Oracle® Database Appliance

Release Notes

Release 18.8 for Linux x86-64

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Oracle Database Appliance Release Notes, Release 18.8 for Linux x86-64

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Contents

A Documentation Addendum

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

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.
italic	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.

What's New in This Release

Understand the new features in this release of Oracle Database Appliance.

- New Features in Oracle Database Appliance Release 18.8
  Oracle Database Appliance release 18.8 supports Oracle Database 18c functionality on Oracle Database Appliance hardware models.
- New Features in Oracle Database Appliance Enterprise Manager Plug-in Releases 13.4.1.0.0 and 13.2.3.0.0
  Understand the new features in Oracle Database Appliance Enterprise Manager Plug-in releases 13.4.1.0.0 and 13.2.3.0.0.

New Features in Oracle Database Appliance Release 18.8

Oracle Database Appliance release 18.8 supports Oracle Database 18c functionality on Oracle Database Appliance hardware models.

New Features

See the topic *New Features in Oracle Database Appliance Enterprise Manager Plug-in* in this Release Notes for information about Oracle Database Appliance Enterprise Manager Plug-in releases 13.4.1.0.0 and 13.2.3.0.0.

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 18.8. Read the chapter *Known Issues with Oracle Database Appliance in This Release* for critical fixes before deploying Oracle Database Appliance release 18.8.

For Oracle Database 18c features, see the Oracle Database Documentation Library at https://docs.oracle.com/en/database/oracle/oracle-database/index.html.

The following new features are available in this release:

- **Support for Oracle Database Appliance Enterprise Manager Plug-in Releases 13.4.1.0.0 and 13.2.3.0.0**

  Oracle Database Appliance Enterprise Manager Plug-in releases 13.4.1.0.0 and 13.2.3.0.0 are available. The plug-in releases 13.4.1.0.0 and 13.2.3.0.0 are supported on 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 for Oracle Database Appliance releases 19.5, 18.8, and earlier. See the topic *New Features in Oracle Database Appliance Enterprise Manager Plug-in* in this Release Notes for the download location, new features, and information about installing and configuring these plug-in releases.
- **Storage Expansion Support on Oracle Database Appliance X8-2**

  With this release, you can expand storage on your Oracle Database Appliance X8-2 systems, at any time even after the initial deployment, without reimaging or redeploying the appliance. See the chapter *Managing Storage* in the *Oracle Database Appliance X8-2 Deployment and User's Guide* for information about adding storage disks and storage expansion shelf for your hardware model.
- **Storage Expansion Options on Oracle Database Appliance X7-2 and X6-2**

You can now expand storage on your Oracle Database Appliance X7-2 and X6-2 hardware models with X8-2 storage disks, and utilize the full storage capacity of the new X8-2 storage disks on your older Oracle Database Appliance X7-2 and X6-2 hardware models. For information about adding storage disks, see the chapter *Managing Storage* in the *Oracle Database Appliance Deployment and User's Guide* for your hardware model.

- **Oracle Database Appliance Browser User Interface**
  The Oracle Database Appliance Web Console is now referred to as the Oracle Database Appliance Browser User Interface.
- **Support for Adding and Deleting Networks and Network Interfaces on Oracle Database Appliance X8-2**
  You can add and delete networks and network interfaces for your baremetal deployments and Virtualized Platform using ODACLI and OAKCLI commands and also from the Browser User Interface. See the chapters *Managing Networks* and *Managing an Oracle Database Appliance Virtualized Platform* in the *Oracle Database Appliance Deployment and User's Guide* for your hardware model.
- **Options to Clean Up Patch Repositories**

  You can now delete obsolete or old patches from the patch repository using the Browser User Interface or ODACLI commands. See the topic *Cleaning Up the Patch Repository* in the *Oracle Database Appliance Deployment and User's Guide* for your hardware model.
- **Oracle Autonomous Health Framework To Run Diagnostics**
  Oracle Autonomous Health Framework is installed automatically when you provision or patch to Oracle Database Appliance release 18.8. Use Oracle Autonomous Health Framework to ensure the health of your deployment. Oracle Autonomous Health Framework provides diagnostic tools such as Oracle Trace File Analyzer and Oracle ORAchk. To understand how to use these tools to collect diagnostic data and also how Oracle Autonomous Health Framework uses Adaptive Classification and Redaction (ACR) to sanitize sensitive data, see *Using Oracle Autonomous Health Framework for Running Diagnostics* in the *Oracle Database Appliance Deployment and User's Guide* for your hardware model.
- **Oracle ORAchk Health Tool Reports Using the Browser User Interface**
  To check the health of your deployment, you can generate and view Oracle ORAchk Health Check Tool reports using the Browser User Interface. For more information, see *Generating and Viewing Oracle ORAchk Health Check Tool Reports in the Browser User Interface* in the *Oracle Database Appliance Deployment and User's Guide* for your hardware model.
- **Oracle Grid Infrastructure and Oracle Database Updates**

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

  - 18.8.0.0.191015
  - 12.2.0.1.191015
  - 12.1.0.2.191015
  - 11.2.0.4.191015

Oracle Grid Infrastructure Clone, Oracle Database Clone, and ISO Image Patches

See the chapter *Oracle Database Appliance Release 18.8 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 18.8 from the drop down list.

- **Oracle Database Appliance 18.8.0.0.0 GI Clone for ODACLI/DCS stack:** Use patch 27604593 to perform an initial deployment of Oracle Database Appliance. The bundle contains the latest Oracle 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 operating system ISO Image. This patch is for all Oracle Database Appliance Hardware Models (bare metal).
- **Oracle Database Appliance 18.8.0.0.0 RDBMS Clone File for ODACLI/DCS stack:** Use the Oracle RDBMS 18.8.0.0.191015 Software Clone file to create 18.8.0.0.191015 Oracle Database homes. Patch 27604558 provides the database clone for this update. This patch is for all Oracle Database Appliance Hardware Models (bare metal).
- **Oracle Database Appliance 12.2.0.1 RDBMS Clone File for ODACLI/DCS stack:** Use the Oracle RDBMS 12.2.0.1.191015 Software Clone file to create 12.2.0.1.191015 database homes. Patch 27119402 provides the database clone for this update.
- **Oracle Database Appliance 12.1.0.2 RDBMS Clone File for ODACLI/DCS stack:** Use the Oracle RDBMS 12.1.0.2.191015 Software Clone file to create 12.1.0.2.191015 database homes. Patch 23494992 provides the database clone for this update.
- **Oracle Database Appliance 11.2.0.4 RDBMS Clone File for ODACLI/DCS stack:** Use the Oracle RDBMS 11.2.0.4.191015 Software Clone file to create 11.2.0.4.191015 database homes. Patch 23494997 provides this update.
- **Oracle Database Appliance 18.8.0.0.0 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 18.8.0.0.0 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 18.8.0.0.0 RDBMS Clone for Virtualized Platform:** Use the Oracle RDBMS 18.8.0.0.191015 Software Clone file to create 18.8.0.0.191015 database homes for Virtualized Platform. Patch 28864456 provides this update.
- **Oracle Database Appliance 12.2.0.1 RDBMS Clone File for Virtualized Platform:** Use the Oracle RDBMS 12.2.0.1.191015 Software Clone file to create 12.2.0.1.191015 database homes for Virtualized Platform. Patch 27449599 provides the database clone for this update.
- **Oracle Database Appliance 12.1.0.2 RDBMS Clone File for Virtualized Platform:** Use the Oracle RDBMS 12.1.0.2.191015 Software Clone file to create

12.1.0.2.191015 database homes for Virtualized Platform. Patch 19520042 provides the database clone for this update.

