



# Oracle Support for IBM Linux on System Z Update

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SIG - Washington DC 2017

# Safe Harbor Statement

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decision. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

# Linux on z Customer Support

- Linux on z Support Team
- SPU/PSU/CPU Updates
- SR Handling Process
- Product Availability
- Real Life Issues
- SR Avoidance

# Linux on z Customer Support - Team

- Duty and escalation managers availability is 24x7
- SRs handling
  - There are still engineers dedicated to work on Linux on z specific issues
  - More engagement with engineers that have generic skills.
    - Collaboration SR (external or internal)
    - Database is the same across platforms
  - Support is still 24x7 for high critical issues requiring 24H assistance

# SR Handling - How to engage Linux on z specific engineers

- Make sure the Platform is: IBM Linux on System Z
  - Product: RDBMS => RDBMS => zlinux specific issues
  - Make sure the problem description is complete and not vague

Example:

“Our application encounters an error, we need to resolve this ASAP”

- Please include in the problem description to assign it to the group that handles IBM Linux on System Z.
- If possible, please provide your deadline (if there is one) or if it needs to be resolved by this *'date' because....*
- If you think the issue needs to give more priority, please open it as a SEV. 2 not SEV. 4.
- Misroutes to other group

# SR Handling - How to engage Linux on z engineers

- When opening an Install, opatch issues:
  - Make sure to indicate it is a Linux on z specific issue
  - Make sure you consult the notes for Requirements
  - Provide the following upon opening the SR
    - Installation log
    - Opatch apply log
- When opening a patch conflict, backports and merge patches:
  - Always Linux on z specific issue
  - Make sure to provide the following upon SR creation:
    - opatch conflict output (also found in opatch apply log)
    - lsinventory –detail log file
    - Technical & Business Justification
    - Milestone date

# SR Handling - How to engage Linux on z engineers

- When opening a Performance SR
  - Product: RDBMS => RDBMS => Linux on z specific issues
  - We collaborate with Performance team
  - Make sure to provide a diagnostic that will serve as a baseline regarding the performance
  - Make sure to provide the alert log
  - Make sure the following diagnostic gathering tools are installed:
    - AWR & Statspack (ASH Report and ADDM are helpful)
    - OSWatcher (make sure you provide the full archive not just part of the files)
    - RDA and TFA
  - **Useful Notes:**

How to Tell if the I/O of the Database is Slow (Doc ID 1275596.1)

Best Practices: Proactive Data Collection for Performance Issues (Doc ID 1477599.1)

# SR Handling- How to engage Linux on z engineers

- When opening an SR for Database problems (ORA-xxx)
  - Product: RDBMS => RDBMS => Linux on z specific issues
  - Clear description of the problem including the error message
  - If the problem is coming from application, please indicate if it's a new application or have been running and all of a sudden having problem
  - Please indicate also on what recent changes made (database, network or OS)
  - Make sure to provide the following files:
    - Alert log
    - Trace files (including incident, please do not include \*.trm files if uploading manually)
    - Event trace may be requested later on, if it can be recreated outside production environment (ideal)



# SR Handling

## How to communicate with Engineer

- Aside from SR updates, you can use the following method of communications in order to reach to the engineer working on your issue:
  - Phone call (1-800-223-1711)
    - Engineer's schedule is provided in the initial update
  - Via chat – fully functional and very useful. Personal experience helped me to inform the customer the diagnostics that I need instead of going back-and-forth via SR updates. Also helpful for quick questions/clarifications.
  - Engineers are required to be “available” via chat and phone calls during their working shifts.

# SUPPORT DIAGNOSTIC TOOLS

- OSWatcher **OSWatcher (Includes: [Video]) (Doc ID 301137.1)**
- RDA - **Remote Diagnostic Agent (RDA) - Getting Started (Doc ID 314422.1)**
- AWR, ADDM, ASH
- TFA
  - **TFA Collector - TFA with Database Support Tools Bundle (Doc ID 1513912.1)**
    - Provide status
      - Clusterware
      - ASM
      - Patch
      - Listener
      - OS
      - NETWORK
    - Collects SRDC, OSWATCHER, Health check, procwatcher, etc..
    - Functionality fully supported on zlinux

# PSU Availability

DB PSU 12.1.0.2.170718 – Patch 25755742  
GI PSU 12.1.0.2.170718 – Patch 25901062  
OJVM PSU 12.1.0.2.170718 – Patch 26027162

DB PSU 11.2.0.4.170718 – Patch 25869727  
GI PSU 11.2.0.4.170718 – Patch 26030799  
OJVM PSU 11.2.0.4.170718 – Patch 26027154

## 12.2 Availability

**Officially Released: June 9, 2017**

network/database/security/downloads/oracle12c-linux-zser64-12201-3745504.html

port for DB:  TimeZone Converter  Java Tutorials  JavaScripts  PSU/CPU Testing  HTML CSS  Hot add, remove, res:

Database 12c  
Database In-Memory  
Multitenant  
More Key Features  
Application Development  
Big Data Appliance  
Cloud Database Services  
Private Database Cloud  
Data Warehousing & Big Data  
Database Appliance  
Exadata Database Machine  
High Availability  
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### Oracle Database 12c Release 2 (12.2.0.1.0) Standard Edition 2 and Enterprise Edition

Thank you for accepting the OTN License Agreement, you may now download this software.

