

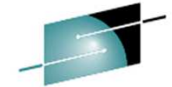


# Oracle on Linux on System z Solutions and Support Update

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Wednesday, August 14, 2013  
Session Number 13524





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**Oracle DB**  
11g Release 2  
Version 11.2.0.3.6  
Q213

**Oracle**  
**Billing and Revenue**  
**Management**  
Version 7.5.0.0.0  
accessing Oracle DB  
11g Release 2

**Oracle**  
Version 11.2.0.3  
11g Release 2  
Version 11.2.0.3  
RHEL 6.2 Support  
Q113

**Hyperion EPM**  
Version 11.1.2.2  
accessing Oracle DB  
10g Release 2

**Enterprise Manager**  
Agent Release 12c  
Version 12.1.0.1  
Q212

**PeopleSoft Campus**  
**Solutions V9**  
PT 8.52  
accessing Oracle DB  
11g Release 2

**Oracle DB**  
10g Release 2  
Version 10.2.0.5  
PSU 5  
Q411

**Oracle DB**  
11g Release 2  
Version 11.2.0.3.5  
Q113

**Oracle DB**  
10g Release 2  
Version 10.2.0.5.10  
Q113

**PeopleTools 8.52**  
accessing Oracle DB  
11g Release 2  
11.2.0.3.1  
Q212

**PeopleTools 8.51**  
accessing Oracle DB  
11g Release 2  
11.2.0.3  
Q212

**Oracle DB**  
11g Release 2  
Version 11.2.0.3.2  
Q212

**Oracle DB**  
11g Release 2  
Version 11.2.0.3  
Q411

**SOA**  
**WebCenter**  
11gR1 PS6  
**WebLogic Server**  
11gR1 11.1.1.6  
Q213

**Oracle BI**  
**EE**  
Version 11.1.1.7  
with Oracle DB  
as DSR\*  
10g Release 2  
11g Release 2  
Q213

**Oracle DB**  
11g Release 2  
Version 11.2.0.3.4  
Q412

**Oracle DB**  
11g Release 2  
Version 11.2.0.3.3  
Q312

**WebLogic Server,**  
**SOA, WebCenter**  
11gR1 PS5  
Q112

**PeopleTools 8.52**  
accessing Oracle DB  
11g Release 2  
11.2.0.2  
Q411

**PeopleTools 8.52**  
accessing Oracle DB  
10g Release 2  
10.2.0.5  
Q411

**Oracle DB**  
11g Release 2  
Version 11.2.0.2  
PSU 4  
Q411

**E-Business Suite**  
Release 12.1x  
accessing Oracle DB  
11g Release 2  
Version 11.2.0.3  
Q112

**PeopleTools 8.51**  
accessing Oracle DB  
10g Release 2  
10.2.0.5  
Q311

**Oracle DB**  
11g Release 2  
Version 11.2.0.2  
PSU 3  
Q311

**Oracle DB**  
11g Release 2  
Version 11.2.0.2.5  
Q112

**WebLogic Server**  
11gR1 PS3  
Q111

**Hyperion EPM**  
Version 11.1.2.3  
accessing Oracle DB  
10g Release 2  
11g Release 2  
Q213

**Siebel**  
**Public Sector,**  
**Loyalty Management**  
Version 8.2.2.3

**Siebel CRM**  
accessing Oracle DB  
Version 8.1.19.0  
10gR2  
accessing Oracle DB  
11g Release 2  
Q213

**PeopleSoft 9.2**  
**PeopleTools 8.53**  
accessing Oracle DB  
11g Release 2 11.2.0.3  
10gR2 10.2.0.5  
Q213

**WebLogic Server**  
12c Release 1  
Version 12.1.1x  
Q212

**Enterprise Manager**  
Agent 12c  
Release 2  
Version 12.1.0.2  
Q212

\* Data Source or Repository





## **IBM and Oracle's Commitment to Oracle on Linux for System z**

*To meet the rapid growth of Linux, server virtualization and IT Optimization, IBM and Oracle have increased development and support investments to deliver complete, open and integrated solutions to our customers. Specifically, IBM and Oracle have:*