- **Oracle Database Appliance 11.2.0.4 RDBMS Clone File for Virtualized Platform:** Use the Oracle RDBMS 11.2.0.4.191015 Software Clone file to create 11.2.0.4.191015 database homes for Virtualized Platform. Patch 17770873 provides the database clone for this update.

Related Topics

- Oracle Database Appliance Checklists
- Managing Storage on Oracle Database Appliance X8-2
- Managing Storage on Oracle Database Appliance X7-2
- Managing Storage on Oracle Database Appliance X6-2-HA
- Patching Oracle Database Appliance Bare Metal Systems
- Managing Networks
- Managing an Oracle Database Appliance Virtualized Platform
- Cleaning Up the Patch Repository
- Using Oracle Autonomous Health Framework for Running Diagnostics
- Generating and Viewing Oracle ORAchk Health Check Tool Reports in the Browser User Interface

New Features in Oracle Database Appliance Enterprise Manager Plug-in Releases 13.4.1.0.0 and 13.2.3.0.0

Understand the new features in Oracle Database Appliance Enterprise Manager Plug-in releases 13.4.1.0.0 and 13.2.3.0.0.

Oracle Enterprise Manager Cloud Control provides unattended monitoring of your IT environment and key components such as applications, application servers, databases, and your Oracle Database Appliance deployments.

New Features in Oracle Database Appliance Enterprise Manager Plug-in Release 13.2.3.0.0

Oracle Database Appliance Enterprise Manager Plug-in release 13.2.3.0.0 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 for Oracle Database Appliance releases 19.5, 18.8, and earlier.

You can download Oracle Database Appliance Enterprise Manager Plug-in release 13.2.3.0.0 from the Plug-in Releases page at https://www.oracle.com/database/technologies/db-appliance-downloads.html.

For Oracle Enterprise Manager Cloud Control features, see the Oracle Enterprise Manager Cloud Control Plug-In Documentation Library at https://docs.oracle.com/cd/cloud-control-13.3/index.htm.

The following new features are available in Oracle Database Appliance Enterprise Manager Plug-in Release 13.2.3.0.0:

- **Plug-in Support for Oracle Database Appliance X8-2 and Earlier Hardware Models with all Oracle Database Appliance releases 19.5, 18.8, and earlier**

  With this plug-in release, you can use Enterprise Manager Cloud Control 13.3 to manage and monitor your Oracle Database Appliance 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 systems for Oracle Database Appliance releases 19.5, 18.8, and earlier.

  To download the plug-in, see the Plug-in Releases page at https://www.oracle.com/database/technologies/db-appliance-downloads.html

  To install and deploy the plug-in, see the *Enterprise Manager Cloud Control Oracle Database Appliance Plug-in User's Guide*.

- **Discovery Support for Sites without DCS Configuration**

  With plug-in release 13.2.3.0.0, discovery of sites without DCS configuration is supported.

  See the *Enterprise Manager Cloud Control Oracle Database Appliance Plug-in User's Guide* for the procedure to discover and add Oracle Database Appliance and other supported targets to be managed by Enteprise Manager Cloud Control.

- **Creation and Promotion of Databases in Enterprise Manager Cloud Control**
  There may be a delay between creation and promotion of Oracle Database targets in Enterprise Manager Cloud Control and their visibility in Enterprise Manager Cloud Control as targets to be managed and monitored.

  See the *Enterprise Manager Cloud Control Administrator's Guide* for more information.

- **Reset `odacli-adm` Password Before Deploying the Plug-in**
  After upgrading DCS components, you must reset the `odacli-adm` password before deploying the plug-in or if the existing plug-in has stopped collecting data.

  To reset your Oracle Database Appliance passwords, see the topic *Changing Oracle Appliance Passwords* in the *Oracle Database Appliance Deployment and User's Guide* for your hardware model.

New Features in Oracle Database Appliance Enterprise Manager Plug-in Release 13.4.1.0.0

Oracle Database Appliance Enterprise Manager Plug-in release 13.4.1.0.0 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 for Oracle Database Appliance releases 19.5, 18.8, and earlier.

You can download Oracle Database Appliance Enterprise Manager Plug-in release 13.4.1.0.0 from the Plug-in Releases page at https://www.oracle.com/database/technologies/db-appliance-downloads.html.

For Oracle Enterprise Manager Cloud Control features, see the Oracle Enterprise Manager Cloud Control Plug-In Documentation Library at https://docs.oracle.com/en/enterprise-manager/cloud-control/enterprise-manager-cloud-control/13.4/index.html.

The following new features are available in Oracle Database Appliance Enterprise Manager Plug-in Release 13.4.1.0.0:

- **Plug-in Support for Oracle Database Appliance X8-2 and Earlier Hardware Models with all Oracle Database Appliance releases 19.5, 18.8, and earlier**

With this plug-in release, you can use Enterprise Manager Cloud Control 13c Release 4 (13.4) to manage and monitor your Oracle Database Appliance 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 systems for Oracle Database Appliance releases 19.5, 18.8, and earlier.

To download the plug-in, see the Plug-in Releases page at https://www.oracle.com/database/technologies/db-appliance-downloads.html

To install and deploy the plug-in, see the *Enterprise Manager Cloud Control Oracle Database Appliance Plug-in User's Guide*.

- **Upgrade Path for Oracle Database Appliance Enterprise Manager Plug-in Release 13.4.1.0.0**

  You can upgrade from Enterprise Manager Cloud Control 13.2 and 13.3 and Oracle Database Appliance Enterprise Manager Plug-in releases 13.2.1.1.0, 13.2.2.1.0, and 13.2.3.0.0.

  To upgrade from Oracle Database Appliance Enterprise Manager Plug-in release 12.1.0.1.0, you must first upgrade to Enterprise Manager Cloud Control 13.3 and Oracle Database Appliance Enterprise Manager Plug-in release 13.2.3.0.0.

- **Plug-in Upgrade Documentation Links**
  For information about upgrading to Enterprise Manager Cloud Control 13c Release 4 (13.4), see the *Cloud Control Upgrade Guide* at https://docs.oracle.com/en/enterprise-manager/cloud-control/enterprise-manager-cloud-control/13.4/emupg/upgrading-enterprise-manager-cloud-control-13c-release.html.

