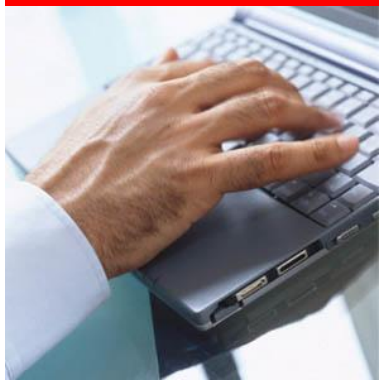
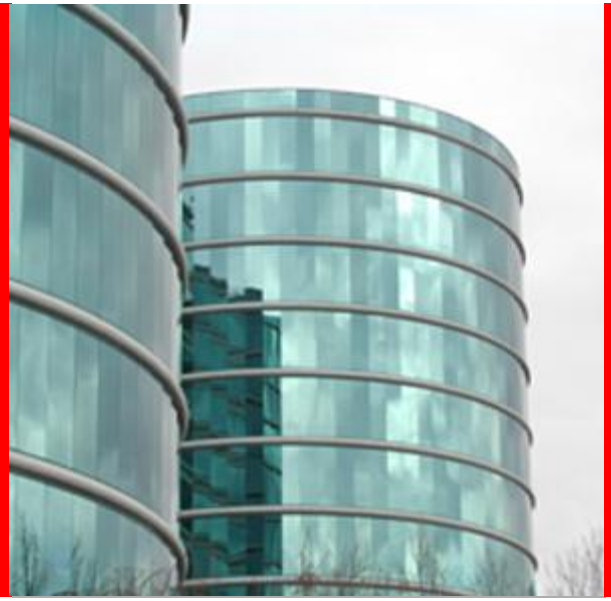


Het mag dan wel niet meer vriezen….

… maar de High Availability SIG “**Giet Oan**”!

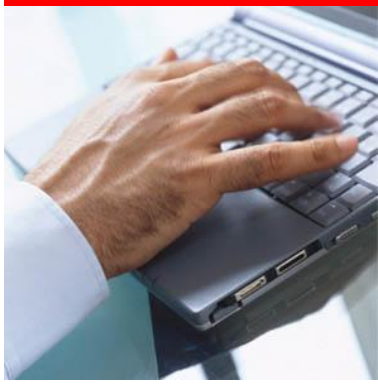


ORACLE®

RAC Support Update

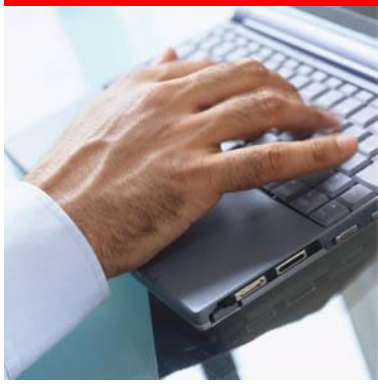
Klaas de Graaf, RAC Support Team,
Oracle Support Services

Agenda



- Data Collectie voor Support
- Grid Infrastructure Upgrade naar 11.2
- Handige Notes

Data Collectie voor Support



- Diagcollection.sh
- OS Watcher
- Cluster Health Monitor - OS

Diagcollection tool

- Diagcollection:
  - 10gR2/11gR1 - $ORA_CRS_HOME/bin/diagcollection.pl -crshome=$ORA_CRS_HOME –collect
  - 11gR2 - execute <GRID_HOME>/bin/diagcollection.sh

- Genereert zip-files als:

  - crsData_<hostname>.tar.gz - CRS logs
  - ocrData_<hostname>.tar.gz - OCR backup, dump
  - oraData_<hostname>.tar.gz - RDBMS racg logs
  - os_<hostname>.tar.gz - system logs

- Note: CRS 10gR2/ 11gR1/ 11gR2 Diagnostic Collection Guide (Doc ID 330358.1)

OS Watcher Overview

- OS Watcher (OSW) is a collection of Unix shell scripts and Windows batch files - intended to collect and archive operating system and network metrics to aid support in diagnosing performance issues.
- OSW operates as set of background shell processes on Server and gather OS data on regular basis, invoking various OS utilities.
- OSW for Unix Platform can be downloaded from “OS Watcher Users’ Guide” - Note: **301137.1**
- OSW for Windows can be downloaded from “OS Watcher For Windows User Guide” – Note: **433472.1**
- OSW has to be installed on each node where data is to be collected.

OS Watcher Overview

- Overview of OSWatcher
  - Download osw tool, osw Installation, OSWatcher controlling scripts, starting osw, gathering diagnostics data, stopping osw & osw de-installation.