- **IBM and Oracle have expanded porting resources to make Oracle technology infrastructure current and complete for Linux on System z (“LoZ”)**
- **IBM is investing in >40 development and tech staff to bring LoZ solutions to market**
- **IBM is investing in hardware resources for Oracle development on LoZ**
- **IBM dedicated resources to engage customers in design, proof-of-concept and benchmark activities**
- **Aligned our technical support organizations to simplify problem resolution**
  - **Dedicated Oracle System z team in Oracle Support**
- **Published IBM and Oracle customer collateral covering various topics regarding Oracle on Linux on System z**

# Oracle Applications for System z Servers



IBM Data Server on DB2 z/OS and or Linux\*

Oracle DB Server on Linux

\* Note: Multi-Platform "Split Tier" Configuration – Oracle applications accessing Database, only the Database runs on System z Servers unless otherwise noted

<b>ERP &amp; CRM Solutions</b>	<b>Oracle PeopleSoft</b>	<ul style="list-style-type: none"> <li>* Version 9.2/Tools 8.53 DB2 v9.1 , V10 Database on z/OS</li> <li>* Version 9.0, 9.1/Tools 8.50, 8.51 &amp; 8.52 DB2 v8, v9.1 , V10 Database on z/OS</li> <li>* Batch Server Supported on z/OS &amp; Linux</li> </ul>	<ul style="list-style-type: none"> <li>• Version 9.2/Tools 8.53 Oracle 10gR2, 11gR2</li> <li>* Version 9.0 &amp; 9.1/Tools 8.50, 8.51 &amp; 8.52 Oracle 10gR2, 11gR2</li> </ul>
	<b>Oracle Siebel CRM Applications</b>	<ul style="list-style-type: none"> <li>* Version 8.2.2.1 DB2 v9, v10 on z/OS DB2 v9.7 on Linux</li> <li>* Version 8.1.1.10 DB2 v9.1, v10.1 on z/OS DB2 v9.7 on Linux</li> <li>* Version 8.1.1.8 DB2 v9.1, v10 on z/OS DB2 v9.1, v9.7 on Linux</li> </ul>	<ul style="list-style-type: none"> <li>• Version 8.2.2.1 •Oracle 10gR2, 11gR2</li> <li>• Version 8.1.1.10 Oracle 10gR2, 11gR2</li> <li>* Version 8.1.1.8 Oracle 10gR2, 11gR2</li> </ul>
	<b>Oracle E-Business Suite</b>	<b>Not Applicable Oracle DB/FMW</b>	<ul style="list-style-type: none"> <li>* Version R12.1.2, 12.1.3 Oracle 10gR2, 11gR2</li> </ul>

# Oracle Industry Applications for System z Servers



IBM Data Server on DB2 z/OS and or Linux\*

Oracle DB Server on Linux

\* Note: Multi-Platform "Split Tier" Configuration – Oracle applications accessing Database,, only the Database runs on System z Servers unless otherwise noted

<b>Industry Solutions</b>	<p><u>Higher Education</u> Oracle PeopleSoft Campus Solutions</p>	Not planned	<p><b>New</b></p> <p>* Version 9.0 /Tools 8.50, 8.51, 8.52 Oracle 10gR2, 11gR2</p>
	<p><u>Public Sector</u> Oracle Siebel CRM</p>	<p>* Version 8.2.2.3 * Version 8.2.2.1 DB2 v9.1, v10 on z/OS DB2 v9.7 on Linux * Version 8.1.1.8: DB2 v9 , v10 on z/OS DB2 v9.1, 9.7 on Linux on System z</p>	<p>• Version 8.2.2.3 • Version 8.2.2.1 • Version 8.1.1.8 Oracle 10gR2, 11gR2</p>
	<p><u>Insurance</u> Oracle Documaker</p>	<p>Version 12.1 DB2 v8.1, v9.1 z/OS Version 11.5 DB2 v8.1, v9.1 z/OS</p>	Not planned
	<p><u>Communications</u> Oracle Billing and Revenue Management</p>	<p>Not Applicable Oracle DB</p>	<p><b>New</b></p> <p>* Version 7.5.0.0.0 Oracle, 11gR2</p>
<b>Cross Industry Solutions</b>	<p>Siebel Loyalty Management</p>	<p>* Version 8.2.2.3 DB2 v9.1, v10 on z/OS DB2 v9.7 on Linux * Version 8.2.2.1 DB2 v9.1, v10 on z/OS DB2 v9.7 on Linux * Version 8.1.1.8: DB2 v9 , v10 on z/OS DB2 v9.1, 9.7 on Linux on System z</p>	<p>• Version 8.2.2.3 • Version 8.2.2.1 • Version 8.1.1.8 Oracle 10gR2, 11gR2</p>
	<p>Oracle Policy Automation</p>	<p>Not Applicable Oracle DB/FMW</p>	<p>Version 10.4.2, 10.3.1 Oracle DB 11gR2 With Oracle WebLogic 11gR1 With IBM WAS 6.1, 7.0</p>