**Oracle Database 12c Release 2 (12.2.0.1.0) for IBM: Linux on System z (64 bit)**  
↓ [linux\\_zser64\\_12201\\_database.zip](#) (2,697,568,598 bytes) (cksum - 635241418)

Directions

1. All files are in the .zip format.
2. Download and unzip both files to the same directory.
3. Installation guides and general Oracle Database 12c documentation are here.

**Oracle Database 12c Release 2 Grid Infrastructure (12.2.0.1.0) for IBM: Linux on System z (64 bit)**  
↓ [linux\\_zser64\\_12201\\_grid\\_home.zip](#) (2,027,897,151 bytes) (cksum - 908314380)

Contains the Grid Infrastructure Software including Oracle Clusterware, Automated Storage Management (ASM), and ASM Cluster File System. Download and install prior to installing Oracle Real Application Clusters, Oracle Real Application Clusters One Node, or other application software in a Grid Environment

**Oracle Database 12c Release 2 Global Service Manager (GSM/GDS) (12.2.0.1.0) for IBM: Linux on System z (64 bit)**  
↓ [linux\\_zser64\\_12201\\_gsm.zip](#) (729,103,885 bytes) (cksum - 1484549008)

Contains the Global Service Manager Software. Download and install as part of Global Data Services (GDS) deployment.

**Oracle Database 12c Release 2 Examples (12.2.0.1.0) for IBM: Linux on System z (64 bit)**  
↓ [linux\\_zser64\\_12201\\_examples.zip](#) (752,625,930 bytes) (cksum - 2816524585)

Contains examples of how to use the Oracle Database. Download if you are new to Oracle and want to try some of the examples presented in the Documentation

**Oracle Database 12c Release 2 Client (12.2.0.1.0) for IBM: Linux on System z (64 bit)**

<http://www.oracle.com/technetwork/database/security/downloads/oracle12c-linux-zser64-12201-3745504.html>

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## 12.2 Availability

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The screenshot shows a web browser window displaying the Oracle Database 12c Release 2 download page for IBM Linux on System z (64 bit). The page title is "Oracle Database 12c Release 2 (12.2.0.1.0) Standard Edition 2 and Enterprise Edition". The page content includes a thank you message for accepting the OTN License Agreement and a list of download packages:

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# PSU, CPU/SPU

- **Benefit for Linux on z Customers**
  - Verified and tested before provided to the customer
    - Different test scenarios
    - Uses scripts for functionality testing
    - Patch conflict test is recommended before applying
  - PLEASE do not ignore the OPATCH minimum requirement!
  - 11.2.0.4 OPATCH AUTO
  - If problem arises => SR => assign to MIT.

# PSU, CPU/SPU

- **For more information about Patching terms:**

FAQ: OPatch/Patch Questions/Issues for Oracle Clusterware (Grid Infrastructure or CRS) and RAC Environments (Doc ID 1339140.1)

- **For a quick reference for Patch numbers:**

Quick Reference to Patch Numbers for Database PSU, SPU(CPU), Bundle Patches and Patchsets (Doc ID 1454618.1)

# Real-Life Scenario Case

**PROBLEM:** Database crashed

## Potential ERRORS:

ORA-00494: enqueue [CF] held for too long (more than 900 seconds) by 'inst 1, osid 3910

ORA-00445: background process "J000" did not start after 30 seconds

Performing implicit shutdown abort due to dead PMON

ORA-1092 : opitsk aborting process

## ACTION:

Run RDA (RDA - Health Check / Validation Engine Guide (Doc ID 250262.1)

- Get the HCVE (#3 - #4)
- Generate
- 5. Oracle Database 12c R1 (12.1.0) Preinstallation (Linux)
- Fix the FAILED settings reported

```
A02010 Umask Set to 022? PASSED UmaskOK
A02030 Limits Processes PASSED Adequate
A02040 Limits Stacksize FAILED HardHigh
A02050 Limits Descriptors PASSED Adequate
A02100 LD_LIBRARY_PATH Unset? FAILED IsSet
A02170 JAVA_HOME Unset? PASSED UnSet
A03100 RAM (in MB) PASSED 15962
A02210 Kernel Parameters OK PASSED KernelOK
A02300 Tainted Kernel? PASSED NotVerifiable
A03010 Temp Adequate? PASSED TempSpaceOK
A03020 Disk Space OK? PASSED DiskSpaceOK
A03050 Swap (in MB) RECORD 4061
A03100 RAM (in MB) PASSED 15962
A03150 SwapToRam OK? FAILED SwapLessThanRam
A03500 Network PASSED Connected
A03510 IP Address RECORD NotFound
```

