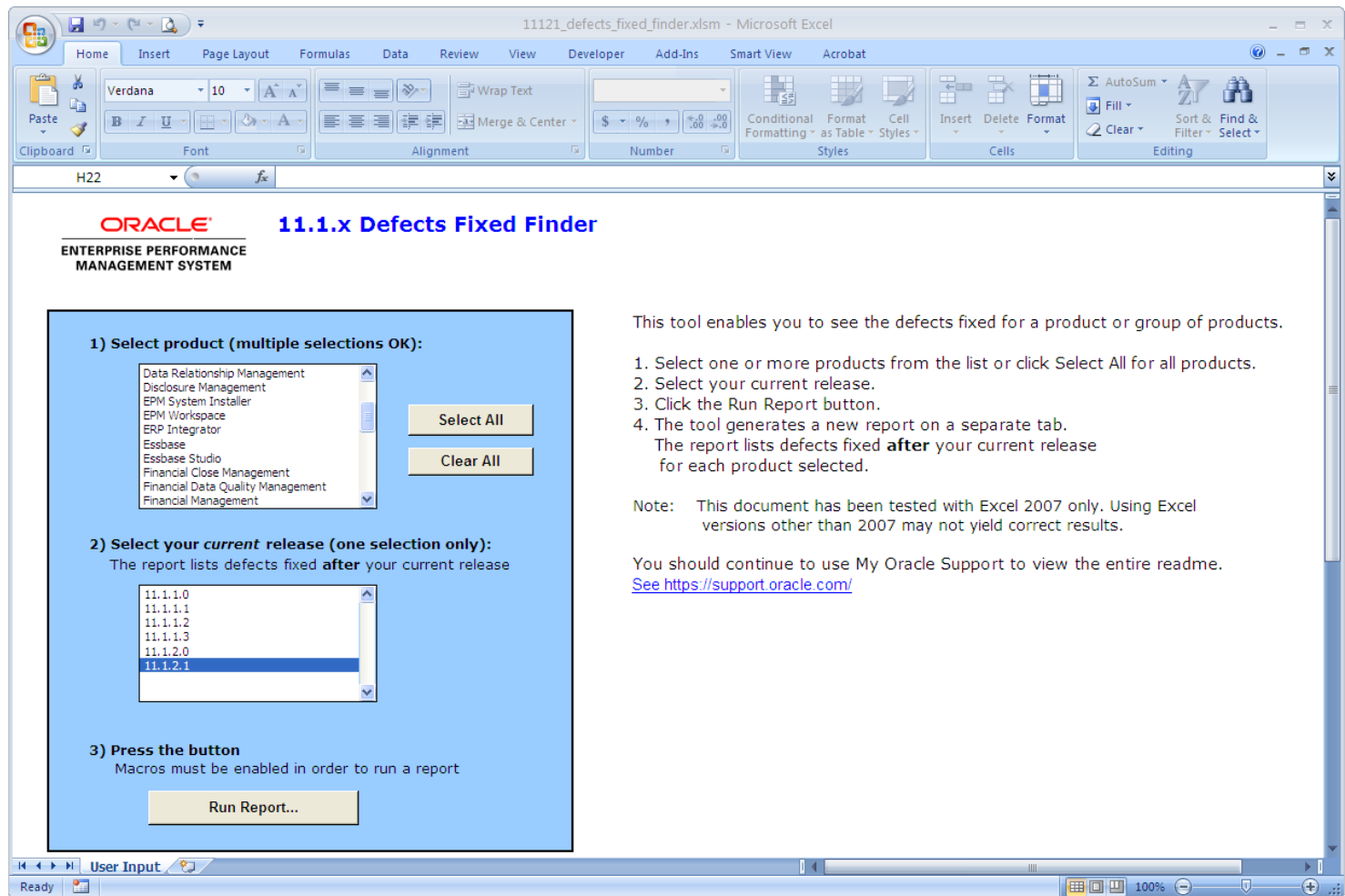
But when we try to expand **Business rule** node, then getting **error**. **Error**: reading plugin data.HBR is not configured correctly. JDBC.ORACLE. ...

forums.oracle.com/forums/thread.jspx?threadID=1045564

Troubleshooting 101: Where to Look for Help

- Oracle Defects Fixed Finder Spreadsheet
 - Very useful to find defects and patches related to your installation
 - Current through version 11.1.2.3 as of 4/30/2014
 - Currently found under document ID 1292603.1

Troubleshooting 101: Where to Look for Help



The screenshot shows the Oracle 11.1.x Defects Fixed Finder tool running in Microsoft Excel. The tool is titled "ORACLE 11.1.x Defects Fixed Finder" and is part of the "ENTERPRISE PERFORMANCE MANAGEMENT SYSTEM".

