Step by step upgrade 11gR2 RAC GI to 12cR1 GI

Oracle Clusterware





http://ohsdba.cn

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Summary

Before doing upgrade, you must check below: Compared with 12.1.0.1, the GIMR (Grid Infrastructure Management Repository) is mandatory in 12.1.0.2. The DiskGroup stores OCR at least have 4.5G free space

Check the current Cluster version

[orgrid@ohs1 grid]\$ crsctl query crs softwareversion Oracle Clusterware version on node [ohs1] is [11.2.0.4.0] [orgrid@ohs1 grid]\$ echo \$ORACLE_HOME /pgold/orgrid/oracle/product/112

Pre-check before upgrade

[orgrid@ohs1 grid]\$./runcluvfy.sh stage -pre crsinst -upgrade -rolling -dest_version 12.1.0.2.0 -src_crshome /pgold/orgrid/oracle/product/112 -dest_crshome /pgold/orgrid/oracle/product/121 /bin/cp: omitting directory `./stage/ext/lib/log'

Performing pre-checks for cluster services setup

Checking node reachability... Node reachability check passed from node "ohs1"

Checking user equivalence... User equivalence check passed for user "orgrid"

Check: Grid Infrastructure home writeability of path /pgold/orgrid/oracle/product/121 Grid Infrastructure home check passed

Checking CRS user consistency CRS user consistency check successful Checking network configuration consistency. Check for network configuration consistency passed. Checking ASM disk size consistency All ASM disks are correctly sized Checking if ASM parameter file is in use by an ASM instance on the local node ASM instance is using parameter file "+SYSTEMDG/prod-cluster/asmparameterfile/registry.253.929303805" on node "ohs1" on which upgrade is requested.

Checking OLR integrity...

Check of existence of OLR configuration file "/etc/oracle/olr.loc" passed Check of attributes of OLR configuration file "/etc/oracle/olr.loc" passed

WARNING:

This check does not verify the integrity of the OLR contents. Execute 'ocrcheck -local' as a privileged user to verify the contents of OLR.

OLR integrity check passed

Checking node connectivity...

Checking hosts config file...

Verification of the hosts config file successful

Check: Node connectivity using interfaces on subnet "10.0.2.0" Node connectivity passed for subnet "10.0.2.0" with node(s) ohs1,ohs2 TCP connectivity check passed for subnet "10.0.2.0"

Check: Node connectivity using interfaces on subnet "172.16.0.0" Node connectivity passed for subnet "172.16.0.0" with node(s) ohs1,ohs2 TCP connectivity check passed for subnet "172.16.0.0"

Checking subnet mask consistency... Subnet mask consistency check passed for subnet "10.0.2.0". Subnet mask consistency check passed for subnet "172.16.0.0". Subnet mask consistency check passed.

Node connectivity check passed

Checking multicast communication...

Checking subnet "172.16.0.0" for multicast communication with multicast group "224.0.0.251"...

Check of subnet "172.16.0.0" for multicast communication with multicast group "224.0.0.251" passed.

Check of multicast communication passed. Task ASM Integrity check started... Starting check to see if ASM is running on all cluster nodes...

ASM Running check passed. ASM is running on all specified nodes Disk Group Check passed. At least one Disk Group configured

Task ASM Integrity check passed...

Checking OCR integrity... Disks "+SYSTEMDG" are managed by ASM.

OCR integrity check passed

Checking ASMLib configuration. Check for ASMLib configuration passed.

Total memory check failed Check failed on nodes:

ohs2,ohs1

Available memory check passed

Swap space check passed

 Free
 disk
 space
 check
 passed
 for

 "ohs2:/usr,ohs2:/var,ohs2:/etc,ohs2:/pgold/orgrid/oracle/product/112,ohs2:/sbin,ohs2:/t
 mp"
 mp"

for

Free disk space check passed

"ohs1:/usr,ohs1:/var,ohs1:/etc,ohs1:/pgold/orgrid/oracle/product/112,ohs1:/sbin,ohs1:/tmp"

Check for multiple users with UID value 1100 passed

User existence check passed for "orgrid"

Group existence check passed for "oinstall"

Group existence check passed for "dba"

Membership check for user "orgrid" in group "oinstall" [as Primary] passed

Membership check for user "orgrid" in group "dba" failed

Check failed on nodes:

ohs2,ohs1

Run level check passed

Hard limits check passed for "maximum open file descriptors"

Soft limits check passed for "maximum open file descriptors"

Hard limits check passed for "maximum user processes"

Soft limits check passed for "maximum user processes"

There are no oracle patches required for home "/pgold/orgrid/oracle/product/112".

There are no oracle patches required for home "/pgold/orgrid/oracle/product/112".

Source home "/pgold/orgrid/oracle/product/112" is suitable for upgrading to version "12.1.0.2.0".