# Real-Life Scenario Case

**PROBLEM:** DBMS\_SCHEDULER is not submitting jobs

**Recent Change/s:**

Database was upgraded or Database was migrated to a new server

**Versions affected: 9i - 12.1.0.2**

**SOLUTION:**

IF: Jobs Do Not Run Automatically (Doc ID 2084527.1)



# Real-Life Scenario Case

**PROBLEM:** 12.2 Installation

**Description:** Created an EM template from 12.1.0.2 to create 12.2 database repository

**ERROR:**

ORA-01092: ORACLE instance terminated. Disconnection forced  
ORA-00704: bootstrap process failure  
ORA-00604: error occurred at recursive SQL level 1  
ORA-00904: "ACDRROWTSINTCOL#": invalid identifier

**SOLUTION:**

This process is not supported.

# Real-Life Scenario Case

**PROBLEM:** 12.2 Installation DBCA generated template when creating CDB/PDB user-defined tablespace were not created

**ERROR:** No ERROR

**OBSERVATION:** Pluggable Databases were created, as well as Oracle default tablespaces BUT NOT user defined tablespaces

**SOLUTION:**

This is an expected behavior.

As of this writing the template is not fixed yet nor documented.

Creation of user-defined tablespaces are not supported by DBA.

The tablespaces needs to be created manually.

**UNPUBLISHED BUG**

BUG 25885515 - DBCA FAILED TO CREATE TABLESPACE DEFINED IN TEMPLATE FOR PDB DATABASE

# SR Avoidance thru Existing Notes

## Linux on z Specific

- Check recommended notes when creating an SR
- When searching for Knowledge Base, check the platform
  - Generic or IBM Linux on System or Across platforms
- Installation Issues – Always perform the “RPM Checker”

Getting Started - 12c Release 1 Grid Infrastructure, Oracle Database - IBM: Linux on System z (s390x) (Doc ID 1574412.1)

Requirements for Installing Oracle Database 12c Release 1 on SLES 11 on IBM: Linux on System z (s390x) (Doc ID 1574414.1)

Requirements for Installing Oracle Database 12c Release 1 on RHEL 6 on IBM: Linux on System z (s390x) (Doc ID 1574413.1)

Requirements for Installing Oracle 12c on SLES 12 on IBM: Linux on System z (s390x) (**Doc ID 2196637.1**)

Requirements for Installing Oracle 12c RDBMS on RH7 on IBM: Linux on System z (s390x) (**Doc ID 2213265.1**)

Requirements for Installing Oracle 11.2.0.4 RDBMS on RH7 on IBM: Linux on System z (s390x) (**Doc ID 1967531.1**)

# SR Avoidance thru Existing Notes

## 12.2 UPGRADE

Complete Checklist for Manual Upgrades to Non-CDB Oracle Database 12c Release 2 (12.2) (Doc ID 2173141.1)

How to Upgrade Pluggable Databases (PDBs) Sequentially to 12.2 (Doc ID 2171026.1)

Complete Checklist for Upgrading to Oracle Database 12c Release 2 (12.2) using DBUA (Doc ID 2189854.1)

Complete checklist for Manual Upgrade for Multitenant Architecture Oracle Databases from 12.1.x.x to 12.2..x.x (Doc ID 2173144.1)

How to Upgrade to/Downgrade from Grid Infrastructure 12.2 and Known Issues (Doc ID 2240959.1)

# SR Avoidance thru Existing Notes - 12.2

## Installation:

12.2 Install : SELECT PRODUCT LANGUAGES OPTION SCREEN MISSING IN OUI (Doc ID 2263509.1)

Grid Infrastructure 12.2 Install Options for Different Cluster Types (Doc ID 2240578.1)

12.2 Grid Install fails with - PRVG-0802 : STORAGE TYPE FOR PATH "" COULD NOT BE DETERMINED ON NODE (ASMLib) (Doc ID 2262130.1)

12.2 root.sh fails with CLSRSC-1102: failed to start resource 'qosmsserver' (Doc ID 2253718.1)

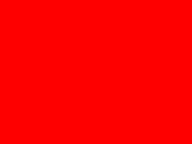
12.2 Grid Infrastructure: INS-43100 and Storage Space Requirements (Doc ID 2245603.1)

12.2 gridSetup.sh Does Not List Disks Unless the Discovery String is Provided (Doc ID 2244960.1)

12.2 root.sh: CLSRSC-214: Failed to start the resource 'ohasd' (Doc ID 2159799.1)

## Downgrade:

- How to Downgrade a 12.2 CDB Database to Previous Release (Doc ID 2193966.1)
- How to Downgrade a 12.2 Non CDB Database to Previous Release (Doc ID 2193965.1)



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