

Oracle® Database Appliance

Release Notes



Release 18.7 for Linux x86-64

F20941-04

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The Oracle logo, consisting of a solid red square with the word "ORACLE" in white, uppercase, sans-serif font centered within it.

ORACLE®

Oracle Database Appliance Release Notes, Release 18.7 for Linux x86-64

F20941-04

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Contents

	Preface	
	Audience	vi
	Documentation Accessibility	vi
	Related Documents	vii
	Conventions	vii
1	What's New in This Release	
2	Component Versions for Oracle Database Appliance	
	Component Versions for Oracle Database Appliance X8-2 Models	2-1
	Component Versions for Oracle Database Appliance X7-2 Models	2-2
	Component Versions for X6-2S, X6-2M, and X6-2L Models	2-3
	Component Versions for Oracle Database Appliance X6-2-HA Models	2-3
	Component Versions for Oracle Database Appliance X5-2 and X4-2 Models	2-4
3	Oracle Database Appliance 18.7 Patches	
	Patching from Previous Releases	3-2
	Minimum Software Version Requirements	3-3
	Oracle Database Appliance X8-2S, X8-2M, and X8-2-HA Patches	3-3
	Oracle Database Appliance X8-2-HA Virtualized Platform Patches	3-5
	Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA Patches	3-9
	Oracle Database Appliance X7-2-HA Virtualized Platform Patches	3-11
	Oracle Database Appliance X6-2S, X6-2M, and X6-2L Patches	3-14
	Oracle Database Appliance X6-2-HA Patches	3-17
	Oracle Database Appliance X5-2/X4-2 Patches	3-22
4	Known Issues with Oracle Database Appliance in This Release	
	Known Issues When Deploying Oracle Database Appliance	4-1

Changing the CPU core count after provisioning appliance for Oracle Database Appliance release 18.7 fails	4-2
Running /opt/oracle/dcs/bin/odacli configure-firstnet fails on Oracle Database Appliance X8-2 Systems	4-3
Only one network interface displayed after rebooting node	4-4
Snapshot databases can only be created on the primary database	4-5
Creation of CDB for 12.1.0.2 databases may fail	4-5
DCS-10045:Validation error encountered: Error retrieving the cpucores	4-6
Database creation hangs when using a deleted database name for database creation	4-6
Error when updating 12.1.0.2 database homes	4-7
Error encountered after running cleanup.pl	4-7
Accelerator volume for data is not created on flash storage	4-7
Database connection fails after database upgrade	4-8
Failure in creating 18.3 database with DSS database shape odb1s	4-8
Error in provisioning Oracle ASM Database on FLASH storage	4-8
Clone database operation fails	4-9
Errors in clone database operation	4-9
Errors after restarting CRS	4-10
Unable to create an Oracle ASM Database for Release 12.1	4-10
Database creation fails for odb-01s DSS databases	4-11
Known Issues When Patching Oracle Database Appliance	4-11
Patching appliance with reduced CPU core count to release 18.7 fails	4-14
Resilvering of Oracle ADVM processes impacting performance after upgrading to 18.3	4-15
Error when applying patch to Oracle Database Appliance on Virtualized Platform	4-15
Error in validating patch for Oracle Database Appliance Virtualized Platform	4-16
Error when patching DCS agent	4-17
Error when patching to 12.1.0.2.190716 Release Update	4-17
Relocation of Oracle RAC One Database fails during patching	4-17
Error in patching Oracle Database Appliance	4-18
Error when patching database homes to 18.3 with Oracle Grid Infrastructure release 18.3.0.0.180717	4-18
Patching pre-checks do not complete with --local option during server patching	4-19
Server status not set to Normal when patching	4-19
Error when patching 11.2.0.4 database homes	4-20
Error when patching from Oracle Database Appliance release earlier than 18.3 to release 18.7	4-20
Error in patching NVMe disks to the latest version	4-21
Failure in patching Oracle Database Appliance Virtualized Platform	4-21
Error in patching Oracle Database Appliance Virtualized Platform	4-22
Patching of M.2 drives not supported	4-23

Onboard public network interfaces do not come up after patching or imaging	4-23
Server patching fails to start Oracle Clusterware	4-24
Stack migration fails during patching	4-24
DATA disk group fails to start after upgrading Oracle Grid Infrastructure to 18.5	4-25
Some files missing after patching the appliance	4-25
Space issues with /u01 directory after patching	4-26
Errors when deleting database storage after migration to DCS stack	4-26
Repository in offline or unknown status after patching	4-27
Versions of some components not updated after cleaning up and reprovisioning Oracle Database Appliance	4-27
11.2.0.4 databases fail to start after patching	4-28
FLASH disk group is not mounted when patching or provisioning the server	4-28
Error in patching database home locally using the Web Console	4-30
Error when patching Oracle Database 11.2.0.4	4-30
Known Issues When Managing Oracle Database Appliance	4-30
Extensive tracing generated for server processes	4-31
Missing DATA, RECO, and REDO entries when dbstorage is rediscovered	4-32
Incorrect Aura8 firmware value displayed	4-32
Error encountered for database operations for odb28 database shape	4-33
Error when restoring a database from backup	4-33
ODA_BASE is in read-only mode or cannot start	4-33
Restriction in moving database home for database shape greater than odb8	4-34
The odaeraser tool does not work if oakd is running in non-cluster mode	4-34
Issues with the Web Console on Microsoft web browsers	4-35
Disk space issues due to Zookeeper logs size	4-35
Error after running the cleanup script	4-36
Incorrect results returned for the describe-component command in certain cases	4-37
Old configuration details persisting in custom environment	4-38
Incorrect SGA and PGA values displayed	4-38
OAKERR:7007 Error encountered while starting VM	4-39
Error in node number information when running network CLI commands	4-40
Unrecognized Token Messages Appear in /var/log/messages	4-41

A Documentation Addendum

Setup Poster X7-2-HA	A-1
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Preface

Oracle Database Appliance is an optimized, prebuilt database system that is easy to deploy, operate, and manage. By integrating hardware and software, Oracle Database Appliance eliminates the complexities of nonintegrated, manually assembled solutions. Oracle Database Appliance reduces the installation and software deployment times from weeks or months to just a few hours while preventing configuration and setup errors that often result in suboptimal, hard-to-manage database environments.

- [Audience](#)
- [Documentation Accessibility](#)
- [Related Documents](#)
- [Conventions](#)

Audience

This guide is intended for anyone who configures, maintains, or uses Oracle Database Appliance:

- System administrators
- Network administrators
- Database administrators
- Application administrators and users

This book does not include information about Oracle Database architecture, tools, management, or application development that is covered in the main body of Oracle Documentation, unless the information provided is specific to Oracle Database Appliance. Users of Oracle Database Appliance software are expected to have the same skills as users of any other Linux-based Oracle Database installations.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Related Documents

For more information about Oracle Database Appliance, go to <http://www.oracle.com/goto/oda/docs> and click the appropriate release. The following documents are published in the Oracle Database Appliance online documentation library:

- *Oracle Database Appliance Release Notes*
- *Oracle Database Appliance Licensing Information User Manual*
- *Oracle Database Appliance Security Guide*
- *Oracle Database Appliance Accessibility Guide*
- *Oracle Database Appliance X8-2 Deployment and User's Guide*
- *Oracle Database Appliance X7-2 Deployment and User's Guide*
- *Oracle Database Appliance X6-2-HA Deployment and User's Guide*
- *Oracle Database Appliance X6-2S/M/L Deployment and User's Guide*
- *Oracle Database Appliance X5-2/X4-2 Deployment and User's Guide*
- Oracle Database Appliance Setup Posters and Booklets (a full-size printed copy ships with Oracle Database Appliance)
- *Oracle Database Appliance Owner's Guide*
- *Oracle Database Appliance Service Manual*
- *Oracle Database Appliance Series Safety and Compliance Guide*

For more information about using Oracle Database, go to <http://docs.oracle.com/en/database/> and select the database release from the menu. See the following documents in the Oracle Database online documentation library:

- *Oracle Database Security Guide*
- *Oracle Database Administrator's Guide*
- *Oracle Database SQL Language Quick Reference*
- *Oracle Database Backup and Recovery User's Guide*
- *Oracle Database Backup and Recovery Reference*
- *Oracle Database Utilities*
- *Oracle Automatic Storage Management Administrator's Guide*

For more information about Oracle Integrated Lights Out Manager 3.2, see https://docs.oracle.com/cd/E37444_01/.

For more details about other Oracle products that are mentioned in Oracle Database Appliance documentation, see the Oracle Documentation home page at <http://docs.oracle.com>.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action or terms defined in the text.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.
# prompt	The pound (#) prompt indicates a command that is run as the root user.

1

What's New in This Release

Oracle Database Appliance release 18.7 supports Oracle Database 18c functionality on Oracle Database Appliance hardware models.

New Features

This release supports Oracle Database Appliance models X8-2-HA, X8-2M, X8-2S, X7-2-HA, X7-2M, X7-2S, X6-2S, X6-2M, X6-2L, X6-2-HA, X5-2, and X4-2. You can either create an Oracle Database Appliance deployment or patch your existing deployment to Oracle Database Appliance release 18.7. Read the chapter *Known Issues with Oracle Database Appliance in This Release* for critical fixes before patching or deploying Oracle Database Appliance to release 18.7.

The following new features are available in this release:

- **Oracle Database Appliance X8-2 Hardware Models**

This release introduces the new Oracle Database Appliance X8-2S, X8-2M, and X8-2-HA hardware models. For information about installing and setting up the hardware, see *Oracle Database Appliance Owner's Guide*.

For information about cabling the appliance, and configuring and deploying the software, see the *Oracle Database Appliance Deployment and User's Guide* for your hardware model.

For information about managing storage on your appliance, see the *Managing Storage* chapter in the *Oracle Database Appliance Deployment and User's Guide* for your hardware model.

- **Enabling Kernel Updates**

Oracle Database Appliance provides several features to help you keep your deployment current with operating system updates and Oracle Database patches. With this release, you can download and install the latest Oracle Ksplice updates (uptrack-updates) from either the local ULN repository or ULN channel. Oracle Ksplice enables you to download and install critical security patches for operating system kernel RPMs outside the Oracle Database Appliance releases. For more information, see the topic *Enabling Kernel Updates* in the *Oracle Database Appliance Deployment and User's Guide* for your hardware model.

- **Repository Cleanup**

With this release, you have the option to clean up unused or obsolete patch files from the local repository. Cleaning up the repository ensures enough free space for new patches and clone files. Use the new command `odacli cleanup-patchrepo` to clean up the repository. For more information about this command, see the *Oracle Database Appliance Deployment and User's Guide* for your hardware model.

- **Unified Auditing for Databases**

This release of Oracle Database Appliance enables unified auditing for databases created in new database homes. Unified audit trail captures audit information and places them in one location and in one format. This consolidated view enables auditors to co-relate audit information from different components. Having a single audit trail also improves management and security of the audit trail.

For more information about unified audit trail for Oracle Database, see the *Oracle Database Security Guide*.

- **Cloning Databases (Database Snapshots) Using the Web Console**

This feature enables creation of an Oracle Database from an existing Oracle ACFS database. Cloning ensures standardization of gold images, and ease of deployment. You can also use the Web Console to clone databases using Oracle ACFS snapshots.

For more information, see the *Cloning a Database Using the Web Console* topic in the *Oracle Database Appliance Deployment and User's Guide* for your model.

- **Deleting Database Backups Using the Web Console**

You can use the Web Console to delete your database backups. For more information, see the topic *Deleting a Backup Using the Web Console* in the *Oracle Database Appliance Deployment and User's Guide* for your hardware model.

- **Updates to the Patching Procedure**

There are two new CLI commands `odacli update-dcsadmin` and `odacli update-dcscomponents`, to update the DCS admin and DCS infrastructure components such as the Zookeeper server. You must run these commands when you patch your bare metal deployment to Oracle Database Appliance release 18.7. For the procedure to update your bare metal deployment to release 18.7, see the topic *Patching Oracle Database Appliance Bare Metal Systems Using the Command-Line* in the *Oracle Database Appliance Deployment and User's Guide* for your hardware model.

- **Oracle Trace File Analyzer (TFA) and ORAchk Enhancements**

Oracle TFA and ORAchk are essential diagnostic tools for troubleshooting your Oracle Database Appliance deployment. Oracle TFA and ORAchk RPMs are installed when you provision or patch an Oracle Database Appliance deployment. For information about the new CLI command options for `odaadmcli manage diagcollect` command for diagnostic data collection, see the chapter *Troubleshooting Oracle Database Appliance* in the *Oracle Database Appliance Deployment and User's Guide* for your hardware model.

- **Other Web Console Enhancements**

The Web Console provides a user-friendly interface to quickly view and perform many of the tasks needed to deploy, patch, and manage your bare metal system. This release enhances the monitoring information available on the Web Console. You can now view disk group storage utilization such as free and used space on the Web Console. For high-availability deployments, you can view monitoring information for each node.

For information about the Web Console, see the topic *About Web Console* in the *Oracle Database Appliance Deployment and User's Guide* for your hardware model.

- **CLI Command Options Enhancements**

There are two new command line options for the `odacli modify-database` command, to modify the database shape and size.

The `odacli update-database` command now provides an option to disable database backups.

For more information about these command options, see the *Oracle Database Appliance Command Line Reference* chapter in the *Oracle Database Appliance Deployment and User's Guide* for your hardware model.

- **Disabling of High-Availability Internet Protocol (HAIP)**

When you patch your deployment to Oracle Database Appliance release 18.7, the patching process creates a network bond between two private networks. High-Availability Internet Protocol (HAIP) is disabled. For more information, see the topic *Verifying That HAIP is Disabled After Patching to Release 18.7* in the *Oracle Database Appliance Deployment and User's Guide* for your hardware model.

- **Deprecation of `opt/oracle/oak/lib/setupX4network.pl` for Oracle Database Appliance X4-2**

The `setupX4network.pl` utility for defining the public network interface is deprecated. To set the public network interface type, use the command `odacli configure-network` on bare metal deployments, and the command `oakcli configure network` on Virtualized Platform.

For the procedure to set the public interface for the Oracle Database Appliance X4-2 hardware model, see the *Oracle Database Appliance X5-2/X4-2 Deployment and User's Guide*.

- **Oracle Grid Infrastructure and Oracle Database Updates**

The following Oracle Grid Infrastructure and Oracle RDBMS updates (July 2019 Oracle Database Release Update) for bare metal and Virtualized Platform are available in this release:

- 18.7.0.0.190716
- 12.2.0.1.190716
- 12.1.0.2.190716
- 11.2.0.4.190716

The following Oracle RDBMS updates (April 2019 Oracle Database Release Update) for bare metal and Virtualized Platform are available in this release:

- 18.6.0.0.190416
- 12.2.0.1.190416
- 12.1.0.2.190416
- 11.2.0.4.190416

GI Clone, Database RDBMS Clone, and ISO Image Patches

See the chapter *Oracle Database Appliance Release 18.7 Patches* for patch details and links.

Oracle Database Appliance patches are available in My Oracle Support. When selecting a patch, ensure that you select Oracle Database Appliance release 18.7 from the drop down list.

