Oracle Exadata Assessment Report

System Health Score is 95 out of 100 (detail)

Cluster Summary

Heading	Description
System Type	Exadata
Cluster Name	Cluster-exa4
OS/Kernel Version	LINUX X86-64 OELRHEL 8 5.15.0-300.163.18.7.el8uek.x86_64
CRS Home - Version	/u01/app/23.0.0.0/grid - 23.7.0.25.01
DB Home - Version - Names	/u01/app/oracle/product/23.0.0.0/dbhome_1 - 23.7.0.25.01 - 2 databases /u01/app/oracle/product/19.0.0.0/dbhome_1 - 19.26.0.0.250121 - cdb2 database
EM Agent Home	/u01/app/oracle/agent13c/agent_13.5.0.0.0
Exadata Version	25.1.3.0.0.250313
Number of nodes	5
Database Servers	2
Storage Servers	3
Exachk Version	25.6.1_20250721
Collection	exachk_exa4dbadm01_whexa4_073125_115548
Duration	16 mins, 55 seconds
Executed by	root
Arguments	
Collection Date	31-Jul-2025 12:18:39

Please Note!

- There are 2 critical, 14 failed, 8 warning, 11 info, and 3 undetermined checks. By default it displays the most severe ones. To display other checks, please select the corresponding alert level checkbox. For details on these check alert levels please refer to the Exachk MOS Note 1070954.1, section "Exachk Checks Criticality Criteria".

- This version of Exachk is considered valid for 170 days from today or until a new version is available.

- **FAIL** The data collection activity appears to be incomplete for this Exachk run. Please review the Killed Processes and/or Skipped Checks section and refer to the Slow Performance, Skipped Checks, and Timeouts" section of the user guide for corrective actions.

- Checks with status UNDETERMINED or SKIPPED or KILLED are reported in the following format: UNDETERMINED/SKIPPED/KILLED (alert level of check).
Example: UNDETERMINED (CRITICAL) or SKIPPED (FAIL) or KILLED (FAIL).

Exadata Critical Issues

The following Exadata Critical Issues (MOS Note 1270094.1) have been checked in this report:

- This environment has been checked for exposure to the following Exadata Critical Issues from MOS Note 1270094.1
-
- Exadata Database Server and Storage Server : EX1-EX65,EX67,EX69-EX78,EX80-EX85,EX87-EX92
- Oracle Database and Grid Infrastructure : DB1-DB4, DB6, DB9-DB50,DB52-DB54
- Exadata Fabric Switch : IB1-IB3,IB5-IB9

Note: Exadata Critical issues which are not shown in the following table are not applicable to the system configuration.

Exadata Critical Issues on Database Server

Status	Previous Status	Type	Description	Status On	Details
CRITICAL	NA	OS Check	Exadata Critical Issue DB50	All Database Servers	Hide
Exadata Critical Issue DB50					
Recommendation	Benefit / Impact: A system exposed to a critical issue may experience system-wide impact to performance or availability.				

```
Risk:

Issue #1 - Bug 33610957, Bug 34534868 - During operating system startup Oracle
Clusterware may not start because the CSS daemon (OCSSD process ocssd.bin) cannot be
set to run with real-time scheduler priority.

Issue #2 - (Bug 34286265 and Bug 34318125) or Bug 34672698 - Set process priority
fails on
critical database background processes, such as VMTK and LMS, which can result in
performance degradation.

Action / Repair:

See Exadata Critical Issue DB50 in MOS note 1270094.1(below link)
```

Links	1. Note: 1270094.1 - Exadata Critical Issues
Needs attention on	exa4dbadm01, exa4dbadm02
Passed on	-

Status on exa4dbadm01:
CRITICAL => System is exposed to Exadata Critical Issue DB50

```
DATA FROM EXA4DBADM01 - EXADATA CRITICAL ISSUE DB50




RDBMS fixes for home - /u01/app/oracle/product/19.0.0.0/dbhome_1
34286265: not installed
34318125: not installed
34672698: not installed

Systemd service configuration files containing Delegate=yes:
/etc/systemd/system/ohasd.service
/etc/systemd/system/oracle-ohasd.service
/etc/systemd/system/oracle-tfa.service


Database process VKTM scheduling policy:
   PID POL CMD
 86063 TS  asm_vktm_+ASM1
```
Click for more data