# Oracle Applications for System z Servers



IBM Data Server on DB2 z/OS and or Linux\*

Oracle DB Server on Linux

\* Note: Multi-Platform "Split Tier" Configuration – Only the Database runs on System z Servers unless otherwise noted

<p><b>Hyperion Enterprise Performance Management</b></p> <p><b>Oracle Enterprise Performance Management</b></p>	<p>* Version 11.1.2.3 * Version 11.1.2.2 DB2 v10 z/OS as Data Source</p>	<p><b>New</b></p> <p>* Version 11.1.2.3 * Version 11.1.2.2 Oracle 10g, Oracle 11gR2 as Data Source &amp; Repository</p>
	<p>* Version 11.1.1.4 DB2 v10 z/OS as Data Source</p>	<p>Not planned</p>

<p><b>OBIEE Solutions:</b></p> <p><b>Oracle Business Intelligence Enterprise Edition</b></p>	<p>* Version 11gR1 v11.1.1.7 DB2 9.1 z/OS as Data Source DB2 V10 Linux on z as Data Source DB2 V9.1.9.5, 9.7 Linux on z as Data Source &amp; Repository</p>	<p>* Version 11gR1 v11.1.1.7 Oracle 10g (10.2.0.5) 11g Release 2 (11.2.0.2, 11.2.0.3) as Data Source &amp; Repository</p>
	<p>* Version 11gR1 v11.1.1.6 DB2 V9.1, 9.5 Linux on z as Data Source DB2 V9.7 Linux on z as Data Source &amp; Repository</p>	<p>* Version 11gR1 v11.1.1.6 Oracle 10g (10.2.0.5) 11g Release 2 (11.2.0.2, 11.2.0.3) as Data Source &amp; Repository</p>
	<p>* Version 10.1.3.4.2 DB2 v8, 9.1 z/OS as Data Source DB2 v9.1, 9.5, DB2 9.7 Linux on z as Data Source</p>	<p>* Version 10.1.3.4.2 Oracle 10g (10.2.0.5) 11g Release 2 (11.2.0.2, 11.2.0.3) as Data Source &amp; Repository</p>

# Oracle Technology Solutions for System z Servers



## Oracle DB Server on z/OS

## Oracle DB Server on Linux

<b>Database</b>	Oracle Database 10gR2	Oracle DB 10g Release 2 (10.2.0.5) Terminal Release	Oracle DB 10g Release 2 (10.2.0.5)
	Oracle Database 11gR2	No	Oracle DB 11g Release 2 (11.2.0.2, 11.2.0.3)

## Oracle Fusion Middleware on z/OS

## Oracle Fusion Middleware on Linux

<b>Fusion Middleware 10g</b>	Oracle FMW 10gR2/10gR3 Application Server	Not Applicable Oracle DB/FMW	10g Release 2 (10.1.2.3) 10g Release 3 (10.1.3.5)
<b>Fusion Middleware</b>	Oracle FMW 11gR1	Not Applicable Oracle DB/FMW	WebLogic Server 11g Release 1 (11.1.1.6+) SOA 11g Release 1 (11.1.1.6+) WebCenter 11g Release 1 (11.1.1.6+) Tuxedo 11g Release 1 (11.1.1.2+) WebLogic Portal 11g Release 1 (10.3.2)
	Oracle FMW 12cR1	Not Applicable Oracle DB/FMW	<b>New</b> WebLogic Server 12c Release 1 (12.1.1x)
<b>Enterprise Manager</b>	Oracle Enterprise Cloud Control Agent	Not Applicable Oracle DB/FMW	<b>New</b> 12c Release 2 (12.1.0.2) Oracle DB 11gR2 (11.2.0.2, 11.2.0.3) 12c Release 1 (12.1.0.1) Oracle DB 11gR2 (11.2.0.2, 11.2.0.3)
<b>Golden Gate</b>	Oracle GoldenGate	11g Release 1 (11.2.1.0.5+) DB2 v10, 9.1 for z/OS (11.1.1.1.1) DB2 v10, 9.1, 8.1 for z/OS	11g Release 2 (11.2.1.0.2+) 11g Release 1 (11.1.1.1.1, 11.1.1.1.2) Oracle DB 10g R2 (10.2.0.5)