1) Select product (multiple selections OK):

- A list of products is shown in a scrollable box: Data Relationship Management, Disclosure Management, EPM System Installer, EPM Workspace, ERP Integrator, Essbase, Essbase Studio, Financial Close Management, Financial Data Quality Management, and Financial Management.
- Buttons for "Select All" and "Clear All" are visible.

2) Select your *current* release (one selection only):

The report lists defects fixed **after** your current release

- A list of releases is shown in a scrollable box: 11.1.1.0, 11.1.1.1, 11.1.1.2, 11.1.1.3, 11.1.2.0, and 11.1.2.1 (which is selected).

3) Press the button

Macros must be enabled in order to run a report

A "Run Report..." button is visible.

This tool enables you to see the defects fixed for a product or group of products.

1. Select one or more products from the list or click Select All for all products.
2. Select your current release.
3. Click the Run Report button.
4. The tool generates a new report on a separate tab. The report lists defects fixed **after** your current release for each product selected.

Note: This document has been tested with Excel 2007 only. Using Excel versions other than 2007 may not yield correct results.

You should continue to use My Oracle Support to view the entire readme. See <https://support.oracle.com/>

Troubleshooting 101: Where to Look for Help

Delete this sheet		Release Number	Supported Platforms	Oracle Patch Number
Product(s)	Defects Fixed			
Planning	<ul style="list-style-type: none"> • 9952858 - Performance issues can occur when you open data forms in Planning 11.1.2. • 12314413 - If a data form has hidden columns, copy and paste do not work correctly. • 12314423 - When you paste data from Microsoft Excel into a Planning data form, a value may be missing. • 12314431 - The Member Selection dialog box for a runtime prompt is empty. 	11.1.2.0.002 Patch Set Exception (PSE): 12314814	Applies to all platforms supported in Release 11.1.2.0.	12314814
Planning	<ul style="list-style-type: none"> • 9857952 - When cells are hidden because the parent row or column is collapsed, cells are not updated by time period spreading or Grid Spread. • 9857287 - Nonadministrator user types receive an error when using process management in Smart View for Office. • 9885024 - An error is displayed when you create a data form and then select a variable. • 9839681, 9819678 - Concurrency issues exist when two users launch a rule almost at the same time in an application using Calculation Manager as the calculation module. • 9866296 - Employee expenses are not computed, because of missing FTE and Status Details when an employee is assigned to a job. • 9840384 - Other Compensation Elements set to follow Salary Allocation are not available in View Allocated Expenses. • 9840380 - Elements removed at the position level are still available in View Allocated Expenses. • 9840351 - Changes made to a position's or employee's allocation data are not reflected in the View Allocation Expenses window. (cont.)	11.1.2.0.01	Applies to all supported platforms.	9809023

Troubleshooting 101

- Cover all angles
 - In most cases it makes sense to open an issue with Oracle as soon as the problem is verified & triaged
 - However this does not mean that the search for a resolution should wait on Oracle Support
 - While Oracle Support is ‘researching’ the issue it is important to continue the process of troubleshooting the problem, gathering more information to assist in the research and resolution

Troubleshooting 101

- Use Caution
 - When trying potential resolutions it's important to exercise caution so as to not create more problems in trying to fix the current one.
 - Only implement 1 fix idea at a time
 - This allows you to know which fix resolved the issue or which one caused more problems
 - Document each attempt and the results
 - Try to avoid crazy hacks that involve the registry, customizing delivered Hyperion code (i.e. JSP pages) or direct SQL changes to the DB
 - These have a tendency to come back and bite you later on