- **Oracle Database Appliance 18.7.0.0.0 GI Clone for ODACLI/DCS stack:** Use patch 27604593 to perform an initial deployment of Oracle Database Appliance. The bundle contains the latest Grid Infrastructure components for deployment on an Oracle Database Appliance in the "shipped from factory" state, or an Oracle Database Appliance that has been re-imaged using the OS ISO Image. This patch is for all Oracle Database Appliance Hardware Models (Bare Metal).
- **Oracle Database Appliance 18.7.0.0.0 RDBMS Clone File for ODACLI/DCS stack:** Use the Oracle RDBMS 18.7.0.0.190716 Software Clone file to create 18.7.0.0.190716 Oracle Database homes. Patch 27604558 provides the database clone for this update. This patch is for all Oracle Database Appliance Hardware Models (Bare Metal). You can also optionally use this patch to create

18.6.0.0.190416 database homes on the ODACLI/DCS stack, by selecting 18.6 in the release drop down list.

- **Oracle Database Appliance 12.2.0.1 RDBMS Clone File for ODACLI/DCS stack:** Use the Oracle RDBMS 12.2.0.1.190716 Software Clone file to create 12.2.0.1.190716 database homes. Patch 27119402 provides the database clone for this update. This patch is for all Oracle Database Appliance Hardware Models (Bare Metal). You can also optionally use this patch to create 12.2.0.1.190416 database homes on the ODACLI/DCS stack, by selecting 18.6 in the release drop down list.
- **Oracle Database Appliance 12.1.0.2 RDBMS Clone File for ODACLI/DCS stack:** Use the Oracle RDBMS 12.1.0.2.190716 Software Clone file to create 12.1.0.2.190716 database homes. Patch 23494992 provides the database clone for this update. This patch is for all Oracle Database Appliance Hardware Models (Bare Metal). You can also optionally use this patch to create 12.1.0.2.190416 database homes on the ODACLI/DCS stack, by selecting 18.6 in the release drop down list.
- **Oracle Database Appliance 11.2.0.4 RDBMS Clone File for ODACLI/DCS stack:** Use the Oracle RDBMS 11.2.0.4.190716 Software Clone file to create 11.2.0.4.190716 database homes. Patch 23494997 provides this update. This patch is for all Oracle Database Appliance Hardware Models (Bare Metal). You can also optionally use this patch to create 11.2.0.4.190416 database homes on the ODACLI/DCS stack, by selecting 18.6 in the release drop down list.
- **Oracle Database Appliance 18.7.0.0.0 ISO Image (Bare Metal):** Use patch 27604623 to perform a bare metal restore (re-image) of the operating system. Bare metal is a non-virtualized Oracle Database Appliance configuration. Use only when you must re-image the operating system.
- **Oracle Database Appliance 18.7.0.0.0 ISO Image (Virtualized Platform):** Use patch 16186163 to re-image the server with an operating system that includes virtualization capabilities. After re-imaging, use the VM Template to deploy ODA_BASE for the Virtualized Platform. The bundle contains the latest Grid Infrastructure components for deployment.
- **Oracle Database Appliance 18.7.0.0.0 RDBMS Clone for Virtualized Platform:** Use the Oracle RDBMS 18.7.0.0.190716 Software Clone file to create 18.7.0.0.190716 database homes for Virtualized Platform. Patch 28864456 provides this update. You can also optionally use this patch to create 18.6.0.0.190416 database homes for Virtualized Platform, by selecting 18.6 in the release drop down list.
- **Oracle Database Appliance 12.2.0.1 RDBMS Clone File for Virtualized Platform:** Use the Oracle RDBMS 12.2.0.1.190716 Software Clone file to create 12.2.0.1.190716 database homes for Virtualized Platform. Patch 27449599 provides the database clone for this update. You can also optionally use this patch to create 12.2.0.1.190416 database homes for Virtualized Platform, by selecting 18.6 in the release drop down list.
- **Oracle Database Appliance 12.1.0.2 RDBMS Clone File for Virtualized Platform:** Use the Oracle RDBMS 12.1.0.2.190716 Software Clone file to create 12.1.0.2.190716 database homes for Virtualized Platform. Patch 19520042 provides the database clone for this update. You can also optionally use this patch to create 12.1.0.2.190416 database homes for Virtualized Platform, by selecting 18.6 in the release drop down list.
- **Oracle Database Appliance 11.2.0.4 RDBMS Clone File for Virtualized Platform:** Use the Oracle RDBMS 11.2.0.4.190716 Software Clone file to create

11.2.0.4.190716 database homes for Virtualized Platform. Patch 17770873 provides the database clone for this update. You can also optionally use this patch to create 11.2.0.4.190416 database homes for Virtualized Platform, by selecting 18.6 in the release drop down list.

Related Topics

- Oracle Database Appliance Checklists
- Managing Storage on Oracle Database Appliance X8-2
- Patching Oracle Database Appliance Bare Metal Systems
- Enabling Kernel Updates
- Cloning Databases Using the Web Console
- odacli cleanup-patchrepo command
- Deleting Database Backups Using the Web Console
- Running Oracle Trace File Analyzer (TFA) Collector Commands
- About the Web Console
- Defining Your Public Network Interface Type on Oracle Database Appliance X4-2
- Verifying That HAIP is Disabled After Patching to Release 18.7
- odacli modify-database command
- [Known Issues with Oracle Database Appliance in This Release](#)
The following are known issues deploying, updating, and managing Oracle Database Appliance in this release.

2

Component Versions for Oracle Database Appliance

Review the component versions available for Oracle Database Appliance for supported hardware models for this release.

- [Component Versions for Oracle Database Appliance X8-2 Models](#)
The matrix displays the component versions available for Oracle Database Appliance for X8-2S, X8-2M, and X8-2-HA.
- [Component Versions for Oracle Database Appliance X7-2 Models](#)
The matrix displays the component versions available for Oracle Database Appliance for X7-2S, X7-2M, and X7-2-HA.
- [Component Versions for X6-2S, X6-2M, and X6-2L Models](#)
The matrix display the component versions available for Oracle Database Appliance for X6-2S, X6-2M, and X6-2L.
- [Component Versions for Oracle Database Appliance X6-2-HA Models](#)
The matrix displays the component versions available for Oracle Database Appliance for X6-2-HA.
- [Component Versions for Oracle Database Appliance X5-2 and X4-2 Models](#)
The matrix display the component versions available for Oracle Database Appliance for X5-2 and X4-2.

Component Versions for Oracle Database Appliance X8-2 Models

The matrix displays the component versions available for Oracle Database Appliance for X8-2S, X8-2M, and X8-2-HA.

Table 2-1 Component Versions for X8-2-HA, X8-2M, and X8-2S in Oracle Database Appliance Release 18.7

Component Name	X8-2-HA	X8-2S and X8-2M
Controller	13.00.00.00	Not applicable
Expander	0306	Not applicable
SSD	A902	Not applicable
NVMe (firmware version)	Not applicable	VDV1RL02
OS Disk (SSD firmware version)	VDV1RL02	XC311102
ILOM (Oracle Integrated Lights Out Manager)	4.0.4.38_r130206	4.0.4.38_r130206
BIOS	52010400	52010400

Table 2-1 (Cont.) Component Versions for X8-2-HA, X8-2M, and X8-2S in Oracle Database Appliance Release 18.7

Component Name	X8-2-HA	X8-2S and X8-2M
IPMI (Intelligent Platform Management Interface)	1.8.15.0	1.8.15.0
HMP (Oracle Hardware Management Pack)	2.4.5.0.1	2.4.5.0.1
OAK	18.7.0.0.0	18.7.0.0.0
Oracle Linux	6.10	6.10
Kernel	4.1.12-124.30.1.el6uek.x86_64	4.1.12-124.30.1.el6uek.x86_64
OVN (Oracle VM Server)	3.4.4	Not applicable
Dom0 Kernel	4.1.12-124.30.1.el6uek.x86_64	Not applicable
GI_HOME	18.7.0.0.190716	18.7.0.0.190716
DB_HOME	18.7.0.0.190716	18.7.0.0.190716
Oracle Auto Service Request (Oracle ASR)	18.3.1	18.3.1

Component Versions for Oracle Database Appliance X7-2 Models

The matrix displays the component versions available for Oracle Database Appliance for X7-2S, X7-2M, and X7-2-HA.

Table 2-2 Component Versions for X7-2-HA, X7-2M, and X7-2S in Oracle Database Appliance Release 18.7

Component Name	X7-2-HA	X7-2S and X7-2M
Controller	13.00.00.00	QDV1RE14
Expander	0306	Not applicable
SSD	A122 For the HDD/SSD option: A374/A087	A122
NVMe (firmware version)	Not applicable	QDV1RF30
OS Disk (SSD firmware version)	0112	0112
ILOM (Oracle Integrated Lights Out Manager)	4.0.4.40.r130348	4.0.4.40.r130348
BIOS	41060300	41060300
IPMI (Intelligent Platform Management Interface)	1.8.15.0	1.8.15.0
HMP (Oracle Hardware Management Pack)	2.4.5.0.1	2.4.5.0.1
OAK	18.7.0.0.0	18.7.0.0.0
Oracle Linux	6.10	6.10

Table 2-2 (Cont.) Component Versions for X7-2-HA, X7-2M, and X7-2S in Oracle Database Appliance Release 18.7

Component Name	X7-2-HA	X7-2S and X7-2M
Kernel	4.1.12-124.30.1.el6uek.x86_64	4.1.12-124.30.1.el6uek.x86_64
OVM (Oracle VM Server)	3.4.4	Not applicable
Dom0 Kernel	4.1.12-124.30.1.el6uek.x86_64	Not applicable
GI_HOME	18.7.0.0.190716	18.7.0.0.190716
DB_HOME	18.7.0.0.190716	18.7.0.0.190716
Oracle Auto Service Request (Oracle ASR)	18.3.1	18.3.1

Component Versions for X6-2S, X6-2M, and X6-2L Models

The matrix display the component versions available for Oracle Database Appliance for X6-2S, X6-2M, and X6-2L.

Table 2-3 Component Versions for Oracle Database Appliance X6-2S, X6-2M, and X6-2L in Oracle Database Appliance Release 18.7

Component Name	Version
Controller	4.650.00-7176
NVMe (firmware version)	KPYAIR3Q
OS Disk	OR3Q
ILOM (Oracle Integrated Lights Out Manager)	X6-2SM: 4.0.4.37.r130617 X6-2L:4.0.0.24.r121140
BIOS	X6-2SM:38130200 X6-2L:39090000
IPMI (Intelligent Platform Management Interface)	1.8.15.0
HMP (Oracle Hardware Management Pack)	2.4.5.0.1
OAK	18.7.0.0.0
Oracle Linux	6.10
Kernel	4.1.12-124.30.1.el6uek.x86_64
GI_HOME	18.7.0.0.190716
DB_HOME	18.7.0.0.190716
Oracle Auto Service Request (Oracle ASR)	18.3.1

Component Versions for Oracle Database Appliance X6-2-HA Models

The matrix displays the component versions available for Oracle Database Appliance for X6-2-HA.

Table 2-4 Component Versions for Oracle Database Appliance X6-2-HA in Oracle Database Appliance Release 18.7

Component Name	Version
Controller_INT	4.650.00-7176
Controller_Ext	13.00.00.00
Expander	0306
SSD_LOCAL	OR3Q
SSD_SHARED	A29A
ILOM (Oracle Integrated Lights Out Manager)	4.0.4.37 r130617
BIOS	38130200
IPMI (Intelligent Platform Management Interface)	1.8.15.0
HMP (Oracle Hardware Management Pack)	2.4.5.0.1
OAK	18.7
Oracle Linux	6.10
Kernel	4.1.12-124.30.1.el6uek.x86_64
OVM (Oracle VM Server)	3.4.4
Dom0 Kernel	4.1.12-124.30.1.el6uek.x86_64
GI_HOME	18.7.0.0.190716
DB_HOME	18.7.0.0.190716
Oracle Auto Service Request (Oracle ASR)	18.3.1

Component Versions for Oracle Database Appliance X5-2 and X4-2 Models

The matrix displays the component versions available for Oracle Database Appliance for X5-2 and X4-2.

Table 2-5 Component Versions for Oracle Database Appliance X5-2 for Oracle Database Appliance Release 18.7

Component Name	Version
Controller_INT	4.650.00-7176
Controller_Ext	13.00.00.00
Expander	001E
SSD_LOCAL	n/a
SSD_SHARED	A29A
HDD_LOCAL	A7E0
HDD_SHARED	A3A0, PAG1
ILOM (Oracle Integrated Lights Out Manager)	4.0.4.37 r130617
BIOS	30150300

Table 2-5 (Cont.) Component Versions for Oracle Database Appliance X5-2 for Oracle Database Appliance Release 18.7

Component Name	Version
IPMI (Intelligent Platform Management Interface)	1.8.15.0
HMP (Oracle Hardware Management Pack)	2.4.5.0.1
OAK	18.7
Oracle Linux	6.10
Kernel	4.1.12-124.30.1.el6uek.x86_64
OVM (Oracle VM Server)	3.4.4
Dom0 Kernel	4.1.12-124.30.1.el6uek.x86_64
GI_HOME	18.7.0.0.190716
DB_HOME	18.7.0.0.190716
Oracle Auto Service Request (Oracle ASR)	18.3.1

Table 2-6 Component Versions for Oracle Database Appliance X4-2 in Oracle Database Appliance Release 18.7

Component Name	Version
Controller_INT	11.05.03.00
Controller_Ext	13.00.00.00
Expander	001E
SSD_LOCAL	n/a
SSD_SHARED	944A
HDD_LOCAL	A7E0
HDD_SHARED	A7E0
ILOM (Oracle Integrated Lights Out Manager)	4.0.4.41 r130359
BIOS	25080100
IPMI (Intelligent Platform Management Interface)	1.8.15.0
HMP (Oracle Hardware Management Pack)	2.4.5.0.1
OAK	18.7
Oracle Linux	6.10
Kernel	4.1.12-124.30.1.el6uek.x86_64
OVM (Oracle VM Server)	3.4.4
Dom0 Kernel	4.1.12-124.30.1.el6uek.x86_64
GI_HOME	18.7.0.0.190716
DB_HOME	18.7.0.0.190716

Table 2-6 (Cont.) Component Versions for Oracle Database Appliance X4-2 in Oracle Database Appliance Release 18.7

Component Name	Version
Oracle Auto Service Request (Oracle ASR)	18.3.1

3

Oracle Database Appliance 18.7 Patches

Get information about Oracle Database Appliance patches for this release, the download locations, and how to apply the patches.

- [Patching from Previous Releases](#)
Understand the minimum versions for patching Oracle Database Appliance to later releases.
- [Minimum Software Version Requirements](#)
Review the minimum software version requirements for upgrading to this release of Oracle Database Appliance.
- [Oracle Database Appliance X8-2S, X8-2M, and X8-2-HA Patches](#)
Download the patches available for Oracle Database Appliance X8-2S, X8-2M, and X8-2-HA in My Oracle Support, get information on the prerequisites, and how to apply the patches.
- [Oracle Database Appliance X8-2-HA Virtualized Platform Patches](#)
Download the patches available for a virtualized Oracle Database Appliance X8-2-HA platform in My Oracle Support, get information on the prerequisites, and how to apply the patches.
- [Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA Patches](#)
Download the patches available for Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA in My Oracle Support, get information on the prerequisites, and how to apply the patches.
- [Oracle Database Appliance X7-2-HA Virtualized Platform Patches](#)
Download the patches available for a virtualized Oracle Database Appliance X7-2-HA platform in My Oracle Support, get information on the prerequisites, and how to apply the patches.
- [Oracle Database Appliance X6-2S, X6-2M, and X6-2L Patches](#)
Download the patches available for Oracle Database Appliance X6-2S, X6-2M, and X6-2L in My Oracle Support, get information on the prerequisites, and how to apply the patches.
- [Oracle Database Appliance X6-2-HA Patches](#)
Download the patches available for Oracle Database Appliance X6-2-HA in My Oracle Support, get information on the prerequisites, and how to apply the patches.
- [Oracle Database Appliance X5-2/X4-2 Patches](#)
Download the patches available for Oracle Database Appliance X5-2/X4-2 in My Oracle Support, get information on the prerequisites, and how to apply the patches.