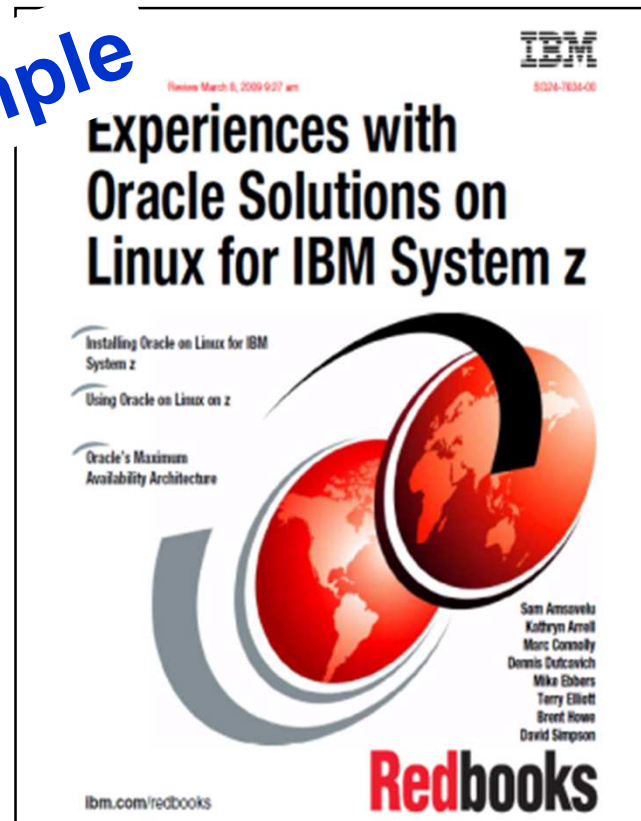
**Redbooks providing  
Implementation Guidance for Oracle/IBM System z  
[www.redbooks.ibm.com](http://www.redbooks.ibm.com)**

- SG24-7191
- SG24-6482
- SG24-7573
- SG24-7634
- SG24-8104

**Example**

**NEW**

- Redpieces
- REDP4788  
(11gR2 RAC)
- REDP9131  
(Silent Install)



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## Workshops – WSC

- **LXOR6 (Wildfire Workshops)**
- **Customizing Linux and the Mainframe for Oracle DB Applications**
  - For clients considering a move of Oracle to Linux on System z
  - Topics include hardware technologies, software components, best practices, performance and tuning, performance tools, linux distributions, tools and services for sizing
  - Labs include setup/installation of z/VM, Linux (RHEL or SUSE), and Oracle on IBM System z
  
- **No charge, Client Team Registration**
- **Offered in Various Cities across North America**
- **2.5 days, Attendees responsible for travel expenses**
- **Combination Lectures and Lab Exercises**
- **Contact your IBM Rep to enroll**



## International zSeries Oracle SIG

- **Independent User Organization**
  - **President, Mike Zechman**
  - **Worldwide user participation**
  - **No cost to be a member**
  - **Oracle and IBM Participation**
  
- **Annual Conference**
  - **Next is April 2014, Las Vegas, Collaborate**
  
- **Longest running still active Oracle User Group**
  
- **Official recognition and involvement by both Oracle and IBM**
  
- **Website [www.zseriesoraclesig.org](http://www.zseriesoraclesig.org)**
  - **Presentations, Links, Bulletin Board**

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## Oracle and IBM System z Coverage

- **Z Oracle SIG Webinar, Oracle and IBM (July 30, 2013, replay available)**
  - z Oracle Best Practices Update
  - For Replay  
<https://oracleaw.webex.com/oracleaw/lsr.php?AT=pb&SP=EC&rID=76841797&rKey=6c9bf76ffc78ec26>
  