  For information about upgrading the Oracle Database Appliance Enterprise Manager Plug-in during the upgrade to Enterprise Manager Cloud Control 13c Release 4 (13.4), see the *Cloud Control Upgrade Guide* at https://docs.oracle.com/en/enterprise-manager/cloud-control/enterprise-manager-cloud-control/13.4/emupg/upgrading-oracle-management-service-and-oracle-management-repository-13c-release.html#GUID-8A481149-A3B4-43A6-AFB7-B6842C16B383.

  In the Enterprise Manager Cloud Control upgrade wizard, copy the command in the last screen in the upgrade wizard, in the format *`path-to-new(upgraded)-oms`*`/sysman/install/ConfigureGC.sh`.

  Paste the command into a terminal and launch the Agent Upgrade console. Complete the configuration steps. The Oracle Management Service (OMS) starts automatically when the configuration is completed. Start the Enterprise Manager Agent manually and upgrade the Enterprise Manager Agent on the console host and client host using Enterprise Manager Cloud Control as described at https://docs.oracle.com/en/enterprise-manager/cloud-control/enterprise-manager-cloud-control/13.4/emupg/upgrading-oracle-management-agents.html#GUID-612769B2-062B-49F4-9F2E-AE95B29504C2.

  When you complete the upgrade steps, your deployment is upgraded to Enterprise Manager Cloud Control 13c Release 4 (13.4) with Oracle Database Appliance Enterprise Manager Plug-in Release 13.4.1.0.0 configured and running.

Related Topics

- Enterprise Manager Cloud Control Oracle Database Appliance Plug-in User's Guide
- Changing Oracle Database Appliance Passwords
- Oracle Database Appliance Documentation

- Download Link for the Plug-in: https://www.oracle.com/database/technologies/db-appliance-downloads.html
- Enterprise Manager Cloud Control 13.3 Plug-in Documentation
- Enterprise Manager Cloud Control 13.4 Plug-in Documentation

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 X5-2 and X4-2 Models
  The matrix display the component versions available for Oracle Database Appliance X5-2 and X4-2 hardware models.

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 18.8

Component Name	X8-2-HA	X8-2S and X8-2M
Controller	13.00.00.00	Not applicable
Expander	0306	Not applicable
SSD	A959	Not applicable
NVMe (firmware version)	Not applicable	VDV1RL02
OS Disk (SSD firmware version)	0121	0121
ILOM (Oracle Integrated Lights Out Manager)	4.0.4.38.a.r132148	4.0.4.38.a.r132148
BIOS	52020500	52020500

Table 2-1 (Cont.) Component Versions for X8-2-HA, X8-2M, and X8-2S in Oracle Database Appliance Release 18.8

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
Oracle Linux	6.10	6.10
OVM (Oracle VM Server)	3.4.4	Not applicable
Kernel	4.1.12-124.33.4.el6uek.x86_64	4.1.12-124.33.4.el6uek.x86_64
GI_HOME	18.8.0.0.191015	18.8.0.0.191015
DB_HOME	18.8.0.0.191015	18.8.0.0.191015
Oracle Auto Service Request (Oracle ASR)	19.4.0	19.4.0

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 18.8

Component Name	X7-2-HA	X7-2S and X7-2M
Controller	13.00.00.00	Not applicable
Expander	0306	Not applicable
SSD	A170 For the HDD/SSD option: A374/A087	A170
NVMe (firmware version)	Not applicable	QDV1RF30
OS Disk (SSD firmware version)	0121	0121
ILOM (Oracle Integrated Lights Out Manager)	4.0.4.47.r131913	4.0.4.47.r131913
BIOS	41060600	41060600
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
Oracle Linux	6.10	6.10
OVM (Oracle VM Server)	3.4.4	Not applicable
Kernel	4.1.12-124.33.4.el6uek.x86_64	4.1.12-124.33.4.el6uek.x86_64
GI_HOME	18.8.0.0.191015	18.8.0.0.191015

Table 2-2 (Cont.) Component Versions for X7-2-HA, X7-2M, and X7-2S in Oracle Database Appliance Release 18.8

Component Name	X7-2-HA	X7-2S and X7-2M
DB_HOME	18.8.0.0.191015	18.8.0.0.191015
Oracle Auto Service Request (Oracle ASR)	19.4.0	19.4.0

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 18.8

Component Name	Version
Controller	4.650.00-7176
NVMe (firmware version)	KPYAIR3Q
OS Disk	OR3Q
ILOM (Oracle Integrated Lights Out Manager)	X6-2SM: 5.0.0.22.r132877 X6-2L:5.0.0.22.r132877
BIOS	X6-2SM:38310100 X6-2L:39310100
IPMI (Intelligent Platform Management Interface)	1.8.15.0
HMP (Oracle Hardware Management Pack)	2.4.5.0.1
Oracle Linux	6.10
Kernel	4.1.12-124.33.4.el6uek.x86_64
GI_HOME	18.8.0.0.191015
DB_HOME	18.8.0.0.191015
Oracle Auto Service Request (Oracle ASR)	19.4.0

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 18.8

Component Name	Version
Controller_INT	4.650.00-7176

Table 2-4 (Cont.) Component Versions for Oracle Database Appliance X6-2-HA in Oracle Database Appliance Release 18.8

Component Name	Version
Controller_Ext	13.00.00.00
Expander	0306
SSD_LOCAL	OR3Q
SSD_SHARED	A29A
ILOM (Oracle Integrated Lights Out Manager)	5.0.0.22.r132877
BIOS	38310100
IPMI (Intelligent Platform Management Interface)	1.8.15.0
HMP (Oracle Hardware Management Pack)	2.4.5.0.1
Oracle Linux	6.10
Kernel	4.1.12-124.33.4.el6uek.x86_64
OVM (Oracle VM Server)	3.4.4
GI_HOME	18.8.0.0.191015
DB_HOME	18.8.0.0.191015
Oracle Auto Service Request (Oracle ASR)	19.4.0

Component Versions for X5-2 and X4-2 Models

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

Table 2-5 Component Versions for Oracle Database Appliance X5-2 for Oracle Database Appliance Release 18.8

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, PD51
ILOM (Oracle Integrated Lights Out Manager)	4.0.4.52-es-r132805
BIOS	30300200
IPMI (Intelligent Platform Management Interface)	1.8.15.0
HMP (Oracle Hardware Management Pack)	2.4.5.0.1
Oracle Linux	6.10
Kernel	4.1.12-124.33.4.el6uek.x86_64

Table 2-5 (Cont.) Component Versions for Oracle Database Appliance X5-2 for Oracle Database Appliance Release 18.8

Component Name	Version
OVM (Oracle VM Server)	3.4.4
GI_HOME	18.8.0.0.191015
DB_HOME	18.8.0.0.191015
Oracle Auto Service Request (Oracle ASR)	19.4.0