Patching from Previous Releases

Understand the minimum versions for patching Oracle Database Appliance to later releases.

Oracle recommends that you patch your Oracle Database Appliance deployment to within the previous four releases. There may be a minimum patch-level requirement for upgrades to certain releases. Use the following table as an indicator for minimum requirements for patching to a release.

Table 3-1 Minimum Patch Requirements for Oracle Database Appliance Releases

Oracle Database Appliance Release (To patch to this release...)	Earliest Supported Release To Patch From (Your deployment must be on this release)
18.7.0.0	<ul style="list-style-type: none"> • 18.5.0.0 • 18.3.0.0
18.5.0.0	<ul style="list-style-type: none"> • 18.3.0.0
18.3.0.0	<ul style="list-style-type: none"> • 12.2.1.4.0 • 12.2.1.3.0 • 12.2.1.2.0 • 12.1.2.12
12.2.1.4.0	<ul style="list-style-type: none"> • 12.2.1.3.0 • 12.2.1.2.0 • 12.1.2.12
12.2.1.3.0	<ul style="list-style-type: none"> • 12.2.1.2.0 • 12.1.2.12
12.2.1.2.0	<ul style="list-style-type: none"> • 12.1.2.12 <p>Note: 12.2.1.2.0 is not supported on virtualized platform.</p>
12.1.2.12	<ul style="list-style-type: none"> • 12.1.2.11 • 12.1.2.10 • 12.1.2.9 • 12.1.2.8
12.1.2.11	<ul style="list-style-type: none"> • 12.1.2.10 • 12.1.2.9 • 12.1.2.8 • 12.1.2.7
12.1.2.10	<ul style="list-style-type: none"> • 12.1.2.9 • 12.1.2.8 • 12.1.2.7 • 12.1.2.6
12.1.2.9	<ul style="list-style-type: none"> • 12.1.2.8 • 12.1.2.7 • 12.1.2.6
12.1.2.5	12.1.2.0 to 12.1.2.4
12.1.2.0.0	2.2.0.0.0 to 2.10.0.0.0
2.2.0.0.0	2.1.0.3.1 or earlier

Release 12.2.1.1.0 is only supported on X7–2 models and hence is not listed in the table.

Minimum Software Version Requirements

Review the minimum software version requirements for upgrading to this release of Oracle Database Appliance.

To upgrade to Oracle Database Appliance release 18.7, your deployment must be on Oracle Database Appliance release 18.5 or Oracle Database Appliance release 18.3.

Oracle Database Appliance X8-2S, X8-2M, and X8-2-HA Patches

Download the patches available for Oracle Database Appliance X8-2S, X8-2M, and X8-2-HA in My Oracle Support, get information on the prerequisites, and how to apply the patches.

When downloading a patch from My Oracle Support, select Oracle Database Appliance release 18.7 from the release list.

Table 3-2 Oracle Database Appliance X8-2S, X8-2M, and X8-2-HA Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	30217856	Use the server patch to update your deployment to Oracle Database Appliance release 18.7. You can also optionally use this patch to apply the April 2019 Oracle Database Release Update (RU) to the database homes in your Oracle Database Appliance deployment.	Patching Oracle Database Appliance
Oracle Database Appliance ISO Image	27604623	Use the ISO image to re-image the operating system for Oracle Database Appliance release 18.7. Re-imaging a server installs the new operating system on the local disks on that server.	Re-imaging Oracle Database Appliance

Table 3-2 (Cont.) Oracle Database Appliance X8-2S, X8-2M, and X8-2-HA Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance GI Clone for ODACLI/DCS stack	27604593	Use to perform an initial deployment of Oracle Database Appliance. The bundle contains the latest Oracle Grid Infrastructure and database components for deployment on an Oracle Database Appliance after re-imaging Oracle Database Appliance with the 18.7 ISO Image.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for ODACLI/DCS stack to create 18.7 database homes for the ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for ODACLI/DCS stack to create 18.6.0.0.190416 database homes.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for ODACLI/DCS stack to create 12.2.0.1 database homes for the 18.7 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for ODACLI/DCS stack to create 12.2.0.1.190416 database homes.	Updating Oracle Database Appliance Repository with Database Clone Files

Table 3-2 (Cont.) Oracle Database Appliance X8-2S, X8-2M, and X8-2-HA Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for ODACLI/DCS stack to create 12.1.0.2 database homes for the 18.7 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for ODACLI/DCS stack to create 12.1.0.2.190416 database homes.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for ODACLI/DCS stack to create 11.2.0.4 database homes for the 18.7 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for ODACLI/DCS stack to to create 11.2.0.4.190416 database homes.	Updating Oracle Database Appliance Repository with Database Clone Files

Oracle Database Appliance X8-2-HA Virtualized Platform Patches

Download the patches available for a virtualized Oracle Database Appliance X8-2-HA platform in My Oracle Support, get information on the prerequisites, and how to apply the patches.

When downloading a patch from My Oracle Support, select Oracle Database Appliance release 18.7 from the release list.

Note:

The patches in the table are only applicable to an Oracle Database Appliance X8-2-HA Virtualized Platform.

Table 3-3 Oracle Database Appliance X8-2-HA Patches for Virtualized Platform

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for Virtualized Platforms	30217863	Use the server patch to update your deployment to Oracle Database Appliance release 18.7. You can also optionally use this patch to apply the April 2019 Oracle Database Release Update (RU) to the database homes in your Oracle Database Appliance deployment.	Patching Oracle Database Appliance Virtualized Platform
VM ISO Image (DOM0)	16186163 From the drop-down list, select 18.7.	Use to reimage Oracle Database Appliance as a Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform
VM Template (ODA_BASE)	16186172 From the drop-down list, select 18.7.	Use to deploy ODA_Base for the virtualized platform. Includes the GI + Database clone files for deployment. Before deploying the VM Template, reimage the system with the Oracle Database Appliance Virtualized Platform ISO (patch 16186163.)	Deploying an Oracle Database Appliance Virtualized Platform

Table 3-3 (Cont.) Oracle Database Appliance X8-2-HA Patches for Virtualized Platform

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for Virtualized Platform	28864456	Use Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for Virtualized Platform to create 18.7 database homes for Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for Virtualized Platform		Use Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for Virtualized Platform to create 18.6.0.0.190416 database homes for Virtualized Platform.	
Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for Virtualized Platforms	27449599	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for Virtualized Platform to create 12.2.0.1 database homes for the 18.7 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for Virtualized Platform		Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for Virtualized Platform to create 12.2.0.1.190416 database homes for Virtualized Platform.	

Table 3-3 (Cont.) Oracle Database Appliance X8-2-HA Patches for Virtualized Platform

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for Virtualized Platform	19520042	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for Virtualized Platform to create 12.1.0.2 database homes for the 18.7 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for Virtualized Platform		Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for Virtualized Platform to create 12.1.0.2.190416 database homes for Virtualized Platform.	
Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for Virtualized Platform	17770873	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for Virtualized Platform to create 11.2.0.4 database homes for the 18.7 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for Virtualized Platform		Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for Virtualized Platform to create 11.2.0.4.190416 database homes for Virtualized Platform.	

Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA Patches

Download the patches available for Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA in My Oracle Support, get information on the prerequisites, and how to apply the patches.

When downloading a patch from My Oracle Support, select Oracle Database Appliance release 18.7 from the release list.

Table 3-4 Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	30217856	Use the server patch to update your deployment to Oracle Database Appliance release 18.7. You can also optionally use this patch to apply the April 2019 Oracle Database Release Update (RU) to the database homes in your Oracle Database Appliance deployment.	Patching Oracle Database Appliance
Oracle Database Appliance ISO Image	27604623	Use the ISO image to re-image the operating system for Oracle Database Appliance release 18.7. Re-imaging a server installs the new operating system on the local disks on that server.	Re-imaging Oracle Database Appliance
Oracle Database Appliance GI Clone for ODACLI/DCS stack	27604593	Use to perform an initial deployment of Oracle Database Appliance. The bundle contains the latest Oracle Grid Infrastructure and database components for deployment on an Oracle Database Appliance after re-imaging Oracle Database Appliance with the 18.7 ISO Image.	Provisioning Oracle Database Appliance Software

Table 3-4 (Cont.) Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for ODACLI/DCS stack to create 18.7 database homes for the ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for ODACLI/DCS stack to create 18.6.0.0.190416 database homes.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for ODACLI/DCS stack to create 12.2.0.1 database homes for the 18.7 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for ODACLI/DCS stack to create 12.2.0.1.190416 database homes.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for ODACLI/DCS stack to create 12.1.0.2 database homes for the 18.7 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for ODACLI/DCS stack to create 12.1.0.2.190416 database homes.	Updating Oracle Database Appliance Repository with Database Clone Files

Table 3-4 (Cont.) Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for ODACLI/DCS stack to create 11.2.0.4 database homes for the 18.7 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for ODACLI/DCS stack		Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for ODACLI/DCS stack to create 11.2.0.4.190416 database homes.	

Oracle Database Appliance X7-2-HA Virtualized Platform Patches

Download the patches available for a virtualized Oracle Database Appliance X7-2-HA platform in My Oracle Support, get information on the prerequisites, and how to apply the patches.

When downloading a patch from My Oracle Support, select Oracle Database Appliance release 18.7 from the release list.

Note:

The patches in the table are only applicable to an Oracle Database Appliance X7-2-HA Virtualized Platform.

Table 3-5 Oracle Database Appliance X7-2-HA Patches

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for Virtualized Platform	30217863	Use the server patch to update your deployment to Oracle Database Appliance release 18.7. You can also optionally use this patch to apply the April 2019 Oracle Database Release Update (RU) to the database homes in your Oracle Database Appliance deployment.	Patching Oracle Database Appliance Virtualized Platform
VM ISO Image (DOM0)	16186163 From the drop-down list, select release 18.7.	Use to reimage Oracle Database Appliance as a Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform
VM Template (ODA_BASE)	16186172 From the drop-down list, select release 18.7.	Use to deploy ODA_Base for the virtualized platform. Includes the GI + Database clone files for deployment. Before deploying the VM Template, reimage the system with the Oracle Database Appliance Virtualized Platform ISO (patch 16186163.)	Deploying an Oracle Database Appliance Virtualized Platform

Table 3-5 (Cont.) Oracle Database Appliance X7-2-HA Patches

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for Virtualized Platform	28864456	Use Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for Virtualized Platform to create 18.7 database homes for Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for Virtualized Platform		Use Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for Virtualized Platform to create 18.6.0.0.190416 database homes for Virtualized Platform.	
Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for Virtualized Platform	27449599	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for Virtualized Platform to create 12.2.0.1 database homes for the 18.7 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for Virtualized Platform		Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for Virtualized Platform to create 12.2.0.1.190416 database homes for Virtualized Platform.	

Table 3-5 (Cont.) Oracle Database Appliance X7-2-HA Patches

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for Virtualized Platform	19520042	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for Virtualized Platform to create 12.1.0.2 database homes for the 18.7 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for Virtualized Platform		Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for Virtualized Platform to create 12.1.0.2.190416 database homes for Virtualized Platform.	
Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for Virtualized Platform	17770873	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for Virtualized Platform to create 11.2.0.4 database homes for the 18.7 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for Virtualized Platform		Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for Virtualized Platform to create 11.2.0.4.190416 database homes for Virtualized Platform.	

Oracle Database Appliance X6-2S, X6-2M, and X6-2L Patches

Download the patches available for Oracle Database Appliance X6-2S, X6-2M, and X6-2L in My Oracle Support, get information on the prerequisites, and how to apply the patches.

When downloading a patch from My Oracle Support, select Oracle Database Appliance release 18.7 from the release list.

Table 3-6 Oracle Database Appliance X6-2S, X6-2M, and X6-2L Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	30217856	Use the server patch to update your deployment to Oracle Database Appliance release 18.7. You can also optionally use this patch to apply the April 2019 Oracle Database Release Update (RU) to the database homes in your Oracle Database Appliance deployment.	Patching Oracle Database Appliance
Oracle Database Appliance ISO Image	27604623	Use the ISO image to re-image the operating system for Oracle Database Appliance release 18.7. Re-imaging a server installs the new operating system on the local disks on that server.	Re-imaging Oracle Database Appliance
Oracle Database Appliance GI Clone for ODACLI/DCS stack	27604593	Use to perform an initial deployment of Oracle Database Appliance. The bundle contains the latest Oracle Grid Infrastructure and database components for deployment on an Oracle Database Appliance after re-imaging Oracle Database Appliance with the Oracle Database Appliance ISO Image for release 18.7 .	Provisioning Oracle Database Appliance Software

Table 3-6 (Cont.) Oracle Database Appliance X6-2S, X6-2M, and X6-2L Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for ODACLI/DCS stack to create 18.7 database homes for the ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for ODACLI/DCS stack to create 18.6.0.0.190416 database homes.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for ODACLI/DCS stack to create 12.2.0.1 database homes for the 18.7 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for ODACLI/DCS stack to create 12.2.0.1.190416 database homes.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for ODACLI/DCS stack to create 12.1.0.2 database homes for the 18.7 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for ODACLI/DCS stack to create 12.1.0.2.190416 database homes.	Updating Oracle Database Appliance Repository with Database Clone Files

Table 3-6 (Cont.) Oracle Database Appliance X6-2S, X6-2M, and X6-2L Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for ODACLI/DCS stack to create 11.2.0.4 database homes for the 18.7 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for ODACLI/DCS stack		Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for ODACLI/DCS stack to create 11.2.0.4.190416 database homes.	

Oracle Database Appliance X6-2-HA Patches

Download the patches available for Oracle Database Appliance X6-2-HA in My Oracle Support, get information on the prerequisites, and how to apply the patches.

When downloading a patch from My Oracle Support, select Oracle Database Appliance release 18.7 from the release list.