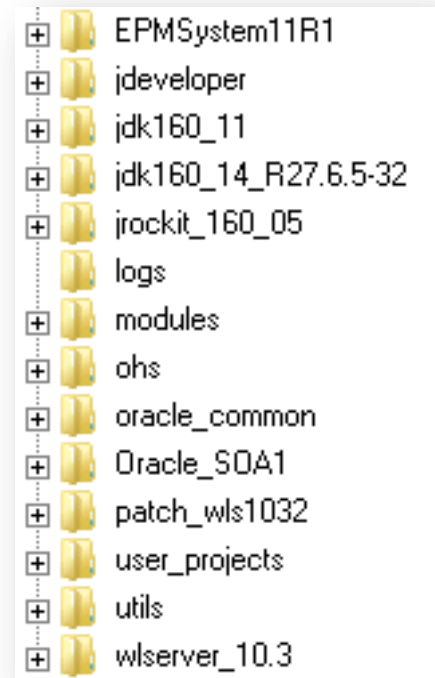
Trust me, I know!

More Troubleshooting Tips

- Stay calm...
- Be methodical
- Document findings
- Discuss ideas with others
- Measure twice, cut once

Working with EPM 11.1.2.x

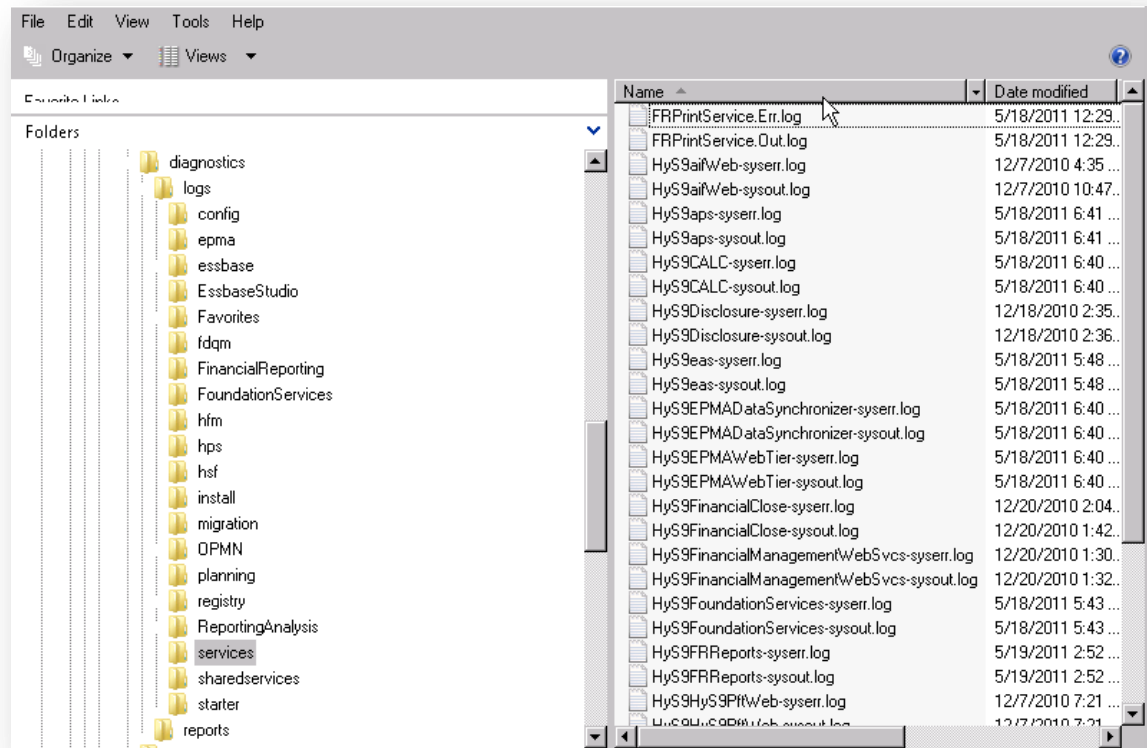
- The directory structure for 11.1.2.x has changed dramatically from version 11.1.1.3
- Logging has also changed a fair amount in the newest version
 - Many of the products now use the Oracle Diagnostic Logging framework
- Logs are 'generally' centralized under the
<EPM_MW_HOME>\user_project
s\epmsystem\diagnostics\logs
directory