Table 2-6 Component Versions for Oracle Database Appliance X4-2 in Oracle Database Appliance Release 18.8

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
Oracle Linux	6.10
Kernel	4.1.12-124.33.4.el6uek.x86_64
OVM (Oracle VM Server)	3.4.4
GI_HOME	18.8.0.0.191015
DB_HOME	18.8.0.0.191015
Oracle Auto Service Request (Oracle ASR)	19.4.0

3

Oracle Database Appliance 18.8 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 installing 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 and X4-2 Patches
  Download the patches available for Oracle Database Appliance X5-2 and 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)
18.8.0.0	• 18.7.0.0 • 18.5.0.0 • 18.3.0.0
18.7.0.0	• 18.5.0.0 • 18.3.0.0
18.5.0.0	• 18.3.0.0
18.3.0.0	• 12.2.1.4.0 • 12.2.1.3.0 • 12.2.1.2.0 • 12.1.2.12
12.2.1.4.0	• 12.2.1.3.0 • 12.2.1.2.0 • 12.1.2.12
12.2.1.3.0	• 12.2.1.2.0 • 12.1.2.12
12.2.1.2.0	• 12.1.2.12 **Note:** 12.2.1.2.0 is not supported on virtualized platform.
12.1.2.12	• 12.1.2.11 • 12.1.2.10 • 12.1.2.9 • 12.1.2.8
12.1.2.11	• 12.1.2.10 • 12.1.2.9 • 12.1.2.8 • 12.1.2.7
12.1.2.10	• 12.1.2.9 • 12.1.2.8 • 12.1.2.7 • 12.1.2.6
12.1.2.9	• 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

Table 3-1 (Cont.) 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)
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 installing this release of Oracle Database Appliance.

You can provision Oracle Database Appliance release 18.8 on Oracle Database Appliance bare metal systems.

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 18.8 from the release list.

Table 3-2 Oracle Database Appliance X8-2S, X8-2M, and X8-2-HA Patches for Oracle Database Appliance Release 18.8

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	30518425	Use the server patch to update your deployment to Oracle Database Appliance release 18.8.	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 18.8. 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 18.8

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 18.8 ISO Image.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 18.8.0.0.191015 for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS Clone 18.8.0.0.191015 for ODACLI/DCS stack to create 18.8 database homes for the ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for ODACLI/DCS stack to create 12.2.0.1 database homes for the 18.8 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for ODACLI/DCS stack to create 12.1.0.2 database homes for the 18.8 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for ODACLI/DCS stack to create 11.2.0.4 database homes for the 18.8 ODACLI/DCS stack.	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 18.8 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	30518438	Use the server patch to update your deployment to Oracle Database Appliance release 18.8.	Patching Oracle Database Appliance Virtualized Platform
VM ISO Image (DOM0)	16186163 From the drop-down list, select 18.8.	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 18.8.	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 18.8.0.0.191015 for Virtualized Platform	28864456	Use Oracle Database Appliance RDBMS Clone 18.8.0.0.191015 for Virtualized Platform to create 18.8 database homes for Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for Virtualized Platforms	27449599	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for Virtualized Platform to create 12.2.0.1 database homes for the 18.8 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for Virtualized Platform	19520042	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for Virtualized Platform to create 12.1.0.2 database homes for the 18.8 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for Virtualized Platform	17770873	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for Virtualized Platform to create 11.2.0.4 database homes for the 18.8 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files

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 18.8 from the release list.

Table 3-4 Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA Patches for Oracle Database Appliance Release 18.8

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	30518425	Use the server patch to update your deployment to Oracle Database Appliance release 18.8.	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 18.8. 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 18.8 ISO Image.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 18.8.0.0.191015 for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS Clone 18.8.0.0.191015 for ODACLI/DCS stack to create 18.8 database homes for the ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for ODACLI/DCS stack to create 12.2.0.1 database homes for the 18.8 ODACLI/DCS stack.	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 18.8

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for ODACLI/DCS stack to create 12.1.0.2 database homes for the 18.8 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for ODACLI/DCS stack to create 11.2.0.4 database homes for the 18.8 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files

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 18.8 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	30518438	Use the server patch to update your deployment to Oracle Database Appliance release 18.8.	Patching Oracle Database Appliance Virtualized Platform

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

Patch Type	Patch Number	Description	Resources
VM ISO Image (DOM0)	16186163 From the drop-down list, select release 18.8.	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 18.8.	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 18.8.0.0.191015 for Virtualized Platform	28864456	Use Oracle Database Appliance RDBMS Clone 18.8.0.0.191015 for Virtualized Platform to create 18.8 database homes for Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for Virtualized Platform	27449599	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for Virtualized Platform to create 12.2.0.1 database homes for the 18.8 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for Virtualized Platform	19520042	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for Virtualized Platform to create 12.1.0.2 database homes for the 18.8 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files

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

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for Virtualized Platform	17770873	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for Virtualized Platform to create 11.2.0.4 database homes for the 18.8 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files

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 18.8 from the release list.

Table 3-6 Oracle Database Appliance X6-2S, X6-2M, and X6-2L Patches for Oracle Database Appliance Release 18.8

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	30518425	Use the server patch to update your deployment to Oracle Database Appliance release 18.8.	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 18.8. Re-imaging a server installs the new operating system on the local disks on that server.	Re-imaging Oracle Database Appliance

Table 3-6 (Cont.) Oracle Database Appliance X6-2S, X6-2M, and X6-2L Patches for Oracle Database Appliance Release 18.8

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 Oracle Database Appliance ISO Image for release 18.8 .	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 18.8.0.0.191015 for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS Clone 18.8.0.0.191015 for ODACLI/DCS stack to create 18.8 database homes for the ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for ODACLI/DCS stack to create 12.2.0.1 database homes for the 18.8 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for ODACLI/DCS stack to create 12.1.0.2 database homes for the 18.8 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for ODACLI/DCS stack to create 11.2.0.4 database homes for the 18.8 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files

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 18.8 from the release list.