System architecture check passed Kernel version check passed Kernel parameter check passed for "semmsl" Kernel parameter check passed for "semmns" Kernel parameter check passed for "semopm" Kernel parameter check passed for "semmni" Kernel parameter check passed for "shmmax" Kernel parameter check passed for "shmmni" Kernel parameter check passed for "shmall" Kernel parameter check passed for "file-max" Kernel parameter check passed for "ip_local_port_range" Kernel parameter check passed for "rmem_default" Kernel parameter check passed for "rmem_max" Kernel parameter check passed for "wmem_default" Kernel parameter check passed for "wmem_max" Kernel parameter check passed for "aio-max-nr" Kernel parameter check passed for "panic_on_oops" Package existence check passed for "binutils" Package existence check passed for "compat-libcap1" Package existence check passed for "compat-libstdc++-33(x86_64)" Package existence check passed for "libgcc(x86_64)" Package existence check passed for "libstdc++(x86_64)" Package existence check passed for "libstdc++-devel(x86_64)" Package existence check passed for "sysstat" Package existence check passed for "gcc" Package existence check passed for "gcc-c++" Package existence check passed for "ksh" Package existence check passed for "make" Package existence check passed for "glibc(x86_64)" Package existence check passed for "glibc-devel(x86_64)" Package existence check passed for "libaio(x86_64)" Package existence check passed for "libaio-devel(x86_64)" Package existence check passed for "nfs-utils" Check for multiple users with UID value 0 passed Current group ID check passed

Starting check for consistency of primary group of root user

Check for consistency of root user's primary group passed

Starting Clock synchronization checks using Network Time Protocol(NTP)... NTP configuration file "/etc/ntp.conf" existence check passed Liveness check passed for "ntpd" Check for NTP daemon or service alive passed on all nodes Check of common NTP Time Server passed Clock time offset check passed

Clock synchronization check using Network Time Protocol(NTP) passed

Core file name pattern consistency check passed.

User "orgrid" is not part of "root" group. Check passed Default user file creation mask check passed Checking integrity of file "/etc/resolv.conf" across nodes

"domain" and "search" entries do not coexist in any "/etc/resolv.conf" file All nodes have same "search" order defined in file "/etc/resolv.conf" PRVF-5636 : The DNS response time for an unreachable node exceeded "15000" ms on following nodes: ohs1,ohs2 checking DNS response from all servers in "/etc/resolv.conf"

Check for integrity of file "/etc/resolv.conf" failed

UDev attributes check for OCR locations started... UDev attributes check passed for OCR locations

UDev attributes check for Voting Disk locations started... UDev attributes check passed for Voting Disk locations

Time zone consistency check passed Checking VIP configuration. Checking VIP Subnet configuration. Check for VIP Subnet configuration passed. Checking VIP reachability Check for VIP reachability passed.

Checking Oracle Cluster Voting Disk configuration...

Oracle Cluster Voting Disk configuration check passed

Clusterware version consistency passed.

Checking integrity of name service switch configuration file "/etc/nsswitch.conf" ... All nodes have same "hosts" entry defined in file "/etc/nsswitch.conf" Check for integrity of name service switch configuration file "/etc/nsswitch.conf" passed Checking daemon "avahi-daemon" is not configured and running Daemon not configured check passed for process "avahi-daemon" Daemon not running check passed for process "avahi-daemon"

Starting check for Reverse path filter setting ...

Check for Reverse path filter setting passed

Starting check for Network interface bonding status of private interconnect network interfaces ...

Check for Network interface bonding status of private interconnect network interfaces passed

Starting check for /dev/shm mounted as temporary file system ...

Check for /dev/shm mounted as temporary file system passed

Starting check for /boot mount ...

Check for /boot mount passed

Starting check for zeroconf check ...

Check for zeroconf check passed

Pre-check for cluster services setup was unsuccessful on all the nodes. [orgrid@ohs1 grid]\$ [orgrid@ohs1 grid]\$

Run runinstaller

[orgrid@ohs1 grid]\$./runInstaller Starting Oracle Universal Installer...

Checking Temp space: must be greater than 415 MB. Actual 22200 MB Passed Checking swap space: must be greater than 150 MB. Actual 4143 MB Passed Checking monitor: must be configured to display at least 256 colors. Actual 16777216 Passed

Preparing to launch Oracle Universal Installer from /tmp/OraInstall2016-12-01_11-11-37AM. Please wait ...

[orgrid@ohs1 grid]\$ You can find the log of this install session at: /pgold/ora1nventory/logs/installActions2016-12-01_11-11-37AM.log

[orgrid@ohs1 grid]\$



Upgrade oracle grid infrastructure of oracle automatic storage management

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Installation Type	Unarado Ocado Crid Infectoructura en Ocado Automatic Storago Management
Cluster Configuration	Upgrade Oracle ond initiastructure of Oracle Automatic storage Management
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	Installation Option Product Languages Node Selection OCR Storage Voting Disk Storage Management Options Operating System Groups Installation Location Root script execution Prerequisite Checks Summary Install Product Finish	Select the Cluster nodes (in addition to the local node) in the hardware cluster where the Installer shou upgrade Grid Infrastructure. Node Name Oracle Grid Infrastructure Home Ohs1 /pgold/orgrid/oracle/product/112 Ohs2 /pgold/orgrid/oracle/product/112 SSH connectivity Skip upgrade on unreachable nodes
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Installation Option	Select the upgrade G	Cluster nodes (in rid Infrastructure	addition to the local node)	in the hardw	are cluster where the Installe	r sł
Product Languages	Node	Name	Oracle G	rid Infrastruc	ture Home	
Node Selection	0 ohs1	/pgold/or	grid/oracle/product/112			
Management Options	@ ohs2	/pgold/or	grid/oracle/product/112			
		Testing password	lless SSH connectivity betw	ween the		
	314 5	elected nodes. Th	his may take several minute	es, please		
	E		wait			