Working with EPM 11.1.2.x

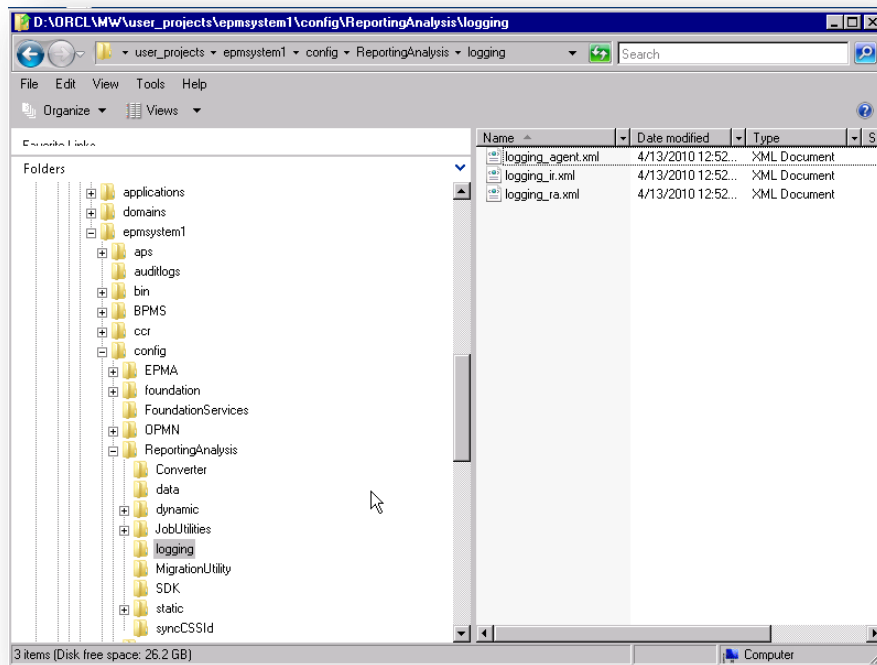
- When reviewing the logs don't always trust the 'last modified date' in Windows
 - Many times this does not seem to reflect when the log was last updated

- The logs for the WebLogic and other Window 'Services' can be found in the 'services' folder



Working with EPM 11.1.2.x

- To change the logging levels for ODL the XML file needs to be modified



These files are located in the
`<EPM_MW_HOME>\user_projects\epmsystem1\config\<product_name>`

Working with EPM 11.1.2.x: ODL Logging Levels

Java Log Level	ODL Message Type: Log Level	ODL Description
SEVERE.intValue()+100	INTERNAL_ERROR:1	The program has experienced an error for some internal or unexpected non-recoverable exception
SEVERE	ERROR:1	A problem requiring attention from the system administrator has occurred
WARNING	WARNING:1	An action occurred or a condition was discovered that should be reviewed and may require action before an error occurs
INFO	NOTIFICATION:1	A report of a normal action or event. This could be a user operation, such as "login completed" or an automatic operation such as a log file rotation
CONFIG	NOTIFICATION:16	A configuration-related message or problem
DEBUG	TRACE:1	A trace or debug message used for debugging or performance monitoring. Typically contains detailed event data