- Interpretation of OSWatcher output data
  - vmstat, iostat, ps, top, mpstat, netstat, prvtnet,meminfo,slabinfo

- Troubleshooting using OSWatcher
  - Node Reboot / Instance eviction /IPC Send timeout issues, RAC performance

- Useful in troubleshooting:
  - OCSSD Reboots (CPU resources / network heartbeats)
  - Useful in troubleshooting OPROCD Reboots (OS Scheduling)

OSWatcher – Unix/Linux platforms

- **Starting OSW –**

./startOSW.sh 20 10

This would start the tool and collect data at 20 second intervals and log the last 10 hours of data to archive files.

./startOSW.sh

default values of 30 and 48 meaning collect data every 30 seconds and store the last 48 hours of data in archive files.

- **nohup ./startOSW.sh 60 10 &**

put the process in the background, enable to the tool to continue running after the session has been terminated

- OSWatcher Output file name format -<node_name>_<OS_utility>_YY.MM.DD.HH24.dat

e.g. - himalaya.idc.oracle.com_vmstat_09.01.21.1000.dat

Cluster Health Monitor - OS

- CHM/OS installed and configured as part of Oracle Grid Infrastructure starting
  - 11.2.0.2 on Linux and Solaris
  - 11.2.0.3 on Linux, Solaris, Windows, and AIX

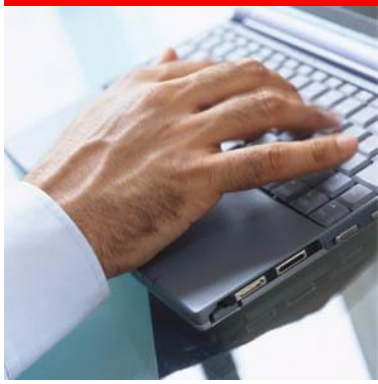
- CHM/OS is modeled as an OHASD resource ora.crf
  - ORAROOTAGENT starts/stops/checks OSYSMOND
  - OSYSMOND spawns the OLOGGERD daemon if needed

- Runs in real time so if the system is unresponsive there is a greater chance that it will still collect some useful data.

- The approx amount of data collected is ~ 0.2 GB per node per day
  - This has changed in 11.2.0.3.0 as the sampling interval is 5 sec

- Diagcollection.sh →
  [--chmos] For collecting Cluster Health Monitor (OS) data

Upgrade naar Grid Infrastructure 11.2



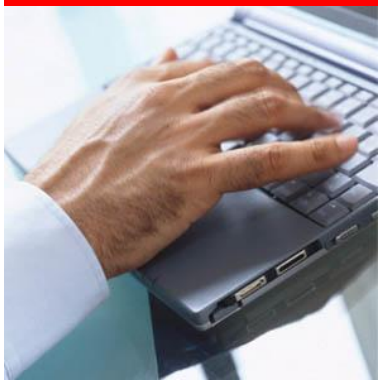
- **Volledige installatie vanaf 11.2.0.2**

  - In-place upgrade / Out-of-place upgrade
  - Direct Upgrade
  - Download via My Oracle Support

- **Multicast issue**

  - Multicast address 230.0.1.0
  - Patch: Multicast address 224.0.0.251
  - Test: mcasttest.pl

Upgrade naar Grid Infrastructure 11.2



- Voor 11.2.0.2 installaties / upgrades:

  Apply 11.2.0.2.4 GI PSU before running root.sh or rootupgrade.sh

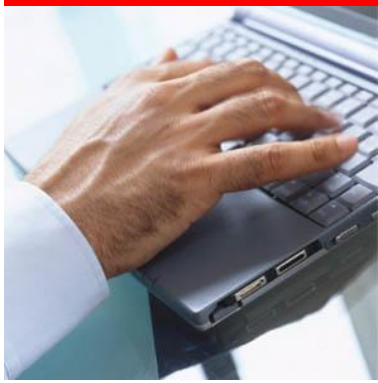
- Check notes:

  1212703.1 - 11.2.0.2 Grid Infrastructure Install or Upgrade may fail due to Multicasting Requirement

  1312225.1 - Things to Consider Before Upgrade to 11.2.0.2 Grid Infrastructure

  1363369.1 Things to Consider Before Upgrading to 11.2.0.3 Grid Infrastructure/ASM

Patch Set Updates (PSU)



- Oracle Recommended Patches -- Oracle Database (Doc ID 756671.1)

  11.2.0.1.2 Grid Infrastructure Patch Set Update (GI PSU)
  11.2.0.2.5 Grid Infrastructure Patch Set Update (GI PSU)
  11.2.0.3.1 Grid Infrastructure Patch Set Update (GI PSU)