- **Oracle Collaborate/zOracle SIG Conference (next is Las Vegas, April 2014)**
  - Oracle on Linux on System z Sessions
  - zSeries Oracle SIG Sessions
  - User, Oracle, and IBM Presenters
  - All z Oracle presentations posted at [www.zseriesoraclesig.org](http://www.zseriesoraclesig.org)
  
- **SHARE (San Francisco, February 2013, and Boston, August 2013)**
  - IBM Oracle Sessions – Installation Experiences and Recommendations
  - Oracle Support for IBM System z
  - User Experiences
  
- **Oracle OpenWorld (San Francisco, CA, October 2013)**
  - Executive Briefing Center, including z and Storage
  - Oracle on Linux on IBM System z
  - PeopleSoft on System z
  - Siebel on IBM System z
  - IBM Booth (Server/System z Ped)
  
- **Social Media**
  - Oracle Community (Database, zSeries)
  - Twitter (IBMANDOracle)

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## Information Sources

- <http://www.oracle.com/ibm>
  - Oracle IBM Partner Relationship
- <http://otn.oracle.com>
  - Oracle Select “Downloads”
- <http://www.vm.ibm.com/perf/tips>
  - General z/VM Performance & Tuning Tips, Capacity planning
- <https://support.oracle.com>
  - Oracle Support Webpage (My Oracle Support)
- <http://www-124.ibm.com/developerworks/oss/linux390/index.shtml>
  - Lot's of information on Linux for zSeries, IBM DeveloperWorks
- <http://www-128.ibm.com/developerworks/linux/linux390/perf/index.html>
  - Hints and Tips for tuning Linux on System z
- <http://www.zseriesoraclesig.org>
  - Special Interest Group of Oracle users on the mainframe (z/OS and Linux)
- <http://www.mail-archive.com/linux-390%40vm.marist.edu/>
  - Marist List Server
- <http://www.ibm.com/redbooks>
  - SG24-6482-00 Experiences with Oracle Database 10g on Linux for zSeries
  - SG24-7191-00 Experiences with Oracle 10gR2 Solutions on Linux for System z
  - SG24-7573-00 Using Oracle Solutions on Linux on System z
  - SG24-7634-00 Experiences with Oracle Solutions on Linux for IBM System z
  - REDP-4788-00 Installing Oracle 11gR2 RAC on Linux on System z

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## Additional z Oracle Sessions at SHARE Boston

- **Wednesday 9:30 am Room 308 RAC Networking and Updates**
  - Kathryn Arrell and Dave Simpson
- **Wednesday 1:30 pm Room 310 How to Make DBs on Loz Highly Available**
  - Michael Friesenegger, SUSE
- **Wednesday 4:30 pm Room 309 Use Experiences O Loz Boston University**
  - Gerard Shockley, Boston University
  
- **Thursday 1:30 pm Room 310 TIPS Learned Implementing O Loz (1 of 2)**
  - Dave Simpson and Christian Ehrhardt
- **Thursday 3:00 pm Room 310 TIPS Learned Implementing O Loz (2 of 2)**
  - Dave Simpson and Christian Ehrhardt



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**Oracle Support Update for Oracle running on Linux on System z**

Rhoda Sarmiento-Pereira / Damian Gallagher  
Principal Technical Support Engineer  
Oracle on Linux on Z Specialist Support Team