Working with EPM 11.1.2.x: ODL Logging Levels

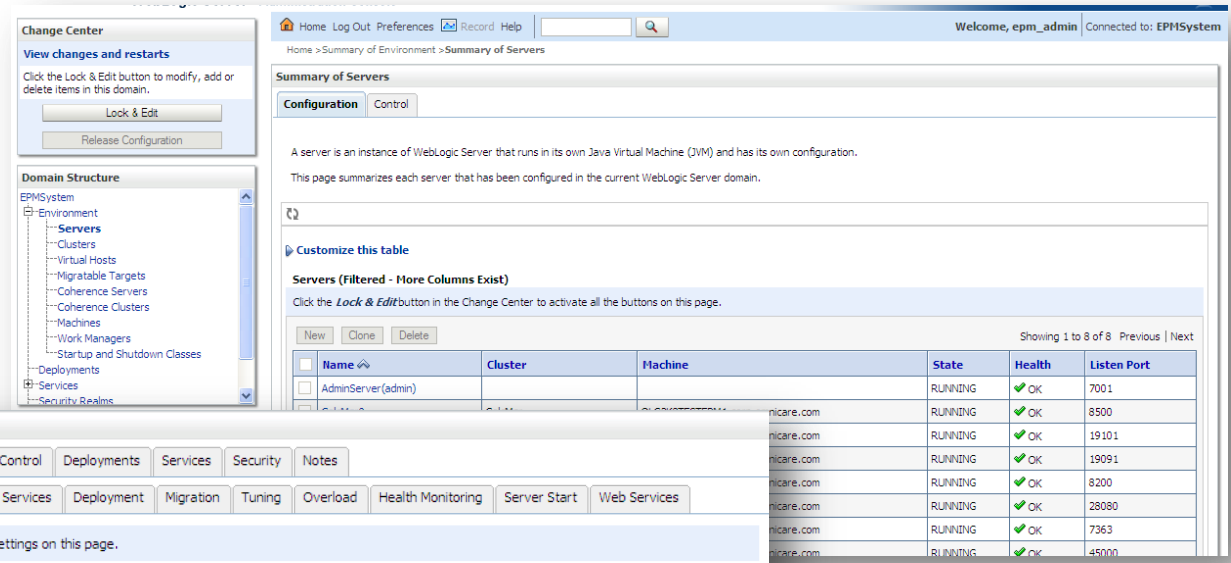
Log Message Format	Description
Time Stamp	Date and time when the message was generated, adjusted for time difference between the host where the message was generated and the host of the common repository. This field is set only when the log message is written to a central repository and should not be set by components. Example: [2010-01-22T05:23:31.755-08:00]
Component ID	The component that originated the message. Example: [FoundationServices0].
Message Type	<p>ERROR—A serious problem that requires immediate attention from the System Administrator and is not caused by a bug in the product.</p> <p>WARNING—A potential problem that should be reviewed by the System Administrator.</p> <p>NOTIFICATION—A major lifecycle event such as the activation or deactivation of a primary subcomponent or feature.</p> <p>TRACE—Trace or debug information for events that are meaningful to users, such as public API entry/exit points. The messages should be understandable by those who do not know internal implementation details.</p> <p>UNKNOWN (may be used when the type is unknown).</p>
Message ID	A short identifier that uniquely identifies the message. Example [EPMWKSP-000001]
Module ID	An identifier of the module that originated the message. The value is component specific. Example: [Initialization]
Execution Context Id (ECID)	Execution context ID helps connect multiple log files. Example: [ecid:0000IPMCrhW17ic5PjWByd1BMQPg000002,0]
Message text	Actual log message

Managing & Troubleshooting

- There are 2 out of the box methods to assist in the management and troubleshooting of the EPM WebLogic Implementation
- WebLogic Administration Console
 - http://<admin_host>:7001/console
- Enterprise Manager Console
 - http://<admin_host>:7001/em
- Login to either using the WebLogic ID created during the initial configuration of EPM

Managing & Troubleshooting

- The admin console is used for managing the configuration of the managed servers in a domain



Home > Summary of Environment > Summary of Servers

Welcome, epm_admin Connected to: EPMSysSystem

Summary of Servers

Configuration Control

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain.

