**Tài liệu cấu hình ExaData X2-2**

Mục Lục

[**1.** **Kiểm tra trước khi upgrade** 4](#_Toc393203609)

[*1.1.* *Default IP setup* 4](#_Toc393203610)

[*1.2.* *Trên DB server* 5](#_Toc393203611)

[**1.2.1.** **Step 1: Kết nối vào các DB server** 5](#_Toc393203612)

[**1.2.2.** **Step 2: Kiểm tra serial\_number** 5](#_Toc393203613)

[**1.2.3.** **Step 3: Kiểm tra Memory** 5](#_Toc393203614)

[**1.2.4.** **Step 4: Kiểm tra disk ( 3 disk online và 1 disk hotspare)** 5](#_Toc393203615)

[**1.2.5.** **Step 5: Kiểm tra cấu hình RAID** 6](#_Toc393203616)

[**1.2.6.** **Step 6: Kiểm tra HW Profile** 6](#_Toc393203617)

[**1.2.7.** **Step 7: Kiểm tra Infinband Topology** 6](#_Toc393203618)

[**1.2.8.** **Step 8: Reclaiming Disk Space** 6](#_Toc393203619)

[**1.2.9.** **Step 9: Kiểm tra thông tin image** 8](#_Toc393203620)

[*1.3.* *Trên Storage server* 9](#_Toc393203621)

[**1.3.1.** **Step 1: Verify RAM on Storage server** 9](#_Toc393203622)

[**1.3.2.** **Step 2: Verify DISK on Storage server** 9](#_Toc393203623)

[**1.3.3.** **Step 3: Verify Flash Module** 11](#_Toc393203624)

[**1.3.4.** **Step 4: Check verison Storage server** 12](#_Toc393203625)

[**2.** **Upgrade images ( trên DB server và Storage server)** 13](#_Toc393203626)

[*2.1.* *Upgrade images trên DB server* 13](#_Toc393203627)

[**2.1.1.** **Step1: Download file images, tool upgrade** 13](#_Toc393203628)

[**2.1.2.** **Step 2: Backup images** 13](#_Toc393203629)

[**2.1.3.** **Step 3: Upgrade images** 18](#_Toc393203630)

[*2.2.* *Upgrade images trên Storage server* 32](#_Toc393203631)

[**2.2.1.** **Preparing Exadata Cells for Patch Application** 32](#_Toc393203632)

[**2.2.2.** **Patching Using the patchmgr Utility** 34](#_Toc393203633)

[**2.2.3.** **Rolling Back Successfully Patched Exadata Cells** 40](#_Toc393203634)

[*2.3.* *Kiểm tra sau Upgrade images* 42](#_Toc393203635)

[**3.** **Thực hiện apply config** 42](#_Toc393203636)

[*3.1.* *Chuẩn bị trước apply config* 42](#_Toc393203637)

[**3.1.1.** **Software** 42](#_Toc393203638)

[**3.1.2.** **Thu thập thông tin config** 42](#_Toc393203639)

[*3.2.* *Thực hiện apply config* 52](#_Toc393203640)

[**3.2.1.** **Step 1: Chuẩn bị trước khi thực hiện** 52](#_Toc393203641)

[**3.2.2.** **Step 2: Kiểm tra IP trước khi config** 52](#_Toc393203642)

[**3.2.3.** **Step 3: Thực hiện apply config** 58](#_Toc393203643)

[**3.2.4.** **Step 4: Kiểm tra IP sau khi config** 62](#_Toc393203644)

[**4.** **Thực hiện deploy config** 68](#_Toc393203645)

[*4.1.* *Chuẩn bị trước deploy config* 68](#_Toc393203646)

[**4.1.1.** **Network** 68](#_Toc393203647)

[**4.1.2.** **Software và Patch** 68](#_Toc393203648)

[*4.2.* *Thực hiện deploy config* 69](#_Toc393203649)

[**4.2.1.** **Step 1: Kiểm tra các step cần thực hiện.** 69](#_Toc393203650)

[**4.2.2.** **Step 2: Kiểm tra trước deploy** 70](#_Toc393203651)

[**4.2.3.** **Step 3: Setup Required Files** 73](#_Toc393203652)

[**4.2.4.** **Step 4: Create Users** 74](#_Toc393203653)

[**4.2.5.** **Step 5: Setup Cell Connectivity** 75](#_Toc393203654)

[**4.2.6.** **Step 6: Verify Infiniband and Calibrate Cells** 75](#_Toc393203655)

[**4.2.7.** **Step 7: Create Cell Disks** 84](#_Toc393203656)

[**4.2.8.** **Step 8: Create Grid Disks** 85](#_Toc393203657)

[**4.2.9.** **Step 9: Install Cluster Software** 85](#_Toc393203658)

[**4.2.10.** **Step 10: Initialize Cluster Software** 86](#_Toc393203659)

[**4.2.11.** **Step 11: Install Database Software** 89](#_Toc393203660)

[**4.2.12.** **Step 12: Relink Database with RDS** 90](#_Toc393203661)

[**4.2.13.** **Step 13: Create ASM Diskgroups** 90](#_Toc393203662)

[**4.2.14.** **Step 14: Create Databases** 91](#_Toc393203663)

[**4.2.15.** **Step 15: Apply Security Fixes** 91](#_Toc393203664)

[**4.2.16.** **Step 16: Create Installation Summary** 93](#_Toc393203665)

[**4.2.17.** **Step 17: Resecure Machine** 93](#_Toc393203666)

[**5.** **Kiểm tra lại toàn bộ hệ thống sau cài đặt** 95](#_Toc393203667)

[*5.1.* *Step 1: Thay đổi mật khẩu sau reboot* 95](#_Toc393203668)

[*5.2.* *Step 2: Kiểm tra hệ thống RAC vừa cài đặt* 95](#_Toc393203669)

[**6.** **Tài liệu tham khảo** 95](#_Toc393203670)

1. **Kiểm tra trước khi upgrade**
   1. *Default IP setup*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Hostname | net0 IP | ILOM IP | IB bonded  IP | RU | Rack Config |
| cell14 | 192.168.1.22 | 192.168.1.122 | 192.168.10.22 | 41 | Full rack only |
| cell13 | 192.168.1.21 | 192.168.1.121 | 192.168.10.21 | 39 | Full rack only |
| cell12 | 192.168.1.20 | 192.168.1.120 | 192.168.10.20 | 37 | Full rack only |
| cell11 | 192.168.1.19 | 192.168.1.119 | 192.168.10.19 | 35 | Full rack only |
| cell10 | 192.168.1.18 | 192.168.1.118 | 192.168.10.18 | 33 | Full rack only |
| cell09 | 192.168.1.17 | 192.168.1.117 | 192.168.10.17 | 31 | Full rack only |
| cell08 | 192.168.1.16 | 192.168.1.116 | 192.168.10.16 | 29 | Full rack only |
| db08 | 192.168.1.15 | 192.168.1.115 | 192.168.10.15 | 28 | Full rack (X2-2) only |
| db07 | 192.168.1.4 | 192.168.1.114 | 192.168.10.14 | 27 | Full rack (X2-2) only |
| db06 | 192.168.1.13 | 192.168.1.113 | 192.168.10.13 | 26 | Full rack (X2-2) only |
| db05 | 192.168.1.12 | 192.168.1.112 | 192.168.10.12 | 25 | Full rack (X2-2) only |
| db04 | 192.168.1.11 | 192.168.1.111 | 192.168.10.11 | 19 | Full X2-2 / Half rack only |
| db03 | 192.168.1.10 | 192.168.1.110 | 192.168.10.10 | 18 | Full X2-2 / Half rack only |
| db02 | 192.168.1.9 | 192.168.1.109 | 192.168.10.9 | 17 | Full / Half / Qrtr rack |
| db01 | 192.168.1.8 | 192.168.1.108 | 192.168.10.8 | 16 | Full / Half / Qrtr rack |
| cell07 | 192.168.1.7 | 192.168.1.107 | 192.168.10.7 | 14 | Full / Half rack only |
| cell06 | 192.168.1.6 | 192.168.1.106 | 192.168.10.6 | 12 | Full / Half rack only |
| cell05 | 192.168.1.5 | 192.168.1.105 | 192.168.10.5 | 10 | Full / Half rack only |
| cell04 | 192.168.1.4 | 192.168.1.104 | 192.168.10.4 | 8 | Full / Half rack only |
| cell03 | 192.168.1.3 | 192.168.1.103 | 192.168.10.3 | 6 | Full / Half / Qrtr rack |
| cell02 | 192.168.1.2 | 192.168.1.102 | 192.168.10.2 | 4 | Full / Half / Qrtr rack |
| cell01 | 192.168.1.1 | 192.168.1.101 | 192.168.10.1 | 2 | Full / Half / Qrtr rack |
| ibswitch3 | 192.168.1.203 |  |  | 24 | Full / Half / Qrtr rack |
| ibswitch2 | 192.168.1.202 |  |  | 20 | Full / Half / Qrtr rack |
| ibswitch1 | 192.168.1.201 |  |  | 1 | See footnote2 |
| ethernet  switch | 192.168.1.200 |  |  | 23 | Full / Half / Qrtr rack |

* 1. *Trên DB server*
     1. **Step 1: Kết nối vào các DB server**

(sử dụng default IP, password: welcome1)

* Sử dụng Laptop : kết nối thông qua SSH.
* Sử dụng KVM: lựa chọn session phù hợp.
  + 1. **Step 2: Kiểm tra serial\_number**

[root@db01 ~]# ipmitool sunoem cli "show /SYS product\_serial\_number"

Connected. Use ^D to exit.

-> show /SYS product\_serial\_number

/SYS

Properties:

product\_serial\_number = 1232FMM0DW

-> Session closed

Disconnected

[root@db01 ~]#

* + 1. **Step 3: Kiểm tra Memory**

[root@db01 ~]# grep MemTotal /proc/meminfo

MemTotal: 74027752 kB

[root@ db01 ~]#

* + 1. **Step 4: Kiểm tra disk ( 3 disk online và 1 disk hotspare)**

[root@db01 ~]# cd /opt/MegaRAID/MegaCli/

[root@db01 MegaCli]# ./MegaCli64 -Pdlist -aAll | grep "Slot\|Firmware"

Slot Number: 0

Firmware state: Online, Spun Up

Slot Number: 1

Firmware state: Online, Spun Up

Slot Number: 2

Firmware state: Online, Spun Up

Slot Number: 3

Firmware state: Hotspare, Spun down

[root@db01 MegaCli]#

* + 1. **Step 5: Kiểm tra cấu hình RAID**

[root@db01 ~]# cd /opt/MegaRAID/MegaCli

[root@db01 MegaCli]# ./MegaCli64 -LdInfo -lAll -aAll

* + 1. **Step 6: Kiểm tra HW Profile**

[root@db01 ~]# /opt/oracle.SupportTools/CheckHWnFWProfile –d

* Nếu xuất hiện IF any of profile checks fail and any firmware needs to be reflashed, this can be done from the system itself using (command on a single line):

[root@db01 ~]# /opt/oracle.SupportTools/CheckHWnFWProfile –U /opt/oracle.cellos/iso/cellbits

Now updating the ILOM and the BIOS …

<update takes place>

After flash update, power off the system, reset ILOM, then wait 10 minutes for ILOM to flash BIOS, then power on the system again.

* + 1. **Step 7: Kiểm tra Infinband Topology**

[root@db01 ~]# cd /opt/oracle.SupportTools/ibdiagtools

[root@db01 ibdiagtools]# ./verify-topology -t quarterrack

* + 1. **Step 8: Reclaiming Disk Space**

[root@db01 ~]# cd /opt/oracle.SupportTools/

[root@db01 oracle.SupportTools]# ./reclaimdisks.sh –check

[INFO] This is SUN FIRE X4170 M2 SERVER machine

[INFO] Number of LSI controllers: 1

[INFO] Physical disks found: 4 (252:0 252:1 252:2 252:3)

[INFO] Logical drives found: 3

[INFO] Dual boot installation: yes

[INFO] Linux logical drive: 0

[INFO] RAID Level for the Linux logical drive: 1

[INFO] Physical disks in the Linux logical drive: 2 (252:0 252:1)

[INFO] Dedicated Hot Spares for the Linux logical drive: 0

[INFO] Global Hot Spares: 0

[INFO] Valid dual boot configuration found for Linux: RAID1 from 2 disks

Nếu xuất hiện lỗi

[root@db02 oracle.SupportTools]# ./reclaimdisks.sh -check

[INFO] This is SUN FIRE X4170 M2 SERVER machine

[INFO] Number of LSI controllers: 1

[INFO] Physical disks found: 4 (252:0 252:1 252:2 252:3)

[INFO] Logical drives found: 2

[INFO] Dual boot installation: yes

[INFO] Linux logical drive: 0

[INFO] RAID Level for the Linux logical drive: 1

[INFO] Physical disks in the Linux logical drive: 1 (252:0)

[INFO] Dedicated Hot Spares for the Linux logical drive: 0

[INFO] Global Hot Spares: 0

[ERROR] Expected RAID 1 from 2 physical disks with no dedicated and global hot spare

[root@db02 oracle.SupportTools]# ./reclaimdisks.sh -restore

Started from ./reclaimdisks.sh

[INFO] Restore mode is set

[INFO] This is SUN FIRE X4170 M2 SERVER machine

[INFO] Number of LSI controllers: 1

[INFO] Physical disks found: 4 (252:0 252:1 252:2 252:3)

[INFO] Logical drives found: 2

[INFO] Dual boot installation: yes

[INFO] Linux logical drive: 0

[INFO] RAID Level for the Linux logical drive: 1

[INFO] Physical disks in the Linux logical drive: 1 (252:0)

[INFO] Dedicated Hot Spares for the Linux logical drive: 0

[INFO] Global Hot Spares: 0

[INFO] RAID level for the Linux second logical drive for restore mode: 5

[INFO] Physical disks in the Linux second logical drive for restore mode: 3 (252:1 252:2 252:3)

[INFO] Non-linux physical disks that will be reclaimed: 3 (252:1 252:2 252:3)

[INFO] Non-linux logical drives that will be reclaimed: 1 (1)

[INFO] Disk reclaiming started in the background with parent process id 9852.