Status on exa4dbadm02:
CRITICAL => System is exposed to Exadata Critical Issue DB50

```
DATA FROM EXA4DBADM02 - EXADATA CRITICAL ISSUE DB50




RDBMS fixes for home - /u01/app/oracle/product/19.0.0.0/dbhome_1
34286265: not installed
34318125: not installed
34672698: not installed

Systemd service configuration files containing Delegate=yes:
/etc/systemd/system/ohasd.service
/etc/systemd/system/oracle-ohasd.service
/etc/systemd/system/oracle-tfa.service


Database process VKTM scheduling policy:
   PID POL CMD
 86224 TS  asm_vktm_+ASM2
```
Click for more data

Hide

Exadata Critical Issues on Storage Server

Status	Previous Status	Type	Description	Status On	Details

Exadata Critical Issues on Cluster Wide

Status	Previous Status	Type	Description	Status On	Details

Database Server

Status	Previous Status	Type	Description	Status On	Details

Storage Server

Status	Previous Status	Type	Description	Status On	Details

Cluster Wide

Status	Previous Status	Type	Description	Status On	Details
CRITICAL	NA	Cluster Wide Check	Verify the storage servers in use configuration matches across the cluster	Cluster Wide	Hide

	Verify the storage servers in use configuration matches across the cluster
Recommendation	Benefit / Impact: Verifying the storage servers in use configuration matches across the cluster can prevent potential issues ranging from impaired performance to a node eviction. The impact of verifying the storage servers in use configuration matches across the cluster. The impact of making corrections varies depending upon the root cause of the difference. Risk: If the storage servers in use configuration does not match across the cluster, there is risk of impaired performance, node eviction, and perhaps data loss with multiple hardware failures over time. Action / Repair: NOTE: This check will only pass if the following are both true: 1) For each database server, the md5sum for the cellip.ora file matches the md5sum from the list of storage servers accessed by kfod. 2) The md5sum from 1) matches across the cluster. To verify the storage servers in use configuration matches across the cluster, run Exachk and review the provided report. The expected output in the Exachk report should be as follows: In the "Cluster Wide" section of the report, the overall result should be "PASS": PASS Cluster Wide Check The storage servers in use configuration matches across the cluster Cluster Wide View In the "View" detail section of the report for this check the expected output should be similar to: SUCCESS: The storage servers in use configuration matches: - DBSRVR: busm01client01 DBSRVR_CELLIP_MD5SUM: d2144e88f4249a5d267691b85ed2ae49 DBSRVR_KFOD_MD5SUM: d2144e88f4249a5d267691b85ed2ae49 DBSRVR_BASE_MD5SUM: d2144e88f4249a5d267691b85ed2ae49 - DBSRVR: busm01client02 DBSRVR_CELLIP_MD5SUM: d2144e88f4249a5d267691b85ed2ae49 DBSRVR_KFOD_MD5SUM: d2144e88f4249a5d267691b85ed2ae49 DBSRVR_BASE_MD5SUM: d2144e88f4249a5d267691b85ed2ae49 A "FAILURE" example: In the "Cluster Wide" section of the report, the overall result will be "FAIL": FAIL Cluster Wide Check The storage servers in use configuration should match across the cluster Cluster Wide View In the "View" detail section of the report for this check the expected output should be similar to: FAILURE: The storage servers in use configuration does not match: - DBSRVR: randomadm01vm01 DBSRVR_CELLIP_MD5SUM: acd6ad6d153ea1ec1ecf9a5aa19cf4a7 DBSRVR_KFOD_MD5SUM: d41d8cd98f00b204e9800998ecf8427e DBSRVR_BASE_MD5SUM: acd6ad6d153ea1ec1ecf9a5aa19cf4a7 - DBSRVR: randomadm02vm01 DBSRVR_CELLIP_MD5SUM: acd6ad6d153ea1ec1ecf9a5aa19cf4a7 DBSRVR_KFOD_MD5SUM: d41d8cd98f00b204e9800998ecf8427e

```
DBSRVR_BASE_MD5SUM:        acd6ad6d153ea1ec1ecf9a5aa19cf4a7

    NOTE: In the "FAILURE:" example, the md5sum for the results reported from kfod on
the running system does not match the cellip.ora md5sum.

If the result is not as expected, investigate for root cause and take appropriate
corrective action.

    NOTE: If after corrective actions are completed, you wish to run this one check
without a full Exachk run execute the following command as the "root" userid in the
directory in which Exachk was installed:

    ./exachk -check 5D6AC87BF4669BF2E053D498EB0AFC19,5D691B1A8146F67CE053D398EB0A8822
```