Table 3-7 Oracle Database Appliance X6-2-HA Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	30217856	Use the server patch to update your deployment to Oracle Database Appliance release 18.7. You can also optionally use this patch to apply the April 2019 Oracle Database Release Update (RU) to the database homes in your Oracle Database Appliance deployment.	Patching Oracle Database Appliance

Table 3-7 (Cont.) Oracle Database Appliance X6-2-HA Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for Virtualized Platforms	30217863	Use the server patch to update your deployment to Oracle Database Appliance release 18.7 You can also optionally use this patch to apply the April 2019 Oracle Database Release Update (RU) to the database homes in your Oracle Database Appliance deployment.	Patching Oracle Database Appliance Virtualized Platform
Oracle Database Appliance GI Clone for ODACLI/DCS stack	27604593	Use to perform an initial deployment of Oracle Database Appliance. The bundle contains the latest Oracle Grid Infrastructure and database components for deployment on an Oracle Database Appliance after re-imaging Oracle Database Appliance with the Oracle Database Appliance ISO Image for release 18.7.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for ODACLI/DCS stack to create 18.7 database homes for the ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for ODACLI/DCS stack to create 18.6.0.0.190416 database homes.	Updating Oracle Database Appliance Repository with Database Clone Files

Table 3-7 (Cont.) Oracle Database Appliance X6-2-HA Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for ODACLI/DCS stack to create 12.2.0.1 database homes for the 18.7 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for ODACLI/DCS stack to create 12.2.0.1.190416 database homes.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for ODACLI/DCS stack to create 12.1.0.2 database homes for the 18.7 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for ODACLI/DCS stack to create 12.1.0.2.190416 database homes.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for ODACLI/DCS stack to create 11.2.0.4 database homes for the 18.7 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for ODACLI/DCS stack to create 11.2.0.4.190416 database homes.	Updating Oracle Database Appliance Repository with Database Clone Files

Table 3-7 (Cont.) Oracle Database Appliance X6-2-HA Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance ISO Image	27604623	Use the ISO image to re-image the operating system for Oracle Database Appliance 18.7. Re-imaging a server installs the new operating system on the local disks on that server.	Re-imaging Oracle Database Appliance
VM ISO Image (DOM0)	16186163 From the drop-down list, select 18.7	Use to reimage Oracle Database Appliance as a Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform
VM Template (ODA_BASE)	16186172 From the drop-down list, select 18.7	Use to deploy ODA_Base for Virtualized Platform. Includes the GI + Database clone files for deployment. Before deploying the VM Template, reimage the system with the Oracle Database Appliance Virtualized Platform ISO (patch 16186163.)	Deploying an Oracle Database Appliance Virtualized Platform
Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for Virtualized Platform Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for Virtualized Platform	28864456	Use Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for Virtualized Platform to create 18.7 database homes for Virtualized Platform. Use Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for Virtualized Platform to create 18.6.0.0.190416 database homes for Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files

Table 3-7 (Cont.) Oracle Database Appliance X6-2-HA Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for Virtualized Platforms Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for Virtualized Platform	27449599	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for Virtualized Platform to create 12.2.0.1 database homes for the 18.7 Virtualized Platform. Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for Virtualized Platform to create 12.2.0.1.190416 database homes for Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for Virtualized Platform Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for Virtualized Platform	19520042	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for Virtualized Platform to create 12.1.0.2 database homes for the 18.7 Virtualized Platform. Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for Virtualized Platform to create 12.1.0.2.190416 database homes for Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files

Table 3-7 (Cont.) Oracle Database Appliance X6-2-HA Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for Virtualized Platform	17770873	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for Virtualized Platform to create 11.2.0.4 database homes for the 18.7 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for Virtualized Platform		Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for Virtualized Platform to create 11.2.0.4.190416 database homes for Virtualized Platform.	

Oracle Database Appliance X5-2/X4-2 Patches

Download the patches available for Oracle Database Appliance X5-2/X4-2 in My Oracle Support, get information on the prerequisites, and how to apply the patches.

When downloading a patch from My Oracle Support, select Oracle Database Appliance release 18.7 from the release list.

Table 3-8 Oracle Database Appliance X5-2/X4-2 Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	30217856	Use the server patch to update your deployment to Oracle Database Appliance release 18.7. You can also optionally use this patch to apply the April 2019 Oracle Database Release Update (RU) to the database homes in your Oracle Database Appliance deployment.	Patching Oracle Database Appliance

Table 3-8 (Cont.) Oracle Database Appliance X5-2/X4-2 Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for Virtualized Platforms	30217863	Use the server patch to update your Virtualized Platform deployment to Oracle Database Appliance release 18.7. You can also optionally use this patch to apply the April 2019 Oracle Database Release Update (RU) to the database homes in your Oracle Database Appliance deployment.	Patching Oracle Database Appliance Virtualized Platform
Oracle Database Appliance GI Clone for ODACLI/DCS stack	27604593	Use to perform an initial deployment of Oracle Database Appliance. The bundle contains the latest Oracle Grid Infrastructure and database components for deployment on an Oracle Database Appliance after re-imaging Oracle Database Appliance with the Oracle Database Appliance ISO Image for release 18.7.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for ODACLI/DCS stack to create 18.7 database homes for the ODACLI/DCS stack.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for ODACLI/DCS stack		Use Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for ODACLI/DCS stack to create 18.6.0.0.190416 database homes.	

Table 3-8 (Cont.) Oracle Database Appliance X5-2/X4-2 Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for ODACLI/DCS stack to create 12.2.0.1 database homes for the 18.7 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for ODACLI/DCS stack to create 12.2.0.1.190416 database homes.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for ODACLI/DCS stack to create 12.1.0.2 database homes for the 18.7 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for ODACLI/DCS stack to create 12.1.0.2.190416 database homes.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for ODACLI/DCS stack Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for ODACLI/DCS stack to create 11.2.0.4 database homes for the 18.7 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for ODACLI/DCS stack to create 11.2.0.4.190416 database homes.	Provisioning Oracle Database Appliance Software

Table 3-8 (Cont.) Oracle Database Appliance X5-2/X4-2 Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance ISO Image	27604623	Use the ISO image to re-image the operating system for Oracle Database Appliance 18.7. Re-imaging a server installs the new operating system on the local disks on that server.	Re-imaging Oracle Database Appliance
VM ISO Image (DOM0)	16186163 From the drop-down list, select 18.7	Use to reimage Oracle Database Appliance as a Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform
VM Template (ODA_BASE)	16186172 From the drop-down list, select 18.7	Use to deploy ODA_Base for the virtualized platform. Includes the GI + Database clone files for deployment. Before deploying the VM Template, reimage the system with the Oracle Database Appliance Virtualized Platform ISO (patch 16186163.)	Deploying an Oracle Database Appliance Virtualized Platform
Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for Virtualized Platform	28864456	Use Oracle Database Appliance RDBMS Clone 18.7.0.0.190716 for Virtualized Platform to create 18.7 database homes for Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for Virtualized Platform		Use Oracle Database Appliance RDBMS Clone 18.6.0.0.190416 for Virtualized Platform to create 18.6.0.0.190416 database homes for Virtualized Platform.	

Table 3-8 (Cont.) Oracle Database Appliance X5-2/X4-2 Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for Virtualized Platforms Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for Virtualized Platform	27449599	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190716 for Virtualized Platform to create 12.2.0.1 database homes for the 18.7 Virtualized Platform. Use Oracle Database Appliance RDBMS Clone 12.2.0.1.190416 for Virtualized Platform to create 12.2.0.1.190416 database homes for Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for Virtualized Platform Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for Virtualized Platform	19520042	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190716 for Virtualized Platform to create 12.1.0.2 database homes for the 18.7 Virtualized Platform. Use Oracle Database Appliance RDBMS Clone 12.1.0.2.190416 for Virtualized Platform to create 12.1.0.2.190416 database homes for Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files

Table 3-8 (Cont.) Oracle Database Appliance X5-2/X4-2 Patches for Oracle Database Appliance Release 18.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for Virtualized Platform	17770873	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190716 for Virtualized Platform to create 11.2.0.4 database homes for the 18.7 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for Virtualized Platform		Use Oracle Database Appliance RDBMS Clone 11.2.0.4.190416 for Virtualized Platform to create 11.2.0.4.190416 database homes for Virtualized Platform.	

4

Known Issues with Oracle Database Appliance in This Release

The following are known issues deploying, updating, and managing Oracle Database Appliance in this release.

- [Known Issues When Deploying Oracle Database Appliance](#)
Understand the known issues when provisioning or deploying Oracle Database Appliance.
- [Known Issues When Patching Oracle Database Appliance](#)
Understand the known issues when patching Oracle Database Appliance to this release.
- [Known Issues When Managing Oracle Database Appliance](#)
Understand the known issues when managing or administering Oracle Database Appliance.

Known Issues When Deploying Oracle Database Appliance

Understand the known issues when provisioning or deploying Oracle Database Appliance.

- [Changing the CPU core count after provisioning appliance for Oracle Database Appliance release 18.7 fails](#)
On a newly-provisioned release 18.7 Oracle Database Appliance system, changing the CPU core count fails.
- [Running /opt/oracle/dcs/bin/odacli configure-firstnet fails on Oracle Database Appliance X8-2 Systems](#)
Running `/opt/oracle/dcs/bin/odacli configure-firstnet` for network setup on Oracle Database Appliance X8-2 systems fails.
- [Only one network interface displayed after rebooting node](#)
After rebooting the node, only one network interface is displayed.
- [Snapshot databases can only be created on the primary database](#)
For `oakcli` stack, snapshot database can be created from the primary database, and not from the standby database.
- [Creation of CDB for 12.1.0.2 databases may fail](#)
Creation of multitenant container database (CDB) for 12.1.0.2 databases on Virtualized Platform may fail.
- [DCS-10045:Validation error encountered: Error retrieving the cpucores](#)
When deploying the appliance, DCS-10045 error appears. There is an error retrieving the CPU cores of the second node.
- [Database creation hangs when using a deleted database name for database creation](#)
The accelerator volume for data is not created on flash storage, for database created during provisioning of appliance.

- [Error when updating 12.1.0.2 database homes](#)
When updating Oracle Database homes from 12.1.0.2 to 18.3, using the command `odacli update-dbhome -i dbhomeId -v 18.3.0.0.0`, an error is encountered.
- [Error encountered after running cleanup.pl](#)
Errors encountered in running `odacli` commands after running `cleanup.pl`.
- [Accelerator volume for data is not created on flash storage](#)
The accelerator volume for data is not created on flash storage, for databases created during provisioning of appliance.
- [Database connection fails after database upgrade](#)
After upgrading the database from 11.2 to 12.1.0.2, database connection fails due to `job_queue_processes` value.
- [Failure in creating 18.3 database with DSS database shape odb1s](#)
When creating 18.3 databases, with DSS database shape `odb1s`, the creation fails, with the following error message:
- [Error in provisioning Oracle ASM Database on FLASH storage](#)
On Oracle Database Appliance High-Availability systems with High Capacity storage, Oracle ASM Database creation on FLASH storage fails.
- [Clone database operation fails](#)
For Oracle Database release 12.1 databases, the database clone creation may fail because the default compatible version from Oracle binaries was set to 12.0.0.0.0
- [Errors in clone database operation](#)
Clone database operation fails due to errors.
- [Errors after restarting CRS](#)
If the Cluster Ready Services (CRS) are stopped or restarted, before stopping the repository and virtual machines, then this may cause errors.
- [Unable to create an Oracle ASM Database for Release 12.1](#)
Known issues with Oracle Automatic Storage Management (Oracle ASM) are preventing the REDO diskgroup from mounting for Oracle Database Release 12.1.
- [Database creation fails for odb-01s DSS databases](#)
When attempting to create an DSS database with shape `odb-01s`, the job may fail with errors.

Changing the CPU core count after provisioning appliance for Oracle Database Appliance release 18.7 fails

On a newly-provisioned release 18.7 Oracle Database Appliance system, changing the CPU core count fails.

An Oracle Database Appliance system is provisioned with all CPU cores enabled by default. You can change the CPU core count after provisioning the appliance with the command `odacli update-cpucore -c count`. Changing the CPU core count fails in the following provisioning cases:

- If you provision an Oracle Database Appliance system with Oracle Database Appliance release 18.7, and change the CPU core count as a postinstallation task, then the provisioning fails with the error message:

Apply one-off fix for Bug 30269395 on both nodes in order to update CPU cores. Please refer to 18.7.0.0.0 Release Notes.

Workaround:

1. Download and apply the patch for bug 30269395 available on My Oracle Support:
<https://support.oracle.com/rs?type=patch&id=30269395>.
 2. After the patch is successfully applied, change the CPU core count with the command `odacli update-cpucore`.
- On a new Oracle Database Appliance system, that is not yet provisioned, changing the CPU core count fails with the following error message:

ODA system needs to be provisioned with full CPU cores before updating CPU cores. Please refer to 18.7.0.0.0 release notes.

Workaround:

1. Provision the system with Oracle Database Appliance release 18.7.
2. Download and apply the patch for bug 30269395 available on My Oracle Support:
<https://support.oracle.com/rs?type=patch&id=30269395>.
3. After the patch is successfully applied, change the CPU core count with the command `odacli update-cpucore`.

Hardware Models

All Oracle Database Appliance hardware models

This issue is tracked with Oracle bug 30313635.

Running `/opt/oracle/dcs/bin/odacli configure-firstnet` fails on Oracle Database Appliance X8-2 Systems

Running `/opt/oracle/dcs/bin/odacli configure-firstnet` for network setup on Oracle Database Appliance X8-2 systems fails.

The following error message is displayed:

```
Summary: TB /usr/sbin/system-config-network-cmd:343:main:ParseError:
('Error parsing line:
DeviceList.BOND.bond0.IP=172.16.20.70', 'an integer is required')
Traceback (most recent call last):
  File "/usr/sbin/system-config-network-cmd", line 343, in main raise pe
ParseError: ('Error parsing line: DeviceList.BOND.bond0.IP=172.16.20.70',
'an integer is required')
```

Hardware Models

Oracle Database Appliance X8-2 Hardware Models

Workaround

Instead, run the command `opt/oracle/oak/bin/configure-firstnet` on Oracle Database Appliance X8-2 systems.

This issue is tracked with Oracle bug 30499174.

Only one network interface displayed after rebooting node

After rebooting the node, only one network interface is displayed.

When both nodes reboot or power on simultaneously, only one of HAIP interfaces is used and Oracle ASM may not be able to start. The `netstat` command returns only one of two interfaces.

```
# netstat -nr | grep 169
169.254.0.0    0.0.0.0          255.255.0.0    U          0 0          0
eth0
```

Ensure that the `ora.cluster_interconnect.haip` is ONLINE on one node before rebooting (or powering on) on the other node.

```
# /u01/app/18.0.0.0/grid/bin/crsctl stat res -t -init|grep -A1
ora.cluster_interconnect.haip
```

```
-----
---
--
Name          Target  State          Server          State
details
```

```
-----
---
--
Cluster Resources
```

```
-----
---
--
ora.cluster_interconnect.haip
      1          ONLINE  ONLINE          <hostname>          STABLE
```

Hardware Models

Oracle Database Appliance hardware models baremetal deployments on X4-2 and X7-2. X5-2 and X6-2 baremetal deployments with Infiniband Interconnect are not affected.

Workaround

If both nodes are already rebooted simultaneously and only one interface is configured for high-availability, then stop `crs` on both nodes and start `crs` one by one.

1. Login as `root` in any node and stop the cluster with the `-all` option.

```
# /u01/app/18.0.0.0/grid/bin/crsctl stop cluster -all
```

2. Stop `crs` on both nodes.

```
[Node 0]
# /u01/app/18.0.0.0/grid/bin/crsctl stop crs
```

```
[Node 1]
# /u01/app/18.0.0.0/grid/bin/crsctl stop crs
```

3. Start crs on each node, one by one.

```
[Node 0]
# /u01/app/18.0.0.0/grid/bin/crsctl start crs
[Node 1]
# /u01/app/18.0.0.0/grid/bin/crsctl start crs
```

This issue is tracked with Oracle bug 29613692.

Snapshot databases can only be created on the primary database

For `oakcli` stack, snapshot database can be created from the primary database, and not from the standby database.