Table 3-7 Oracle Database Appliance X6-2-HA Patches for Oracle Database Appliance Release 18.8

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	30518425	Use the server patch to update your deployment to Oracle Database Appliance release 18.8	Patching Oracle Database Appliance
Oracle Database Appliance Server Patch for Virtualized Platforms	30518438	Use the server patch to update your deployment to Oracle Database Appliance release 18.8	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 18.8.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 18.8.0.0.191015 for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS Clone 18.8.0.0.191015 for ODACLI/DCS stack to create 18.8 database homes for the ODACLI/DCS stack.	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 18.8

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for ODACLI/DCS stack to create 12.2.0.1 database homes for the 18.8 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for ODACLI/DCS stack to create 12.1.0.2 database homes for the 18.8 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for ODACLI/DCS stack to create 11.2.0.4 database homes for the 18.8 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance ISO Image	27604623	Use the ISO image to re-image the operating system for Oracle Database Appliance 18.8. 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 18.8	Use to reimage Oracle Database Appliance as a Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform

Table 3-7 (Cont.) Oracle Database Appliance X6-2-HA Patches for Oracle Database Appliance Release 18.8

Patch Type	Patch Number	Description	Resources
VM Template (ODA_BASE)	16186172 From the drop-down list, select 18.8	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 18.8.0.0.191015 for Virtualized Platform	28864456	Use Oracle Database Appliance RDBMS Clone 18.8.0.0.191015 for Virtualized Platform to create 18.8 database homes for Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for Virtualized Platforms	27449599	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for Virtualized Platform to create 12.2.0.1 database homes for the 18.8 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for Virtualized Platform	19520042	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for Virtualized Platform to create 12.1.0.2 database homes for the 18.8 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for Virtualized Platform	17770873	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for Virtualized Platform to create 11.2.0.4 database homes for the 18.8 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files

Oracle Database Appliance X5-2 and X4-2 Patches

Download the patches available for Oracle Database Appliance X5-2 and 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 18.8 from the release list.

Table 3-8 Oracle Database Appliance X5-2/X4-2 Patches for Oracle Database Appliance Release 18.8

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	30518425	Use the server patch to update your deployment to Oracle Database Appliance release 18.8.	Patching Oracle Database Appliance
Oracle Database Appliance Server Patch for Virtualized Platforms	30518438	Use the server patch to update your Virtualized Platform deployment to Oracle Database Appliance release 18.8.	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 18.8.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 18.8.0.0.191015 for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS Clone 18.8.0.0.191015 for ODACLI/DCS stack to create 18.8 database homes for the ODACLI/DCS stack.	Provisioning Oracle Database Appliance Software

Table 3-8 (Cont.) Oracle Database Appliance X5-2/X4-2 Patches for Oracle Database Appliance Release 18.8

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for ODACLI/DCS stack to create 12.2.0.1 database homes for the 18.8 ODACLI/DCS stack.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for ODACLI/DCS stack to create 12.1.0.2 database homes for the 18.8 ODACLI/DCS stack.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for ODACLI/DCS stack to create 11.2.0.4 database homes for the 18.8 ODACLI/DCS stack.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance ISO Image	27604623	Use the ISO image to re-image the operating system for Oracle Database Appliance 18.8. 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 18.8	Use to reimage Oracle Database Appliance as a Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform

Table 3-8 (Cont.) Oracle Database Appliance X5-2/X4-2 Patches for Oracle Database Appliance Release 18.8

Patch Type	Patch Number	Description	Resources
VM Template (ODA_BASE)	16186172 From the drop-down list, select 18.8	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 18.8.0.0.191015 for Virtualized Platform	28864456	Use Oracle Database Appliance RDBMS Clone 18.8.0.0.191015 for Virtualized Platform to create 18.8 database homes for Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for Virtualized Platforms	27449599	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.191015 for Virtualized Platform to create 12.2.0.1 database homes for the 18.8 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for Virtualized Platform	19520042	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.191015 for Virtualized Platform to create 12.1.0.2 database homes for the 18.8 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for Virtualized Platform	17770873	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.191015 for Virtualized Platform to create 11.2.0.4 database homes for the 18.8 Virtualized Platform.	Updating Oracle Database Appliance Repository with Database Clone Files

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

Known Issues When Patching Oracle Database Appliance

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

- Errors when running oakcli commands on Oracle Database Appliance Virtualized Platform
  You may encounter an error when you run `oakcli` commands on Oracle Database Appliance Virtualized Platforms.
- Patching Oracle Database home fails with errors
  When applying the patch for Oracle Database homes, an error is encountered.
- Error in patching Oracle Database Appliance
  When applying the server patch for Oracle Database Appliance, an error is encountered.
- Patching errors on Oracle Database Appliance Virtualized Platform
  When applying the server patch for Oracle Database Appliance Virtualized Platform, an error is encountered.
- Error encountered when running Oracle Database Appliance commands
  If you submit an `odacli create-prepatchreport` job, and then run any command before the job is completed, an error is encountered.
- Error in updating Oracle ILOM when patching the appliance
  When patching the appliance, there may be errors in patching Oracle ILOM.
- Patching pre-checks do not complete with --local option during server patching
  Server patching fails while running patching pre-checks with the `--local` option.
- Relocation of Oracle RAC One Database fails during patching
  When relocating Oracle RAC One Database during patching, an error is encountered.

- Error when patching to 12.1.0.2.190716 Bundle Patch
  When patching Oracle Database release 12.1.0.2 to Oracle Database 12.1.0.2.190716 Bundle Patch, an error is encountered.
- Server status not set to Normal when patching
  When patching Oracle Database Appliance, 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.
- 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.
- 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 18.8, 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.

Errors when running oakcli commands on Oracle Database Appliance Virtualized Platform

You may encounter an error when you run `oakcli` commands on Oracle Database Appliance Virtualized Platforms.

For example, the following error is encountered when running the `oakcli expand storage` command on Oracle Database Appliance Virtualized Platforms.

```
sh: /opt/oracle/oak/bin/odaadmcli: No such file or directory
```

This error occurs in Oracle Database Appliance Virtualized Platforms with Oracle Autonomous Health Framework version 19.3 or earlier, where Oracle Autonomous Health Framework is installed in the DCS home directory (`/opt/oracle/dcs`) under `/opt/oracle/dcs/oracle.ahf/`.

You can check your AHF version:

```
# tfactl -version;orachk -v
TFA Version : 193000
TFA Build ID : 20200108023845
ORACHK  VERSION: 19.3.0_20200108
# cd /opt/oracle
# ls
dcs  extapi  oak
# cd dcs
# ls
oracle.ahf
#
```

Hardware Models

Oracle Database Appliance High-Availability hardware models Virtualized Platform deployments

Workaround

Uninstall the installed Oracle Autonomous Health Framework version and download the latest Oracle Autonomous Health Framework version on both nodes of your Oracle Database Appliance High-Availability deployment.