Links	1. Note: 888828.1 - Database Machine and Exadata Storage Server 11g Release 2 (11.2) Supported Versions
Needs attention on	Cluster Wide
Passed on	-

Status on Cluster Wide:
CRITICAL => The storage servers in use configuration should match across the cluster

```
DATA FROM EXA4DBADM01 - VERIFY THE STORAGE SERVERS IN USE CONFIGURATION MATCHES ACROSS THE CLUSTER




FAILURE: The storage servers in use configuration does not match:
-
DBSRVR:                exa4dbadm01
DBSRVR_CELLIP_MD5SUM:  75b15f843565253ceb54ed49702c20f2
DBSRVR_KFOD_MD5SUM:    5a0d931256bfa647a45b1c7ce6bf973a
DBSRVR_BASE_MD5SUM:    75b15f843565253ceb54ed49702c20f2
```

Hide

Security

The Security section contains selected controls that may impact the overall security of a system.

Security controls are typically reviewed for impact against Confidentiality, Integrity, and Availability (CIA). NIST definition of CIA is as follows:

• Confidentiality â€" preserving authorized restrictions on information access and disclosure, including means for protecting personal privacy and proprietary information
• Integrity â€" guarding against improper information modification or destruction and ensuring information non-repudiation and authenticity
• Availability â€" ensuring timely and reliable access to and use of information

For more information for general security guidelines, please refer to the following resources:

• Security Guide for Exadata Database Machine (DBMSQ)
• Oracle Exadata Database Machine Security FAQ (Doc ID 2751741.1)
• Exadata Maximum Security Architecture Presentation

Security checks for Database Server

Status	Previous Status	Type	Description	Status On	Details

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Maximum Availability Architecture (MAA) Scorecard