If the database name (`db_name`) and database unique name (`db_unique_name`) are different when creating snapshot database, then the following error is encountered:

```
WARNING: 2018-09-13 12:47:18: Following data files are not on SNAP location
```

Hardware Models

All Oracle Database Appliance hardware models for Virtualized Platform

Workaround

None. For `oakcli` stack, create snapshot database from the primary database, and not from the standby database.

This issue is tracked with Oracle bug 28649665.

Creation of CDB for 12.1.0.2 databases may fail

Creation of multitenant container database (CDB) for 12.1.0.2 databases on Virtualized Platform may fail.

If the database name (`db_name`) and database unique name (`db_unique_name`) are different when creating snahsot database, then the following error is encountered:

```
WARNING: 2018-09-13 12:47:18: Following data files are not on SNAP location
```

Hardware Models

All Oracle Database Appliance hardware models for Virtualized Platform

Workaround

None.

This issue is tracked with Oracle bug 29231958.

DCS-10045: Validation error encountered: Error retrieving the cpucores

When deploying the appliance, DCS-10045 error appears. There is an error retrieving the CPU cores of the second node.

Hardware Models

Oracle Database Appliance X7-2-HA

Workaround

1. Remove the following directory in Node0: `/opt/oracle/dcs/repo/node_0`
2. Remove the following directory in Node1: `/opt/oracle/dcs/repo/node_1`
3. Restart the `dcs-agent` on both nodes.

```
cd /opt/oracle/dcs/bin
initctl stop initdcsagent
initctl start initdcsagent
```

This issue is tracked with Oracle bug 27527676.

Database creation hangs when using a deleted database name for database creation

The accelerator volume for data is not created on flash storage, for database created during provisioning of appliance.

If you delete a 11.2.0.4 database, and then create a new database with same name as the deleted database, database creation hangs while unlocking the DBSNMP user for the database.

Hardware Models

All Oracle Database Appliance high-availability environments

Workaround

Before creating the 11.2.0.4 database with the same name as the deleted database, delete the DBSNMP user, if the user exists.

For example, the following command creates a database `testdb` with user `DBSNMP`.

```
/u01/app/18.0.0.0/grid/bin/crsctl delete wallet -type CVUDB -name testdb -
user DBSNMP
```

This issue is tracked with Oracle bug 28916487.

Error when updating 12.1.0.2 database homes

When updating Oracle Database homes from 12.1.0.2 to 18.3, using the command `odacli update-dbhome -i dbhomeId -v 18.3.0.0.0`, an error is encountered.

```
DCS-10001:Internal error encountered: Failed to run SQL script: datapatch script
```

Hardware Models

All Oracle Database Appliance hardware models bare metal deployments

Workaround

Apply the patch for bug 24385625 and run `odacli update-dbhome -i dbhomeId -v 18.3.0.0.0` again to fix the issue.

This issue is tracked with Oracle bug 28975529.

Error encountered after running cleanup.pl

Errors encountered in running `odacli` commands after running `cleanup.pl`.

After running `cleanup.pl`, when you try to use `odacli` commands, the following error is encountered:

```
DCS-10042:User oda-cliadmin cannot be authorized.
```

Hardware Models

All Oracle Database Appliance hardware models for bare metal deployments

Workaround

Run the following commands to set up the credentials for the user `oda-cliadmin` on the agent wallet:

```
# rm -rf /opt/oracle/dcs/conf/.authconfig  
# /opt/oracle/dcs/bin/setupAgentAuth.sh
```

This issue is tracked with Oracle bug 29038717.

Accelerator volume for data is not created on flash storage

The accelerator volume for data is not created on flash storage, for databases created during provisioning of appliance.

Hardware Models

Oracle Database Appliance high capacity environments with HDD disks

Workaround

Do not create the database when provisioning the appliance. This creates all required disk groups, including flash. After provisioning the appliance, create the database. The accelerator volume is then created.

This issue is tracked with Oracle bug 28836461.

Database connection fails after database upgrade

After upgrading the database from 11.2 to 12.1.0.2, database connection fails due to `job_queue_processes` value.

Hardware Models

All Oracle Database Appliance hardware models

Workaround

Follow these steps:

1. Before upgrading the database, check the `job_queue_processes` parameter, for example, x. If the value of `job_queue_processes` is less than 4, then set the value to 4.
2. Upgrade the database to 12.1.0.2.
3. After upgrading the database, set the value of `job_queue_processes` to the earlier value, for example, x.

This issue is tracked with Oracle bug 28987900.

Failure in creating 18.3 database with DSS database shape odb1s

When creating 18.3 databases, with DSS database shape odb1s, the creation fails, with the following error message:

```
ORA-04031: unable to allocate 6029352 bytes of shared memory ("shared pool","unknown object","sga heap(1,0)","ksipc pct")
```

Hardware Models

All Oracle Database Appliance Hardware Models

Workaround

None.

This issue is tracked with Oracle bug 28444642.

Error in provisioning Oracle ASM Database on FLASH storage

On Oracle Database Appliance High-Availability systems with High Capacity storage, Oracle ASM Database creation on FLASH storage fails.

This issue occurs because the FLASH disk group is not mounted.

Hardware Models

All Oracle Database Appliance high-availability hardware models with High Capacity storage configuration

Workaround

Provision the appliance without creating the database, and then create the database.

This issue is tracked with Oracle bug 30309798.

Clone database operation fails

For Oracle Database release 12.1 databases, the database clone creation may fail because the default compatible version from Oracle binaries was set to 12.0.0.0.0

Hardware Models

All Oracle Database Appliance high-availability hardware models for bare metal deployments

Workaround

Set the compatible value to that of the source database. Follow these steps:

1. Change the parameter value.

```
SQL> ALTER SYSTEM SET COMPATIBLE = '12.1.0.2.0' SCOPE=SPFILE;
```

2. Shut down the database.

```
SQL> SHUTDOWN IMMEDIATE
```

3. Start the database.

```
SQL> Startup
```

4. Verify the parameter for the new value.

```
SQL> SELECT name, value, description FROM v$parameter WHERE name  
='compatible';
```

This issue is tracked with Oracle bug 30309914.

Errors in clone database operation

Clone database operation fails due to errors.

If the dbname and dbunique name are not the same for the source database or they are in mixed case (mix of uppercase and lowercase letters) or the source database is single-instance or Oracle RAC One Node, running on the remote node, the clone database operation fails, because the paths are not created correctly in the control file.

Clone database operation may also fail with errors if the source database creation time stamp is too close to the clone operation (at least within 60 minutes).

Hardware Models

All Oracle Database Appliance high-availability hardware models for bare metal deployments

Workaround

Create the clone database from source database which has the same `db_name` and `db_unique_name`, in lowercase letters, and the source database instance is running on the same node from which the clone database creation is triggered.

For Oracle Database 12c and later, synchronize the source database before the clone operation, by running the command:

```
SQL> alter system checkpoint;
```

This issue is tracked with Oracle bugs 29002231, 29002563, 29002004, 29001906, 29001855, 29001631, 28995153, 28986643, 28986950, 30309971, and 30228362.

Errors after restarting CRS

If the Cluster Ready Services (CRS) are stopped or restarted, before stopping the repository and virtual machines, then this may cause errors.

Repository status is unknown and High Availability Virtual IP is offline if the Cluster Ready Services (CRS) are stopped or restarted before stopping the repository and virtual machines.

Hardware Models

Oracle Database Appliance HA models X7-2-HA, X6-2-HA, X5-2, X4-2, X3-2, V1

Workaround

Follow these steps:

1. Start the High Availability Virtual IP on node1.

```
# /u01/app/GI_version/grid/bin/srvctl start havip -id havip_0
```

2. Stop the `oakVmAgent.py` process on `dom0`.
3. Run the lazy unmount option on the `dom0` repository mounts:

```
umount -l mount_points
```

This issue is tracked with Oracle bug 20461930.

Unable to create an Oracle ASM Database for Release 12.1

Known issues with Oracle Automatic Storage Management (Oracle ASM) are preventing the REDO diskgroup from mounting for Oracle Database Release 12.1.

Unable to create an Oracle ASM database lower than 12.1.0.2.17814 PSU (12.1.2.12).

Hardware Models

Oracle Database Appliance X6-2-HA, X5-2, X4-2, X3-2, and V1.

Workaround

There is not a workaround. If you have Oracle Database 11.2 or 12.1 that is using Oracle Automatic Storage Management (Oracle ASM) and you want to upgrade to a higher release of Oracle Database, then you must be on at least Oracle Database Appliance 12.1.2.12.0 and Database Home 12.1.0.2.170814.

The upgrade path for Oracle Database 11.2 or 12.1 Oracle ASM is as follows:

- If you are on Oracle Database Appliance version 12.1.2.6.0 or later, then upgrade to 12.1.2.12 or higher before upgrading your database.
- If you are on Oracle Database Appliance version 12.1.2.5 or earlier, then upgrade to 12.1.2.6.0, and then upgrade again to 12.1.2.12 or higher before upgrading your database.

This issue is tracked with Oracle bug 21626377, 27682997, and 21780146. The issues are fixed in Oracle Database 12.1.0.2.170814.

Database creation fails for odb-01s DSS databases

When attempting to create an DSS database with shape odb-01s, the job may fail with errors.

```
CRS-2674: Start of 'ora.test.db' on 'example_node' failed
CRS-5017: The resource action "ora.test.db start" encountered the following
error:
ORA-03113: end-of-file on communication channel
Process ID: 0
Session ID: 0 Serial number: 0
. For details refer to "(:CLSN00107:)" in
"/u01/app/grid/diag/crs/example_node/crs/trace/crsd_oraagent_oracle.trc".
```

Hardware Models

Oracle Database Appliance X6-2-HA, X5-2, X4-2, X3-2, and V1

Workaround

There is no workaround. Select an alternate shape to create the database.

This issue is tracked with Oracle bug 27768012.

Known Issues When Patching Oracle Database Appliance

Understand the known issues when patching Oracle Database Appliance to this release.

- [Patching appliance with reduced CPU core count to release 18.7 fails](#)
On an Oracle Database Appliance system with a reduced CPU core count, patching to Oracle Database Appliance release 18.7 fails.

- [Resilvering of Oracle ADVM processes impacting performance after upgrading to 18.3](#)
Upgrading to Oracle Database Appliance 18.3 or later can impact performance on some Oracle Database Appliance systems due to Oracle ASM Dynamic Volume Manager (Oracle ADVM) processes consuming excessive CPU.
- [Error when applying patch to Oracle Database Appliance on Virtualized Platform](#)
Server patching for Oracle Database Appliance on Virtualized Platform may fail with errors.
- [Error in validating patch for Oracle Database Appliance Virtualized Platform](#)
When validating the server patch for Oracle Database Appliance Virtualized Platform, an error is encountered.
- [Error when patching DCS agent](#)
When patching the DCS agent, an error is encountered.
- [Error when patching to 12.1.0.2.190716 Release Update](#)
When patching Oracle Database release 12.1.0.2 to Oracle Database 12.1.0.2.190716 Release Update, an error is encountered.
- [Relocation of Oracle RAC One Database fails during patching](#)
When relocating Oracle RAC One Database during patching, an error is encountered.
- [Error in patching Oracle Database Appliance](#)
When applying the server patch for Oracle Database Appliance, an error is encountered.
- [Error when patching database homes to 18.3 with Oracle Grid Infrastructure release 18.3.0.0.180717](#)
When DCS agent release 18.7 tries to patch 18.3 database homes, an error is encountered.
- [Patching pre-checks do not complete with --local option during server patching](#)
Server patching fails while running patching pre-checks with the `--local` option.
- [Server status not set to Normal when patching](#)
When patching Oracle Database Appliance, an error is encountered.
- [Error when patching 11.2.0.4 database homes](#)
Patching 11.2.0.4 Oracle Database homes to Release 18.5 may fail if bug#2015 exists in the inventory.
- [Error when patching from Oracle Database Appliance release earlier than 18.3 to release 18.7](#)
When patching from Oracle Database Appliance release earlier than 18.3 to release 18.7, an error is encountered.
- [Error in patching NVMe disks to the latest version](#)
Patching of NVMe disks to the latest version may not be supported on some Oracle Database Appliance hardware models.
- [Failure in patching Oracle Database Appliance Virtualized Platform](#)
Server patching for Oracle Database Appliance may fail with errors.
- [Error in patching Oracle Database Appliance Virtualized Platform](#)
When applying the server patch for Oracle Database Appliance Virtualized Platform, an error is encountered.

- [Patching of M.2 drives not supported](#)
Patching of M.2 drives (local disks disks SSDSCKJB48 and SSDSCKJB480G7) is not supported.
- [Onboard public network interfaces do not come up after patching or imaging](#)
When you apply patches or re-image Oracle Database Appliance, the onboard public network interfaces may not come up due to faulty status presented in the ILOM.
- [Server patching fails to start Oracle Clusterware](#)
When applying the server patch, Oracle Clusterware does not start due to issue with Oracle Clusterware Time Synchronization Services Daemon (OCTSSD).
- [Stack migration fails during patching](#)
After patching the OAK stack, the following error is encountered when running `odacli` commands:
- [DATA disk group fails to start after upgrading Oracle Grid Infrastructure to 18.5](#)
After upgrading Oracle Grid Infrastructure to 18.5, the DATA disk group fails to start.
- [Some files missing after patching the appliance](#)
Some files are missing after patching the appliance.
- [Space issues with /u01 directory after patching](#)
After patching to 18.7, the directory `/u01/app/18.0.0.0/grid/log/hostname/client` fills quickly with `gpn` logs.
- [Errors when deleting database storage after migration to DCS stack](#)
After migrating to the DCS stack, some volumes in the database storage cannot be deleted.
- [Repository in offline or unknown status after patching](#)
After rolling or local patching of both nodes to 18.7, repositories are in offline or unknown state on node 0 or 1.
- [Versions of some components not updated after cleaning up and reprovisioning Oracle Database Appliance](#)
Oracle Auto Service Request (ASR), or Oracle TFA Collector, or Oracle ORAchk versions are not updated after cleaning up and reprovisioning Oracle Database Appliance.
- [11.2.0.4 databases fail to start after patching](#)
After patching Oracle Database Appliance to release 18.3, databases of version 11.2.0.4 fail to start.
- [FLASH disk group is not mounted when patching or provisioning the server](#)
The FLASH disk group is not mounted after a reboot, including after provisioning, reimaging, or patching the server with Oracle Database Appliance 12.2.1.2.
- [Error in patching database home locally using the Web Console](#)
Applying a database home patch locally through the Web Console, creates a pre-patch submission request.
- [Error when patching Oracle Database 11.2.0.4](#)
When patching Oracle Database 11.2.0.4, the log file may show some errors.

Patching appliance with reduced CPU core count to release 18.7 fails

On an Oracle Database Appliance system with a reduced CPU core count, patching to Oracle Database Appliance release 18.7 fails.