[INFO] Check the log file /var/log/cellos/reclaimdisks.bg.log.

[INFO] This process may take about two hours.

[INFO] DO NOT REBOOT THE NODE.

[INFO] The node will be rebooted automatically upon completion.

[root@db02 oracle.SupportTools]# tail -f /var/log/cellos/reclaimdisks.bg.log

[INFO] Global Hot Spares: 0

[INFO] RAID level for the Linux second logical drive for restore mode: 5

[INFO] Physical disks in the Linux second logical drive for restore mode: 3 (252:1 252:2 252:3)

[INFO] Non-linux physical disks that will be reclaimed: 3 (252:1 252:2 252:3)

[INFO] Non-linux logical drives that will be reclaimed: 1 (1)

Existing logical drive 0 has assigned device: /dev/sda

For new logical drive 1 assigned device: /dev/sdb

Move data from LVM physical volume /dev/sda2 to /dev/sdb2

Be patient it may take about two hours ...

DO NOT INTERRUPT THIS PROCESS

Connection closed by foreign host.

### END LOG - DATE: 140609, TIME: 103858 ###

* + 1. **Step 9: Kiểm tra thông tin image**

[root@db01 update]# imageinfo

Kernel version: 2.6.18-274.18.1.0.1.el5 #1 SMP Thu Feb 9 19:07:16 EST 2012 x86\_64

Image version: 11.2.3.1.1.120607

Image activated: 2012-09-09 12:33:14 -0700

Image status: success

System partition on device: /dev/mapper/VGExaDb-LVDbSys1

* 1. *Trên Storage server*
     1. **Step 1: Verify RAM on Storage server**

Verify that all memory is present in Linux. Total memory on X4275 / X4270 M2 Storage Cells is 24GB. If any is missing the below will show less and the faulted memory should be identifiable in ILOM event logs.

[root@cell02 ~]# grep MemTotal /proc/meminfo

MemTotal: 74026524 kB

* + 1. **Step 2: Verify DISK on Storage server**

Verify the 12 disks are visible and online. They should be numbered slot 0 to 11.

[root@cell02 ~]# cd /opt/MegaRAID/MegaCli/

[root@cell02 MegaCli]# ./MegaCli64 -Pdlist -aAll | grep "Slot\|Firmware"

Slot Number: 0

Firmware state: Online, Spun Up

Device Firmware Level: A6C0

Slot Number: 1

Firmware state: Online, Spun Up

Device Firmware Level: A6C0

Slot Number: 2

Firmware state: Online, Spun Up

Device Firmware Level: A6C0

Slot Number: 3

Firmware state: Online, Spun Up

Device Firmware Level: A6C0

Slot Number: 4

Firmware state: Online, Spun Up

Device Firmware Level: A6C0

Slot Number: 5

Firmware state: Online, Spun Up

Device Firmware Level: A6C0

Slot Number: 6

Firmware state: Online, Spun Up

Device Firmware Level: A6C0

Slot Number: 7

Firmware state: Online, Spun Up

Device Firmware Level: A6C0

Slot Number: 8

Firmware state: Online, Spun Up

Device Firmware Level: A6C0

Slot Number: 9

Firmware state: Online, Spun Up

Device Firmware Level: A6C0

Slot Number: 10

Firmware state: Online, Spun Up

Device Firmware Level: A6C0

Slot Number: 11

Firmware state: Online, Spun Up

Device Firmware Level: A6C0

* + 1. **Step 3: Verify Flash Module**

Verify 16 Flash Modules are visible (4 per a card)

[root@cell02 MegaCli]# lsscsi | grep -i marvel

[8:0:0:0] disk ATA MARVELL SD88SA02 D20Y /dev/sdn

[8:0:1:0] disk ATA MARVELL SD88SA02 D20Y /dev/sdo

[8:0:2:0] disk ATA MARVELL SD88SA02 D20Y /dev/sdp

[8:0:3:0] disk ATA MARVELL SD88SA02 D20Y /dev/sdq

[9:0:0:0] disk ATA MARVELL SD88SA02 D20Y /dev/sdr

[9:0:1:0] disk ATA MARVELL SD88SA02 D20Y /dev/sds

[9:0:2:0] disk ATA MARVELL SD88SA02 D20Y /dev/sdt

[9:0:3:0] disk ATA MARVELL SD88SA02 D20Y /dev/sdu

[10:0:0:0] disk ATA MARVELL SD88SA02 D20Y /dev/sdv

[10:0:1:0] disk ATA MARVELL SD88SA02 D20Y /dev/sdw

[10:0:2:0] disk ATA MARVELL SD88SA02 D20Y /dev/sdx

[10:0:3:0] disk ATA MARVELL SD88SA02 D20Y /dev/sdy

[11:0:0:0] disk ATA MARVELL SD88SA02 D20Y /dev/sdz

[11:0:1:0] disk ATA MARVELL SD88SA02 D20Y /dev/sdaa

[11:0:2:0] disk ATA MARVELL SD88SA02 D20Y /dev/sdab

[11:0:3:0] disk ATA MARVELL SD88SA02 D20Y /dev/sdac

[root@cell02 MegaCli]# cellcli -e list lun where disktype=flashdisk

1\_0 1\_0 normal

1\_1 1\_1 normal

1\_2 1\_2 normal

1\_3 1\_3 normal

2\_0 2\_0 normal

2\_1 2\_1 normal

2\_2 2\_2 normal

2\_3 2\_3 normal

4\_0 4\_0 normal

4\_1 4\_1 normal

4\_2 4\_2 normal

4\_3 4\_3 normal

5\_0 5\_0 normal

5\_1 5\_1 normal

5\_2 5\_2 normal

5\_3 5\_3 normal

* + 1. **Step 4: Check verison Storage server**

[root@cell01 ~]# imageinfo

Kernel version: 2.6.18-274.18.1.0.1.el5 #1 SMP Thu Feb 9 19:07:16 EST 2012 x86\_64

Cell version: CELL-01514: Connect Error. Verify that Management Server is listening at the specified HTTP port: 8888.

Cell rpm version: cell-11.2.3.1.1\_LINUX.X64\_120607-1

Active image version: 11.2.3.1.1.120607

Active image activated: 2012-09-09 13:20:23 -0700

Active image status: success

Active system partition on device: /dev/md5

Active software partition on device: /dev/md7

In partition rollback: Impossible

Cell boot usb partition: /dev/sdm1

Cell boot usb version: 11.2.3.1.1.120607

Inactive image version: 11.2.3.2.2.140221.1

[WARNING] File not found /opt/oracle.cellos/patch/history/image.id.11.2.3.2.2.140221.1

Inactive system partition on device: /dev/md6

Inactive software partition on device: /dev/md8

Boot area has rollback archive for the version: undefined

Rollback to the inactive partitions: Impossible

[root@cell01 ~]# imagehistory

Version : 11.2.3.1.1.120607

Image activation date : 2012-09-09 13:20:23 -0700

Imaging mode : fresh

Imaging status : success

1. **Upgrade images ( trên DB server và Storage server)**
   1. *Upgrade images trên DB server*
      1. **Step1: Download file images, tool upgrade**

* Tên file images cần download: p18205376\_112322\_Linux-x86-64.zip
* Tool upgrade: p16486998\_121110\_Linux-x86-64.zip
  + 1. **Step 2: Backup images**
* Giải nén file p16486998\_121110\_Linux-x86-64.zip. Sử dụng công cụ dbnodeupdate để backup imases
* Chạy câu lệnh: ./dbnodeupdate.sh -u -l /u01/update/p18205376\_112322\_Linux-x86-64.zip –b

[root@db01 update]# ./dbnodeupdate.sh -u -l /u01/update/p18205376\_112322\_Linux-x86-64.zip -b

##########################################################################################################################

# #

# Guidelines for using dbnodeupdate.sh (rel. 3.26): #

# #

# - Prerequisites for usage: #

# 1. Refer to dbnodeupdate.sh options. See MOS 1553103.1 #

# 2. Use the latest release of dbnodeupdate.sh. See patch 16486998 #

# 3. Run the prereq check with the '-v' option. #

# #

# I.e.: ./dbnodeupdate.sh -u -l /u01/my-iso-repo.zip -v #

# ./dbnodeupdate.sh -u -l http://my-yum-repo -v #

# #

# - Prerequisite dependency check failures can happen due to customization: #

# - The prereq check detects dependency issues that need to be addressed prior to running a successful update. #

# - Customized rpm packages may fail the built-in dependency check and system updates cannot proceed until resolved. #

# #

# When upgrading from releases later than 11.2.2.4.2 to releases before 11.2.3.3.0: #

# - Conflicting packages should be removed before proceeding the update. #

# #

# When upgrading to releases 11.2.3.3.0 or later: #

# - When the 'exact' package dependency check fails 'minimum' package dependency check will be tried. #

# - When the 'minimum' package dependency check also fails, #

# the conflicting packages should be removed before proceeding. #

# #

# - As part of the prereq checks and as part of the update, a number of rpms will be removed. #

# This removal is required to preserve Exadata functioning. This should not be confused with obsolete packages. #

# - See /var/log/cellos/packages\_to\_be\_removed.txt for details on what packages will be removed. #

# #

# - In case of any problem when filing an SR, upload the following: #

# - /var/log/cellos/dbnodeupdate.log #

# - /var/log/cellos/dbnodeupdate.<runid>.diag #

# - where <runid> is the is of the failing run. #

# #

##########################################################################################################################

Continue ? [Y/n]

Y

(\*) 2014-06-05 21:50:39: Unzipping helpers (/u01/update/dbupdate-helpers.zip) to /opt/oracle.SupportTools/dbnodeupdate\_helpers

(\*) 2014-06-05 21:50:39: Initializing logfile /var/log/cellos/dbnodeupdate.log

(\*) 2014-06-05 21:50:40: Collecting system configuration details. This may take a while...

Warning: File /etc/oratab not in place.

dbnodeupdate.sh can continue without /etc/oratab but will then assume no Oracle homes are installed.

Continue ? [Y/n]

Y

(\*) 2014-06-05 21:50:55: Validating system details for known issues and best practices. This may take a while...

(\*) 2014-06-05 21:50:55: Checking free space in /u01

(\*) 2014-06-05 21:50:55: Unzipping /u01/update/p18205376\_112322\_Linux-x86-64.zip to /u01/app/oracle/stage.050614215038, this may take a while

(\*) 2014-06-05 21:51:10: Original /etc/yum.conf moved to /etc/yum.conf.050614215038, generating new yum.conf

(\*) 2014-06-05 21:51:10: Generating Exadata repository file /etc/yum.repos.d/Exadata-computenode.repo

Active Image version : 11.2.3.1.1.120607

Active Kernel version : 2.6.18-274.18.1.0.1.el5

Active LVM Name : /dev/mapper/VGExaDb-LVDbSys1

Inactive Image version : n/a

Inactive LVM Name : /dev/mapper/VGExaDb-LVDbSys2

Current user id : root

Action : Backup only

Baseurl : file:///var/www/html/yum/unknown/EXADATA/dbserver/050614215038/x86\_64/ (iso)

Iso file : /u01/app/oracle/stage.050614215038/112322\_base.iso

Create a backup : Yes

Shutdown stack : No (Currently stack is down - /etc/oratab not found)

Hotspare to be claimed : No (/opt/oracle/EXADATA\_KEEP\_HOT\_SPARE\_ON\_YUM\_UPDATE exists)

Logfile : /var/log/cellos/dbnodeupdate.log (runid: 050614215038)

Diagfile : /var/log/cellos/dbnodeupdate.050614215038.diag

Server model : SUN FIRE X4170 M2 SERVER

dbnodeupdate.sh rel. : 3.26 (always check MOS 1553103.1 for the latest release of dbnodeupdate)

Continue ? [Y/n]

Y

(\*) 2014-06-05 21:52:05: Performing filesystem backup to /dev/mapper/VGExaDb-LVDbSys2. Avg. 30 minutes (max. 120) depends per environment...