Run the following steps on **both** nodes:

1. Uninstall Oracle Autonomous Health Framework.

   ```
   # tfactl uninstall -local -deleterepo
   ```

   For Oracle Autonomous Health Framework version 19.3, manually remove the installed version, by running the following command:

   ```
   # rpm -e oracle-ahf
   ```

2. Check that no `oracle-ahf` rpm is installed on the system.

   ```
   # rpm -qi oracle-ahf
   package oracle-ahf is not installed
   #
   ```

3. Remove the DCS home (`/opt/oracle/dcs`) and its sub-directories.

   ```
   # cd /opt/oracle
   # rm -rf /opt/oracle/dcs
   ```

4. Check and ensure the DCS home directory (`/opt/oracle/dcs`) does not exist under the `/opt/oracle` directory on the system.

```
# cd /opt/oracle/
# ls
extapi  oak
#
```

5. Download the latest Oracle Autonomous Health Framework version from My Oracle Support.
6. Copy the downloaded zip file to `/root` on your system, for example, `AHF-LINUX_v20.1.1.zip`. The zip file name for each Oracle Autonomous Health Framework version may change based on the latest release number.

```
# /root/AHF-LINUX_v20.1.1.zip
```

7. Create the `ahfinstall` directory under `/tmp`.

```
# cd /tmp
# mkdir ahfinstall
```

8. Unzip the Oracle Autonomous Health Framework zip file into `/tmp/ahfinstall`.

```
# cd ahfinstall
# unzip /root/AHF-LINUX_v20.1.1.zip
```

9. Run the `ahf_setup` installer from `/tmp/ahfinstall`. During installation, select the default location for installation.
   Note: Do not choose the DCS home directory as the default Oracle Autonomous Health Framework location for install.

```
# ./ahf_setup
```

10. Check the Oracle TFA and ORAchk versions.

```
#tfactl -version;orachk -v
TFA Version : 201100
TFA Build ID : 20200331131556
ORACHK  VERSION: 20.1.1_20200331
#
```

11. Check that Oracle Autonomous Health Framework is installed in the `/opt/oracle.ahf` directory.

Example of Running the Workaround

```
#  tfactl -version;orachk -v
TFA Version : 193000
TFA Build ID : 20200108023845
ORACHK  VERSION: 19.3.0_20200108

# tfactl uninstall -local -deleterepo
Starting AHF Uninstall
```

```
AHF will be uninstalled on: node2

Do you want to continue with AHF uninstall ? [Y]|N : y

Stopping AHF service on local node node2...
Sleeping for 10 seconds...

Stopping TFA Support Tools...
TFA-00002 Oracle Trace File Analyzer (TFA) is not running
Stopping orachk scheduler ...
Removing orachk cache discovery....
Successfully completed orachk cache discovery removal.
Removed orachk from inittab
Removing AHF setup on node2:
Removing /etc/rc.d/rc0.d/K17init.tfa
Removing /etc/rc.d/rc1.d/K17init.tfa
Removing /etc/rc.d/rc2.d/K17init.tfa
Removing /etc/rc.d/rc4.d/K17init.tfa
Removing /etc/rc.d/rc6.d/K17init.tfa
Removing /etc/init.d/init.tfa...
Removing /opt/oracle.ahf/jre
Removing /opt/oracle.ahf/common
Removing /opt/oracle.ahf/bin
Removing /opt/oracle.ahf/python
Removing /opt/oracle.ahf/analyzer
Removing /opt/oracle.ahf/tfa
Removing /opt/oracle.ahf/orachk
Removing /opt/oracle.ahf/ahf
Removing /u01/app/grid/oracle.ahf/data/node2
Removing /opt/oracle.ahf/install.properties
Removing /u01/app/grid/oracle.ahf/data/repository
Removing /u01/app/grid/oracle.ahf/data
Removing /u01/app/grid/oracle.ahf
Removing AHF Home : /opt/oracle.ahf
# tfactl -version;orachk -v
-bash: /usr/bin/tfactl: No such file or directory
-bash: /usr/bin/orachk: No such file or directory
# rpm -e oracle-ahf
warning:    erase unlink of /opt/oracle.ahf failed: No such file or
directory
# rpm -qi oracle-ahf
package oracle-ahf is not installed
#
# cd /opt/oracle
# ls
dcs  extapi  oak
# rm -rf dcs/
# ls
extapi  oak
#
#cd /tmp
#mkdir ahfinstall
#cd ahfinstall/
# pwd
/tmp/ahfinstall
```

```
# unzip /root/AHF-LINUX_v20.1.1.zip
Archive:  /root/AHF-LINUX_v20.1.1.zip
  inflating: README.txt
  inflating: ahf_setup


# ls
ahf_setup  README.txt
# ./ahf_setup

AHF Installer for Platform Linux Architecture x86_64
AHF Installation Log : /tmp/ahf_install_85684_2020_04_01-00_15_38.log
Starting Autonomous Health Framework (AHF) Installation
AHF Version: 20.1.1 Build Date: 202003311315
Default AHF Location : /opt/oracle.ahf
Do you want to install AHF at [/opt/oracle.ahf] ? [Y]|N : y
AHF Location : /opt/oracle.ahf
AHF Data Directory stores diagnostic collections and metadata.
AHF Data Directory requires at least 5GB (Recommended 10GB) of free space.
Choose Data Directory from below options :

1. /u01/app/grid [Free Space : 51458 MB]
2. Enter a different Location

Choose Option [1 - 2] : 1

AHF Data Directory : /u01/app/grid/oracle.ahf/data

Do you want to add AHF Notification Email IDs ? [Y]|N :   xxxxxxxxxxxx

AHF will also be installed/upgraded on these Cluster Nodes :

1. node1

The AHF Location and AHF Data Directory must exist on the above nodes
AHF Location : /opt/oracle.ahf
AHF Data Directory : /u01/app/grid/oracle.ahf/data

Do you want to install/upgrade AHF on Cluster Nodes ? [Y]|N : N
Extracting AHF to /opt/oracle.ahf
Configuring TFA Services
Discovering Nodes and Oracle Resources
Not generating certificates as GI discovered
Starting TFA Services

.-------------------------------------------------------------------------
--------.
| Host          | Status of TFA | PID   | Port | Version    | Build
ID             |
+---------------+---------------+-------+------+------------
+----------------------+
| node2 | RUNNING       | 87939 | 5000 | 20.1.1.0.0 | 20110020200331131556
|
'---------------+---------------+-------+------+------------
+----------------------'
```

```
Running TFA Inventory...

Adding default users to TFA Access list...

.-------------------------------------------------------------.
|                    Summary of AHF Configuration             |
+-----------------+-------------------------------------------+
| Parameter       | Value                                     |
+-----------------+-------------------------------------------+
| AHF Location    | /opt/oracle.ahf                           |
| TFA Location    | /opt/oracle.ahf/tfa                       |
| Orachk Location | /opt/oracle.ahf/orachk                    |
| Data Directory  | /u01/app/grid/oracle.ahf/data             |
| Repository      | /u01/app/grid/oracle.ahf/data/repository  |
| Diag Directory  | /u01/app/grid/oracle.ahf/data/node2/diag |
'-----------------+-------------------------------------------'


Starting orachk daemon from AHF ...
AHF install completed on node1.
Installing AHF on Remote Nodes :
AHF will be installed on node1, Please wait.
Installing AHF on node1:
[node1] Copying AHF Installer
[node1] Running AHF Installer
Adding rpm Metadata to rpm database on ODA system
RPM File /opt/oracle.ahf/rpms/oracle-ahf-201100-20200331131556.x86_64.rpm
Preparing...                ##########################################
[100%]
---------

   1:oracle-ahf             ##########################################
[100%]
Upgrading oracle-ahf
warning:    erase unlink of /opt/oracle/dcs/oracle.ahf failed: No such
file or directory

AHF binaries are available in /opt/oracle.ahf/bin
AHF is successfully installed
Moving /tmp/ahf_install_85684_2020_04_01-00_15_38.log to /u01/app/grid/
oracle.ahf/data/node2/diag/ahf/

# tfactl -version;orachk -v
TFA Version : 201100
TFA Build ID : 20200331131556
ORACHK  VERSION: 20.1.1_20200331

# ls -l /opt/
........
drwxr-xr-x 11 root root 4096 Mar 31 13:16 oracle.ahf
........
#
```

This issue is tracked with Oracle bug 31014517.