If the Oracle Database Appliance system you are attempting to patch from an earlier supported release has a reduced CPU core count, then patching to Oracle Database Appliance release 18.7 fails in the following patching cases:

- When you patch Oracle Database Appliance system with a reduced CPU core count with Oracle Database Appliance release 18.7, then the `odacli update-server` command fails with the error message:

```
Configured core count is not equal maximum allowed core count. Refer to
18.7.0.0.0 Release Notes for steps to run before patching the system to
18.7.0.0.0.
```

Workaround:

1. Determine the CPU core count on your Oracle Database Appliance system.

```
odacli describe-cpucore
Node Cores Modified Job Status
-----
0 36 October 18, 2019 4:29:01 PM CEST Configured
0 12 November 8, 2019 9:24:27 AM CET Configured
```

2. Reboot the nodes, update the BIOS, and set the enabled cores per socket value.
Update the BIOS for both nodes with half of the count displayed in the `odacli describe-cpucore` command output. For example, if the value returned was 36, then update the BIOS with the value 18.
 3. Patch your appliance to Oracle Database Appliance release 18.7.
- After patching to Oracle Database Appliance release 18.7, if you try to change the CPU core count, and if the patch for Bug 30269395 is not applied, then the following error message is encountered:

```
Configured core count is not equal maximum allowed core count, and
patch for bug 30269395 is not present in GI home. Download and apply
the patch for 30269395 and rerun this command. Refer to 18.7.0.0.0
Release Notes for information on this known issue.
```

Workaround:

1. Download and apply on both nodes, the patch for bug 30269395 available on My Oracle Support:
<https://support.oracle.com/rs?type=patch&id=30269395>
2. After the patch is successfully applied on both nodes, change the CPU core count with the command `odacli update-cpucore`.

3. If the value for the enabled cores per socket value is not set to the maximum in the BIOS, then reboot the nodes, update the BIOS, and set the enabled cores per socket value.
For example, if the maximum enabled cores per socket value for your Oracle Database Appliance hardware model is 36, then update the BIOS with the value 18.

Hardware Models

All Oracle Database Appliance hardware models

This issue is tracked with Oracle bug 30313635.

Resilvering of Oracle ADVM processes impacting performance after upgrading to 18.3

Upgrading to Oracle Database Appliance 18.3 or later can impact performance on some Oracle Database Appliance systems due to Oracle ASM Dynamic Volume Manager (Oracle ADVM) processes consuming excessive CPU.

When you upgrade to Oracle Database Appliance 18.3, the storage disk may be resilvered or synchronized again, for mirrored volumes on an Oracle ASM disk group with Allocation Unit (AU) size greater than 1 MB. The larger the Oracle Automatic Storage Management Cluster File System (Oracle ACFS) volume size, the higher is the impact.

Hardware Models

All Oracle Database Appliance hardware models, particularly, X5-2 and X7-2 High Capacity models that use 8T HDDs.

Workaround

For information about resolving this issue, see Oracle Support Note 2525427.1 at:

<https://support.oracle.com/rs?type=doc&id=2525427.1>

This issue is tracked with Oracle bug 29520544.

Error when applying patch to Oracle Database Appliance on Virtualized Platform

Server patching for Oracle Database Appliance on Virtualized Platform may fail with errors.

Running the command `oakcli update -patch 18.7.0.0` fails with the following error:

```
VM server patch failed to apply gi patch,Copy failed from
'/tmp/oakpatch/gi/18.0.0.0/29757256/30097923/30223179/files/bin/
crsctl.bin'
to '/u01/app/18.0.0.0/grid/bin/crsctl.bin', OakVmAgent using crsctl command
to check repo or tfa to check db resources status which cause gi patch
failure.
```

Hardware Models

All Oracle Database Appliance hardware models Virtualized Platform

Workaround

Follow these steps:

1. On ODA_BASE, run the following commands:

```
# oakcli disable startrepo -node 0
# oakcli disable startrepo -node 1
```

2. Run the command to apply the patch.

```
oakcli update -patch 18.7.0.0
```

3. Stop TFACTL.

```
# /u01/app/18.0.0.0/grid/bin/tfactl stop
```

4. After patching completes, run the following commands on ODA_BASE:

```
# oakcli enable startrepo -node 0
# oakcli enable startrepo -node 1
```

This issue is tracked with Oracle bug 30318993.

Error in validating patch for Oracle Database Appliance Virtualized Platform

When validating the server patch for Oracle Database Appliance Virtualized Platform, an error is encountered.

When patching the appliance, the `oakcli validate -c ospatch -ver 18.7.0.0.0` command fails with the following error:

```
Bareword "X7_HP" not allowed while "strict subs" in use at /opt/oracle/oak/lib/oakvalidatelib/oaksharedstorageinfo.pm line 152.
Bareword "X7_HC" not allowed while "strict subs" in use at /opt/oracle/oak/lib/oakvalidatelib/oaksharedstorageinfo.pm line 161.
Bareword "X7_HP" not allowed while "strict subs" in use at /opt/oracle/oak/lib/oakvalidatelib/oaksharedstorageinfo.pm line 171.
Bareword "X7_HC" not allowed while "strict subs" in use at /opt/oracle/oak/lib/oakvalidatelib/oaksharedstorageinfo.pm line 176.
```

Hardware Models

All Oracle Database Appliance hardware models Virtualized Platforms

Workaround

None. Ignore the error message and continue.

This issue is tracked with Oracle bug 30539619.

Error when patching DCS agent

When patching the DCS agent, an error is encountered.

When patching the DCS agent during the provisioning process, the following error is displayed:

```
DCS-10011:Input parameter 'defaultUserAlias' cannot be NULL.
```

This issue occurs when you upgrade a system which does not have Oracle Grid Infrastructure.

Hardware Models

All Oracle Database Appliance hardware models bare metal deployments

Workaround

Install Oracle Grid Infrastructure and then upgrade the system.

This issue is tracked with Oracle bug 30114925.

Error when patching to 12.1.0.2.190716 Release Update

When patching Oracle Database release 12.1.0.2 to Oracle Database 12.1.0.2.190716 Release Update, an error is encountered.

The ODA CLI job displays the following error:

```
DCS-10001:Internal error encountered: Failed to run SQL script: datapatch script.
```

The data patch log contains the entry "Prereq check failed, exiting without installing any patches."

Hardware Models

All Oracle Database Appliance hardware models bare metal deployments

Workaround

Install the same patch again.

This issue is tracked with Oracle bugs 30026438 and 30155710.

Relocation of Oracle RAC One Database fails during patching

When relocating Oracle RAC One Database during patching, an error is encountered.

When patching a database home in which one or more Oracle RAC One Databases are running, the relocation of the Oracle RAC One Database may fail. This causes the Oracle Database home patching to fail.

Hardware Models

All Oracle Database Appliance hardware models

Workaround

Shut down the Oracle RAC One node manually and then patch the database home. After patching completes successfully, start Oracle Database.

This issue is tracked with Oracle bug 30114925.

Error in patching Oracle Database Appliance

When applying the server patch for Oracle Database Appliance, an error is encountered.

When patching the appliance, the `odacli update-server` command fails with the following error:

```
INFO: date_time_stamp: Checking for running CRS processes on the node.  
ERROR: date_time_stamp: Failed in shutting down all crs processes.  
Exiting...  
ERROR: date_time_stamp: Failed to patch server (grid) component
```

Hardware Models

All Oracle Database Appliance hardware models

Workaround

1. Shut down Oracle TFA Collector.

```
/u01/app/18.0.0.0/grid/bin/tfactl stop
```

2. Restart Oracle Database Appliance server patching.

This issue is tracked with Oracle bug 30260318.

Error when patching database homes to 18.3 with Oracle Grid Infrastructure release 18.3.0.0.180717

When DCS agent release 18.7 tries to patch 18.3 database homes, an error is encountered.

This error occurs because Oracle Grid Infrastructure is on release 18.3.0.0.180717.

Hardware Models

All Oracle Database Appliance hardware models bare metal deployments

Workaround

Update the server to Oracle Database Appliance release 18.7 or update the DCS agent to Oracle Database Appliance release 18.3.

This issue is tracked with Oracle bug 30320375.

Patching pre-checks do not complete with --local option during server patching

Server patching fails while running patching pre-checks with the `--local` option.

Hardware Models

All Oracle Database Appliance hardware models

Workaround

Do not run patching pre-checks on the server with the `--local` option.

This issue is tracked with Oracle bug 30255817.

Server status not set to Normal when patching

When patching Oracle Database Appliance, an error is encountered.

When patching the appliance, the `odacli update-server` command fails with the following error:

```
DCS-10001:Internal error encountered: Server upgrade state is not NORMAL
node_name
```

Hardware Models

All Oracle Database Appliance hardware models

Workaround

1. Run the command:

```
/u01/app/18.0.0.0/grid//bin/cluvfy stage -post crsinst -collect cluster
-gi_upgrade -n all
```

2. Ignore the following two warnings:

```
Verifying OCR Integrity ...WARNING
PRVG-6017 : OCR backup is located in the same disk group "+DATA" as OCR.
```

```
Verifying Single Client Access Name (SCAN) ...WARNING
RVG-11368 : A SCAN is recommended to resolve to "3" or more IP
```

3. Run the command again till the output displays only the two warnings above. The status of Oracle Custerware status should be `Normal` again.
4. You can verify the status with the command:

```
/u01/app/18.0.0.0/grid/bin/crsctl query crs activeversion -f
```

This issue is tracked with Oracle bug 30099090.

Error when patching 11.2.0.4 database homes

Patching 11.2.0.4 Oracle Database homes to Release 18.5 may fail if bug#2015 exists in the inventory.

Hardware Models

All Oracle Database Appliance Bare Metal and Virtualized Platform Deployments.

Workaround

Delete bug#2015 if it exists in the inventory.

1. Check if bug#2015 exists in the inventory:

```
su - oracle
export ORACLE_HOME=path_to_the_11.2.0.4_ORACLE_HOME
$ORACLE_HOME/OPatch/opatch lspatches | grep -i "OCW" | cut -d ';' -f1
```

2. The command returns a bug number, for example, 28729234. Navigate to the inventory:

```
cd $ORACLE_HOME/inventory/oneoffs/bug# from above command/etc/config
```

3. Check if inventory.xml contains a string such as 'bug number="2015"'. If no match is found, then no action is required, and you can continue with step 6 in this procedure.

```
grep 'bug number="2015"' inventory.xml
echo $? ( the command returns 0, if match found )
```

4. Take a backup of inventory.xml.

```
cp inventory.xml inventory.xml.$(date +%Y%m%d-%H%M)
```

5. Delete entry like <bug number="2015" ...> from inventory.xml.

```
sed '/bug number="2015"/d' inventory.xml
```

This issue is tracked with Oracle bugs 29834563 and 29446248.

Error when patching from Oracle Database Appliance release earlier than 18.3 to release 18.7

When patching from Oracle Database Appliance release earlier than 18.3 to release 18.7, an error is encountered.

The minimum system version required to patch to Oracle Database Appliance release 18.7 is release 18.3. If you try to patch your deployment on an Oracle Database Appliance release prior to 18.3, to release 18.7, and the DCS-Agent patching to

release 18.7 succeeds, then when you try to patch the server to release 18.7, the DCS agent reports following error:

```
DCS-10001:Internal error encountered: Current version is not compatible to update to 18.7.0.0.0. Please update the server components in the following order [18.3.0.0.0]
```

Hardware Models

All Oracle Database Appliance hardware models bare metal deployments

Workaround

Install the DCS command line interface utility (CLI) for Oracle Database Appliance release 18.7 on both nodes manually. The DCS CLI is located in the following location:

```
/opt/oracle/oak/pkgrepos/dcscli/latest/
```

Run the following command to install the DCS CLI:

```
# rpm -Uvh /opt/oracle/oak/pkgrepos/dcscli/latest/dcs-  
cli-18.7.0.0.0_LINUX.X64_*.rpm
```

This issue is tracked with Oracle bug 30258005.

Error in patching NVMe disks to the latest version

Patching of NVMe disks to the latest version may not be supported on some Oracle Database Appliance hardware models.

On Oracle Database Appliance X8-2 hardware models, the NVMe controller 7361456_ICRPC2DD2ORA6.4T is installed with higher version VDV1RL01/VDV1RL02. Patching of this controller is not supported on Oracle Database Appliance X8-2 hardware models. For other platforms, if the installed version is QDV1RE0F, or QDV1RE13, or QDV1RD09, or QDV1RE14 then when you patch the storage, the NVMe controller version is updated to qdv1rf30.

Hardware Models

All Oracle Database Appliance hardware models

Workaround

None

This issue is tracked with Oracle bug 30287439.

Failure in patching Oracle Database Appliance Virtualized Platform

Server patching for Oracle Database Appliance may fail with errors.

Patching the appliance server fails with the following error:

```
Worker 0: IOError: [Errno 28] No space left on device
```

This can occur during server patching. The space issue may occur either on ODA_BASE or dom0. The issue occurs when the log files opensm.log on dom0 and ibacm.log on ODA_BASE increase in size and consume all free space on the volume.

Hardware Models

Oracle Database Appliance hardware models X6-2 and X5-2 Virtualized Platform with InfiniBand

Workaround

Follow these steps:

1. On ODA_BASE, truncate /var/log/opensm.log.
2. On dom0, truncate /var/log/ibacm.log.
3. Stop Oracle Clusterware:

```
/u01/app/18.0.0.0/grid/bin/crsctl stop crs -f
```

4. After the cluster and the cluster resources are stopped, start Oracle Clusterware:

```
/u01/app/18.0.0.0/grid/bin/crsctl start crs
```

Restart Oracle Database Appliance server patching.

This issue is tracked with Oracle bug 30327847.

Error in patching Oracle Database Appliance Virtualized Platform

When applying the server patch for Oracle Database Appliance Virtualized Platform, an error is encountered.

Patching the appliance server fails with the following error:

```
ERROR: Host 192.168.16.28 listed in file /opt/oracle/oak/temp_privips.txt  
is not pingable at /opt/oracle/oak/pkgrepos/System/18.7.0.0.0/bin/  
pkg_install.pl  
line 1806  
ERROR: Unable to apply the patch 2
```

This can occur during non-local (rolling) server patch. The error is seen on the first node after patching of ODA_BASE and dom0 is complete. This issue is caused because the remote node Node1 rebooted during patching.

Hardware Models

Oracle Database Appliance hardware models X6-2 and X5-2 Virtualized Platform with InfiniBand

Workaround

1. Shut down Oracle TFA Collector.

```
/u01/app/18.0.0.0/grid/bin/tfactl stop
```

2. Restart Oracle Database Appliance server patching.

This issue is tracked with Oracle bug 30318927.

Patching of M.2 drives not supported

Patching of M.2 drives (local disks disks SSDSCKJB48 and SSDSCKJB480G7) is not supported.

These drives are displayed when you run the `odacli describe-component` command. Patching of neither of the two known versions 0112 and 0121 of the M.2 disk is supported. Patching the LSI controller version 13.00.00.00 to version 16.00.01.00 is also not supported. However, on some Oracle Database Appliance X8-2 models, the installed LSI controller version may be 16.00.01.00.

Hardware Models

Oracle Database Appliance bare metal deployments

Workaround

None

This issue is tracked with Oracle bug 30249232.

Onboard public network interfaces do not come up after patching or imaging

When you apply patches or re-image Oracle Database Appliance, the onboard public network interfaces may not come up due to faulty status presented in the ILOM.

Hardware Models

Oracle Database Appliance X7-2-HA, X7-2S, X7-2M

Workaround

1. Clear all faults on the ILOM.
2. Reset or power cycle the host.
3. Check that the ILOM has the most current version of firmware patches.
4. Check that the X7-2 On Board Dual Port 10Gb/25Gb SFP28 Ethernet Controller firmware is up-to-date.
5. Collect a new snapshot and monitor your appliance to confirm that the faults did not recur.
6. Contact Oracle Support if this issue recurs.

This issue is tracked with Oracle bugs 29206350 and 28308268.

