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# Oracle Support for IBM Linux on System Z Update

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DATABASE

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# Safe Harbor Statement

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# System Z Customer Support

- System Z Support Team
- SPU/PSU/CPU Updates
- SR Handling Process
- New Features worth considering

## System Z Customer Support - Team

- Duty and escalation managers availability is 24x7
- SRs handling
  - There are still engineers dedicated to work on zLinux 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 zLinux 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.

# SR Handling -How to engage zLinux specific engineers

- When opening an installation SR
  - Product: RDBMS => Install => zlinux specific issues
  - Make sure to upload the following:
    - Installation log
    - Installation Error Log
    - Output of commands: `lsb_release -r -i -c -d` and `uname -a`

```
[root@strkf34 product]# lsb_release -r -i -c -d
Distributor ID: RedHatEnterpriseServer
Description:    Red Hat Enterprise Linux Server release 6.4 (Santiago)
Release:        6.4
Codename:       Santiago
```

# SR Handling - How to engage zLinux specific engineers

- When opening a Performance SR
  - Product: RDBMS => RDMS => zlinux specific issues
  - 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
    - Sysstat/sar,nmon,OSWatcher
    - RDA and TFA

## SR Handling- How to engage zLinux specific engineers

- When opening an SR for Database problems (ORA-xxx)
  - Product: RDBMS => RDMS => zlinux 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





# 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)
  - Via chat – this has been available for months now but recently it's fully functional. 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 during their working shifts.



# SR Handling

## OOB (BLR)/MLR Patch requests

- **One-off Backport (or Backport Label Request)**
- **Merge Label Request** (Usually requested when there is conflict)
  - If multiple BLR/MLR requests, we usually open a separate SR for each request
    - Development team requires us to open a separate request per backport
    - It is easier to track if each backport is related to one SR. Usually, we will not contact you with the new opened SRs all communications will be on the main SR (you created).

# SR Handling: Severity – Why is it important?

- SRs are being handled on how severe the problem is.
- You (customer) set the severity of the SR
- Make sure you set the severity based on how 'critical' the problem is

**Customer A –  
Open a SEV1  
PROBLEM: We  
need help in  
finding the  
documentation  
and how to install  
Oracle on zlinux**

**Customer B – Open a  
Sev2 SR  
PROBLEM: Our  
applications cannot  
connect to the  
database. The  
reports being  
generated from these  
applications are  
critical to business.**

# PSU, CPU/SPU or Patchset?

- **Patchset**
  - contains fixes for most known issues for the release and potentially also introduces new features
  - It is a product upgrade and OUI is required to install
  - Version number changes (4<sup>th</sup> digit) 12.1.0.1.0 => 12.1.0.2.0
- **PSU (Patch Set Update)**
  - Applied on a given Patchset release on a quarterly basis
  - Contain fixes for known critical issues
  - Will not change the functionality of the software
  - Fixes are cumulative and contains **CPU**

# PSU, CPU/SPU or Patchset

- **CPU (Critical Patch Update) aka SPU (Security Patch Update)**
  - contains fixes for security related issues.
  - only applicable to the Database Home.
- **Will I apply PSU or CPU?**
  - PSU always ships CPU for a particular quarter
  - PSU patching is preferred over CPU patching
  - If you started installing one, you need to stick with it.
    - You cannot install PSU then the next quarter you will install CPU alone or vice-versa

# PSU, CPU/SPU or Patchset

- **Benefit for Linux on System z Customers**
  - Verified and tested before provided to the customer
    - Different test scenarios
    - Uses scripts for functionality testing
    - One-off specific fixes are not tested
      - Patch conflict test is recommended before applying
  - PLEASE do not ignore the OPATCH minimum requirement!

# PSU, CPU/SPU or Patchset

- 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)**

## SR Avoidance thru Existing Notes

- Check recommended notes when creating an SR
- When searching for Knowledge Base, check the platform
  - Generic or IBM Linux on System or 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)**



# SR Avoidance thru Existing Notes

- Reinstalling failed Grid Infrastructure
  - Make sure to cleanup the directories created with the failed installation.
  - Follow the note:

How to completely remove 11.2 and 12.1 Grid Infrastructure, CRS and/or Oracle Restart - IBM: Linux on System z (Doc ID 1413787.1)

## New Oracle Database Features to try

- In-MemoryDatabase
- Full Database Caching
  - put in the buffer cache all blocks of all tables that have been read
  - Oracle assumes the size of the database buffer cache is large enough to accommodate the entire database!
  - Small, medium or large tables doesn't apply anymore
  - Oracle does not load immediately all blocks of all objects in memory
    - When read -> the blocks stays in the memory

Documentation:

<http://docs.oracle.com/database/121/ADMIN/memory.htm#ADMIN14237>

# SR Avoidance thru Existing Notes

- When using ASM
  - How to Manually Configure Disk Storage devices for use with Oracle ASM 11.2 and 12.1 on IBM: Linux on System z under SLES (Doc ID 1350008.1)
  - How to Manually Configure Disk Storage devices for use with Oracle ASM 11.2 and 12.1 on IBM: Linux on System z under RedHat 6 (Doc ID 1377392.1)
  - How to Manually Configure Disk Storage devices for use with Oracle ASM 11.2 on IBM: Linux on System z under RedHat 5 (Doc ID 1351746.1)
  - How to Manually Configure multipathed fcp/scsi devices for use with Oracle ASM 11.2 on IBM: Linux on System z under SLES 11 SP 2 and later (Doc ID 1584934.1)



Q&A

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