Oracle	Grid Infrastructure 12c F	Release 1 Installer - Step	9 4 of 11 _ 🗆
pecify Management Opt	ions		GRID INFRASTRUCTURE
Installation Option Product Languages Node Selection Management Options	You can configure to have this Management to be managed b Control configuration to perfo Register with Enterprise Ma	s instance of Oracle Grid Infrastrue by Enterprise Manager Cloud Contr orm the registration. anager (EM) Cloud Con <u>t</u> rol	cture and Oracle Automatic Storage ol. Specify the details of the Cloud
Operating System Groups Installation Location Root script execution Prerequisite Checks Summary Install Product Finish	OM <u>S</u> port: EM A <u>d</u> min User Name: EM Admin Pass <u>w</u> ord:		
			k
Help		< <u>B</u> ac	k <u>N</u> ext > install Cancel

🛃 Oracle G	rid Infrastructure 12c	Release 1 Installer -	Step 5 of 11	_ 0 X
Privileged Operating Syste	m Groups			12 ^C
Installation Option Product Languages Node Selection Management Options Operating System Groups Installation Location Root script execution Prerequisite Checks Summary Install Product Finish	Select the name of the operat to Oracle Automatic Storage Oracle <u>A</u> SM Administrator (O Oracle ASM <u>D</u> BA (OSDBA for <i>i</i> Oracle ASM <u>O</u> perator (OSOPE	ing system group, that you w Management. SASM) Group ASM) Group (R for ASM) Group (Optional)	asmadmin asmadmin asmdba asmoper	authentication
Help			< Back Next > Insta	I Cancel

Type Oracle base and Oracle Home

Oracle Grid Specify Installation Location	d Infrastructure 12c Release 1 Installer - Step 6 of 11 ORACLE	- □ ×
	GRID INFRASTRUCTUR	E
Installation Option Product Languages Node Selection Management Options Operating System Groups	Specify the Oracle Grid Infrastructure for a Cluster Oracle base. By default, Oracle Grid Infrast installed in a path indicating the Oracle Grid Infrastructure release and grid infrastructure so owner. Oracle base: /pgold/orgrid/grid_base	tructure is iftware B <u>r</u> owse racle base
Installation Location	directory. This software directory is the Oracle Grid Infrastructure home directory.	
Root script execution Prerequisite Checks Summary Install Product Finish	Software location /pgold/orgrid/oracle/product/121	Browse
Help	< <u>Back</u> Next > [install	Cancel

Soot script execution confi	rid Infrastructure 1: guration	2c Release 1 Installer - St		×
Installation Option Product Languages Node Selection Management Options Operating System Groups Installation Location Root script execution Prerequisite Checks Summary Install Product Finish	While configuring the sof to have the installer performed below.	tware, certain operations have to be orm these operations automatically i figuration scripts edential //usr/local/bin/sudo orgrid	performed as "root" user. You can choose by specifying inputs for one of the options	
Help		<	Back Next > Install Cancel	

🛃 Oracle Gr	id Infrastructure 12c Release 1 Installer - Step 8 of 11 $_{-}$ \square \times
Perform Prerequisite Check	
Installation Option Product Languages Node Selection Management Options Operating System Groups Installation Location Root script execution Prerequisite Checks Summary Install Product Finish	Verifying that the target environment meets minimum installation and configuration requirements for products you have selected. This can take time. Please wait. 74% Checking Task resolv.conf Integrity
Help	< <u>B</u> ack <u>N</u> ext > Install Cancel

🛃 Oracle Gri	d Infrastructure 12c Release 1 Installer - Step 8 of 11 ×
Perform Prerequisite Checks	
Installation Option Product Languages Node Selection Management Options Operating System Groups Installation Location Root script execution Prerequisite Checks Summary Install Product Finish	Yerification Result Some of the minimum requirements for installation are not completed. Review and fix the issues listed in the following table, and recheck the system. Check Again Eix & Check Again Show Failed Image: Check Again Checks Status Fixable Checks Status Fixable Checks Status Fixable Checks Ignored No Task resolv.conf Integrity Ignored No
	physical memory. <u>(more details)</u>
Help Oracle Gri	id Infrastructure 12c Release 1 Installer - Step 9 of 11 _ Cancel
· · · · · · · · · · · · · · · · · · ·	
Installation Option Product Languages Node Selection Management Options Operating System Groups Installation Location Root script execution Prerequisite Checks	Oracle Grid Infrastructure 12c Release 1 Installer Global Settings Disk Space: required 6.9 GB available 21.2 GB [Edit] Install Option: Upgrade Oracle Grid Infrastructure or Oracle Automatic Storage Management [Oracle base for Oracle Grid Infrastructure: /pgold/orgrid/grid_base [Edit] Grid home: /pgold/orgrid/oracle/product/121 [Edit] Source Location: /mnt/grid/install//stage/products.xml Privileged Operating System Groups: asmdba (OSDBA), asmoper (OSOPER), asmadmin (OSASM Root script execution configuration: Manual configuration [Edit]
Finish	Management information Management method: None [Edit] Grid Infrastructure Settings Selected Nodes: ohs1, ohs2
Finish	Management information Management method: None [Edit] Grid Infrastructure Settings Selected Nodes: ohs1, ohs2

Solution Oracle	Grid Infrastructure 12c Release 1 Installer - Step 10 of 11	- • ×
Installation Option Product Languages Node Selection Management Options Operating System Groups	Progress	×
Root script execution Prerequisite Checks Summary	The following configuration scripts need to be executed as the "root" user in each new cluster node. Each script in the list below is followed by a list of nodes. Scripts to be executed: Number Script Location	eded eded eded eded eded eded
Finish	1 /pgold/orgrid/oracle/product/121/rootupgrade.sh ohs1,ohs2 Image: Second S	eded eded gress ig
Нер	nodes except the last node are done successfully, run the script on the last node. Help	Cancel

Oracle 0	Frid Infrastructure	12c Release 1 Instal	ler - Step 10 of 11	_ 1



Run rootupgrade.sh on ohs1

[root@ohs1 ~]# /pgold/orgrid/oracle/product/121/rootupgrade.sh Performing root user operation.