(\*) 2014-06-05 21:54:15: Backup successful

(\*) 2014-06-05 21:54:16: Backup-only run finished.

(\*) 2014-06-05 21:54:16: Cleaning up iso and temp mount points

* + 1. **Step 3: Upgrade images**
* Chạy câu lệnh “./dbnodeupdate.sh -u -l /u01/update/p18205376\_112322\_Linux-x86-64.zip”

[root@db01 update]# ./dbnodeupdate.sh -u -l /u01/update/p18205376\_112322\_Linux-x86-64.zip

##########################################################################################################################

# #

# Guidelines for using dbnodeupdate.sh (rel. 3.26): #

# #

# - Prerequisites for usage: #

# 1. Refer to dbnodeupdate.sh options. See MOS 1553103.1 #

# 2. Use the latest release of dbnodeupdate.sh. See patch 16486998 #

# 3. Run the prereq check with the '-v' option. #

# #

# I.e.: ./dbnodeupdate.sh -u -l /u01/my-iso-repo.zip -v #

# ./dbnodeupdate.sh -u -l http://my-yum-repo -v #

# #

# - Prerequisite dependency check failures can happen due to customization: #

# - The prereq check detects dependency issues that need to be addressed prior to running a successful update. #

# - Customized rpm packages may fail the built-in dependency check and system updates cannot proceed until resolved. #

# #

# When upgrading from releases later than 11.2.2.4.2 to releases before 11.2.3.3.0: #

# - Conflicting packages should be removed before proceeding the update. #

# #

# When upgrading to releases 11.2.3.3.0 or later: #

# - When the 'exact' package dependency check fails 'minimum' package dependency check will be tried. #

# - When the 'minimum' package dependency check also fails, #

# the conflicting packages should be removed before proceeding. #

# #

# - As part of the prereq checks and as part of the update, a number of rpms will be removed. #

# This removal is required to preserve Exadata functioning. This should not be confused with obsolete packages. #

# - See /var/log/cellos/packages\_to\_be\_removed.txt for details on what packages will be removed. #

# #

# - In case of any problem when filing an SR, upload the following: #

# - /var/log/cellos/dbnodeupdate.log #

# - /var/log/cellos/dbnodeupdate.<runid>.diag #

# - where <runid> is the is of the failing run. #

# #

##########################################################################################################################

Continue ? [Y/n]

Y

(\*) 2014-06-05 21:55:11: Unzipping helpers (/u01/update/dbupdate-helpers.zip) to /opt/oracle.SupportTools/dbnodeupdate\_helpers

(\*) 2014-06-05 21:55:11: Initializing logfile /var/log/cellos/dbnodeupdate.log

(\*) 2014-06-05 21:55:12: Collecting system configuration details. This may take a while...

Warning: File /etc/oratab not in place.

dbnodeupdate.sh can continue without /etc/oratab but will then assume no Oracle homes are installed.

Continue ? [Y/n]

Y

(\*) 2014-06-05 21:55:23: Validating system details for known issues and best practices. This may take a while...

(\*) 2014-06-05 21:55:23: Checking free space in /u01

(\*) 2014-06-05 21:55:23: Unzipping /u01/update/p18205376\_112322\_Linux-x86-64.zip to /u01/app/oracle/stage.050614215509, this may take a while

(\*) 2014-06-05 21:55:34: Original /etc/yum.conf moved to /etc/yum.conf.050614215509, generating new yum.conf

(\*) 2014-06-05 21:55:34: Generating Exadata repository file /etc/yum.repos.d/Exadata-computenode.repo

Warning: Network routing configuration requires change before updating database server. See MOS 1306154.1

Continue ? [y/N]

Y

(\*) 2014-06-05 21:55:48: Validating the specified source location.

(\*) 2014-06-05 21:55:49: Cleaning up the yum cache.

(\*) 2014-06-05 21:55:49: Performing yum package dependency check. This may take a while...

(\*) 2014-06-05 21:56:10: Package dependency check successful.

Active Image version : 11.2.3.1.1.120607

Active Kernel version : 2.6.18-274.18.1.0.1.el5

Active LVM Name : /dev/mapper/VGExaDb-LVDbSys1

Inactive Image version : 11.2.3.1.1.120607

Inactive LVM Name : /dev/mapper/VGExaDb-LVDbSys2

Current user id : root

Action : upgrade

Upgrading to : 11.2.3.2.2.140221.1

Baseurl : file:///var/www/html/yum/unknown/EXADATA/dbserver/050614215509/x86\_64/ (iso)

Iso file : /u01/app/oracle/stage.050614215509/112322\_base.iso

Create a backup : Yes

Shutdown stack : No (Currently stack is down - /etc/oratab not found)

Hotspare to be claimed : No (/opt/oracle/EXADATA\_KEEP\_HOT\_SPARE\_ON\_YUM\_UPDATE exists)

RPM exclusion list : Not in use (add rpms to /etc/exadata/yum/exclusion.lst and restart dbnodeupdate.sh)

Dependencies : No conflicts

Logfile : /var/log/cellos/dbnodeupdate.log (runid: 050614215509)

Diagfile : /var/log/cellos/dbnodeupdate.050614215509.diag

Server model : SUN FIRE X4170 M2 SERVER

dbnodeupdate.sh rel. : 3.26 (always check MOS 1553103.1 for the latest release of dbnodeupdate)

Note : After upgrading and rebooting run './dbnodeupdate.sh -c' to finish post steps.

Warning: Active image version is equal to inactive image version (backup already made). Use -n to disable backup or let dbnodeupdate.sh overwrite.

Recommended : Keep the existing backup on the inactive lvm and skip the new backup, run :

./dbnodeupdate.sh -u -l /u01/update/p18205376\_112322\_Linux-x86-64.zip -n

Alternatively : Continue this run and have dbnodeupdate.sh overwrite the existing backup on the inactive lvm automatically

The following known issues will be checked for and automatically corrected by dbnodeupdate.sh:

(\*) - Issue - Hotspare not reclaimed

(\*) - Issue - Cell and Database image versions 11.2.2.2.2 or lower require workaround before patching

(\*) - Issue - Database servers with an ofa rpm earlier than 1.5.1-4.0.28 can encounter a file system corruption

(\*) - Issue - Filesystem checks not disabled on database servers

(\*) - Issue - X4800 ILOM 3.0.16.16 r69500 and X4800M2 ILOM 3.0.16.20.b r75668 require upd. before upgr. to 11.2.3.2.2. See MOS 1608581.1

(\*) - Issue - Verify the vm.min\_free\_kbytes kernel parameter on database servers to make sure 512MB is reserved

The following known issues will be checked for but require manual follow-up:

(\*) - Issue - Database Server upgrades may hit network routing issues after the upgrade

(\*) - Issue - Yum rolling update requires fix for 11768055 when Grid Infrastructure is below 11.2.0.2 BP12

(\*) - Updates from releases earlier than 11.2.3.3.0 may hang during reboot. See MOS 1620826.1 for more details

Continue ? [Y/n]

n

(\*) 2014-06-05 21:57:37: Cleaning up iso and temp mount points

Exiting ...

[root@db01 update]# ./dbnodeupdate.sh -u -l /u01/update/p18205376\_112322\_Linux-x86-64.zip -n

##########################################################################################################################

# #

# Guidelines for using dbnodeupdate.sh (rel. 3.26): #

# #

# - Prerequisites for usage: #

# 1. Refer to dbnodeupdate.sh options. See MOS 1553103.1 #

# 2. Use the latest release of dbnodeupdate.sh. See patch 16486998 #

# 3. Run the prereq check with the '-v' option. #

# #

# I.e.: ./dbnodeupdate.sh -u -l /u01/my-iso-repo.zip -v #

# ./dbnodeupdate.sh -u -l http://my-yum-repo -v #

# #

# - Prerequisite dependency check failures can happen due to customization: #

# - The prereq check detects dependency issues that need to be addressed prior to running a successful update. #

# - Customized rpm packages may fail the built-in dependency check and system updates cannot proceed until resolved. #

# #

# When upgrading from releases later than 11.2.2.4.2 to releases before 11.2.3.3.0: #

# - Conflicting packages should be removed before proceeding the update. #

# #

# When upgrading to releases 11.2.3.3.0 or later: #

# - When the 'exact' package dependency check fails 'minimum' package dependency check will be tried. #

# - When the 'minimum' package dependency check also fails, #

# the conflicting packages should be removed before proceeding. #

# #

# - As part of the prereq checks and as part of the update, a number of rpms will be removed. #

# This removal is required to preserve Exadata functioning. This should not be confused with obsolete packages. #

# - See /var/log/cellos/packages\_to\_be\_removed.txt for details on what packages will be removed. #

# #

# - In case of any problem when filing an SR, upload the following: #

# - /var/log/cellos/dbnodeupdate.log #

# - /var/log/cellos/dbnodeupdate.<runid>.diag #

# - where <runid> is the is of the failing run. #

# #

##########################################################################################################################

Continue ? [Y/n]

Y

(\*) 2014-06-05 21:57:43: Unzipping helpers (/u01/update/dbupdate-helpers.zip) to /opt/oracle.SupportTools/dbnodeupdate\_helpers

(\*) 2014-06-05 21:57:43: Initializing logfile /var/log/cellos/dbnodeupdate.log

(\*) 2014-06-05 21:57:43: Collecting system configuration details. This may take a while...

Warning: File /etc/oratab not in place.

dbnodeupdate.sh can continue without /etc/oratab but will then assume no Oracle homes are installed.

Continue ? [Y/n]

Y

(\*) 2014-06-05 21:57:59: Validating system details for known issues and best practices. This may take a while...

(\*) 2014-06-05 21:58:00: Checking free space in /u01

(\*) 2014-06-05 21:58:00: Unzipping /u01/update/p18205376\_112322\_Linux-x86-64.zip to /u01/app/oracle/stage.050614215741, this may take a while

(\*) 2014-06-05 21:58:09: Original /etc/yum.conf moved to /etc/yum.conf.050614215741, generating new yum.conf

(\*) 2014-06-05 21:58:10: Generating Exadata repository file /etc/yum.repos.d/Exadata-computenode.repo

Warning: Network routing configuration requires change before updating database server. See MOS 1306154.1

Continue ? [y/N]

Y

(\*) 2014-06-05 21:58:42: Validating the specified source location.

(\*) 2014-06-05 21:58:43: Cleaning up the yum cache.

(\*) 2014-06-05 21:58:43: Performing yum package dependency check. This may take a while...

(\*) 2014-06-05 21:59:04: Package dependency check successful.

Active Image version : 11.2.3.1.1.120607

Active Kernel version : 2.6.18-274.18.1.0.1.el5

Active LVM Name : /dev/mapper/VGExaDb-LVDbSys1

Inactive Image version : 11.2.3.1.1.120607

Inactive LVM Name : /dev/mapper/VGExaDb-LVDbSys2

Current user id : root

Action : upgrade

Upgrading to : 11.2.3.2.2.140221.1

Baseurl : file:///var/www/html/yum/unknown/EXADATA/dbserver/050614215741/x86\_64/ (iso)

Iso file : /u01/app/oracle/stage.050614215741/112322\_base.iso

Create a backup : No

Shutdown stack : No (Currently stack is down - /etc/oratab not found)

Hotspare to be claimed : No (/opt/oracle/EXADATA\_KEEP\_HOT\_SPARE\_ON\_YUM\_UPDATE exists)

RPM exclusion list : Not in use (add rpms to /etc/exadata/yum/exclusion.lst and restart dbnodeupdate.sh)

Dependencies : No conflicts

Logfile : /var/log/cellos/dbnodeupdate.log (runid: 050614215741)

Diagfile : /var/log/cellos/dbnodeupdate.050614215741.diag

Server model : SUN FIRE X4170 M2 SERVER

dbnodeupdate.sh rel. : 3.26 (always check MOS 1553103.1 for the latest release of dbnodeupdate)

Note : After upgrading and rebooting run './dbnodeupdate.sh -c' to finish post steps.