Server patching fails to start Oracle Clusterware

When applying the server patch, Oracle Clusterware does not start due to issue with Oracle Clusterware Time Synchronization Services Daemon (OCTSSD).

Hardware Models

Oracle Database Appliance high-availability hardware models baremetal deployments.

Workaround

1. Login as `root` in any node and stop the cluster with the `-force` option.

```
# export ORACLE_HOME = /u01/app/18.0.0.0/grid/bin
# $ORACLE_HOME/bin/crsctl stop crs -force
```

2. Restart `ctssd` on the master node and failed node.

```
On the master node:
# $ORACLE_HOME/bin/crsctl stop res ora.ctssd -init
# $ORACLE_HOME/bin/crsctl start res ora.ctssd -init
```

3. Update the server.

```
# odacli update-server -v 18.5.0.0.0
```

This issue is tracked with Oracle bug 29549267.

Stack migration fails during patching

After patching the OAK stack, the following error is encountered when running `odacli` commands:

```
DCS-10001:Internal error encountered: java.lang.String cannot be cast to
com.oracle.dcs.agent.model.DbSystemNodeComponents.
```

Hardware Models

All Oracle Database Appliance Hardware models

Workaround

1. Rename the `/etc/ntp.conf` file temporarily and retry patching the appliance.

```
# mv /etc/ntp.conf /etc/ntp.conf.orig
```

2. After patching is successful, restore the `/etc/ntp.conf` file.

```
# mv /etc/ntp.conf.orig /etc/ntp.conf
```

This issue is tracked with Oracle bug 29216717.

DATA disk group fails to start after upgrading Oracle Grid Infrastructure to 18.5

After upgrading Oracle Grid Infrastructure to 18.5, the DATA disk group fails to start.

The following error is reported in the log file:

```
ORA-15038: disk '/dev/mapper/HDD_E1_S13_1931008292p1' mismatch on 'Sector Size' with target disk group [512] [4096]
```

Hardware Models

Oracle Database Appliance hardware models X5-2 or later, with mixed storage disks installed

Workaround

To start Oracle Clusterware successfully, connect to Oracle ASM as grid user, and run the following SQL commands:

```
SQL> show parameter _disk_sector_size_override;
```

NAME	TYPE	VALUE
-----	-----	-----
_disk_sector_size_override	boolean	TRUE

```
SQL> alter system set "_disk_sector_size_override" = FALSE scope=both;
alter system set "_disk_sector_size_override" = FALSE scope=both
*
```

```
ERROR at line 1:
ORA-32000: write to SPFILE requested but SPFILE is not modifiable
```

```
SQL> alter diskgroup DATA mount;
```

```
Diskgroup altered.
```

```
SQL> alter system set "_disk_sector_size_override" = FALSE scope=both;
```

```
System altered
```

This issue is tracked with Oracle bug 29220984.

Some files missing after patching the appliance

Some files are missing after patching the appliance.

Hardware Models

Oracle Database Appliance X7-2 hardware models

Workaround

Before patching the appliance, take a backup of the `/etc/sysconfig/network-scripts/ifcfg-em*` folder, and compare the folder contents after patching. If any files or parameters of the `ifcfg-em*` are missing, then they can be recovered from the backup directory.

This issue is tracked with Oracle bug 28308268.

Space issues with /u01 directory after patching

After patching to 18.7, the directory `/u01/app/18.0.0.0/grid/log/hostname/client` fills quickly with `gppp` logs.

Hardware Models

All Oracle Database Appliance hardware models for virtualized platforms deployments (X3-2 HA, X4-2 HA, X5-2 HA, X6-2 HA, X7-2 HA)

Workaround

1. Run the following commands on **both** ODA_BASE nodes:

On Node0:

```
rm -rf /u01/app/18.0.0.0/grid/log/hostname/client/  
oakcli enable startrepo -node 0  
oakcli stop oak  
pkill odaBaseAgent  
oakcli start oak
```

On Node1:

```
rm -rf /u01/app/18.0.0.0/grid/log/hostname/client/  
oakcli enable startrepo -node 1  
oakcli stop oak  
pkill odaBaseAgent  
oakcli start oak
```

This issue is tracked with Oracle bug 28865162.

Errors when deleting database storage after migration to DCS stack

After migrating to the DCS stack, some volumes in the database storage cannot be deleted.

Create an Oracle ACFS database storage using the `oakcli create dbstorage` command for multitenant environment (CDB) without database in the OAK stack and then migrate to the DCS stack. When deleting the database storage, only the DATA volume is deleted, and not the REDO and RECO volumes.

Hardware Models

All Oracle Database Appliance high-availability hardware models for bare metal deployments

Workaround

Create a database on Oracle ACFS database storage with the same name as the database for which you want to delete the storage volumes, and then delete the database. This cleans up all the volumes and file systems.

This issue is tracked with Oracle bug 28987135.

Repository in offline or unknown status after patching

After rolling or local patching of both nodes to 18.7, repositories are in offline or unknown state on node 0 or 1.

The command `oakcli start repo <reponame>` fails with the error:

```
OAKERR8038 The filesystem could not be exported as a crs resource
OAKERR:5015 Start repo operation has been disabled by flag
```

Models

Oracle Database Appliance X7-2-HA, X6-2-HA, X5-2, X4-2, X3-2, and V1.

Workaround

Log in to `oda_base` of any node and run the following two commands:

```
oakcli enable startrepo -node 0
oakcli enable startrepo -node 1
```

The commands start the repositories and enable them to be available online.

This issue is tracked with Oracle bug 27539157.

Versions of some components not updated after cleaning up and reprovisioning Oracle Database Appliance

Oracle Auto Service Request (ASR), or Oracle TFA Collector, or Oracle ORAchk versions are not updated after cleaning up and reprovisioning Oracle Database Appliance.

When cleaning up and reprovisioning Oracle Database Appliance with release 18.7, the Oracle Auto Service Request (ASR), or Oracle TFA Collector, or Oracle ORAchk RPMs may not be updated to release 18.7. The components are updated when you apply the patches for Oracle Database Appliance release 18.7.

Hardware Models

All Oracle Database Appliance deployments

Workaround

Update to the latest server patch for the release.

This issue is tracked with Oracle bugs 28933900 and 30187516.

11.2.0.4 databases fail to start after patching

After patching Oracle Database Appliance to release 18.3, databases of version 11.2.0.4 fail to start.

Hardware Models

All Oracle Database Appliance Hardware models

Workaround

Databases of versions 11.2.0.4.170814 and 11.2.0.4.171017 must be manually started after patching to Oracle Database Appliance release 18.3.

Start the databases with the command:

```
srvctl start database -db db_unique_name
```

This issue is tracked with Oracle bug 28815716.

FLASH disk group is not mounted when patching or provisioning the server

The FLASH disk group is not mounted after a reboot, including after provisioning, reimaging, or patching the server with Oracle Database Appliance 12.2.1.2.

This issue occurs when the node reboots and then you attempt to create an Oracle Automatic Storage Management Cluster File System (Oracle ACFS) database. When patching or provisioning a server with Oracle Database Appliance 12.2.1.2, you will encounter an SSH disconnect issue and an error.

```
# oakcli update -patch 12.2.1.2 --server
```

```
*****
*
****   For all X5-2 customers with 8TB disks, please make sure to
****
****   run storage patch ASAP to update the disk firmware to
"PA61".   ****
*****
*
INFO: DB, ASM, Clusterware may be stopped during the patch if required
INFO: Both Nodes may get rebooted automatically during the patch if
required
Do you want to continue: [Y/N]?: y
INFO: User has confirmed for the reboot
INFO: Patch bundle must be unpacked on the second Node also before
applying the patch
```

```
Did you unpack the patch bundle on the second Node? : [Y/N]? : y
Please enter the 'root' password :
Please re-enter the 'root' password:
INFO: Setting up the SSH
.....Completed .....
... ..
INFO: 2017-12-26 00:31:22: -----Patching ILOM &
BIOS-----
INFO: 2017-12-26 00:31:22: ILOM is already running with version
3.2.9.23r116695
INFO: 2017-12-26 00:31:22: BIOS is already running with version 30110000
INFO: 2017-12-26 00:31:22: ILOM and BIOS will not be updated
INFO: 2017-12-26 00:31:22: Getting the SP Interconnect state...
INFO: 2017-12-26 00:31:44: Clusterware is running on local node
INFO: 2017-12-26 00:31:44: Attempting to stop clusterware and its
resources locally
Killed
# Connection to server.example.com closed.
```

The Oracle High Availability Services, Cluster Ready Services, Cluster Synchronization Services, and Event Manager are online. However, when you attempt to create an Oracle Automatic Storage Management Cluster File System (Oracle ACFS) database, you receive an error: `flash space is 0`.

Hardware Models

Oracle Database Appliance X5-2, X6-2-HA, and X7-2 HA SSD systems.

Workaround

Manually mount FLASH disk group before creating an Oracle ACFS database.

Perform the following steps as the GRID owner:

1. Set the environment variables as grid OS user:

```
on node0
export ORACLE_SID=+ASM1
export ORACLE_HOME= /u01/app/12.2.0.1/grid
```

2. Log on to the ASM instance as sysasm

```
$_ORACLE_HOME/bin/sqlplus / as sysasm
```

3. Execute the following SQL command:

```
SQL> ALTER DISKGROUP FLASH MOUNT
```

This issue is tracked with Oracle bug 27322213.

Error in patching database home locally using the Web Console

Applying a database home patch locally through the Web Console, creates a pre-patch submission request.

Models

All Oracle Database Appliance Hardware Models

Workaround

Use the `odacli update-dbhome --local` command patching database homes locally.

This issue is tracked with Oracle bug 28909972.

Error when patching Oracle Database 11.2.0.4

When patching Oracle Database 11.2.0.4, the log file may show some errors.

When patching Oracle Database 11.2.0.4 homes, the following error may be logged in `alert.log`.

```
ORA-00600: internal error code, arguments: [kgfmGetCtx0], [kgfm.c],  
[2840], [ctx], [], [], [], [], [], [], [], []
```

Once the patching completes, the error will no longer be raised.

Hardware Models

Oracle Database Appliance X7-2-HA Virtualized Platform, X6-2-HA Bare Metal and Virtualized Platform, X5-2, X4-2, X3-2, and V1.

Workaround

There is no workaround for this issue.

This issue is tracked with Oracle bug 28032876.

Known Issues When Managing Oracle Database Appliance

Understand the known issues when managing or administering Oracle Database Appliance.

- [Extensive tracing generated for server processes](#)
Extensive tracing files for the server processes are generated with DRM messages.
- [Missing DATA, RECO, and REDO entries when dbstorage is rediscovered](#)
Running the `odacli update-registry` command with `-n all --force` or `-n dbstorage --force` option can result in metadata corruption.
- [Incorrect Aura8 firmware value displayed](#)
The Aura8 firmware version displayed in the components list is incorrect.

- [Error encountered for database operations for odb28 database shape](#)
When creating databases, there is a policy restriction for creating databases with database shapes odb8 or higher for Oracle Database Standard Edition.
- [Error when restoring a database from backup](#)
When running the `odacli irestore-database` command, an error is encountered.
- [ODA_BASE is in read-only mode or cannot start](#)
The `/ovs` directory is full and ODA_BASE is in read-only mode.
- [Restriction in moving database home for database shape greater than odb8](#)
When creating databases, there is a policy restriction for creating databases with database shapes odb8 or higher for Oracle Database Standard Edition.
- [The odaeraser tool does not work if oakd is running in non-cluster mode](#)
After cleaning up the deployment, the Secure Eraser tool does not work if oakd is running in non-cluster mode.
- [Issues with the Web Console on Microsoft web browsers](#)
Oracle Database Appliance Web Console has issues on Microsoft Edge and Microsoft Internet Explorer web browsers.
- [Disk space issues due to Zookeeper logs size](#)
The Zookeeper log files, `zookeeper.out` and `/opt/zookeeper/log/zkMonitor.log`, are not rotated, when new logs are added. This can cause disk space issues.
- [Error after running the cleanup script](#)
After running the `cleanup.pl` script, the following error message appears:
`DCS-10001:Internal error encountered: Fail to start hand shake.`
- [Incorrect results returned for the describe-component command in certain cases](#)
The `describe-component` command may return incorrect results in some cases.
- [Old configuration details persisting in custom environment](#)
The configuration file `/etc/security/limits.conf` contains default entries even in the case of custom environments.
- [Incorrect SGA and PGA values displayed](#)
For online transaction processing (OLTP), In-Memory (IMDB), and decision support services (DSS) databases created with odb36 database shape, the PGA and SGA values are displayed incorrectly.
- [OAKERR:7007 Error encountered while starting VM](#)
When starting a virtual machine (VM), an error message appears that the domain does not exist.
- [Error in node number information when running network CLI commands](#)
Network information for node0 is always displayed for some `odacli` commands, when the `-u` option is not specified.
- [Unrecognized Token Messages Appear in /var/log/messages](#)
After updating Oracle Database Appliance, unrecognized token messages appear in `/var/log/messages`.

Extensive tracing generated for server processes

Extensive tracing files for the server processes are generated with DRM messages.

```
2019-08-07 03:35:33.498*:example1():
[0x3fc1001c][0xf02],[TX][ext0x0,0x0][domid 0x0]
```

```

maxnodes 16, key 2663540594, node 2 (inst 3), member_node 0
2019-08-07 03:35:33.498*:example1(): delta 15
2019-08-07 03:35:33.498*:example2():
[0x3fc1001c][0xf11],[TX][ext0x0,0x0][domid 0x0]
maxnodes 16, key 2663540609, node 1 (inst 2), member_node 1

```

Hardware Models

All Oracle Database Appliance hardware models

Workaround

Disable tracing:

```
alter system set event='trace [rac_enq] disk disable' scope=spfile;
```

This issue is tracked with Oracle bug 30166512.

Missing DATA, RECO, and REDO entries when dbstorage is rediscovered

Running the `odacli update-registry` command with `-n all --force` or `-n dbstorage --force` option can result in metadata corruption.

Hardware Models

All Oracle Database Appliance hardware models bare metal deployments

Workaround

Run the `-all` option when all the databases created in the system use OAKCLI in migrated systems. On other systems that run on DCS stack, update all components other than `dbstorage` individually, using the `odacli update-registry -n component_name_to_be_updated_excluding_dbstorage`.

This issue is tracked with Oracle bug 30274477.

Incorrect Aura8 firmware value displayed

The Aura8 firmware version displayed in the components list is incorrect.

Models

Oracle Database Appliance X8-2S and X8-2M

Workaround

None.

This issue is tracked with Oracle bug 30340410.

Error encountered for database operations for odb28 database shape

When creating databases, there is a policy restriction for creating databases with database shapes odb8 or higher for Oracle Database Standard Edition.

The database shape odb28 is listed as an unsupported database shape in the `opt/oracle/dcs/rdbaas/config/opc_sizing_metadata.xml` file for some Oracle Database Appliance hardware models.

Hardware Models

Oracle Database Appliance Hardware Models X7-2 and X8-2

Workaround

Update the `opt/oracle/dcs/rdbaas/config/opc_sizing_metadata.xml` file with the information for odb28. For example:

```
<shape name="Odb28">
    <ocpus>28</ocpus>
    <memory>224GB</memory>
    <log_buffer>128M</log_buffer>
    <redo_size>4GB</redo_size>
    <db_block_size>8k</db_block_size>
    <db_size>100</db_size>
</shape>
```

This issue is tracked with Oracle bug 30313914.