The following environment variables are set as: ORACLE_OWNER= orgrid

ORACLE_HOME = /pgold/orgrid/oracle/product/121

Enter the full pathname of the local bin directory: [/usr/local/bin]: The file "dbhome" already exists in /usr/local/bin. Overwrite it? (y/n) [n]: y

Copying dbhome to /usr/local/bin ...

The file "oraenv" already exists in /usr/local/bin. Overwrite it? (y/n) [n]: y

Copying oraenv to /usr/local/bin ...

The file "coraenv" already exists in /usr/local/bin. Overwrite it? (y/n) [n]: y

Copying coraenv to /usr/local/bin ...

Entries will be added to the /etc/oratab file as needed by

Database Configuration Assistant when a database is created

Finished running generic part of root script.

Now product-specific root actions will be performed.

Using configuration parameter file: /pgold/orgrid/oracle/product/121/crs/install/crsconfig_params 2016/12/01 11:32:21 CLSRSC-4015: Performing install or upgrade action for Oracle Trace File Analyzer (TFA) Collector.

2016/12/01 11:32:55 CLSRSC-4003: Successfully patched Oracle Trace File Analyzer (TFA) Collector.

2016/12/01 11:32:58 CLSRSC-464: Starting retrieval of the cluster configuration data

2016/12/01 11:33:06 CLSRSC-465: Retrieval of the cluster configuration data has successfully completed.

2016/12/01 11:33:06 CLSRSC-363: User ignored prerequisites during installation

2016/12/01 11:33:17 CLSRSC-515: Starting OCR manual backup.

2016/12/01 11:33:19 CLSRSC-516: OCR manual backup successful.

2016/12/01 11:33:23 CLSRSC-468: Setting Oracle Clusterware and ASM to rolling migration mode

2016/12/01 11:33:23 CLSRSC-482: Running command: '/pgold/orgrid/oracle/product/121/bin/asmca -silent -upgradeNodeASM -nonRolling false -oldCRSHome /pgold/orgrid/oracle/product/112 -oldCRSVersion 11.2.0.4.0 -nodeNumber 1 -firstNode true -startRolling true'

ASM configuration upgraded in local node successfully.

2016/12/01 11:33:31 CLSRSC-469: Successfully set Oracle Clusterware and ASM to rolling migration mode

2016/12/01 11:33:31 CLSRSC-466: Starting shutdown of the current Oracle Grid Infrastructure stack

2016/12/01 11:34:14 CLSRSC-467: Shutdown of the current Oracle Grid Infrastructure stack has successfully completed.

OLR initialization - successful 2016/12/01 11:36:54 CLSRSC-329: Replacing Clusterware entries in file 'oracle-ohasd.conf'

CRS-4133: Oracle High Availability Services has been stopped.CRS-4123: Oracle High Availability Services has been started.2016/12/01 11:39:41 CLSRSC-472: Attempting to export the OCR

2016/12/01 11:39:41 CLSRSC-482: Running command: 'ocrconfig -upgrade orgrid oinstall'

2016/12/01 11:39:48 CLSRSC-473: Successfully exported the OCR

2016/12/01 11:39:54 CLSRSC-486:

At this stage of upgrade, the OCR has changed. Any attempt to downgrade the cluster after this point will require a complete cluster outage to restore the OCR.

2016/12/01 11:39:54 CLSRSC-541:

To downgrade the cluster:

1. All nodes that have been upgraded must be downgraded.

2016/12/01 11:39:54 CLSRSC-542:

2. Before downgrading the last node, the Grid Infrastructure stack on all other cluster nodes must be down.

2016/12/01 11:39:54 CLSRSC-543:

3. The downgrade command must be run on the node ohs1 with the '-lastnode' option to restore global configuration data.

2016/12/01 11:40:20 CLSRSC-343: Successfully started Oracle Clusterware stack

clscfg: EXISTING configuration version 5 detected.

clscfg: version 5 is 11g Release 2.

Successfully taken the backup of node specific configuration in OCR.

Successfully accumulated necessary OCR keys.

Creating OCR keys for user 'root', privgrp 'root'...

Operation successful.

2016/12/01 11:40:40 CLSRSC-474: Initiating upgrade of resource types

2016/12/01 11:40:57 CLSRSC-482: Running command: 'upgrade model -s 11.2.0.4.0 -d 12.1.0.2.0 -p first'

2016/12/01 11:40:57 CLSRSC-475: Upgrade of resource types successfully initiated.