The following known issues will be checked for and automatically corrected by dbnodeupdate.sh:

(\*) - Issue - Hotspare not reclaimed

(\*) - Issue - Cell and Database image versions 11.2.2.2.2 or lower require workaround before patching

(\*) - Issue - Database servers with an ofa rpm earlier than 1.5.1-4.0.28 can encounter a file system corruption

(\*) - Issue - Filesystem checks not disabled on database servers

(\*) - Issue - X4800 ILOM 3.0.16.16 r69500 and X4800M2 ILOM 3.0.16.20.b r75668 require upd. before upgr. to 11.2.3.2.2. See MOS 1608581.1

(\*) - Issue - Verify the vm.min\_free\_kbytes kernel parameter on database servers to make sure 512MB is reserved

The following known issues will be checked for but require manual follow-up:

(\*) - Issue - Database Server upgrades may hit network routing issues after the upgrade

(\*) - Issue - Yum rolling update requires fix for 11768055 when Grid Infrastructure is below 11.2.0.2 BP12

(\*) - Updates from releases earlier than 11.2.3.3.0 may hang during reboot. See MOS 1620826.1 for more details

Continue ? [Y/n]

Y

(\*) 2014-06-05 21:59:13: Collecting console history for diag purposes

(\*) 2014-06-05 21:59:27: Unmount of /boot successful

(\*) 2014-06-05 21:59:28: Check for /dev/sda1 successful

(\*) 2014-06-05 21:59:28: Mount of /boot successful

(\*) 2014-06-05 21:59:28: Disabling stack from starting

(\*) 2014-06-05 21:59:28: Unable to disable GI, no /etc/oratab

(\*) 2014-06-05 21:59:28: OSWatcher stopped successful

(\*) 2014-06-05 21:59:28: Validating the specified source location.

(\*) 2014-06-05 21:59:29: Cleaning up the yum cache.

(\*) 2014-06-05 21:59:29: Performing yum update. Node is expected to reboot when finished.

(\*) 2014-06-05 22:02:33: All post steps are finished.

(\*) 2014-06-05 22:02:33: System will reboot automatically for changes to take effect

(\*) 2014-06-05 22:02:33: After reboot run "./dbnodeupdate.sh -c" to complete the upgrade

[root@db01 update]#

Remote broadcast message (Thu Jun 5 22:02:41 2014):

Exadata post install steps started.

It may take up to 2 minutes.

The db node will be rebooted upon successful completion.

Remote broadcast message (Thu Jun 5 22:03:15 2014):

Exadata post install steps completed.

Initiate reboot in 10 seconds to apply the changes.

Broadcast message from root (Thu Jun 5 22:03:25 2014):

The system is going down for reboot NOW!

* 1. *Upgrade images trên Storage server*
     1. **Preparing Exadata Cells for Patch Application**
* Run all steps as the root user
* *Step 1: Obtain Lights Out (LO) and serial console access for the cells*

For V2, X2-2, X2-8, X3-2, and X3-8 (Sun hardware) cells: Use SSH to the ILOM host name or IP address as the root user. To start the serial console,

Oracle(R) Integrated Lights Out Manager

Version 3.0.16.10 r65138

Copyright (c) 2011, Oracle and/or its affiliates. All rights reserved.

Oracle(R) Integrated Lights Out Manager

Version 3.0.16.10 r65138

Copyright (c) 2011, Oracle and/or its affiliates. All rights reserved.

-> start /SP/console

Are you sure you want to start /SP/console (y/n)? y

Serial console started. To stop, type ESC (

To stop it press the Escape key (ESC) followed by ( and then stop /SP/console

* *Step 2: Ensure the network configuration on the cell is consistent with values in the cell.conf file using the following command:*

[root@cell02 update]# /opt/oracle.cellos/ipconf -verify

Verifying of Exadata configuration file /opt/oracle.cellos/cell.conf

Done. Configuration file /opt/oracle.cellos/cell.conf passed all verification checks

* *Step 3: Set up for using the patchmgr utility*

Prepare the list of cells file named cell\_group that has one cell host name or IP address per line for each cell to be patched.

Check for existing root SSH equivalence. The following command should require no password prompts and no interaction. It should return the list of host names in the cell\_group file.Set up SSH root equivalence if not already done so from the launch server. Do not do this step if you already have root SSH equivalence.

Generate root SSH keys as follows:

#ssh-keygen -t rsa

Accept defaults so the SSH keys are created for the root user.

Push SSH keys to set up SSH equivalence using the following command. Enter the root password when prompted.

#dcli -g cell\_group -l root -k

* *Step 4: Shut down all cell services on all cells that will be patched*

Shut down all cell services on all cells that will be patched. This may be done by the root user on each cell by running cellcli -e 'alter cell shutdown services all' or command to do this on all cells at the same time:

#dcli -g cell\_group -l root "cellcli -e alter cell shutdown services all"

Stopping the RS, CELLSRV, and MS services...

The SHUTDOWN of services was successful.

* + 1. **Patching Using the patchmgr Utility**

Chạy patching trên server khác( không chạy trên server cần update patch)

* *Step 1: Log in to a system that has SSH equivalence set up for the root user to all cells that are to be patched*
* *Step 2: Unzip the patch*

Copy file p17953347\_112322\_Linux-x86-64.zip to /tmp via FTP

Unzip file

root@cell03 ~]# cd /tmp/

[root@cell03 tmp]# unzip p17953347\_112322\_Linux-x86-64.zip

Archive: p17953347\_112322\_Linux-x86-64.zip

creating: patch\_11.2.3.2.2.140221.1/

inflating: patch\_11.2.3.2.2.140221.1/dostep.sh

inflating: patch\_11.2.3.2.2.140221.1/patchmgr

inflating: patch\_11.2.3.2.2.140221.1/11.2.3.2.2.140221.1.iso

inflating: patch\_11.2.3.2.2.140221.1/11.2.3.2.2.140221.1.patch.tar

inflating: patch\_11.2.3.2.2.140221.1/dcli

creating: patch\_11.2.3.2.2.140221.1/etc/

creating: patch\_11.2.3.2.2.140221.1/etc/config/

inflating: patch\_11.2.3.2.2.140221.1/etc/config/inventory.xml

inflating: patch\_11.2.3.2.2.140221.1/README.html

[root@cell03 tmp]# cd patch\_11.2.3.2.2.140221.1/

* *Step 3: Verify SSH access to cells that was configured*

[root@cell03 patch\_11.2.3.2.2.140221.1]# dcli -g cell\_group -l root 'hostname -i'

cell02: 192.168.1.2

* *Step 4: Reset the server to a known state using the following command:*

[root@cell03 patch\_11.2.3.2.2.140221.1]# ./patchmgr -cells cell\_group -reset\_force

Linux cell03.domain.mycompany.com 2.6.32-400.35.2.el5uek #1 SMP Thu Feb 13 15:00:30 PST 2014 x86\_64 x86\_64 x86\_64 GNU/Linux

2014-06-06 02:13:08 :DONE: reset\_force

* *Step 5: Clean up any previous patchmgr utility runs*

[root@cell03 patch\_11.2.3.2.2.140221.1]# ./patchmgr -cells cell\_group -cleanup

Linux cell03.domain.mycompany.com 2.6.32-400.35.2.el5uek #1 SMP Thu Feb 13 15:00:30 PST 2014 x86\_64 x86\_64 x86\_64 GNU/Linux

2014-06-06 02:13:19 :DONE: Cleanup

* *Step 6: Verify that the cells meet prerequisite checks*

[root@db01 patch\_11.2.3.2.2.140221.1]# ./patchmgr -cells cell\_group -patch\_check\_prereq

Linux db01.domain.mycompany.com 2.6.32-400.35.2.el5uek #1 SMP Thu Feb 13 15:00:30 PST 2014 x86\_64 x86\_64 x86\_64 GNU/Linux

2014-06-08 19:54:47 :Working: DO: Check cells have ssh equivalence for root user. Up to 10 seconds per cell ...

2014-06-08 19:54:48 :SUCCESS: DONE: Check cells have ssh equivalence for root user.

2014-06-08 19:54:48 :Working: DO: Check space and state of Cell services on target cells. Up to 1 minute ...

2014-06-08 19:55:02 :SUCCESS: DONE: Check space and state of Cell services on target cells.

2014-06-08 19:55:02 :Working: DO: Copy, extract prerequisite check archive to cells. If required start md11 mismatched partner size correction. Up to 40 minutes ...

2014-06-08 19:55:15 Wait correction of degraded md11 due to md partner size mismatch. Up to 30 minutes.

2014-06-08 19:55:16 :SUCCESS: DONE: Copy, extract prerequisite check archive to cells. If required start md11 mismatched partner size correction.

2014-06-08 19:55:16 :Working: DO: Check prerequisites on all cells. Up to 2 minutes ...

2014-06-08 19:55:42 :SUCCESS: DONE: Check prerequisites on all cells.

* *Step 7: start the patch application*

[root@db01 patch\_11.2.3.2.2.140221.1]# ./patchmgr -cells cell\_group -patch

Linux db01.domain.mycompany.com 2.6.32-400.35.2.el5uek #1 SMP Thu Feb 13 15:00:30 PST 2014 x86\_64 x86\_64 x86\_64 GNU/Linux

NOTE Cells will reboot during the patch or rollback process.

NOTE For non-rolling patch or rollback, ensure all ASM instances using

NOTE the cells are shut down for the duration of the patch or rollback.

NOTE For rolling patch or rollback, ensure all ASM instances using

NOTE the cells are up for the duration of the patch or rollback.

WARNING Do not start more than one instance of patchmgr.

WARNING Do not interrupt the patchmgr session.

WARNING Do not alter state of ASM instances during patch or rollback.

WARNING Do not resize the screen. It may disturb the screen layout.

WARNING Do not reboot cells or alter cell services during patch or rollback.

WARNING Do not open log files in editor in write mode or try to alter them.

NOTE All time estimates are approximate. Timestamps on the left are real.

NOTE You may interrupt this patchmgr run in next 60 seconds with control-c.

2014-06-08 23:25:11 :Working: DO: Check cells have ssh equivalence for root user. Up to 10 seconds per cell ...

2014-06-08 23:25:12 :SUCCESS: DONE: Check cells have ssh equivalence for root user.

2014-06-08 23:25:12 :Working: DO: Check space and state of Cell services on target cells. Up to 1 minute ...

2014-06-08 23:25:27 :SUCCESS: DONE: Check space and state of Cell services on target cells.

2014-06-08 23:25:27 :Working: DO: Copy, extract prerequisite check archive to cells. If required start md11 mismatched partner size correction. Up to 40 minutes ...

2014-06-08 23:25:40 Wait correction of degraded md11 due to md partner size mismatch. Up to 30 minutes.

2014-06-08 23:25:41 :SUCCESS: DONE: Copy, extract prerequisite check archive to cells. If required start md11 mismatched partner size correction.

2014-06-08 23:25:41 :Working: DO: Check prerequisites on all cells. Up to 2 minutes ...

2014-06-08 23:26:05 :SUCCESS: DONE: Check prerequisites on all cells.

2014-06-08 23:26:05 :Working: DO: Copy the patch to all cells. Up to 3 minutes ...

2014-06-08 23:26:37 :SUCCESS: DONE: Copy the patch to all cells.

2014-06-08 23:26:39 1 of 5 :Working: DO: Initiate patch on cells. Cells will remain up. Up to 5 minutes ...

2014-06-08 23:26:41 1 of 5 :SUCCESS: DONE: Initiate patch on cells.

2014-06-08 23:26:41 2 of 5 :Working: DO: Waiting to finish pre-reboot patch actions. Cells will remain up. Up to 45 minutes ...

2014-06-08 23:27:41 Wait for patch pre-reboot

2014-06-08 23:38:50 2 of 5 :SUCCESS: DONE: Waiting to finish pre-reboot patch actions.

2014-06-08 23:38:50 3 of 5 :Working: DO: Finalize patch on cells. Cells will reboot. Up to 5 minutes ...

2014-06-08 23:39:06 3 of 5 :SUCCESS: DONE: Finalize patch on cells.

2014-06-08 23:39:06 4 of 5 :Working: DO: Wait for cells to reboot and come online. Up to 120 minutes ...

2014-06-08 23:40:06 Wait for patch finalization and reboot

* *Step 8: Verify the patch status after the patchmgr utility completes*

Check image status after updated:

[root@cell01 ~]# imagehistory

Version : 11.2.3.1.1.120607

Image activation date : 2014-06-08 23:35:01 -0700

Imaging mode : fresh

Imaging status : success

Version : 11.2.3.2.2.140221.1

Image activation date : 2014-06-09 01:13:46 -0700

Imaging mode : out of partition upgrade

Imaging status : success

[root@cell01 ~]# imageinfo

Kernel version: 2.6.32-400.35.2.el5uek #1 SMP Thu Feb 13 15:00:30 PST 2014 x86\_64

Cell version: OSS\_11.2.3.2.2\_LINUX.X64\_140221.1

Cell rpm version: cell-11.2.3.2.2\_LINUX.X64\_140221.1-1

Active image version: 11.2.3.2.2.140221.1

Active image activated: 2014-06-09 01:13:46 -0700

Active image status: success

Active system partition on device: /dev/md6

Active software partition on device: /dev/md8

In partition rollback: Impossible

Cell boot usb partition: /dev/sdm1

Cell boot usb version: 11.2.3.2.2.140221.1

Inactive image version: 11.2.3.1.1.120607

Inactive image activated: 2014-06-08 23:35:01 -0700

Inactive image status: success

Inactive system partition on device: /dev/md5

Inactive software partition on device: /dev/md7

Boot area has rollback archive for the version: 11.2.3.1.1.120607

Rollback to the inactive partitions: Possible

* + 1. **Rolling Back Successfully Patched Exadata Cells**
* Step 1: (For rolling back to releases earlier than 11.2.3.2.0) Use the following command to check the flash cache mode:

#dcli -g ~/cell\_group -l root "cellcli -e list cell attributes flashCacheMode"

If flash cache mode is writeback, then change the mode to writethrough. This can be done in a rolling or non-rolling fashion.