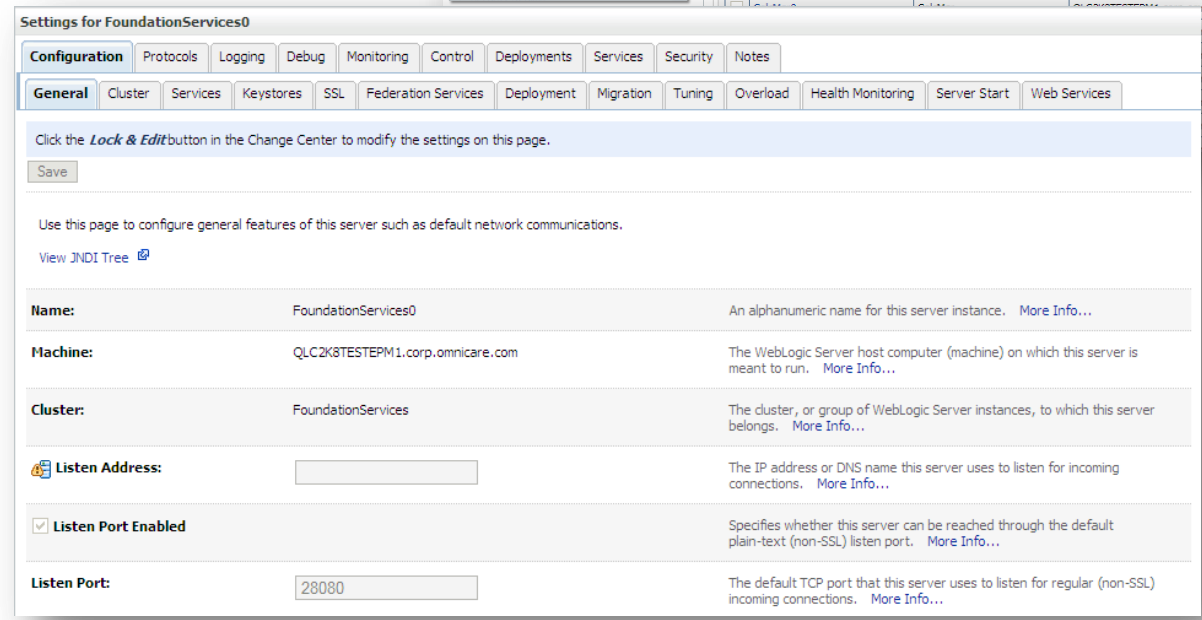
Customize this table

Servers (Filtered - More Columns Exist)

Click the **Lock & Edit** button in the Change Center to activate all the buttons on this page.

New Clone Delete Showing 1 to 8 of 8 Previous | Next

<input type="checkbox"/>	Name	Cluster	Machine	State	Health	Listen Port
<input type="checkbox"/>	AdminServer(admin)			RUNNING	OK	7001
<input type="checkbox"/>				RUNNING	OK	8500
<input type="checkbox"/>				RUNNING	OK	19101
<input type="checkbox"/>				RUNNING	OK	19091
<input type="checkbox"/>				RUNNING	OK	8200
<input type="checkbox"/>				RUNNING	OK	28080
<input type="checkbox"/>				RUNNING	OK	7363
<input type="checkbox"/>				RUNNING	OK	45000



Settings for FoundationServices0

Configuration Protocols Logging Debug Monitoring Control Deployments Services Security Notes

General Cluster Services Keystores SSL Federation Services Deployment Migration Tuning Overload Health Monitoring Server Start Web Services

Click the **Lock & Edit** button in the Change Center to modify the settings on this page.

Save

Use this page to configure general features of this server such as default network communications.

View JNDI Tree

Name: FoundationServices0 An alphanumeric name for this server instance. [More Info...](#)

Machine: QLC2K8TESTEPM1.corp.omnicare.com The WebLogic Server host computer (machine) on which this server is meant to run. [More Info...](#)

Cluster: FoundationServices The cluster, or group of WebLogic Server instances, to which this server belongs. [More Info...](#)

Listen Address: The IP address or DNS name this server uses to listen for incoming connections. [More Info...](#)

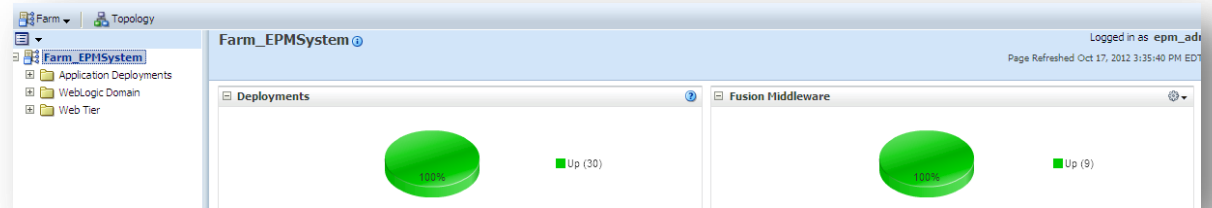
Listen Port Enabled Specifies whether this server can be reached through the default plain-text (non-SSL) listen port. [More Info...](#)