2016/12/01 11:41:02 CLSRSC-325: Configure Oracle Grid Infrastructure for a Cluster ... succeeded

[root@ohs1 ~]#

ASM configuration upgraded in local node successfully. 2016/12/01 11:33:31 CLSRSC-469: Successfully set Oracle Clusterware and ASM to rolling migration mode 2016/12/01 11:33:31 CLSRSC-466: Starting shutdown of the current Oracle Grid Infrastructure stack 2016/12/01 11:34:14 CLSRSC-467: Shutdown of the current Oracle Grid Infrastructure stack has successfully completed. OLR initialization - successful 2016/12/01 11:36:54 CLSRSC-329: Replacing Clusterware entries in file 'oracle-ohasd.conf' CRS-4133: Oracle High Availability Services has been stopped. CRS-4123: Oracle High Availability Services has been started. 2016/12/01 11:39:41 CLSRSC-472: Attempting to export the OCR 2016/12/01 11:39:41 CLSRSC-482: Running command: 'ocrconfig -upgrade orgrid oinstall' 2016/12/01 11:39:48 CLSR5C-473: Successfully exported the OCR 2016/12/01 11:39:54 CLSRSC-486: At this stage of upgrade, the OCR has changed. Any attempt to downgrade the cluster after this point will require a complete cluster outage to restore the OCR. 2016/12/01 11:39:54 CLSRSC-541: To downgrade the cluster: 1. All nodes that have been upgraded must be downgraded. 2016/12/01 11:39:54 CLSRSC-542: 2. Before downgrading the last node, the Grid Infrastructure stack on all other cluster nodes must be down. 2016/12/01 11:39:54 CLSRSC-543: 3. The downgrade command must be run on the node ohs1 with the '-lastnode' option to restore global configuration data. 2016/12/01 11:40:20 CLSRSC-343: Successfully started Oracle Clusterware stack clscfg: EXISTING configuration version 5 detected. clscfg: version 5 is 11g Release 2. Successfully taken the backup of node specific configuration in OCR. Successfully accumulated necessary OCR keys. Creating OCR keys for user 'root', privgrp 'root'.. Operation successful. 2016/12/01 11:40:40 CLSRSC-474: Initiating upgrade of resource types 2016/12/01 11:40:57 CLSRSC-482: Running command: 'upgrade model -s 11.2.0.4.0 -d 12.1.0.2.0 -p first' 2016/12/01 11:40:57 CLSRSC-475: Upgrade of resource types successfully initiated. 2016/12/01 11:41:02 CLSRSC-325: Configure Oracle Grid Infrastructure for a Cluster ... succeeded [root@ohs1 ~]#

Run rootupgrade.sh on ohs2

[root@ohs2 ~]# /pgold/orgrid/oracle/product/121/rootupgrade.sh Performing root user operation.

The following environment variables are set as: ORACLE_OWNER= orgrid

ORACLE_HOME= /pgold/orgrid/oracle/product/121

Enter the full pathname of the local bin directory: [/usr/local/bin]: The file "dbhome" already exists in /usr/local/bin. Overwrite it? (y/n) [n]: y

Copying dbhome to /usr/local/bin ...

The file "oraenv" already exists in /usr/local/bin. Overwrite it? (y/n) [n]: y

Copying oraenv to /usr/local/bin ...

The file "coraenv" already exists in /usr/local/bin. Overwrite it? (y/n) [n]: y

Copying coraenv to /usr/local/bin ...

Entries will be added to the /etc/oratab file as needed by

Database Configuration Assistant when a database is created

Finished running generic part of root script.

Now product-specific root actions will be performed.

Using configuration parameter file: /pgold/orgrid/oracle/product/121/crs/install/crsconfig_params 2016/12/01 11:43:14 CLSRSC-4015: Performing install or upgrade action for Oracle Trace File Analyzer (TFA) Collector.

2016/12/01 11:43:47 CLSRSC-4003: Successfully patched Oracle Trace File Analyzer (TFA) Collector.

2016/12/01 11:43:48 CLSRSC-464: Starting retrieval of the cluster configuration data

2016/12/01 11:43:53 CLSRSC-465: Retrieval of the cluster configuration data has successfully completed.

2016/12/01 11:43:53 CLSRSC-363: User ignored prerequisites during installation

ASM configuration upgraded in local node successfully.

2016/12/01 11:44:05 CLSRSC-466: Starting shutdown of the current Oracle Grid

Infrastructure stack

2016/12/01 11:44:34 CLSRSC-467: Shutdown of the current Oracle Grid Infrastructure stack has successfully completed.

OLR initialization - successful 2016/12/01 11:44:57 CLSRSC-329: Replacing Clusterware entries in file 'oracle-ohasd.conf'

CRS-4133: Oracle High Availability Services has been stopped. CRS-4123: Oracle High Availability Services has been started.

2016/12/01 11:46:54 CLSRSC-343: Successfully started Oracle Clusterware stack

clscfg: EXISTING configuration version 5 detected.

clscfg: version 5 is 12c Release 1.

Successfully taken the backup of node specific configuration in OCR.

Successfully accumulated necessary OCR keys.

Creating OCR keys for user 'root', privgrp 'root'..

Operation successful.

Start upgrade invoked ..

2016/12/01 11:47:13 CLSRSC-478: Setting Oracle Clusterware active version on the last node to be upgraded

2016/12/01 11:47:13 CLSRSC-482: Running command: '/pgold/orgrid/oracle/product/121/bin/crsctl set crs activeversion'

Started to upgrade the Oracle Clusterware. This operation may take a few minutes.

Started to upgrade the OCR.

Started to upgrade the CSS.

The CSS was successfully upgraded.

Started to upgrade the CRS.

The CRS was successfully upgraded.

Successfully upgraded the Oracle Clusterware.