Error when restoring a database from backup

When running the `odacli irestore-database` command, an error is encountered.

When the the source database that contains the backups used for database restore, has a name identical to the substring in one of the tablespace names, the database restore operation fails.

Hardware Models

All Oracle Database Appliance hardware models

Workaround

Rename the tablespace so that it does not contain the same substring as source database name, and then perform the restore operation.

This issue is tracked with Oracle bug 30290161.

ODA_BASE is in read-only mode or cannot start

The `/OVS` directory is full and ODA_BASE is in read-only mode.

The `vmcore` file in the `/OVS/ var` directory can cause the `/OVS` directory (Dom 0) to become 100% used. When Dom 0 is full, ODA_BASE is in read-only mode or cannot start.

Hardware Models

Oracle Database Appliance X6-2-HA, X5-2, X4-2, X3-2, and V1.

Oracle Database Appliance X7-2-HA Virtualized Platform.

Workaround

Perform the following to correct or prevent this issue:

- Periodically check the file usage on Dom 0 and clean up the `vmcore` file, as needed.
- Edit the `oda_base vm.cfg` file and change the `on_crash = 'coredump-restart'` parameter to `on_crash = 'restart'`. Especially when ODA_BASE is using more than 200 GB (gigabytes) of memory.

This issue is tracked with Oracle bug 26121450.

Restriction in moving database home for database shape greater than odb8

When creating databases, there is a policy restriction for creating databases with database shapes odb8 or higher for Oracle Database Standard Edition.

To maintain consistency with this policy restriction, do not migrate any database to an Oracle Database Standard Edition database home, where the database shape is greater than odb8. The database migration may not fail, but it may not adhere to policy rules.

Hardware Models

All Oracle Database Appliance Hardware Models bare metal deployments

Workaround

None.

This issue is tracked with Oracle bug 29003323.

The odaeraser tool does not work if oakd is running in non-cluster mode

After cleaning up the deployment, the Secure Eraser tool does not work if oakd is running in non-cluster mode.

Hardware Models

All Oracle Database Appliance Hardware bare metal systems

Workaround

After cleanup of the deployment, `oakd` is started in the non-cluster mode, and it cannot be stopped using "`odaadmcli stop oak`" command. In such a case, if the Secure Erase tool is run, then the `odaeraser` command fails.

Use the command `odaadmcli shutdown oak` to stop oakd.

This issue is tracked with Oracle bug 28547433.

Issues with the Web Console on Microsoft web browsers

Oracle Database Appliance Web Console has issues on Microsoft Edge and Microsoft Internet Explorer web browsers.

Following are issues with Microsoft web browsers:

- Oracle Database Appliance Web Console does not display correctly on Microsoft Edge and Microsoft Internet Explorer web browsers.
- Advanced Information for the appliance does not display on Microsoft Internet Explorer web browser.
- Job activity status does not refresh in the Web Console on Microsoft Internet Explorer web browser.
- After configuring the oda-admin password, the following error is displayed:

```
Failed to change the default user (oda-admin) account password.  
Status Code: 500 DCS-10001: DCS-10001:Internal error encountered: User  
not authorized
```

Workaround: Close the Microsoft Internet Explorer browser session and open another browser session.

Models

All Oracle Database Appliance Hardware Models bare metal deployments

Workaround

To access the Web Console, use either Google Chrome or Firefox.

This issue is tracked with Oracle bugs 27798498, 27028446, 30077007, 30099089, 29887027, and 27799452.

Disk space issues due to Zookeeper logs size

The Zookeeper log files, `zookeeper.out` and `/opt/zookeeper/log/zkMonitor.log`, are not rotated, when new logs are added. This can cause disk space issues.

Hardware Models

All Oracle Database Appliance hardware models for bare metal deployments

Workaround

Rotate the zookeeper log file manually, if the log file size increases, as follows:

1. Stop the DCS-agent service for zookeeper on both nodes.

```
initctl stop initdcsagent
```

2. Stop the zookeeper service on both nodes.

```
/opt/zookeeper/bin/zkServer.sh stop
```

3. Clean the zookeeper logs after taking the backup, by manually deleting the existing file or by following steps 4 to 10.
4. Set the `ZOO_LOG_DIR` as an environment variable to a different log directory, before starting the zookeeper server.

```
export ZOO_LOG_DIR=/opt/zookeeper/log
```

5. Switch to `ROLLINGFILE`, to set the capability to roll.

```
export ZOO_LOG4J_PROP="INFO, ROLLINGFILE"
```

Restart the zookeeper server, for the changes to take effect.

6. Set the following parameters in the `/opt/zookeeper/conf/log4j.properties` file, to limit the number of backup files, and the file sizes.

```
zookeeper.log.dir=/opt/zookeeper/log
zookeeper.log.file=zookeeper.out
log4j.appender.ROLLINGFILE.MaxFileSize=10MB
log4j.appender.ROLLINGFILE.MaxBackupIndex=10
```

7. Start zookeeper on both nodes.

```
/opt/zookeeper/bin/zkServer.sh start
```

8. Check the zookeeper status, and verify that zookeeper runs in leader/follower/standalone mode.

```
/opt/zookeeper/bin/zkServer.sh status
ZooKeeper JMX enabled by default
Using config: /opt/zookeeper/bin/./conf/zoo.cfg
Mode: follower
```

9. Start the dcs agent on both nodes.

```
initctl start initdcsagent
```

10. Purge the zookeeper monitor log, `zkMonitor.log`, in the location `/opt/zookeeper/log`. You do not have to stop the zookeeper service.

This issue is tracked with Oracle bug 29033812.

Error after running the cleanup script

After running the `cleanup.pl` script, the following error message appears:
DCS-10001:Internal error encountered: Fail to start hand shake.

The error is caused when you run the following steps:

1. Run `cleanup.pl` on the first node (Node0). Wait until the cleanup script finishes, then reboot the node.
2. Run `cleanup.pl` on the second node (Node1). Wait until the cleanup script finishes, then reboot the node.
3. After both nodes are started, use the command-line interface to list the jobs on Node0. An internal error appears.

```
# odacli list-jobs
DCS-10001:Internal error encountered: Fail to start hand shake to
localhost:7070
```

Hardware Models

Oracle Database Appliance X7-2-HA

Workaround

1. Verify the zookeeper status on the both nodes before starting `dcshagent`:

```
/opt/zookeeper/bin/zkServer.sh status
```

For a single-node environment, the status should be: leader, or follower, or standalone.

2. Restart the `dcshagent` on Node0 after running the `cleanup.pl` script.

```
# initctl stop initdcshagent
# initctl start initdcshagent
```

Incorrect results returned for the describe-component command in certain cases

The `describe-component` command may return incorrect results in some cases.

For the following disk, the `describe-component` command shows the available version as QDV1RE14 which is lower than the actual version QDV1RF30:

```
Disk type: NVMe
Manufacturer : Intel
Model: 0x0a54
Product name: 7335940:ICDPC2DD2ORA6.4T
Version: QDV1RF30
```

The following disk is not visible when you run the `describe-component` command. This does not impact the system components, except display.

```
Disk type: NVMe
Manufacturer : Intel
Model: 0x0a54
Product name: 7361456_ICRPC2DD2ORA6.4T
Version: VDV1RY03
```

Hardware Models

All Oracle Database Appliance hardware models.

Workaround

Use the `fwupdate list all` command to check the correct versions.

This issue is tracked with Oracle bug 29680034.

Old configuration details persisting in custom environment

The configuration file `/etc/security/limits.conf` contains default entries even in the case of custom environments.

On custom environments, when a single user is configured for both grid and oracle, the default grid user entries for the image are not removed from the `/etc/security/limits.conf` file.

Models

Oracle Database Appliance X7-2-HA, X7-2S, and X7-2M

Workaround

This issue does not affect the functionality. Manually edit the `/etc/security/limits.conf` file and remove invalid entries.

This issue is tracked with Oracle bug 27036374.

Incorrect SGA and PGA values displayed

For online transaction processing (OLTP), In-Memory (IMDB), and decision support services (DSS) databases created with odb36 database shape, the PGA and SGA values are displayed incorrectly.

For OLTP databases created with odb36 shape, following are the issues:

- `sga_target` is set as 128 GB instead of 144 GB
- `pga_aggregate_target` is set as 64 GB instead of 72 GB

For DSS databases created with with odb36 shape, following are the issues:

- `sga_target` is set as 64 GB instead of 72 GB
- `pga_aggregate_target` is set as 128 GB instead of 144 GB

For IMDB databases created with Odb36 shape, following are the issues:

- `sga_target` is set as 128 GB instead of 144 GB
- `pga_aggregate_target` is set as 64 GB instead of 72 GB
- `inmemory_size` is set as 64 GB instead of 72 GB

Models

Oracle Database Appliance X7-2-HA, X7-2S, and X7-2M

Workaround

Reset the PGA and SGA sizes manually

This issue is tracked with Oracle bug 27036374.

OAKERR:7007 Error encountered while starting VM

When starting a virtual machine (VM), an error message appears that the domain does not exist.

If a VM was cloned in Oracle Database Appliance 12.1.2.10 or earlier, you cannot start the HVM domain VMs in Oracle Database Appliance 12.1.2.11.

This issue does not impact newly cloned VMs in Oracle Database Appliance 12.1.2.11 or any other type of VM cloned on older versions. The vm templates were fixed in 12.1.2.11.0.

When trying to start the VM (vm4 in this example), the output is similar to the following:

```
# oakcli start vm vm4 -d
.
Start VM : test on Node Number : 0 failed.
DETAILS:
    Attempting to start vm on node:0=>FAILED.
<OAKERR:7007 Error encountered while starting VM - Error: Domain 'vm4'
does not exist.>
```

The following is an example of the `vm.cfg` file for vm4:

```
vif = []
name = 'vm4'
extra = 'NODENAME=vm4'
builder = 'hvm'
cpus = '0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23'
vcpus = 2
memory = 2048
cpu_cap = 0
vnc = 1
serial = 'pty'
disk =
[u'file:/OVS/Repositories/odarepo1/VirtualMachines/
vm4/68c32afe2ba8493e89f018a
970c644ea.img,xvda,w']
maxvcpus = 2
maxmem = 2048
```

Hardware Models

Oracle Database Appliance X6-2-HA, X5-2, X4-2, X3-2, and V1

Oracle Database Appliance X7-2-HA Virtualized Platform.

Workaround

Delete the `extra = 'NODENAME=vm_name'` line from the `vm.cfg` file for the VM that failed to start.

1. Open the `vm.cfg` file for the virtual machine (vm) that failed to start.
 - `Dom0 : /Repositories/ vm_repo_name /.ACFS/snaps/ vm_name / VirtualMachines/ vm_name`
 - `ODA_BASE : /app/sharedrepo/ vm_repo_name /.ACFS/snaps/ vm_name / VirtualMachines/ vm_name`
2. Delete the following line: `extra='NODENAME=vmname'`. For example, if virtual machine `vm4` failed to start, delete the line `extra = 'NODENAME=vm4'`.

```
vif = [ ''
name = 'vm4'
extra = 'NODENAME=vm4'
builder = 'hvm'
cpus = '0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23'
vcpus = 2
memory = 2048
cpu_cap = 0
vnc = 1
serial = 'pty'
disk =
[u'file:/OVS/Repositories/odarepo1/VirtualMachines/
vm4/68c32afe2ba8493e89f018a

970c644ea.img,xvda,w']
maxvcpus = 2
maxmem = 2048
```

3. Start the virtual machine on Oracle Database Appliance 12.1.2.11.0.

```
# oakcli start vm vm4
```

This issue is tracked with Oracle bug 25943318.

Error in node number information when running network CLI commands

Network information for node0 is always displayed for some `odacli` commands, when the `-u` option is not specified.

If the `-u` option is not provided, then the `describe-networkinterface`, `list-networks` and the `describe-network` `odacli` commands always display the results for node0 (the default node), irrespective of whether the command is run from node0 or node1.

Hardware Models

Oracle Database Appliance X7-2-HA, X6-2-HA, X5-2, X4-2, X3-2, and V1

Workaround

Specify the `-u` option in the `odacli` command, for details about the current node.

This issue is tracked with Oracle bug 27251239.

Unrecognized Token Messages Appear in `/var/log/messages`

After updating Oracle Database Appliance, unrecognized token messages appear in `/var/log/messages`.

Updating to Oracle Database Appliance 12.1.2.11.0 updates the Oracle VM Server version to 3.4.3. After updating, the following messages appear in `/var/log/messages`:

```
Unrecognized token: "max_seq_redisc"  
Unrecognized token: "rereg_on_guid_migr"  
Unrecognized token: "aguid_inout_notice"  
Unrecognized token: "sm_assign_guid_func"  
Unrecognized token: "reports"  
Unrecognized token: "per_module_logging"  
Unrecognized token: "consolidate_ipv4_mask"
```

You can ignore the messages for these parameters, they do not impact the InfiniBand compliant Subnet Manager and Administration (`opensm`) functionality. However, Oracle recommends removing the parameters to avoid flooding `/var/log/messages`.

Hardware Models

Oracle Database Appliance X6-2-HA and X5-2 with InfiniBand

Workaround

Perform the following to remove the parameters:

1. After patching, update the `/etc/opensm/opensm.conf` file in bare metal deployments and in Dom0 in virtualized platform environment to remove the parameters.

```
cat /etc/opensm/opensm.conf | egrep -w  
'max_seq_redisc|rereg_on_guid_migr|aguid_inout_notice|  
sm_assign_guid_func|repo  
rts|per_module_logging|consolidate_ipv4_mask' | grep -v ^#  
max_seq_redisc 0  
rereg_on_guid_migr FALSE  
aguid_inout_notice FALSE  
sm_assign_guid_func uniq_count  
reports 2  
per_module_logging FALSE  
consolidate_ipv4_mask 0xFFFFFFFF
```

2. Reboot. The messages will not appear after rebooting the node.

This issue is tracked with Oracle bug 25985258.

A

Documentation Addendum

These topics contain corrections or additions that need to be made to published documentation.

- [Setup Poster X7-2-HA](#)
Review this topic for corrections to the instructions in the Setup Poster for X7-2HA (PDF version).

Setup Poster X7-2-HA

Review this topic for corrections to the instructions in the Setup Poster for X7-2HA (PDF version).

- On Page 4, in Step D, in the procedure 3. *Verify Virtual Machine Image and Cabling*, read the command as:

```
/opt/oracle/oak/bin/oakcli validate -c storagetopology
```

- On Page 4, in Step B, in the procedure 4. *Configure the Network*, read the command as:

```
/opt/oracle/oak/bin/oakcli configure firstnet
```

- On Page 4, in Step F, in the procedure 5. *Deploy ODA_BASE and Validate Storage*, read the command as:

```
/opt/oracle/oak/bin/oakcli validate -c storagetopology
```

- On Page 4, in Step A, in the procedure 6. *Deploy the Oracle Software on ODA_BASE*, read the command as:

```
/opt/oracle/oak/bin/oakcli configure firstnet
```

- On Page 4, in Step C, in the procedure 6. *Deploy the Oracle Software on ODA_BASE*, read the command as:

```
vncserver
```

- On Page 4, in Step D, in the procedure 6. *Deploy the Oracle Software on ODA_BASE*, you need not specify port 5901.

Index

C

component versions, [2-1–2-3](#)