Patching Oracle Database home fails with errors

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

Error Encountered When Patching Oracle Database Homes on Bare Metal Systems:

When patching Oracle Database homes on baremetal systems, the `odacli update-dbhome` command fails with an error similar to the following:

```
Please stop TFA before dbhome patching.
```

To resolve this issue, follow the steps described in the Workaround.

Error Encountered When Patching Oracle Database Homes on Virtualized Platform:

When patching Oracle Database homes on Virtualized Platform, patching fails with an error similar to the following:

```
INFO: Running prepatching on local node
WARNING: errors seen during prepatch on local node
ERROR: Unable to apply the patch 1
```

Check the prepatch log file generated in the directory `/opt/oracle/oak/log/hostname/patch/18.8.0.0.0`. You can also view the prepatch log for the last run with the command `ls -lrt prepatch_*.log`. Check the last log file in the command output.

In the log file, search for entries similar to the following:

```
ERROR: date_time_stamp: TFA is running on one or more nodes.
WARNING: date_time_stamp: Shutdown TFA and then restart patching
INFO: date_time_stamp: Read the Release Notes for additional information.
```

To resolve this issue, follow the steps described in the Workaround.

Hardware Models

All Oracle Database Appliance hardware models

Workaround

On Oracle Database Appliance bare metal systems, do the following:

1. Run `tfactl stop` on all the nodes in the cluster.
2. Restart patching once Oracle TFA Collector has stopped on all nodes.

On Oracle Database Appliance Virtualized Platform, do the following:

1. Run `/etc/init.d/init.tfa stop` on all the nodes in the cluster.
2. Restart patching once Oracle TFA Collector has stopped on all nodes.

This issue is tracked with Oracle bugs 30799713 and 30892062.

Error in patching Oracle Database Appliance

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

Error Encountered When Patching Bare Metal Systems:

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

```
Please stop TFA before server patching.
```

To resolve this issue, follow the steps described in the Workaround.

Error Encountered When Patching Virtualized Platform:

When patching the appliance on Virtualized Platform, patching fails with an error similar to the following:

```
INFO: Running prepatching on local node
WARNING: errors seen during prepatch on local node
ERROR: Unable to apply the patch 1
```

Check the prepatch log file generated in the directory `/opt/oracle/oak/log/`*`hostname`*`/patch/18.8.0.0.0`. You can also view the prepatch log for the last run with the command `ls -lrt prepatch_*.log`. Check the last log file in the command output.

In the log file, search for entries similar to the following:

```
ERROR: date_time_stamp: TFA is running on one or more nodes.
WARNING: date_time_stamp: Shutdown TFA and then restart patching
INFO: date_time_stamp: Read the Release Notes for additional information.
```

To resolve this issue, follow the steps described in the Workaround.

Hardware Models

All Oracle Database Appliance hardware models

Workaround

On Oracle Database Appliance bare metal systems, do the following:

1. Run `tfactl stop` on all the nodes in the cluster.
2. Restart patching once Oracle TFA Collector has stopped on all nodes.

On Oracle Database Appliance Virtualized Platform, do the following:

1. Run `/etc/init.d/init.tfa stop` on all the nodes in the cluster.
2. Restart patching once Oracle TFA Collector has stopped on all nodes.

This issue is tracked with Oracle bugs 30260318 and 30892062.

Patching errors on Oracle Database Appliance Virtualized Platform

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

Error Encountered When Patching Virtualized Platform:

When patching the appliance on Virtualized Platform, patching fails with an error similar to the following:

```
ERROR: Unable to apply the GRID patch
ERROR: Failed to patch server (grid) component
```

This error can occur even if you stopped Oracle TFA Collector before patching. During server patching on the node, Oracle TFA Collector is updated and this can restart the TFA processes, thus causing an error. To resolve this issue, follow the steps described in the Workaround.

Hardware Models

All Oracle Database Appliance hardware models

Workaround

On Oracle Database Appliance Virtualized Platform, do the following:

1. Run `/etc/init.d/init.tfa stop` on all the nodes in the cluster.
2. Run the command:

   ```
   /u01/app/18.0.0.0/grid/bin/cluutil -ckpt -oraclebase /u01/app/grid -
   chkckpt -name ROOTCRS_PREPATCH -status
   ```

   Verify that the command output is `SUCCESS`.
3. If the command output was `SUCCESS`, then run the following commands on all the nodes:

   ```
   /u01/app/18.0.0.0/grid/crs/install/rootcrs.sh -prepatch -rollback
   /u01/app/18.0.0.0/grid/crs/install/rootcrs.sh -postpatch
   ```

4. Restart patching.

This issue is tracked with Oracle bug 30886701.

Error encountered when running Oracle Database Appliance commands

If you submit an `odacli create-prepatchreport` job, and then run any command before the job is completed, an error is encountered.

If you issue an `odacli` command such as `odacli create-appliance`, `odacli update-dbhome`, `odacli update-server`, `odacli create-database`, or `odacli update-`

`repository`, while an `odacli create-prepatchreport` job is running, then you may see an error.

Hardware Models

All Oracle Database Appliance bare metal deployments

Workaround

Wait for the `odacli create-prepatchreport` job to complete before issuing any other `odacli` commands.

This issue is tracked with Oracle bug 30892528.

Error in updating Oracle ILOM when patching the appliance

When patching the appliance, there may be errors in patching Oracle ILOM.

When patching Oracle Database Appliance, patching of Oracle ILOM fails. The `odacli describe-component` command output does not display Oracle ILOM as up-to-date.

Hardware Models

All Oracle Database Appliance bare metal deployments

Workaround

Run the command `ln -s /usr/bin/ipmiflash /usr/sbin/ipmiflash` and then run the `odacli update-server` command again.

This issue is tracked with Oracle bug 30619842.

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.

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 30187542.

Error when patching to 12.1.0.2.190716 Bundle Patch

When patching Oracle Database release 12.1.0.2 to Oracle Database 12.1.0.2.190716 Bundle Patch, an error is encountered.

The ODACLI 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.

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 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.

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.