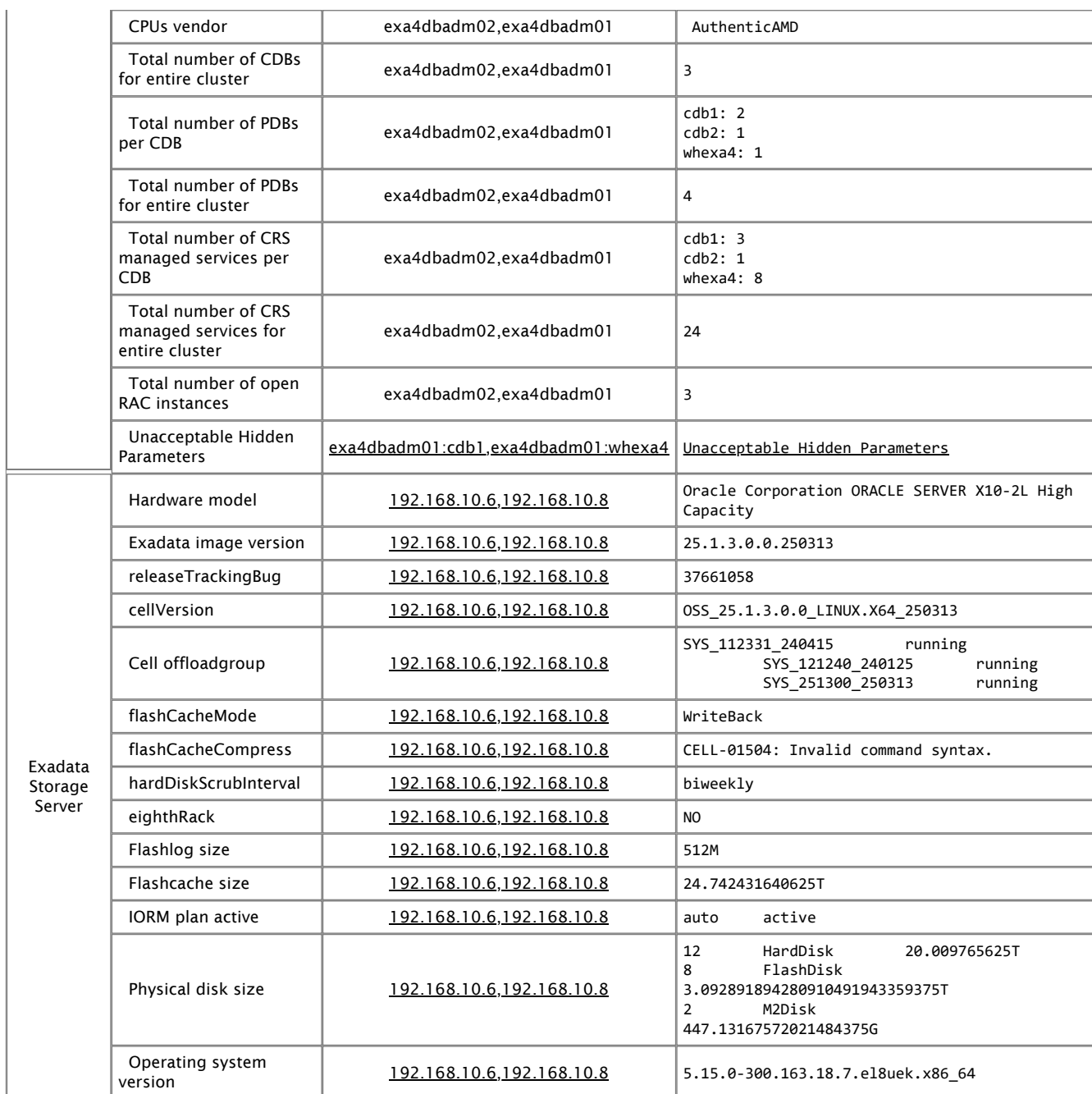| Outage Type		Status	Previous Status	Type	Description	Status On	Details
Component		**Host/Location**		**Found version**	**Recommended versions**		**Status**
DATABASE SERVER	Database Home	exa4dbadm01,exa4dbadm02: /u01/app/oracle/product/19.0.0.0/dbhome_1		19.26.0.0.250121	19.27.0.0.250415		Version within recommended range (minimum version is 19.24.0.0.240716).
		exa4dbadm01,exa4dbadm02: /u01/app/oracle/product/23.0.0.0/dbhome_1		23.7.0.25.01	23.8.0.25.04		Version within recommended range (minimum version is 23.7.0.0.0).

	Grid Infrastructure	exa4dbadm01,exa4dbadm02: /u01/app/23.0.0.0/grid	23.7.0.25.01	23.8.0.25.04	Version within recommended range (minimum version is 23.7.0.0.0).
	Exadata	exa4dbadm01,exa4dbadm02	25.1.3.0.0	25.1.6.0.0	This Exadata Maintenance Release is older than recommended.
STORAGE SERVER	Exadata	exa4celadm01,exa4celadm02,exa4celadm04	25.1.3.0.0	25.1.6.0.0	This Exadata Maintenance Release is older than recommended.

Infrastructure Software and Configuration Summary

NOTE: This table displays the configuration summary of the system. It is for informational purposes only. No action is required.