When changing to writethrough mode in a rolling fashion, run the following commands on a cell by cell basis. All grid disks on the cell should have the asmdeactivationoutcome attribute set to Yes before running the commands.

* Step 2: Flush the cache. This may take many minutes depending on the amount of data in the writeback cache.

#cellcli -e alter flashcache all flush

* Step 3: Drop the cache. This command will fail if the cache was not already flushed.

#cellcli -e drop flashcache

* Step 4: Verify that the flash cache is dropped. The following command will return no values when the flash cache has been dropped successfully.

#cellcli -e list flashcache

* Step 5: Convert the flash cache to writethrough.

#cellcli -e alter cell shutdown services cellsrv

#cellcli -e alter cell flashCacheMode=WriteThrough

#cellcli -e alter cell startup services cellsrv

#cellcli -e create flashcache all

When changing to writethrough mode in a non-rolling fashion, run the following steps only after bringing down all database and Oracle ASM instances.:

#dcli -l root -g ~/cell\_group 'cellcli -e alter flashcache all flush'

#dcli -l root -g ~/cell\_group 'cellcli -e drop flashcache'

#dcli -l root -g ~/cell\_group 'cellcli -e alter cell shutdown services cellsrv'

#dcli -l root -g ~/cell\_group 'cellcli -e alter cell flashCacheMode=WriteThrough'

#dcli -l root -g ~/cell\_group 'cellcli -e alter cell startup services cellsrv'

#dcli -l root -g ~/cell\_group 'cellcli -e create flashcache all'

* Step 6: Check the prerequisites using the following command:

#./patchmgr -cells cell\_group -rollback\_check\_prereq [-rolling]

* Step 7: Perform the rollback using the following command:

#./patchmgr -cells cell\_group -rollback [-rolling]

* Step 8: Clean up the cells using the -cleanup command to clean up all the temporary patch or rollback files on the cells. This will clean the stale patch and rollback states as well as clean up to 1.5 GB of disk space on the cells. Also use this command before retrying a halted or failed run of the patchmgr utility.

#./patchmgr -cells cell\_group -cleanup

* 1. *Kiểm tra sau Upgrade images*

[root@dm01db01 onecommand]# imageinfo

Kernel version: 2.6.32-400.35.2.el5uek #1 SMP Thu Feb 13 15:00:30 PST 2014 x86\_64

Image version: 11.2.3.2.2.140221.1

Image activated: 2014-06-08 21:18:43 -0700

Image status: success

System partition on device: /dev/mapper/VGExaDb-LVDbSys1

1. **Thực hiện apply config**
   1. *Chuẩn bị trước apply config*
      1. **Software**

Tool onecommand: p18770054\_112330\_Linux-x86-64.zip

* + 1. **Thu thập thông tin config**
* Step 1: Download file Onecommand : p18770054\_112330\_Linux-x86-64.zip
* Step 2: Giải nén vào folder /tmp
* Step 3: Chạy file install.sh để thu thập thông tin

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

* 1. *Thực hiện apply config*
     1. **Step 1: Chuẩn bị trước khi thực hiện**

Copy folder được tạo ra ở bước 3.1.2 vào server db01.

* + 1. **Step 2: Kiểm tra IP trước khi config**

[root@db01 linux-x64]# ./Exadata-dm01-checkip.sh –m pre\_applyconfig

Executing Validate Configuration File

Processing section NAME

GOOD : Name Server 10.0.97.24 responds to resolve request for dm01db01.dldchp.vn

Processing section NTP

GOOD : 10.0.97.24 responds to time server query

Processing Section GATEWAY..

ERROR : 10.0.2.254 does not ping

GOOD : 10.0.97.254 pings successfully

Running checkip on cluster cluster-clu1

Processing section SCAN

GOOD : dm01-scan.dldchp.vn forward resolves to 3 IP adresses [10.0.97.35, 10.0.97.36, 10.0.97.37]..

ERROR : 10.0.97.35 does not reverse resolve to dm01-scan.dldchp.vn

GOOD : 10.0.97.35 does not ping

ERROR : 10.0.97.37 does not reverse resolve to dm01-scan.dldchp.vn

GOOD : 10.0.97.37 does not ping

ERROR : 10.0.97.36 does not reverse resolve to dm01-scan.dldchp.vn

GOOD : 10.0.97.36 does not ping

Processing section VIP..

ERROR : 10.0.97.32 does not reverse resolve to dm01db01-vip.dldchp.vn

GOOD : 10.0.97.32 does not ping..

ERROR : 10.0.97.34 does not reverse resolve to dm01db02-vip.dldchp.vn

GOOD : 10.0.97.34 does not ping

Processing section COMPUTE..

ERROR : 10.0.97.31 does not reverse resolve to dm01db01.dldchp.vn

GOOD : 10.0.97.31 does not ping

ERROR : 10.0.97.33 does not reverse resolve to dm01db02.dldchp.vn

GOOD : 10.0.97.33 does not ping

ERROR : 10.0.2.51 does not reverse resolve to dm01dbadm01.dldchp.vn

GOOD : 10.0.2.51 does not ping

ERROR : 10.0.2.52 does not reverse resolve to dm01dbadm02.dldchp.vn

GOOD : 10.0.2.52 does not ping

Processing section CELL

ERROR : 10.0.2.53 does not reverse resolve to dm01celadm01.dldchp.vn

GOOD : 10.0.2.53 does not ping

ERROR : 10.0.2.54 does not reverse resolve to dm01celadm02.dldchp.vn

GOOD : 10.0.2.54 does not ping

ERROR : 10.0.2.55 does not reverse resolve to dm01celadm03.dldchp.vn

GOOD : 10.0.2.55 does not ping

Processing section FACTORY

ERROR : 192.168.1.1 pings

GOOD : 192.168.1.10 does not ping

ERROR : 192.168.1.101 pings

ERROR : 192.168.1.102 pings

ERROR : 192.168.1.103 pings

GOOD : 192.168.1.104 does not ping

GOOD : 192.168.1.105 does not ping

GOOD : 192.168.1.106 does not ping

ERROR : 192.168.1.107 pings

ERROR : 192.168.1.108 pings

ERROR : 192.168.1.109 pings

GOOD : 192.168.1.11 does not ping

GOOD : 192.168.1.110 does not ping

GOOD : 192.168.1.111 does not ping

GOOD : 192.168.1.112 does not ping

GOOD : 192.168.1.113 does not ping

GOOD : 192.168.1.114 does not ping

GOOD : 192.168.1.115 does not ping

GOOD : 192.168.1.116 does not ping

GOOD : 192.168.1.117 does not ping

GOOD : 192.168.1.118 does not ping

GOOD : 192.168.1.119 does not ping

GOOD : 192.168.1.12 does not ping

ERROR : 192.168.1.120 pings

GOOD : 192.168.1.121 does not ping

GOOD : 192.168.1.122 does not ping

GOOD : 192.168.1.13 does not ping

GOOD : 192.168.1.14 does not ping

GOOD : 192.168.1.15 does not ping

GOOD : 192.168.1.16 does not ping

GOOD : 192.168.1.17 does not ping

GOOD : 192.168.1.18 does not ping

GOOD : 192.168.1.19 does not ping

ERROR : 192.168.1.2 pings

GOOD : 192.168.1.20 does not ping

GOOD : 192.168.1.200 does not ping

GOOD : 192.168.1.201 does not ping

GOOD : 192.168.1.202 does not ping

GOOD : 192.168.1.203 does not ping

GOOD : 192.168.1.21 does not ping

GOOD : 192.168.1.22 does not ping

ERROR : 192.168.1.3 pings

ERROR : 192.168.1.4 pings

GOOD : 192.168.1.5 does not ping

GOOD : 192.168.1.6 does not ping

GOOD : 192.168.1.7 does not ping

ERROR : 192.168.1.8 pings

ERROR : 192.168.1.9 pings

Processing section SWITCHES

ERROR : 10.0.2.61 does not reverse resolve to dm01sw-kvm01.dldchp.vn

GOOD : 10.0.2.61 does not ping

ERROR : 10.0.2.62 does not reverse resolve to dm01sw-adm01.dldchp.vn

GOOD : 10.0.2.62 does not ping

ERROR : 10.0.2.63 does not reverse resolve to dm01sw-iba01.dldchp.vn

GOOD : 10.0.2.63 does not ping

ERROR : 10.0.2.64 does not reverse resolve to dm01sw-ibb01.dldchp.vn

GOOD : 10.0.2.64 does not ping

ERROR : 10.0.2.65 does not reverse resolve to dm01sw-pdua01.dldchp.vn

GOOD : 10.0.2.65 does not ping

ERROR : 10.0.2.66 does not reverse resolve to dm01sw-pdub01.dldchp.vn

GOOD : 10.0.2.66 does not ping

Processing section ILOMS

ERROR : 10.0.2.56 does not reverse resolve to dm01dbadm01-ilom.dldchp.vn

GOOD : 10.0.2.56 does not ping

ERROR : 10.0.2.57 does not reverse resolve to dm01dbadm02-ilom.dldchp.vn

GOOD : 10.0.2.57 does not ping

ERROR : 10.0.2.58 does not reverse resolve to dm01celadm01-ilom.dldchp.vn

GOOD : 10.0.2.58 does not ping

ERROR : 10.0.2.59 does not reverse resolve to dm01celadm02-ilom.dldchp.vn

GOOD : 10.0.2.59 does not ping

ERROR : 10.0.2.60 does not reverse resolve to dm01celadm03-ilom.dldchp.vn

GOOD : 10.0.2.60 does not ping

Completed validation...

Successfully completed execution of step Validate Configuration File [elapsed Time [Elapsed = 46171 mS [0.0 minutes] Wed Jun 11 01:45:41 PDT 2014]]

[root@db01 linux-x64]#

* + 1. **Step 3: Thực hiện apply config**

Thực hiện câu lệnh sau: “./applyconfig.sh –preconf /u01/update/Exadata-dm01-preconf\_rack\_0.csv -dbm-node-ips quarter”

[root@db01 linux-x64]# cd /opt/oracle.SupportTools/firstconf/

[root@db01 firstconf]# ./applyconfig.sh -preconf /u01/update/Exadata-dm01-preconf\_rack\_0.csv -dbm-node-ips quarter

[PRECHECK] This utility started by the root user: PASSED

[PRECHECK] dcli utility found and has executable permissions /usr/local/bin/dcli: PASSED

[INFO] This is SUN FIRE X4170 M2 SERVER machine

[INFO] Number of LSI controllers: 1

[INFO] Physical disks found: 4 (252:0 252:1 252:2 252:3)

[INFO] Logical drives found: 1

[INFO] Linux logical drive: 1

[INFO] RAID Level for the Linux logical drive: 5

[INFO] Dual boot installation: no

[INFO] LVM based installation: yes

[INFO] Physical disks in the Linux logical drive: 3 (252:1 252:2 252:3)

[INFO] Dedicated Hot Spares for the Linux logical drive: 0

[INFO] Global Hot Spares: 1 (252:0)

[INFO] Valid single boot configuration found for Linux: RAID5 from 3 disks and 1 global hot spare disk

[PRECHECK] An IP of this host defined 192.168.1.8: PASSED

Pinging 192.168.1.9 ...PASSED

Pinging 192.168.1.8 ...PASSED

Pinging 192.168.1.3 ...PASSED

Pinging 192.168.1.2 ...PASSED

Pinging 192.168.1.1 ...PASSED

Validating /u01/update/Exadata-dm01-preconf\_rack\_0.csv. This process will take up to 2 minutes ...

Done. Pre config verification OK

[INFO] Checking nodes have ssh equivalence for root user ...

Checking passwordless ssh to the node 192.168.1.9 ... PASSED

Checking passwordless ssh to the node 192.168.1.8 ... PASSED

Checking passwordless ssh to the node 192.168.1.3 ... PASSED

Checking passwordless ssh to the node 192.168.1.2 ... PASSED

Checking passwordless ssh to the node 192.168.1.1 ... PASSED

[INFO] This process will take up to 2 minutes ...

[INFO] Generating cell config files for each node in /tmp/ipconf ...