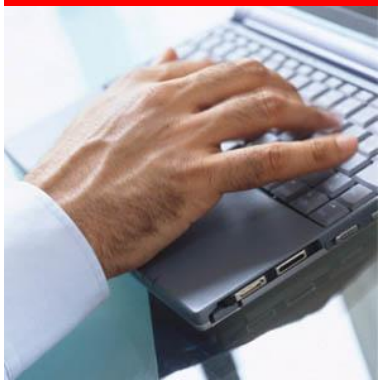
  11.2.0.1.6 Patch Set Update (PSU)
  11.2.0.2.5 Patch Set Update (PSU)
  11.2.0.3.1 Patch Set Update (PSU)

  -- Windows: in patch bundles

  PSU's niet in de Oracle Release versie:
  - Controle via: opatch lsinv -bugs_fixed | grep PSU

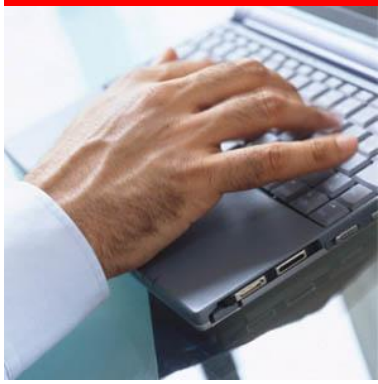
  Eerst GI PSU en daarna de DB PSU installeren. Zie patch README

New Cluster Verification in 11.2.0.3



- Validations before Upgrade
- Multicast validation
- IPMP validation
- Check for firewall existence
- Database related checks
- Health Checks (Best Practice)

New Cluster Verification in 11.2.0.3



- Clusterware upgrade

  cluvfy stage –pre crsinst -upgrade [-rolling] -src_crshome <src_crshome> ...

Checks:

- User validation / CRS Version consistency / Oracle patches
- Consistent Release Version; Active Version matches Release Version

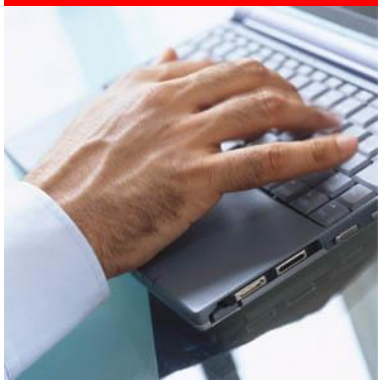
- Database upgrade

  cluvfy stage –pre dbinst -upgrade -src_dbhome <src_dbhome> .....

Checks:

- User validation / Current user is Database owner
- Database & CRS Version compatibility
- CRS version consistency / DB Version <= CRS Version

New Cluster Verification in 11.2.0.3



- Multicast Validation

Checks if Multicast is enabled on one of these multicast addresses:
230.0.1.0 (port 42424) or 224.0.0.251 (port 42424)
For each multicast address / for each private network interface

- IPMP Validation

- Checks the interfaces in IPMP group that can be used for public and private network
- Validate consistency & compatibility amongst the collected information

- Check for Firewall existence

- Existence of firewall on cluster nodes during installation on Windows

Handige Install/Upgrade Notes

- 1212703.1 - 11.2.0.2 Grid Infrastructure Install or Upgrade may fail due to Multicasting Requirement
- 1312225.1 - Things to Consider Before Upgrade to 11.2.0.2 Grid Infrastructure
- 1363369.1 Things to Consider Before Upgrading to 11.2.0.3 Grid Infrastructure/ASM
- 942166.1 - How to Proceed from Failed 11gR2 Grid Infrastructure (CRS) Installation
- 969254.1 - How to Proceed from Failed Upgrade to 11gR2 Grid Infrastructure on Linux/Unix
- 1053970.1 - Troubleshooting 11.2 Grid Infastructure Installation Root.sh Issues

Handige Install/Upgrade Notes

- 1053147.1 - 11gR2 Clusterware and Grid Home - What You Need to Know
- 810394.1 - RAC and Oracle Clusterware Best Practices and Starter Kit
- 1189783.1 - Important Changes to Oracle Database Patch Sets Starting With 11.2.0.2
- 756671.1 - Oracle Recommended Patches -- Oracle Database

Top 5 Notes:

- 1372859.1 Top 5 CRS Cluster Patching Issues
- 1367631.1 Top 5 CRS/Grid Infrastructure Install issues
- 1367153.1 Top 5 Issues That Cause Node Reboots or Unexpected Recycle of CRS
- 1368382.1 Top 5 Grid Infrastructure Startup Issues

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Q&A