Component	Attribute	Host	Value
Oracle Database Server	Exadata image version	exa4dbadm02,exa4dbadm01	`25.1.3.0.0.250313`
	Operating system	exa4dbadm02,exa4dbadm01	`Linux x86_64`
	Operating system version	exa4dbadm02,exa4dbadm01	`5.15.0-300.163.18.7.el8uek.x86_64`
	Hardware model	exa4dbadm02,exa4dbadm01	`ORACLE SERVER E5-2L`
	Disk configuration	exa4dbadm02,exa4dbadm01	`[INFO    ] /opt/oracle.SupportTools/reclaimdisks.sh: There is nothing to reclaim on RoCE-based Exadata database servers`

	Logical Volume Configuration	exa4dbadm02,exa4dbadm01	`Volume groups`
			`  VG       VSize VFree PV        PSize PFree`
			`Used    Fmt`
			`  VGExaDb 3.48t 3.21t /dev/md25  3.48t 3.21t`
			`278.00g lvm2`
			`Logical volumes`
			`  LV              VG      LSize`
			`  LVDbHome        VGExaDb   4.00g`
			`  LVDbOra1        VGExaDb 200.00g`
			`  LVDbSwap1       VGExaDb  16.00g`
			`  LVDbSys1        VGExaDb  15.00g`
			`  LVDbSys2        VGExaDb  15.00g`
			`  LVDbTmp         VGExaDb   3.00g`
			`  LVDbVar1        VGExaDb   2.00g`
			`  LVDbVar2        VGExaDb   2.00g`
			`  LVDbVarLog      VGExaDb  18.00g`
			`  LVDbVarLogAudit VGExaDb   1.00g`
			`  LVDoNotRemoveOrUse VGExaDb   2.00g`

	Network interface configuration	exa4dbadm02,exa4dbadm01	`Master bondeth0: slaves eth10 eth9` `Master bondeth1: slaves eth29 eth30`
	Memory size	exa4dbadm02,exa4dbadm01	`2304 GB`
	CPUs enabled	exa4dbadm02,exa4dbadm01	`384`

	Custom RPMS	exa4dbadm02,exa4dbadm01	`Exadata computenode package  : exact (locked)`
			`Missing capabilities         : 0`
			`Exadata packages upgraded    : 2363`
			`Additional packages installed : 15`

	ASM disk group configuration	exa4dbadm02	

		exa4dbadm01	`STATE   TYPE      SECTOR     BLOCK`
			`AU   TOTAL_MB   FREE_MB REQ_MIR_FREE_MB`
			`USABLE_FILE_MB OFFLINE_DISKS VOTING NAME`
			`------- ------ ---------- ---------- ---------`
			`- ---------- ---------- --------------- ------`
			`-------- ------------- ------ ---------------`
			`MOUNTED NORMAL      512       4096`
			`4194304  377671680  365507572       56650752`
			`154428410             0 Y      DATAC1`
			`MOUNTED NORMAL      512       4096`
			`4194304  377669952  368540952       56650492`
			`155945230             0 N      RECOC1`

	CPUs vendor	exa4dbadm02,exa4dbadm01	AuthenticAMD
	Total number of CDBs for entire cluster	exa4dbadm02,exa4dbadm01	3
	Total number of PDBs per CDB	exa4dbadm02,exa4dbadm01	cdb1: 2 cdb2: 1 whexa4: 1
	Total number of PDBs for entire cluster	exa4dbadm02,exa4dbadm01	4
	Total number of CRS managed services per CDB	exa4dbadm02,exa4dbadm01	cdb1: 3 cdb2: 1 whexa4: 8
	Total number of CRS managed services for entire cluster	exa4dbadm02,exa4dbadm01	24
	Total number of open RAC instances	exa4dbadm02,exa4dbadm01	3
	Unacceptable Hidden Parameters	exa4dbadm01:cdb1,exa4dbadm01:whexa4	Unacceptable Hidden Parameters
Exadata Storage Server	Hardware model	192.168.10.6,192.168.10.8	Oracle Corporation ORACLE SERVER X10-2L High Capacity
	Exadata image version	192.168.10.6,192.168.10.8	25.1.3.0.0.250313
	releaseTrackingBug	192.168.10.6,192.168.10.8	37661058
	cellVersion	192.168.10.6,192.168.10.8	OSS_25.1.3.0.0_LINUX.X64_250313