Generating configs for all cell and db nodes in /tmp/ipconf

Done. Generating configurations for all cell and db nodes OK

[INFO] Secure copying /tmp/ipconf/cell.conf.dm01db02.dldchp.vn to root@192.168.1.9:/.cell.conf ...

cell.conf.dm01db02.dldchp.vn 0% 0 0.0KB/s --:-- ETAcell.conf.dm01db02.dldchp.vn 100% 4052 4.0KB/s 00:00

[INFO] Secure copying /tmp/ipconf/cell.conf.dm01db01.dldchp.vn to root@192.168.1.8:/.cell.conf ...

cell.conf.dm01db01.dldchp.vn 0% 0 0.0KB/s --:-- ETAcell.conf.dm01db01.dldchp.vn 100% 4052 4.0KB/s 00:00

[INFO] Secure copying /tmp/ipconf/cell.conf.dm01celadm03.dldchp.vn to root@192.168.1.3:/.cell.conf ...

cell.conf.dm01celadm03.dldchp.vn 0% 0 0.0KB/s --:-- ETAcell.conf.dm01celadm03.dldchp.vn 100% 3002 2.9KB/s 00:00

[INFO] Secure copying /tmp/ipconf/cell.conf.dm01celadm02.dldchp.vn to root@192.168.1.2:/.cell.conf ...

cell.conf.dm01celadm02.dldchp.vn 0% 0 0.0KB/s --:-- ETAcell.conf.dm01celadm02.dldchp.vn 100% 3002 2.9KB/s 00:00

[INFO] Secure copying /tmp/ipconf/cell.conf.dm01celadm01.dldchp.vn to root@192.168.1.1:/.cell.conf ...

cell.conf.dm01celadm01.dldchp.vn 0% 0 0.0KB/s --:-- ETAcell.conf.dm01celadm01.dldchp.vn 100% 3002 2.9KB/s 00:00

192.168.1.3:

192.168.1.3: Stopping the RS, CELLSRV, and MS services...

192.168.1.3: The SHUTDOWN of services was successful.

192.168.1.2:

192.168.1.2: Stopping the RS, CELLSRV, and MS services...

192.168.1.2: The SHUTDOWN of services was successful.

192.168.1.1:

192.168.1.1: Stopping the RS, CELLSRV, and MS services...

192.168.1.1: The SHUTDOWN of services was successful.

[WARNING] If you are connected to this node using ssh, then you will now get disconnected. After the node

[WARNING] boots back, you should connect to it using the hostname or ip address in the preconf.csv file

[INFO] Refer to the user guide about how to recover from problems running applyconfig.sh

Connection closed by foreign host.

### END LOG - DATE: 140611, TIME: 160424 ###

* + 1. **Step 4: Kiểm tra IP sau khi config**

[root@dm01db01 onecommand]# cd /tmp/linux-x64/

[root@dm01db01 linux-x64]# ./Exadata-dm01-checkip.sh -m post\_applyconfig

Executing Validate Configuration File

Processing section NAME

GOOD : Name Server 10.0.97.24 responds to resolve request for dm01db01.dldchp.vn

Processing section NTP

GOOD : 10.0.97.24 responds to time server query

Processing Section GATEWAY

GOOD : 10.0.2.254 pings successfully

GOOD : 10.0.97.254 pings successfully

Running checkip on cluster cluster-clu1

Processing section SCAN

GOOD : dm01-scan.dldchp.vn forward resolves to 3 IP adresses [10.0.97.35, 10.0.97.36, 10.0.97.37]..

GOOD : dm01-scan.dldchp.vn forward resolves to 10.0.97.36

GOOD : 10.0.97.36 reverse resolves to dm01-scan.dldchp.vn

GOOD : 10.0.97.36 does not ping

GOOD : dm01-scan.dldchp.vn forward resolves to 10.0.97.35

GOOD : 10.0.97.35 reverse resolves to dm01-scan.dldchp.vn

GOOD : 10.0.97.35 does not ping

GOOD : dm01-scan.dldchp.vn forward resolves to 10.0.97.37

GOOD : 10.0.97.37 reverse resolves to dm01-scan.dldchp.vn

GOOD : 10.0.97.37 does not ping

Processing section VIP..

GOOD : dm01db01-vip.dldchp.vn forward resolves to 10.0.97.32

GOOD : 10.0.97.32 reverse resolves to dm01db01-vip.dldchp.vn

GOOD : 10.0.97.32 does not ping..

GOOD : dm01db02-vip.dldchp.vn forward resolves to 10.0.97.34

GOOD : 10.0.97.34 reverse resolves to dm01db02-vip.dldchp.vn

GOOD : 10.0.97.34 does not ping

Processing section COMPUTE

GOOD : dm01db01.dldchp.vn forward resolves to 10.0.97.31

GOOD : 10.0.97.31 reverse resolves to dm01db01.dldchp.vn

ERROR : 10.0.97.31 is pingable

GOOD : dm01db02.dldchp.vn forward resolves to 10.0.97.33

GOOD : 10.0.97.33 reverse resolves to dm01db02.dldchp.vn

ERROR : 10.0.97.33 is pingable

GOOD : dm01dbadm01.dldchp.vn forward resolves to 10.0.2.51

GOOD : 10.0.2.51 reverse resolves to dm01dbadm01.dldchp.vn

ERROR : 10.0.2.51 is pingable

GOOD : dm01dbadm02.dldchp.vn forward resolves to 10.0.2.52

GOOD : 10.0.2.52 reverse resolves to dm01dbadm02.dldchp.vn

ERROR : 10.0.2.52 is pingable

Processing section CELL

GOOD : dm01celadm01.dldchp.vn forward resolves to 10.0.2.53

GOOD : 10.0.2.53 reverse resolves to dm01celadm01.dldchp.vn

ERROR : 10.0.2.53 is pingable

GOOD : dm01celadm02.dldchp.vn forward resolves to 10.0.2.54

GOOD : 10.0.2.54 reverse resolves to dm01celadm02.dldchp.vn

ERROR : 10.0.2.54 is pingable

GOOD : dm01celadm03.dldchp.vn forward resolves to 10.0.2.55

GOOD : 10.0.2.55 reverse resolves to dm01celadm03.dldchp.vn

ERROR : 10.0.2.55 is pingable

Processing section FACTORY

GOOD : 192.168.1.1 does not ping

GOOD : 192.168.1.10 does not ping

GOOD : 192.168.1.101 does not ping

GOOD : 192.168.1.102 does not ping

GOOD : 192.168.1.103 does not ping

GOOD : 192.168.1.104 does not ping

GOOD : 192.168.1.105 does not ping

GOOD : 192.168.1.106 does not ping

GOOD : 192.168.1.107 does not ping

GOOD : 192.168.1.108 does not ping

GOOD : 192.168.1.109 does not ping

GOOD : 192.168.1.11 does not ping

GOOD : 192.168.1.110 does not ping

GOOD : 192.168.1.111 does not ping

GOOD : 192.168.1.112 does not ping

GOOD : 192.168.1.113 does not ping

GOOD : 192.168.1.114 does not ping

GOOD : 192.168.1.115 does not ping

GOOD : 192.168.1.116 does not ping

GOOD : 192.168.1.117 does not ping

GOOD : 192.168.1.118 does not ping

GOOD : 192.168.1.119 does not ping

GOOD : 192.168.1.12 does not ping

GOOD : 192.168.1.120 does not ping

GOOD : 192.168.1.121 does not ping

GOOD : 192.168.1.122 does not ping

GOOD : 192.168.1.13 does not ping

GOOD : 192.168.1.14 does not ping

GOOD : 192.168.1.15 does not ping

GOOD : 192.168.1.16 does not ping

GOOD : 192.168.1.17 does not ping

GOOD : 192.168.1.18 does not ping

GOOD : 192.168.1.19 does not ping

GOOD : 192.168.1.2 does not ping

GOOD : 192.168.1.20 does not ping

GOOD : 192.168.1.200 does not ping

GOOD : 192.168.1.201 does not ping

GOOD : 192.168.1.202 does not ping

GOOD : 192.168.1.203 does not ping

GOOD : 192.168.1.21 does not ping

GOOD : 192.168.1.22 does not ping

GOOD : 192.168.1.3 does not ping

GOOD : 192.168.1.4 does not ping

GOOD : 192.168.1.5 does not ping

GOOD : 192.168.1.6 does not ping

GOOD : 192.168.1.7 does not ping

GOOD : 192.168.1.8 does not ping

GOOD : 192.168.1.9 does not ping

Processing section SWITCHES

GOOD : dm01sw-kvm01.dldchp.vn forward resolves to 10.0.2.61

GOOD : 10.0.2.61 reverse resolves to dm01sw-kvm01.dldchp.vn

GOOD : 10.0.2.61 does not ping

GOOD : dm01sw-adm01.dldchp.vn forward resolves to 10.0.2.62

GOOD : 10.0.2.62 reverse resolves to dm01sw-adm01.dldchp.vn

GOOD : 10.0.2.62 does not ping

GOOD : dm01sw-iba01.dldchp.vn forward resolves to 10.0.2.63

GOOD : 10.0.2.63 reverse resolves to dm01sw-iba01.dldchp.vn

GOOD : 10.0.2.63 does not ping

GOOD : dm01sw-ibb01.dldchp.vn forward resolves to 10.0.2.64

GOOD : 10.0.2.64 reverse resolves to dm01sw-ibb01.dldchp.vn

GOOD : 10.0.2.64 does not ping

GOOD : dm01sw-pdua01.dldchp.vn forward resolves to 10.0.2.65

GOOD : 10.0.2.65 reverse resolves to dm01sw-pdua01.dldchp.vn

GOOD : 10.0.2.65 does not ping

GOOD : dm01sw-pdub01.dldchp.vn forward resolves to 10.0.2.66

GOOD : 10.0.2.66 reverse resolves to dm01sw-pdub01.dldchp.vn

GOOD : 10.0.2.66 does not ping

Processing section ILOMS

GOOD : dm01dbadm01-ilom.dldchp.vn forward resolves to 10.0.2.56

GOOD : 10.0.2.56 reverse resolves to dm01dbadm01-ilom.dldchp.vn

ERROR : 10.0.2.56 is pingable

GOOD : dm01dbadm02-ilom.dldchp.vn forward resolves to 10.0.2.57

GOOD : 10.0.2.57 reverse resolves to dm01dbadm02-ilom.dldchp.vn

ERROR : 10.0.2.57 is pingable

GOOD : dm01celadm01-ilom.dldchp.vn forward resolves to 10.0.2.58

GOOD : 10.0.2.58 reverse resolves to dm01celadm01-ilom.dldchp.vn

ERROR : 10.0.2.58 is pingable

GOOD : dm01celadm02-ilom.dldchp.vn forward resolves to 10.0.2.59

GOOD : 10.0.2.59 reverse resolves to dm01celadm02-ilom.dldchp.vn

ERROR : 10.0.2.59 is pingable

GOOD : dm01celadm03-ilom.dldchp.vn forward resolves to 10.0.2.60

GOOD : 10.0.2.60 reverse resolves to dm01celadm03-ilom.dldchp.vn

ERROR : 10.0.2.60 is pingable

Completed validation...

Successfully completed execution of step Validate Configuration File [elapsed Time [Elapsed = 20265 mS [0.0 minutes] Thu Jun 12 11:07:23 ICT 2014]]

1. **Thực hiện deploy config**
   1. *Chuẩn bị trước deploy config*
      1. **Network**

* Step 1: Kiểm tra lại các địa chỉ IP bằng lệnh “ping”
* Step 2: Kiểm tra lại config NTP
  + 1. **Software và Patch**
* Patch 6880880, OPatch release 11.2.0.3.6 or later.
* Patch 13390677, Oracle Database 11g Release 2 (11.2.0.4) Patch Set 3. Only the following files from patch 13390677 are required:

p13390677\_112040\_PLATFORM\_1of7.zip

p13390677\_112040\_PLATFORM\_2of7.zip

p13390677\_112040\_PLATFORM\_3of7.zip

* The patch for the relevant bundle patch being deployed. The following are the bundle patches and patch numbers for release 11.2.0.4:

Bundle Patch Patch Number

6 18371656

5 18179615

4 18006587

3 17904156

2 17838803

1 17628025

* 1. *Thực hiện deploy config*
     1. **Step 1: Kiểm tra các step cần thực hiện.**

[root@dm01db01 onecommand]# cd /tmp/linux-x64/

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -l

1. Validate Configuration File

2. Setup Required Files

3. Create Users

4. Setup Cell Connectivity

5. Verify Infiniband and Calibrate Cells

6. Create Cell Disks

7. Create Grid Disks

8. Install Cluster Software

9. Initialize Cluster Software

10. Install Database Software

11. Relink Database with RDS

12. Create ASM Diskgroups

13. Create Databases

14. Apply Security Fixes

15. Create Installation Summary

16. Resecure Machine

* + 1. **Step 2: Kiểm tra trước deploy**

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -s 1

Executing Validate Configuration File

Validating hostnames and ip addresses using DNS servers [10.0.97.24] for cluster cluster-clu1..........