Oracle Clusterware operating version was successfully set to 12.1.0.2.0

2016/12/01 11:48:42 CLSRSC-479: Successfully set Oracle Clusterware active version

2016/12/01 11:48:46 CLSRSC-476: Finishing upgrade of resource types

2016/12/01 11:49:06 CLSRSC-482: Running command: 'upgrade model -s 11.2.0.4.0 -d 12.1.0.2.0 -p last'

2016/12/01 11:49:06 CLSRSC-477: Successfully completed upgrade of resource types

2016/12/01 11:49:33 CLSRSC-325: Configure Oracle Grid Infrastructure for a Cluster ... succeeded

[root@ohs2 ~]#

2016/12/01 11:43:47 CLSRSC-4003: Successfully patched Oracle Trace File Analyzer (TFA) Collector. 2016/12/01 11:43:48 CLSRSC-464: Starting retrieval of the cluster configuration data 2016/12/01 11:43:53 CLSRSC-465: Retrieval of the cluster configuration data has successfully completed. 2016/12/01 11:43:53 CLSRSC-363: User ignored prerequisites during installation

ASM configuration upgraded in local node successfully.

2016/12/01 11:44:05 CLSRSC-466: Starting shutdown of the current Oracle Grid Infrastructure stack

2016/12/01 11:44:34 CLSRSC-467: Shutdown of the current Oracle Grid Infrastructure stack has successfully completed.

OLR initialization - successful 2016/12/01 11:44:57 CLSRSC-329: Replacing Clusterware entries in file 'oracle-ohasd.conf'

CRS-4133: Oracle High Availability Services has been stopped. CRS-4123: Oracle High Availability Services has been started. 2016/12/01 11:46:54 CLSRSC-433: Successfully started Oracle Clusterware stack clscfg: EXISTING configuration version 5 detected. clscfg: version 5 is 12C Release 1. Successfully tacumulated necessary OCR keys. Creating OCR keys for user 'root', privgrp 'root'.. Operation Successfull. Start upgrade invoked.. 2016/12/01 11:47:13 CLSRSC-478: Setting Oracle Clusterware active version on the last node to be upgraded 2016/12/01 11:47:13 CLSRSC-482: Running command: '/pgold/orgrid/oracle/product/121/bin/crsctl set crs activeversion' started to upgrade the oracle Clusterware. This operation may take a few minutes. started to upgrade the OCR. Started to upgrade t



stall Product			2
Installation Option	Progress		
Product Languages	85%		_
Node Selection	Starting 'Update Inventory'		
Operating System Groups	- Status		
Installation Location	 Copy files 	Succeeded	1
	 Link binaries 	Succeeded	F
Root script execution	Setup	Succeeded	
Prerequisite Checks	 Perform remote operations 	Succeeded	
Francisco e en c	Setup Oracle Base	Succeeded	
Summary	✓ Update Inventory	Succeeded	
Install Product	Secure Root Scripts	Succeeded	
Einich	↓ Configure Oracle Grid Infrastructure for a Cluster	In Progress	000
	 Update Inventory 	In Progress	Ĩ
	Creating Container Database for Oracle Grid Infrastructure Management F	te Pending	
	Setting up Oracle Grid Infrastructure Management Repository	Pending	
	Management Database Configuration Assistant	Pending	
	Oracle Cluster Verification Utility	Pending	

nstall Product	GRID INFRAST		2
Installation Option Product Languages Node Selection Management Options	Progress 91% Starting 'Setting up Oracle Grid Infrastructure Management Repository'		
Operating System Groups Installation Location	Status Copy tiles	Succeeded	1.
Root script execution	 Link binaries 	Succeeded	
	 ✓ • Setup 	Succeeded	
Prerequisite Checks	Perform remote operations	Succeeded	-
Summary	Setup Oracle Base	Succeeded	
Install Product	Vipolate Inventory	Succeeded	-
listan rioduct	Configure Oracle Crid Infractructure for a Cluster	In Progress	- 3
Finish	Indate Inventory	Succeeded	- 22
	 Opdate inventory Creating Container Database for Oracle Crid Infrastructure Management Re 	Succeeded	-
	Setting up Oracle Crid Infrastructure Management Repository	In Progress	
	Management Database Configuration Assistant	Pending	
	Oracle Cluster Verification Utility	Pending	

Installation Option Product Languages Node Selection Management Options Operating System Groups Installation Location Root script execution Prerequisite Checks Summary Install Product Finish Finish Progress 97% Status 97% Status Status Status Status Status Status Status Status Status Status Status Status Succeeded Setup Oracle Base Succeeded Outpate Inventory Succeeded Succeeded Configure Oracle Grid Infrastructure for a Cluster Update Inventory Succeeded Configure Oracle Grid Infrastructure for a Cluster Update Inventory Succeeded <	Oracle Gri	d Infrastructure 12c Release 1 Installer - Step 10 of 11 ORACL GRID INFRASTRU		• 2
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Finish Finish Configure Oracle Grid Infrastructure for a Cluster Update Inventory Succeeded Creating Container Database for Oracle Grid Infrastructure Management Re Succeeded	Root script execution Prerequisite Checks Summary	Copy files Link binaries Setup Perform remote operations Setup Oracle Base Update Inventory Every Bood Scripts	Succeeded Succeeded Succeeded Succeeded Succeeded Succeeded	
Setting up Oracle Grid Infrastructure Management Repository Succeeded Management Database Configuration Assistant Succeeded Oracle Cluster Verification Utility In Progress	Finish	 Configure Oracle Grid Infrastructure for a Cluster Update Inventory Creating Container Database for Oracle Grid Infrastructure Management Re Setting up Oracle Grid Infrastructure Management Repository Management Database Configuration Assistant Oracle Cluster Verification Utility 	In Progress Succeeded Succeeded Succeeded Succeeded In Progress	