	Cell offloadgroup	192.168.10.6,192.168.10.8	SYS_112331_240415 running
			          SYS_121240_240125 running
			          SYS_251300_250313 running

	flashCacheMode	192.168.10.6,192.168.10.8	WriteBack
	flashCacheCompress	192.168.10.6,192.168.10.8	CELL-01504: Invalid command syntax.
	hardDiskScrubInterval	192.168.10.6,192.168.10.8	biweekly
	eighthRack	192.168.10.6,192.168.10.8	NO
	Flashlog size	192.168.10.6,192.168.10.8	512M
	Flashcache size	192.168.10.6,192.168.10.8	24.742431640625T
	IORM plan active	192.168.10.6,192.168.10.8	auto active
	Physical disk size	192.168.10.6,192.168.10.8	12 HardDisk 20.009765625T 8 FlashDisk 3.09289189428091049194335 9375T 2 M2Disk 447.13167572021484375G
	Operating system version	192.168.10.6,192.168.10.8	5.15.0-300.163.18.7.el8uek.x86_64

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Cluster Verification Utility (CVU 23.8.0.25.4) result

Status	Previous Status	Type	Description	Status On	Details

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Findings needing further review

NOTE: This section contains best practices that Exachk can only do a partial check for because a complete check requires information it cannot gather (ex: data outside of Exachk run scope, requires customer knowledge, etc). Please investigate the partial finding that Exachk reports in this section, paying particular attention to the details, to determine if any action is required.

Status	Previous Status	Type	Description	Status On	Details

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Platinum Certification

Status	Previous Status	Type	Description	Status On	Details

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Killed Processes

Exachk found that below commands were killed during the run, so some checks might have failed to execute properly. Refer to the "Slow Performance, Skipped Checks, and Timeouts" section of the user guide for corrective actions.

```
KILLED (FAIL) - [exa4dbadm01:+ASM1] check Verify database server quorum disks configuration (Check-ID:
339FE456FBDC3549E0530D98EB0AD21F) because it timed out after 250 seconds
KILLED (FAIL) - [exa4dbadm02:+ASM2] check Verify database server quorum disks configuration (Check-ID:
339FE456FBDC3549E0530D98EB0AD21F) because it timed out after 250 seconds
```

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Component Elapsed Times

Component Name	Component Type	Elapsed Time

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Top 10 Time Consuming Checks

NOTE: This information is primarily used for helping Oracle optimize the run time of Exachk.

These timings are not necessarily indicative of any problem and may vary widely from one system to another.

Name	Type	Target	Execution Duration
Verify database server quorum disks configuration	OS Check	exa4dbadm02	4 mins, 10 seconds
Verify database server quorum disks configuration	OS Check	exa4dbadm01	4 mins, 10 seconds
ASM High Redundancy Grid Disks	SQL Collection	exa4dbadm02:+ASM2	1 mins, 13 seconds
ASM High Redundancy Grid Disks	SQL Collection	exa4dbadm01:+ASM1	1 mins, 11 seconds
Infrastructure Software and Configuration for compute	OS Collection	exa4dbadm01	54 seconds
Infrastructure Software and Configuration for compute	OS Collection	exa4dbadm02	50 seconds
Verify the storage servers in use configuration matches across the cluster	OS Check	exa4dbadm01	47 seconds
Verify the storage servers in use configuration matches across the cluster	OS Check	exa4dbadm02	46 seconds
Verify Hardware and Firmware on Database and Storage Servers (CheckHWnFWProfile) [Storage Server]	OS Collection	exa4celadm01	38 seconds
Verify Hardware and Firmware on Database and Storage Servers (CheckHWnFWProfile) [Storage Server]	OS Collection	exa4celadm02	38 seconds