Validating cluster: cluster-clu1

Locating machines...

Verifying operating systems...........

Validating cluster networks......

Validating DNS setup....

Validating network connectivity.............

Validating NTP setup.....

Validating physical disks on storage cells...............

Completed validation...

SUCCESS: IP address 10.0.97.31[dm01db01.dldchp.vn] configured correctly in DNS servers...

SUCCESS: IP address 10.0.97.36[dm01-scan] configured correctly in DNS servers...

SUCCESS: IP address 10.0.97.33[dm01db02.dldchp.vn] configured correctly in DNS servers...

SUCCESS: IP address 10.0.97.37[dm01-scan] configured correctly in DNS servers...

SUCCESS: IP address 10.0.97.35[dm01-scan] configured correctly in DNS servers...

SUCCESS: IP address 10.0.2.54[dm01celadm02.dldchp.vn] configured correctly in DNS servers...

SUCCESS: IP address 10.0.97.34[dm01db02-vip.dldchp.vn] configured correctly in DNS servers...

SUCCESS: IP address 10.0.2.55[dm01celadm03.dldchp.vn] configured correctly in DNS servers...

SUCCESS: IP address 10.0.97.32[dm01db01-vip.dldchp.vn] configured correctly in DNS servers...

SUCCESS: IP address 10.0.2.53[dm01celadm01.dldchp.vn] configured correctly in DNS servers...

SUCCESS: IP address 10.0.2.51[dm01dbadm01.dldchp.vn] configured correctly in DNS servers...

SUCCESS: IP address 10.0.2.52[dm01dbadm02.dldchp.vn] configured correctly in DNS servers...

SUCCESS: Scan ip 10.0.97.37 is configured correctly

SUCCESS: Scan ip 10.0.97.36 is configured correctly

SUCCESS: Scan ip 10.0.97.35 is configured correctly

SUCCESS: Vip dm01db02-vip with IP address 10.0.97.34 is configured correctly

SUCCESS: Vip dm01db01-vip with IP address 10.0.97.32 is configured correctly

SUCCESS: Validated NTP server 10.0.97.24

SUCCESS: Found Operating system LinuxPhysical and configuration file expects LinuxPhysical on machine dm01db01.dldchp.vn

SUCCESS: Found Operating system LinuxPhysical and configuration file expects LinuxPhysical on machine dm01celadm02.dldchp.vn

SUCCESS: Found Operating system LinuxPhysical and configuration file expects LinuxPhysical on machine dm01db02.dldchp.vn

SUCCESS: Found Operating system LinuxPhysical and configuration file expects LinuxPhysical on machine dm01celadm01.dldchp.vn

SUCCESS: Found Operating system LinuxPhysical and configuration file expects LinuxPhysical on machine dm01celadm03.dldchp.vn

SUCCESS:

SUCCESS: NTP servers on machine dm01db01.dldchp.vn verified successfully

SUCCESS: NTP servers on machine dm01celadm02.dldchp.vn verified successfully

SUCCESS: NTP servers on machine dm01db02.dldchp.vn verified successfully

SUCCESS: NTP servers on machine dm01celadm01.dldchp.vn verified successfully

SUCCESS: NTP servers on machine dm01celadm03.dldchp.vn verified successfully

SUCCESS: Required file /tmp/linux-x64/WorkDir/p18179615\_112040\_Linux-x86-64.zip exists...

SUCCESS: Required file /tmp/linux-x64/WorkDir/p13390677\_112040\_Linux-x86-64\_3of7.zip exists...

SUCCESS: Required file /tmp/linux-x64/WorkDir/p13390677\_112040\_Linux-x86-64\_2of7.zip exists...

SUCCESS: Required file /tmp/linux-x64/WorkDir/p13390677\_112040\_Linux-x86-64\_1of7.zip exists...

SUCCESS: Required file /tmp/linux-x64/WorkDir/p6880880\_112000\_Linux-x86-64.zip exists...

Successfully completed execution of step Validate Configuration File [elapsed Time [Elapsed = 46175 mS [0.0 minutes] Fri Jun 13 09:53:54 ICT 2014]]

* + 1. **Step 3: Setup Required Files**

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -s 2

Executing Setup Required Files

Copying and extracting required files...

Required files are:

/tmp/linux-x64/WorkDir/p13390677\_112040\_Linux-x86-64\_1of7.zip

/tmp/linux-x64/WorkDir/p13390677\_112040\_Linux-x86-64\_2of7.zip

/tmp/linux-x64/WorkDir/p13390677\_112040\_Linux-x86-64\_3of7.zip

/tmp/linux-x64/WorkDir/p18179615\_112040\_Linux-x86-64.zip

/tmp/linux-x64/WorkDir/p6880880\_112000\_Linux-x86-64.zip

Copying required files...

Checking status of remote files...........

Getting status of local files.............

Creating symbolic link for file /tmp/linux-x64/WorkDir/p13390677\_112040\_Linux-x86-64\_1of7.zip at /opt/oracle.SupportTools/onecommand/p13390677\_112040\_Linux-x86-64\_1of7.zip..

Creating symbolic link for file /tmp/linux-x64/WorkDir/p13390677\_112040\_Linux-x86-64\_2of7.zip at /opt/oracle.SupportTools/onecommand/p13390677\_112040\_Linux-x86-64\_2of7.zip..

Creating symbolic link for file /tmp/linux-x64/WorkDir/p13390677\_112040\_Linux-x86-64\_3of7.zip at /opt/oracle.SupportTools/onecommand/p13390677\_112040\_Linux-x86-64\_3of7.zip..

Creating symbolic link for file /tmp/linux-x64/WorkDir/p18179615\_112040\_Linux-x86-64.zip at /opt/oracle.SupportTools/onecommand/p18179615\_112040\_Linux-x86-64.zip..

Copying file: p18179615\_112040\_Linux-x86-64.zip to node dm01db02.dldchp.vn..

Creating symbolic link for file /tmp/linux-x64/WorkDir/p6880880\_112000\_Linux-x86-64.zip at /opt/oracle.SupportTools/onecommand/Software/patches/p6880880\_112000\_Linux-x86-64.zip..

Copying file: p6880880\_112000\_Linux-x86-64.zip to node dm01db02.dldchp.vn.....

Completed copying files.....

Extracting required files..........................

Copying resourcecontrol and other required files..........................

Creating databasemachine.xml for EM discovery

Done Creating databasemachine.xml for EM discovery.

Successfully completed execution of step Setup Required Files [elapsed Time [Elapsed = 102236 mS [1.0 minutes] Fri Jun 13 09:55:53 ICT 2014]]

* + 1. **Step 4: Create Users**

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -s 3

Executing Create Users

Creating users...

Creating users in cluster cluster-clu1

Validating existing users and groups..................

Creating required directories on nodes in cluster cluster-clu1................

Updating /etc/hosts on nodes in cluster cluster-clu1..

Setting up ssh for users in cluster cluster-clu1.....

Completed creating all users...

Successfully completed execution of step Create Users [elapsed Time [Elapsed = 48732 mS [0.0 minutes] Fri Jun 13 09:56:56 ICT 2014]]

* + 1. **Step 5: Setup Cell Connectivity**

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -s 4

Executing Setup Cell Connectivity

Creating cellip.ora and cellinit.ora ...

Creating cellip.ora for cluster cluster-clu1.

Creating cellinit.ora for cluster cluster-clu1.

Creating cellAffinity for cluster cluster-clu1

Creating cellaffinity if required

Creating cellaffinity is NOT required

Creating cellaffinity is NOT required

Done with cellaffinity.ora....

Done creating cellip.ora and cellinit.ora...

Successfully completed execution of step Setup Cell Connectivity [elapsed Time [Elapsed = 8335 mS [0.0 minutes] Fri Jun 13 09:57:34 ICT 2014]]

* + 1. **Step 6: Verify Infiniband and Calibrate Cells**

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -s 5

Executing Verify Infiniband and Calibrate Cells

Running rds ping tests on cluster nodes............

Validating infiniband network with rds-ping....

No ping errors while pinging infiniband fabric.............

Running infinicheck to verify infiniband fabric........

Infinicheck output...

INFINICHECK

[Network Connectivity, Configuration and Performance]

[Version IBD VER 2.c ]

INFINICHECK

[Network Connectivity, Configuration and Performance]

[Version IBD VER 2.c ]

Verifying User Equivalance of user=root to all hosts.

(If it isn't setup correctly, an authentication prompt will appear to push keys to all the nodes)

Unable to verify user-equivalence for root..

Host key verification failed.

If you haven't already done so, please run: ssh-keygen -t rsa

head: cannot open `VERSION\_FILE' for reading: No such file or directory

head: cannot open `VERSION\_FILE' for reading: No such file or directory

Checking status of infiniband links....

Infiniband link errors found, please investigate and fix before resuming...

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 1[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x0021280001efe2dc 10 2[ ] "dm01celadm02 C 192.168.10.4 HCA-1" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 2[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x0021280001efe650 12 2[ ] "dm01celadm01 C 192.168.10.3 HCA-1" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 3[ ] ==( 4X 2.5 Gbps Down/ Polling)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 4[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x0021280001efe990 8 2[ ] "dm01celadm03 C 192.168.10.5 HCA-1" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 5[ ] ==( 4X 2.5 Gbps Down/ Polling)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 6[ ] ==( 4X 2.5 Gbps Down/ Polling)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 7[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x0021280001fbd56e 6 2[ ] "dm01db01 S 192.168.10.1 HCA-1" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 8[ ] ==( 4X 2.5 Gbps Down/ Polling)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 9[ ] ==( 4X 2.5 Gbps Down/ Polling)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 10[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x0021280001f01200 4 2[ ] "dm01db02 S 192.168.10.2 HCA-1" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 11[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 12[ ] ==( 4X 2.5 Gbps Down/ Polling)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 13[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x002128e8b015a0a0 1 14[ ] "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 14[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x002128e8b015a0a0 1 13[ ] "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 15[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x002128e8b015a0a0 1 16[ ] "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 16[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x002128e8b015a0a0 1 15[ ] "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 17[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x002128e8b015a0a0 1 18[ ] "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 18[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x002128e8b015a0a0 1 17[ ] "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 19[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 20[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x0010e0000133ba2c 14 2[ ] "backup HCA-1" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 21[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 22[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 23[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 24[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 25[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 26[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 27[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 28[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 29[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 30[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 31[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x002128e8b015a0a0 1 31[ ] "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 32[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 33[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 34[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 35[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128f56614a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" 2 36[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 1[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x0021280001efe2dc 9 1[ ] "dm01celadm02 C 192.168.10.4 HCA-1" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 2[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x0021280001efe650 11 1[ ] "dm01celadm01 C 192.168.10.3 HCA-1" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 3[ ] ==( 4X 2.5 Gbps Down/ Polling)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 4[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x0021280001efe990 7 1[ ] "dm01celadm03 C 192.168.10.5 HCA-1" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 5[ ] ==( 4X 2.5 Gbps Down/ Polling)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 6[ ] ==( 4X 2.5 Gbps Down/ Polling)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 7[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x0021280001fbd56e 5 1[ ] "dm01db01 S 192.168.10.1 HCA-1" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 8[ ] ==( 4X 2.5 Gbps Down/ Polling)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 9[ ] ==( 4X 2.5 Gbps Down/ Polling)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 10[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x0021280001f01200 3 1[ ] "dm01db02 S 192.168.10.2 HCA-1" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 11[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 12[ ] ==( 4X 2.5 Gbps Down/ Polling)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 13[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x002128f56614a0a0 2 14[ ] "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 14[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x002128f56614a0a0 2 13[ ] "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 15[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x002128f56614a0a0 2 16[ ] "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 16[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x002128f56614a0a0 2 15[ ] "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 17[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x002128f56614a0a0 2 18[ ] "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 18[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x002128f56614a0a0 2 17[ ] "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 19[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 20[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x0010e0000133ba2c 13 1[ ] "backup HCA-1" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 21[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 22[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 23[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 24[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 25[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 26[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 27[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 28[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 29[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 30[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 31[ ] ==( 4X 10.0 Gbps Active/ LinkUp)==> 0x002128f56614a0a0 2 31[ ] "SUN DCS 36P QDR dc-c72-ibswitch-02.dldchp.vn" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 32[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 33[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 34[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 35[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )

0x002128e8b015a0a0 "SUN DCS 36P QDR dc-c72-ibswitch-01.dldchp.vn" 1 36[ ] ==( 4X 2.5 Gbps Down/Disabled)==> [ ] "" ( )..

Running verify topology to verify infiniband network....

Calibrating cells.....................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

Successfully completed execution of step Verify Infiniband and Calibrate Cells [elapsed Time [Elapsed = 870205 mS [14.0 minutes] Fri Jun 13 10:12:42 ICT 2014]]

* + 1. **Step 7: Create Cell Disks**

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -s 6

Executing Create Cell Disks

Check physical disks for errors before creating celldisks..........