🔮 Oracle Gri	id Infrastructure 12c Release 1 Installer - Step 11 of 11 $_$ \square \times
Finish	
 Installation Option Product Languages Node Selection Management Options Operating System Groups Installation Location Root script execution Prerequisite Checks Summary Install Product Finish 	The upgrade of Oracle Grid Infrastructure for a Cluster was successful.
Help	< <u>B</u> ack <u>N</u> ext > <u>I</u> nstall <u>C</u> lose

Post upgrade check

[orgrid@ohs1 ~]\$ crsctl stat res -t				
Name	Target	State	Server	State details
Local Resourc	ces			
ora.DATA_PR	OD.dg			
	ONLINE	ONLINE	ohs1	STABLE
	ONLINE	ONLINE	ohs2	STABLE
ora.FRA_PRO	D.dg			
	ONLINE	ONLINE	ohs1	STABLE
	ONLINE	ONLINE	ohs2	STABLE
ora.LISTENE	R.Isnr			
	ONLINE	ONLINE	ohs1	STABLE
	ONLINE	ONLINE	ohs2	STABLE
ora.SYSTEMD)G.dg			
	ONLINE	ONLINE	ohs1	STABLE
	ONLINE	ONLINE	ohs2	STABLE

[orgrid@ohs1 ~]\$

[orgrid@ohs1 ~]\$ crsctl query crs releaseversion

ora.asm				
	ONLINE	ONLINE	ohs1	Started,STABLE
	ONLINE	ONLINE	ohs2	Started, STABLE
ora.net1.netv	vork			
	ONLINE	ONLINE	ohs1	STABLE
	ONLINE	ONLINE	ohs2	STABLE
ora.ons				
	ONLINE	ONLINE	ohs1	STABLE
	ONLINE	ONLINE	ohs2	STABLE
Cluster Resou	irces			
ora.LISTENER	R_SCAN1.Is	snr		
1	ONLINE	ONLINE	ohs2	STABLE
ora.LISTENER	R_SCAN2.Is	snr		
1	ONLINE	ONLINE	ohs1	STABLE
ora.LISTENER	R_SCAN3.Is	snr		
1	ONLINE	ONLINE	ohs1	STABLE
ora.MGMTLSN	IR			
1	ONLINE	ONLINE	ohs1	169.254.237.80 172.1 6.0.21,STABLE
ora.cvu				
1	ONLINE	ONLINE	ohs2	STABLE
ora.mgmtdb				
1	ONLINE	ONLINE	ohs1	Open,STABLE
ora.oc4j				
1	ONLINE	ONLINE	ohs2	STABLE
ora.ohs1.vip				
1	ONLINE	ONLINE	ohs1	STABLE
ora.ohs2.vip				
1	ONLINE	ONLINE	ohs2	STABLE
ora.prod.db				
1	ONLINE	ONLINE	ohs1	Open,STABLE
2	ONLINE	ONLINE	ohs2	Open,STABLE
ora.scan1.vip				
1	ONLINE	ONLINE	ohs2	STABLE
ora.scan2.vip				
1	ONLINE	ONLINE	ohs1	STABLE
ora.scan3.vip				
1	ONLINE	ONLINE	ohs1	STABLE

Oracle High Availability Services release version on the local node is [12.1.0.2.0] [orgrid@ohs1 ~]\$ crsctl check cluster -all ohs1: CRS-4537: Cluster Ready Services is online CRS-4529: Cluster Synchronization Services is online CRS-4533: Event Manager is online ****** ohs2: CRS-4537: Cluster Ready Services is online CRS-4529: Cluster Synchronization Services is online CRS-4533: Event Manager is online [orgrid@ohs1 ~]\$ crsctl query crs activeversion -f Oracle Clusterware active version on the cluster is [12.1.0.2.0]. The cluster upgrade state is [NORMAL]. The cluster active patch level is [0]. [orgrid@ohs1 ~]\$ ps -ef|grep d.bin root 2578 1 11:38 ? 00:00:16 1 /pgold/orgrid/oracle/product/121/bin/ohasd.bin exclusive 3320 00:00:17 orgrid 1 1 11:38 ? /pgold/orgrid/oracle/product/121/bin/evmd.bin orgrid 3351 1 0 11:38 ? 00:00:02 /pgold/orgrid/oracle/product/121/bin/mdnsd.bin 3373 orgrid 0 11:38 ? 00:00:02 1 /pgold/orgrid/oracle/product/121/bin/gpnpd.bin 3514 1 ? 00:00:23 orgrid 1 11:38 /pgold/orgrid/oracle/product/121/bin/gipcd.bin 3557 ? 00:00:12 orgrid 1 0 11:38 /pgold/orgrid/oracle/product/121/bin/ocssd.bin 3668 ? 00:00:16 root 1 1 11:39 /pgold/orgrid/oracle/product/121/bin/octssd.bin reboot 3689 1 11:39 00:00:09 root 0 ? /pgold/orgrid/oracle/product/121/bin/osysmond.bin root 8753 1 1 11:47 ? 00:00:12 /pgold/orgrid/oracle/product/121/bin/crsd.bin reboot 28304 27892 0 12:05 pts/0 00:00:00 grep d.bin orgrid [orgrid@ohs1 ~]\$ ps -ef|grep pmon 7130 orgrid 1 0 11:44? 00:00:00 asm_pmon_+ASM1 7482 1 0 11:45 ? 00:00:00 ora_pmon_prod1 oracle orgrid 18386 1 011:57? 00:00:00 mdb_pmon_-MGMTDB orgrid 28320 27892 0 12:06 pts/0 00:00:00 grep pmon [orgrid@ohs1 ~]\$ oclumon manage -get reppath