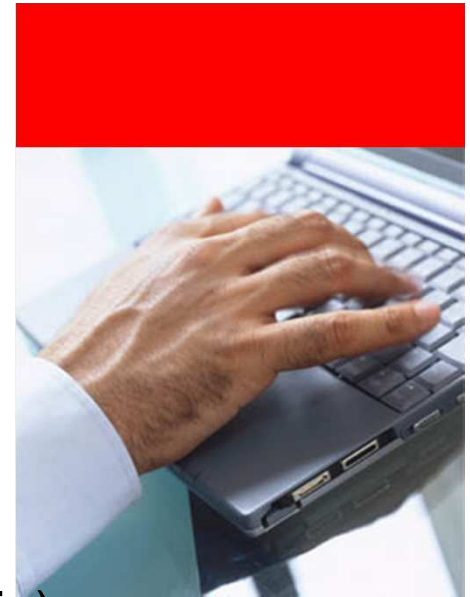


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## Agenda

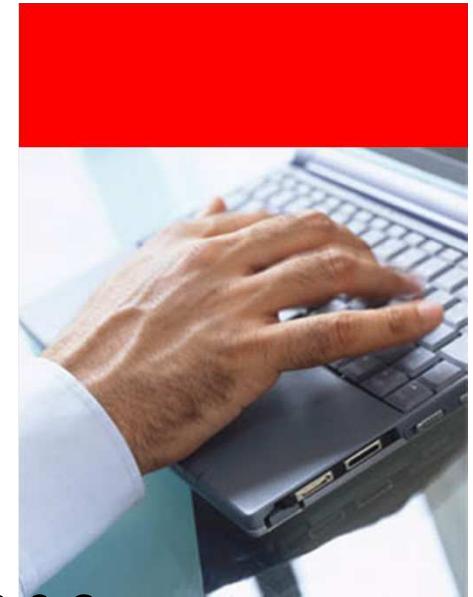
- Oracle RDBMS on z/Linux
  - Version Availability
  - Product Updates including PSU and SPU
  - Useful Diagnostics when opening an SR
  - Log file Sync Wait (Excessive Commit Scenario)
  
- Q&A



## Product Availability

- 11.2.0.3
  - Premier Support Ends Jan 2015
  - Extended Support Ends Jan 2018
  - Patch 10404530 – complete replacement for 11.2.0.2
  - 12c Agent is already available for Oracle Enterprise Manager Cloud Control

<http://www.oracle.com/technetwork/oem/enterprise-manager/downloads/index.html>





## **PSU and SPU (fka CPU Patch) Availability**

- **Patch 16742216: GRID INFRASTRUCTURE PATCH SET UPDATE 11.2.0.3.7 (INCLUDES DB PSU 11.2.0.3.7)**
- **Patch 16742095: DATABASE SECURITY PATCH UPDATE 11.2.0.3.0 (CPUJUL2013)**
- **Patch 16619892: DATABASE PATCH SET UPDATE 11.2.0.3.7 (INCLUDES CPUJUL2013)**

**To understand the difference between PSU and SPU:  
Patch Set Updates for Oracle Products (Doc ID 854428.1)**



## Top Issues

- Extended Support for 10gR2:
  - Only applies to 10.2.0.5.0 (the terminal patchset)
  - We've had a couple of customers who have been caught out with a new bug at an earlier patchset –while we'll do our best, we cannot open bugs for anything other than 10.2.0.5 – and ideally the latest available PSU
  - So get up to latest level if this is where you need to be
  - Ideally get on up to 11gR2 😊



## Top Issues

- Address Space Layout Randomisation – ASLR
  - Lovely concept for security – moves address space components around, and handles the links and offsets so that it's transparent to application programs.
  - Er, NOT, at least as far as Oracle is concerned – our memory management code has been refined over decades, and does things that ASLR doesn't expect
  - Setting ON/TRUE causes random, intermittent memory related issues, from a single process ORA-600 to complete database crash – it is entirely SGA size and workload dependent what may happen
  - Set OFF, please





## Essential Reading

- Experiences with Oracle 11gR2 on Linux on System Z  
<http://www.redbooks.ibm.com/abstracts/sg248104.html?Open>
- Everything you need to install, operate, tune, migrate... All in one place, written by a joint IBM and Oracle team from real world experiences
- Free !!



## Essential Reading

- **Note 1306465.1 - Getting Started - 11gR2 Grid Infrastructure, ASM and DB (IBM: Linux on System z)**
- **Note 1290644.1 - Requirements for Installing Oracle 11gR2 on SLES11 on IBM: Linux on System z (s390x)**
- **Note 1476511.1 - OHASD fails to start on SuSE 11 SP2 on IBM: Linux on System z [ID]**
- **Note 1470834.1 - Requirements for Installing Oracle 11gR2 on RHEL 6 on IBM: Linux on System z (s390x)**
- **Note 1086769.1 - Ensure you have prerequisite rpms to install Oracle Database and AS10g(midtier) on IBM: Linux on System z (s390x)**