Listen Port: The default TCP port that this server uses to listen for regular (non-SSL) incoming connections. [More Info...](#)

Managing & Troubleshooting

- The Enterprise Manager Console can be used to get status on the deployed components

ORACLE Enterprise Manager 11g Fusion Middleware Control



- Also performance and log information can be viewed

The screenshot displays four panels from the Oracle Enterprise Manager 11g Fusion Middleware Control console:

- Summary:** Shows general information for the WebLogic Domain, including the Administration Server (AdminServer), Administration Server Host (QLC2K8TESTEPM1.corp.omnicare.com), and Administration Server Listen Port (7001). It also provides a link to the Oracle WebLogic Server Administration Console.
- Servers:** Shows a green progress indicator at 100% and 'Up (8)'. Below it is a table listing server details:

Name	Status	Host	Cluster	Listen Port	Active Sessions	Request Processing Time (ms)	Be Access (p/minute)
AdminServer	Up	QLC2K8TE		7001	1	0	0.
CaldMgr0	Up	QLC2K8TE	CaldMgr	8500	0	0	0.
EpmaDataSync0	Up	QLC2K8TE	EpmaData	19101	0	0	0.
EpmaWebReport	Up	QLC2K8TE	EpmaWeb	19091	0	0	0.
FinancialReporti	Up	QLC2K8TE	Financial	8200	0	0	0.

- Clusters:** Shows a table listing cluster details:

Name	Servers	Cluster Address	Cluster Messaging Mode	Default Load Algorithm	Session Replication Type
CaldMgr	1		Unicast	Round Robin	(None)
EpmaDataSync	1		Unicast	Round Robin	(None)
EpmaWebReports	1		Unicast	Round Robin	(None)
FinancialReporting	1		Unicast	Round Robin	(None)
FoundationServices	1		Unicast	Round Robin	(None)
HFMWeb	1		Unicast	Round Robin	(None)
RaFramework	1		Unicast	Round Robin	(None)

- Deployments:** Shows a green progress indicator at 100% and 'Up (30)'. Below it is a table listing deployment details:

Name	Status	Target
Application Deployments		
Internal Applications		
CALC(11.1.2.0)	Up	CaldMgr

Managing & Troubleshooting

Servlets and JSPs					
Name	Web Module	Requests Processed	Average Client Processing Time (ms)	Requests (per minute)	Total Client Processing Time (ms)
WebServiceServlet	hfmadf	0	0	0.00	0
JspServlet	hfmadf	0	0	0.00	0
HFMpingServlet	hfmadf	4	152	0.00	609
jsp	hfmadf	855	11	0.00	9,311
WorkspaceManagerServlet	hfmadf	1	313	0.00	313
Faces Servlet	hfmadf	49	1,620	0.00	79,390
BIGALGESERVLET	hfmadf	0	0	0.00	0
adw	hfmadf	0	0	0.00	0

- Performance Information on the pages and servlets being served

APS(11.1.2.0)	↓	AnalyticProvider
APS(11.1.2.0)	↓	AnalyticProvider
CALC(11.1.2.0)	↑	CalcMgr
CALC(11.1.2.0)	↑	CalcMgr0
EAS(11.1.2.0)	↑	EssbaseAdminSe
EAS(11.1.2.0)	↑	EssbaseAdminSe
EPMADATASYNCHRONIZER(11.1.2.0)	↑	EpmaDataSync
EPMADATASYNCHRONIZER(11.1.2.0)	↑	EpmaDataSync0
EPMAWEBTIER(11.1.2.0)	↓	EpmaWebRepor
EPMAWEBTIER(11.1.2.0)	↓	EpmaWebRepor
FINANCIALREPORTING(11.1.2.0)	↓	FinancialReporti
FINANCIALREPORTING(11.1.2.0)	↓	FinancialReporti
FMADFWEB(11.1.2.0)	↓	HFMWeb
FMADFWEB(11.1.2.0)	↓	HFMWeb0
FMWEBSERVICES(11.1.2.0)	↓	HFMWeb
FMWEBSERVICES(11.1.2.0)	↓	HFMWeb0
PLANNING(11.1.2.0)	↓	Planning
PLANNING(11.1.2.0)	↓	Planning0
proxyservlet(11.1.2.2)	↓	FoundationServ
proxyservlet(11.1.2.2)	↓	FoundationServ
RAFRAMEWORK(11.1.2.0)	↑	RaFramework
RAFRAMEWORK(11.1.2.0)	↑	RaFramework0
SHAREDSERVICES(11.1.2.0)	↓	FoundationServ