СНМ	Repository	Path =
26 Page		

+SYSTEMDG/_MGMTDB/FD9B43BF6A646F8CE043B6A9E80A2815/DATAFILE/sysmgmtdata. 269.929447857 [orgrid@ohs1 ~]\$ srvctl status mgmtdb -verbose Database is enabled Instance -MGMTDB is running on node ohs1. Instance status: Open. [orgrid@ohs1 ~]\$ srvctl config mgmtdb Database unique name: _mgmtdb Database name: Oracle home: <CRS home> Oracle user: orgrid Spfile: +SYSTEMDG/_MGMTDB/PARAMETERFILE/spfile.268.929447741 Password file: Domain: Start options: open Stop options: immediate Database role: PRIMARY Management policy: AUTOMATIC Type: Management PDB name: prod_cluster PDB service: prod_cluster Cluster name: prod-cluster Database instance: -MGMTDB ASMCMD> lsct -g data_prod Instance_ID DB_Name Status Software_Version Compatible_version Instance_Name Disk_Group 1 +ASM CONNECTED 12.1.0.2.0 12.1.0.2.0 +ASM1 DATA PROD 2 +ASM CONNECTED 12.1.0.2.0 12.1.0.2.0 +ASM2 DATA_PROD CONNECTED 11.2.0.4.0 1 prod 11.2.0.4.0 prod1 DATA_PROD CONNECTED 11.2.0.4.0 11.2.0.4.0 prod2 2 prod DATA_PROD ASMCMD> showversion : 12.1.0.2.0 ASM version ASMCMD> [root@ohs1 ~]# su - orgrid [orgrid@ohs1 ~]\$ cat .bash_profile # .bash_profile # Get the aliases and functions if [-f ~/.bashrc]; then . ~/.bashrc

fi

User specific environment and startup programs

PATH=\$PATH:\$HOME/bin

export PATH

- export ORACLE_SID=+ASM1
- export ORACLE_HOME=/pgold/orgrid/oracle/product/121
- export PATH=\$ORACLE_HOME/bin:\$PATH
- [orgrid@ohs1 ~]\$ srvctl config listener
- Name: LISTENER
- Type: Database Listener
- Network: 1, Owner: orgrid
- Home: <CRS home>
- End points: TCP:1521
- Listener is enabled.
- Listener is individually enabled on nodes:
- Listener is individually disabled on nodes:
- [orgrid@ohs1 ~]\$ srvctl config scan_listener
- SCAN Listener LISTENER_SCAN1 exists. Port: TCP:10010
- Registration invited nodes:
- Registration invited subnets:
- SCAN Listener is enabled.
- SCAN Listener is individually enabled on nodes:
- SCAN Listener is individually disabled on nodes:
- SCAN Listener LISTENER_SCAN2 exists. Port: TCP:10010
- Registration invited nodes:
- Registration invited subnets:
- SCAN Listener is enabled.
- SCAN Listener is individually enabled on nodes:
- SCAN Listener is individually disabled on nodes:
- SCAN Listener LISTENER_SCAN3 exists. Port: TCP:10010
- Registration invited nodes:
- Registration invited subnets:
- SCAN Listener is enabled.
- SCAN Listener is individually enabled on nodes:
- SCAN Listener is individually disabled on nodes:
- [orgrid@ohs1 ~]\$ srvctl config database -d prod
- PRCD-1229 : An attempt to access configuration of database prod was rejected because its version 11.2.0.4.0 differs from the program version 12.1.0.2.0. Instead run the program from /pgold/ordb/oracle/product/112.
- [orgrid@ohs1 ~]\$ IsnrctI status

LSNRCTL for Linux: Version 12.1.0.2.0 - Production on 06-DEC-2016 16:27:02

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```
Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=IPC)(KEY=LISTENER)))
STATUS of the LISTENER
```

Alias	LISTENER			
Version	TNSLSNR for Linux: Version 12.1.0.2.0 - Production			
Start Date 06-DEC-2016 16:18:12				
Uptime	0 days 0 hr. 8 min. 50 sec			
Trace Level	off			
Security	ON: Local OS Authentication			
SNMP	OFF			
Listener Parameter File	/pgold/orgrid/oracle/product/121/network/admin/listener.ora			
Listener Log File	/pgold/orgrid/grid_base/diag/tnslsnr/ohs1/listener/alert/log.xml			
Listening Endpoints Sum	mary			
(DESCRIPTION=(ADDR	<pre>RESS=(PROTOCOL=ipc)(KEY=LISTENER)))</pre>			
(DESCRIPTION=(ADDR	ESS=(PROTOCOL=tcp)(HOST=10.0.2.21)(PORT=1521)))			
(DESCRIPTION=(ADDR	ESS=(PROTOCOL=tcp)(HOST=10.0.2.31)(PORT=1521)))			
Services Summary				
Service "+ASM" has 1 ins	stance(s).			
Instance "+ASM1", sta	tus READY, has 1 handler(s) for this service			
Service "-MGMTDBXDB"	has 1 instance(s).			
Instance "-MGMTDB", s	status READY, has 1 handler(s) for this service			
Service "_mgmtdb" has "	1 instance(s).			
Instance "-MGMTDB", s	status READY, has 1 handler(s) for this service			
Service "prod1" has 1 ins	stance(s).			
Instance "prod1", statu	us UNKNOWN, has 1 handler(s) for this service			
Service "prod_cluster" ha	as 1 instance(s).			
Instance "-MGMTDB", s	status READY, has 1 handler(s) for this service			

The command completed successfully

[orgrid@ohs1 ~]\$