Restarting cell services...................

Initializing cells...........................

Cleaning cells.......................................................

Restarting cell services..................

Creating cell disks............................................................

Creating flashlog on cells..............

Creating flashcache on cells...........................

Successfully completed execution of step Create Cell Disks [elapsed Time [Elapsed = 211167 mS [3.0 minutes] Fri Jun 13 10:16:54 ICT 2014]]

* + 1. **Step 8: Create Grid Disks**

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -s 7

Executing Create Grid Disks

Creating grid disks for cluster cluster-clu1.......................................................

Successfully completed execution of step Create Grid Disks [elapsed Time [Elapsed = 58781 mS [0.0 minutes] Fri Jun 13 10:18:03 ICT 2014]]

* + 1. **Step 9: Install Cluster Software**

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -s 8

Executing Install Cluster Software

Installing cluster cluster-clu1..

Getting grid disks using utility in /opt/oracle.SupportTools/onecommand/Software/11.2.0.4/grid...................

Running Oracle installer........................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

Setting up Opatch for cluster cluster-clu1......

Patching cluster cluster-clu1... ...................................................................................................

Successfully completed execution of step Install Cluster Software [elapsed Time [Elapsed = 614554 mS [10.0 minutes] Fri Jun 13 10:28:31 ICT 2014]]

* + 1. **Step 10: Initialize Cluster Software**

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -s 9

Executing Initialize Cluster Software..........

Running root.sh on node dm01db01.dldchp.vn....................................................................................oracleoks: module license 'Proprietary' taints kernel.

Disabling lock debugging due to kernel taint

[Oracle OKS] mallocing log buffer, size=10485760

[Oracle OKS] log buffer = 0xffff8815eaa42640 log buffer size 10485760

[Oracle OKS] ODLM hash size 1000000

OKSK-00004: Module load succeeded. Build information: (LOW DEBUG) USM\_11.2.0.4.0\_LINUX.X64\_130707 2013/07/07 21:43:59

ADVMK-00001: Module load succeeded. Build information: (LOW DEBUG) - USM\_11.2.0.4.0\_LINUX.X64\_130707 built on 2013/07/07 21:56:48.

.[Oracle ACFS] FCB hash size 1000000

[Oracle ACFS] buffer cache size 6771MB (1032065 buckets)

[Oracle ACFS] DLM hash size 1000000

ACFSK-0037: Module load succeeded. Build information: (LOW DEBUG) USM\_11.2.0.4.0\_LINUX.X64\_130707 2013/07/07 22:07:46

OKSK-00010: Persistent OKS log opened at /u01/app/11.2.0.4/grid/log/dm01db01/acfs/kernel/acfs.log.0.

.............................OKSK-00010: Persistent OKS log opened at /u01/app/11.2.0.4/grid/log/dm01db01/acfs/kernel/acfs.log.0.

.ib0: Unicast, no dst: type 0000, QPN 060000 0020:0800:1404:0001:8000:0048:fe80:0000

..ib0: Unicast, no dst: type 0000, QPN 060000 0020:0800:1404:0001:8000:0048:fe80:0000

.ib0: Unicast, no dst: type 0000, QPN 060000 0020:0800:1404:0001:8000:0048:fe80:0000

..ib0: Unicast, no dst: type 0000, QPN 060000 0020:0800:1404:0001:8000:0048:fe80:0000

..ib0: Unicast, no dst: type 0000, QPN 060000 0020:0800:1404:0001:8000:0048:fe80:0000

...............................................................................................................................................ib0: Unicast, no dst: type 0000, QPN 060000 0020:0800:1404:0001:8000:0048:fe80:0000

.ib0: Unicast, no dst: type 0000, QPN 060000 0020:0800:1404:0001:8000:0048:fe80:0000

.ib0: Unicast, no dst: type 0000, QPN 060000 0020:0800:1404:0001:8000:0048:fe80:0000

..ib0: Unicast, no dst: type 0000, QPN 060000 0020:0800:1404:0001:8000:0048:fe80:0000

..ib0: Unicast, no dst: type 0000, QPN 060000 0020:0800:1404:0001:8000:0048:fe80:0000

................RDS/IB: connected to 169.254.89.36 version 3.1

RDS/IB: connected to 169.254.89.36 version 3.1

................................................................................

Checking file root\_dm01db01.dldchp.vn\_2014-06-13\_10-28-57.log on node dm01db01

Running root.sh on node dm01db02.dldchp.vn...........................................................................................................................................................................................................................RDS/IB: connected to 169.254.146.99 version 3.1

.............................................

Checking file root\_dm01db02.dldchp.vn\_2014-06-13\_10-35-36.log on node dm01db02..

Running configuration tools on machine dm01db01.dldchp.vn.......................................................................................................

Checking status of cluster.......

Successfully completed execution of step Initialize Cluster Software [elapsed Time [Elapsed = 814117 mS [13.0 minutes] Fri Jun 13 10:42:20 ICT 2014]]

* + 1. **Step 11: Install Database Software**

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -s 10

Executing Install Database Software

Installing database software ...

Installing database home software...

Installing database home software, database home c0\_DbHome\_0

Installing database software ..............

Running database installer on node dm01db01 ... Please wait.............................................................................................................................................................................................................................................................................................\_\_ratelimit: 2 callbacks suppressed

.........\_\_ratelimit: 2 callbacks suppressed

.......................................................................\_\_ratelimit: 25 callbacks suppressed

......\_\_ratelimit: 12 callbacks suppressed

......\_\_ratelimit: 3 callbacks suppressed

.....\_\_ratelimit: 1 callbacks suppressed

..................

.....\_\_ratelimit: 9 callbacks suppressed

.........

..............................................................................................................................................................................................................................................................................................................................................................................................

After running database installer.......

Patching database software ....................................................................................

Successfully completed execution of step Install Database Software [elapsed Time [Elapsed = 897486 mS [14.0 minutes] Mon Jun 16 09:21:00 ICT 2014]]

* + 1. **Step 12: Relink Database with RDS**

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -s 11

Executing Relink Database with RDS.....

Successfully completed execution of step Relink Database with RDS [elapsed Time [Elapsed = 7033 mS [0.0 minutes] Mon Jun 16 09:21:52 ICT 2014]]

* + 1. **Step 13: Create ASM Diskgroups**

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -s 12

Executing Create ASM Diskgroups..

Getting grid disks using utility in /opt/oracle.SupportTools/onecommand/Software/11.2.0.4/grid..................

Getting grid disks using utility in /opt/oracle.SupportTools/onecommand/Software/11.2.0.4/grid..............

Getting grid disks using utility in /opt/oracle.SupportTools/onecommand/Software/11.2.0.4/grid.............

Successfully completed execution of step Create ASM Diskgroups [elapsed Time [Elapsed = 48307 mS [0.0 minutes] Mon Jun 16 09:23:12 ICT 2014]]

* + 1. **Step 14: Create Databases**

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -s 13

Executing Create Databases

Creating databases..................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

Successfully completed execution of step Create Databases [elapsed Time [Elapsed = 614899 mS [10.0 minutes] Mon Jun 16 09:33:45 ICT 2014]]

* + 1. **Step 15: Apply Security Fixes**

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -s 14

Executing Apply Security Fixes..............................

Bouncing clusterware to set required parameters..........................................................ACFSK-0039: Module unloaded.

ADVMK-00003: Module unloaded.

OKSK-00006: Module unloaded.

........................ib0: Unicast, no dst: type 0000, QPN 060000 0020:0800:1404:0001:8000:0048:fe80:0000

ib0: Unicast, no dst: type 0000, QPN 060000 0020:0800:1404:0001:8000:0048:fe80:0000

ib0: Unicast, no dst: type 0000, QPN 060000 0020:0800:1404:0001:8000:0048:fe80:0000

ib0: Unicast, no dst: type 0000, QPN 060000 0020:0800:1404:0001:8000:0048:fe80:0000

.ib0: Unicast, no dst: type 0000, QPN 060000 0020:0800:1404:0001:8000:0048:fe80:0000

[Oracle OKS] mallocing log buffer, size=10485760

[Oracle OKS] log buffer = 0xffff88138b537480 log buffer size 10485760

[Oracle OKS] ODLM hash size 1000000

OKSK-00004: Module load succeeded. Build information: (LOW DEBUG) USM\_11.2.0.4.0\_LINUX.X64\_130707 2013/07/07 21:43:59

ADVMK-00001: Module load succeeded. Build information: (LOW DEBUG) - USM\_11.2.0.4.0\_LINUX.X64\_130707 built on 2013/07/07 21:56:48.

[Oracle ACFS] FCB hash size 1000000

[Oracle ACFS] buffer cache size 6771MB (1032065 buckets)

[Oracle ACFS] DLM hash size 1000000

ACFSK-0037: Module load succeeded. Build information: (LOW DEBUG) USM\_11.2.0.4.0\_LINUX.X64\_130707 2013/07/07 22:07:46

OKSK-00010: Persistent OKS log opened at /u01/app/11.2.0.4/grid/log/dm01db01/acfs/kernel/acfs.log.0.

........................

Checking and enabling turbo mode if required.......

dm01db02 Command: /opt/oracle.SupportTools/fix\_17898503\_Enable\_Turbo\_Mode.sh produced null output but executed successfully on dm01db02

dm01db01 Command: /opt/oracle.SupportTools/fix\_17898503\_Enable\_Turbo\_Mode.sh produced null output but executed successfully on dm01db01

Successfully completed execution of step Apply Security Fixes [elapsed Time [Elapsed = 339916 mS [5.0 minutes] Mon Jun 16 09:49:58 ICT 2014]]

* + 1. **Step 16: Create Installation Summary**

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -s 15

Executing Create Installation Summary

Getting system details...........................................

Installation summary report: /tmp/linux-x64/ExadataConfigurations/Exadata-QLDC-InstallationReport.xml

Successfully completed execution of step Create Installation Summary [elapsed Time [Elapsed = 43182 mS [0.0 minutes] Mon Jun 16 09:53:56 ICT 2014]]

* + 1. **Step 17: Resecure Machine**

[root@dm01db01 linux-x64]# ./install.sh -cf /u01/update/Exadata-dm01.xml -s 16

Executing Resecure Machine..............

Stopping cluster cluster-clu1.........................ACFSK-0039: Module unloaded.

ADVMK-00003: Module unloaded.

OKSK-00006: Module unloaded.

.....

Cluster cluster-clu1 stopped...

Stopped clusterware on all nodes...

Making sure all cluster nodes are up...

Resecuring all nodes....................................RDS/IB: connected to 192.168.10.2 version 3.1

...

Waiting for machines to stop...

Waiting for machine dm01celadm02.dldchp.vn to be NOT pingable...

Waiting for machine dm01celadm01.dldchp.vn to be NOT pingable...

Waiting for machine dm01celadm03.dldchp.vn to be NOT pingable...

Waiting for machine dm01db02.dldchp.vn to be NOT pingable...RDS/IB: connected to 192.168.10.4 version 3.1

RDS/IB: connected to 192.168.10.3 version 3.1

RDS/IB: connected to 192.168.10.5 version 3.1

Output: Node dm01celadm01.dldchp.vn is NOT pingable

Output: Node dm01celadm02.dldchp.vn is NOT pingable

Output: Node dm01celadm03.dldchp.vn is NOT pingable

Output: Node dm01db02.dldchp.vn is NOT pingable

Waiting for machines to start...

Waiting for machine dm01celadm02.dldchp.vn to be pingable...

Waiting for machine dm01celadm01.dldchp.vn to be pingable...

Waiting for machine dm01celadm03.dldchp.vn to be pingable...

Waiting for machine dm01db02.dldchp.vn to be pingable...RDS/IB: send completion on 192.168.10.3 had status 12, disconnecting and reconnecting

RDS/IB: send completion on 192.168.10.5 had status 12, disconnecting and reconnecting

RDS/IB: send completion on 192.168.10.4 had status 12, disconnecting and reconnecting

RDS/IB: connected to 192.168.10.2 version 3.1

RDS/IB: connected to 192.168.10.4 version 3.1

RDS/IB: connected to 192.168.10.3 version 3.1

RDS/IB: connected to 192.168.10.5 version 3.1

.....

Broadcast message from root (Mon Jun 16 10:01:18 2014):

The system is going down for reboot NOW!

1. **Kiểm tra lại toàn bộ hệ thống sau cài đặt**
   1. *Step 1: Thay đổi mật khẩu sau reboot*
   2. *Step 2: Kiểm tra hệ thống RAC vừa cài đặt*
2. **Tài liệu tham khảo**

Exadata Database Machine and Exadata Storage Server Supported Versions (Doc ID 888828.1)

Oracle Exadata Database Machine Owner's Guide( e13874 ) -> lấy trực tiếp trong Storager server ( */opt/oracle/cell/doc/doc*)

Optional\_Exadata Installation steps

EIS\_EIS Installation Checklist for the ORACLE Exadata Database Machine X2-2