- Monitor Service availability

Managing & Troubleshooting

- Viewing Log Messages is one of the most useful features on the Enterprise Manager Console

Log Messages Broaden Target Scope Manual Refresh

Search

View Show Messages View Related Messages Export Messages to File

	Message Type	Message ID	Message	Target	Target Type	ECID	Execution Context	Relationship
8, 2012 11:32:38 AM EDT	Error	01301	Could not resolve role: native://DN=cn=HUB:23,ou=HUB,ou=Roles	WORKSPACE(11.1.2.	Aj	0000JdoWK3W7u1r5GJS4yf1GTQa50001CT		0
8, 2012 11:33:37 AM EDT	Incident E		Servlet pulse, memory(free = 12549416 used = 148513496 total =	RAFRAMEWORK(11	Aj	0000Jch^6Rw7u1r5GJS4yf1GRVvd000000		1:27694
8, 2012 11:33:37 AM EDT	Incident E		Servlet pulse, memory(free = 12549416 used = 148513496 total =	RAFRAMEWORK(11	Aj	0000Jch^6Rw7u1r5GJS4yf1GRVvd000000		1:27693
8, 2012 11:33:38 AM EDT	Incident E		Servlet pulse, memory(free = 10976576 used = 150086336 total =	RAFRAMEWORK(11	Aj	0000Jch^6Rw7u1r5GJS4yf1GRVvd000000		1:27697
8, 2012 11:33:39 AM EDT	Incident E		Servlet pulse, memory(free = 10976576 used = 150086336 total =	RAFRAMEWORK(11	Aj	0000Jch^6Rw7u1r5GJS4yf1GRVvd000000		1:27695
8, 2012 11:33:39 AM EDT	Incident E		Servlet pulse, memory(free = 10976576 used = 150086336 total =	RAFRAMEWORK(11	Aj	0000Jch^6Rw7u1r5GJS4yf1GRVvd000000		1:27696
8, 2012 11:33:39 AM EDT	Incident E		Servlet pulse, memory(free = 10976576 used = 150086336 total =	RAFRAMEWORK(11	Aj	0000Jch^6Rw7u1r5GJS4yf1GRVvd000000		1:27692
8, 2012 11:34:07 AM EDT	Error		oracle.epm.fm.reusable.common.POVBarData	FMADFWEB(11.1.2.	Aj	0000JdoWd667u1r5GJK6yf1GRVSE0007p7		0
8, 2012 11:34:07 AM EDT	Error		oracle.epm.fm.reusable.common.AccountSelectorData	FMADFWEB(11.1.2.	Aj	0000JdoWd667u1r5GJK6yf1GRVSE0007p7		0
8, 2012 11:34:07 AM EDT	Error		oracle.epm.fm.reusable.common.AccountSelectorData	FMADFWEB(11.1.2.	Aj	0000JdoWd667u1r5GJK6yf1GRVSE0007p7		0

Rows Selected 1 Columns Hidden 20 Total Rows : 46

```

Message Level 1
SRC_CLASS com.brio.one.web.log.CUServerMonitor
SRC_METHOD printServerStatus:?
Relationship ID 1:27694
Component RaFramework0
Module oracle.EPMRAF.com.brio.one.web.log.CUServerMonitor
Message Servlet pulse, memory( free = 12549416 used = 148513496 total = 161062912 ) total users = 0 active req = 0 max concurrent req = 0
    
```

A Word on Monitoring

- Implementing infrastructure & application monitoring can provide valuable information
 - Provide metrics to track performance over time
 - Provide information to assist in troubleshooting performance issues
 - Assist in proactively managing performance and reliability
- Many of the current IT monitoring applications can be configured to provide detailed information on an Oracle EPM implementation
 - Oracle Enterprise Manager (OEM)
 - HP OpenView
 - BMC
- Monitors can go beyond just server & hardware statistics if implemented properly