## Essential Reading

- **Note 1377392.1 - How to Manually Configure Disk Storage devices for use with Oracle ASM 11.2 on IBM: Linux on System z Red Hat 6**
- **Note 1351746.1 - How to Manually Configure Disk Storage devices for use with Oracle ASM 11.2 on IBM: Linux on System z under Red Hat 5**
- **Note 1350008.1 - How to Manually Configure Disk Storage devices for use with Oracle ASM 11.2 on IBM: Linux on System z under SLES**
- **Note 1459030.1 - 11.2.0.3 Grid Installer Hangs at 75% When Using DASD Softlink Device**
- **Note 1514012.1 - runcluvfy stage -pre crsinst generates reference data is not available for verifying prerequisites for RHEL 6**

# Oracle Advisor Webcast Program

Current schedule  
Archived recordings  
Doc ID 740966.1

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Replay available of July 30<sup>th</sup> -  
Top Ten Tips for Oracle RAC on Linux on IBM System Z



## Working with Support “Diagnostics Required”

- Each problem reported with an SR requires analysis on our part (support). In order to assist you better we want to make sure that diagnostics is provided in timely manner.
- The next few slides are a list of basic diagnostics we ask as when we receive an SR . If possible, upload them immediately after opening an SR.



## Working with Support “Diagnostics Required”

- Please provide a complete description of the problem.
  - description like: Our database hangs or the installation of Oracle 11g is not working are not a helpful description. We need clear and complete details. Error message or at least screen shot of the problem will help.
- RDA (Remote Diagnostic Agent)
  - very important piece of information about the database and OS kernel parameters.
- If RDA cannot be provided right away, upload the alert log and accompanying trace files especially with ORA-0600, ORA-7445 errors and other ORA-xx errors.
- If problem is with installation and applying a patch, please upload the installation log and the output of lsinventory –detail



## Working with Support “Diagnostics Required”

- OS Watcher and AWR are usually needed when there is a performance issue. Additional diagnostics maybe requested later on but these two will very helpful when uploaded when the SR was opened
- For ASM issues:  
Collecting The Required Information For Support To Troubleshoot ASM/ASMLIB Issues. (Doc ID 869526.1)
- For RAC evictions:  
RAC Node Eviction Troubleshooting Tool (Doc ID 1549954.1)



## Tools

- Oracle Tools

- AWR
- Statspack
- OSWatcher
- LTOM
- SQLT
- HCVE
- RDA

- Other Tools

- Sysstat / sar
- Nmon
- Velocity
- PerfKit





## AWR

Active Workload Repository – stores data as things are running, takes snapshots, provides reports:

AWR – performance averaged over time

AWRSQL – for a particular sql

AWR Compare – diff two AWR reports – very useful

AWR RAC – across all nodes in a system

ADDM – Diagnostic Monitor – run this first and read it !!

ASH – active session history – what the active sessions were doing in a period



## AWR

NOTE WELL – using the AWR repository data requires a licence for the Diagnostic and Tuning pack, and support will not often verify that you have one. If in doubt, use statspack.



## Statspack

Snapshot based performance over time, still enhanced for new releases, used by tools such as LTOM as it's guaranteed to be available (if not installed 😊 )



## OSWatcher

Gathers system profile data – vmstat, top, iostat etc

Unnecessary if you have sar

Provides a good summary report – the new OSWatcher

Black Box does analysis for you

A good basic collector

Provides top, which shows the process list

Takes a snap every minute, which is not very expensive



## LTOM

Lightweight Onboard Monitor

Subset of OS stats together with Oracle wait/contention information.

Very good for cross correlating Oracle and Linux info for further depth of analysis

Excellent for identifying the 'hockey stick' – the point where everything went wrong.

As with OSW, sample based so temporal analysis possible



## SQLT

SQLTXplain – comprehensive SQL access plan analysis with comprehensive data collection, plan history, object DDL and stat history

If tuning pack installed, will also generate tuning baselines and profiles.



## RDA

Remote Diagnostic Agent – provides baseline information on configuration and setup – OS, Oracle, cluster, CRS etc

Important to run with the correct flags set

Collects a lot of information, including performance data



## RDA HCVE

Health checker

Missing a few prereqs for Linux on z, but worth running as belt and braces, and at least provides data to challenge





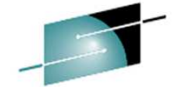
*R&A*

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