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 18.8, 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 18.8, the Oracle Auto Service Request (ASR), or Oracle TFA Collector, or Oracle ORAchk RPMs may not be updated to release 18.8. The components are updated when you apply the patches for Oracle Database Appliance release 18.8.

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
"PAG1".  *****
**************************************************************************
*
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.

Known Issues When Deploying Oracle Database Appliance

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

- Incorrect RAID configuration of some Oracle Database Appliance X8-2 Systems
  Oracle Database Appliance X8-2 Systems shipped before December 20, 2019 may have local system or boot disks with incorrect RAID configuration, and hence require reimaging the system.
- Failure in creating RECO disk group during provisioning
  When provisioning Oracle Database Appliance X8-2-HA with High Performance configuration containing default storage and expansion shelf, creation of RECO disk group fails.
- Simultaneous creation of two Oracle ACFS Databases fails
  If you try to create two Oracle ACFS databases on a system where there is no database or database storage already created, then database creation fails for one of the databases with an error.
- Shared repositories are not online after patching Virtualized Platform
  The oakcli show repo command displays only the local repository or the shared repository status is unknown.
- 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.
- 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 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.
- Errors in clone database operation
  Clone database operation fails due to errors.

- 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 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.

Incorrect RAID configuration of some Oracle Database Appliance X8-2 Systems

Oracle Database Appliance X8-2 Systems shipped before December 20, 2019 may have local system or boot disks with incorrect RAID configuration, and hence require reimaging the system.

Hardware Models

Oracle Database Appliance X8-2 Systems shipped before December 20, 2019

Workaround

See My Oracle Support Note 2622035.1 for more details.

https://support.oracle.com/rs?type=patch&id=2622035.1

This issue is tracked with Oracle bug 30651492.

Failure in creating RECO disk group during provisioning

When provisioning Oracle Database Appliance X8-2-HA with High Performance configuration containing default storage and expansion shelf, creation of RECO disk group fails.

Hardware Models

All Oracle Database Appliance X8-2-HA with High Performance configuration

Workaround

1. Power off storage expansion shelf.
2. Reboot both nodes.
3. Proceed with provisioning the default storage shelf (first JBOD).
4. After the system is successfully provisioned with default storage shelf (first JBOD), check that `oakd` is running on both nodes in foreground mode.

```
# ps -aef | grep oakd
```

5. Check that all first JBOD disks have the status online, good in `oakd`, and CACHED in Oracle ASM.
6. Power on the storage expansion shelf (second JBOD), wait for a few minutes for the oeprating system and other subsystems to recognize it.
7. Run the following command from the master node to add the storage expansion shelf disks (two JBOD setup) to `oakd` and Oracle ASM.

```
#odaadmcli show ismaster
      OAKD is in Master Mode

      # odaadmcli expand storage -ndisk 24 -enclosure 1
       Skipping precheck for enclosure '1'...
       Check the progress of expansion of storage by executing
'odaadmcli
show disk'
       Waiting for expansion to finish ...
      #
```

8. Check that the storage expansion shelf disks (two JBOD setup) are added to `oakd` and Oracle ASM.

Replace `odaadmcli` with `oakcli` commands on Oracle Database Appliance Virtualized Platform in the procedure.

For more information, see the chapter *Managing Storage* in the *Oracle Database Appliance X8-2 Deployment Guide*.

This issue is tracked with Oracle bug 30839054.

Simultaneous creation of two Oracle ACFS Databases fails

If you try to create two Oracle ACFS databases on a system where there is no database or database storage already created, then database creation fails for one of the databases with an error.

```
DCS-10001:Internal error encountered: Fail to run command Failed to
create
volume.
```

Hardware Models

All Oracle Database Appliance bare metal deployments

Workaround

Manually delete the DATA volume (and REDO volume, in case of Oracle Database Appliance X8-2) from the system.

For High Perfomance configuration, run the following commands:

```
su - GRID_USER
export ORACLE_SID=+ASM1(in case of first node) /+ASM2(in case of second
node);
```

```
export ORACLE_HOME=GRID_HOME;
GRID_HOME/bin/asmcmd --nocp voldelete -G Data datdbname
```

For Oracle Database Appliance X8-2 High Perfomance configuration, remove the REDO volume as follows:

```
su - GRID_USER
export ORACLE_SID=+ASM1(in case of first node) /+ASM2(in case of second
node);
export ORACLE_HOME=GRID_HOME;
GRID_HOME/bin/asmcmd --nocp voldelete -G Reco rdodbname
```

For High Capacity configuration, run the following commands:

```
su - GRID_USER
export ORACLE_SID=+ASM1(in case of first node) /+ASM2(in case of second
node);
export ORACLE_HOME=GRID_HOME;
GRID_HOME/bin/asmcmd --nocp voldelete -G Flash datdbname (if volume exists
in FLASH disk group)
GRID_HOME/bin/asmcmd --nocp voldelete -G data datdbname (if volume exists
in DATA disk group)
```

For Oracle Database Appliance X8-2 High Capacity configuration, remove the REDO volume as follows:

```
su - GRID_USER
export ORACLE_SID=+ASM1(in case of first node) /+ASM2(in case of second
node);
export ORACLE_HOME=GRID_HOME;
GRID_HOME/bin/asmcmd --nocp voldelete -G Flash rdodbname
```

This issue is tracked with Oracle bug 30750497.

Shared repositories are not online after patching Virtualized Platform

The oakcli show repo command displays only the local repository or the shared repository status is unknown.

Hardware Models

All Oracle Database Appliance Virtualized Platform

Workaround

After patching Oracle Database Appliance Virtualized Platform, run the following commands to reenable the shared repository:

```
# oakcli enable startrepo -node 0
# oakcli enable startrepo -node 1
# oakcl restart oak
```

This issue is tracked with Oracle bug 30325619.

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.

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 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.

Errors in clone database operation

Clone database operation fails due to errors.

If the source database is single-instance or Oracle RAC One Node, or 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 the source database instance that 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 29002563, 29002004, 29001906, 29001855, 29001631, 28995153, 28986643, 30309971, and 30228362.

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 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, 27250552, 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 Managing Oracle Database Appliance

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

- Error when expanding storage on Oracle Database Appliance Virtualized Platform
  When you run the `oakcli expand storage` command on Oracle Database Appliance Virtualized Platforms, an error is encountered.
- Inconsistency in available and current system firmware
  The current system firmware may be different from the available firmware after applying the latest patch.
- DCS logs not collected by the odaadmcli manage diagcollect command
  By default, the DCS logs are not collected when you run the `odaadmcli manage diagcollect` command.
- Inconsistency in ORAchk summary and details report page
  ORAChk report summary on the Browser User Interface may show different counts of Critical, Failed, and Warning issues than the report detail page.
- Error in attaching vdisk to guest VM
  The current system firmware may be different from the available firmware after applying the latest patch.
- 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.
- iRestore, recovery, and update operations on a database fail
  iRestore, recovery, and update operations on a database fail, if the ObjectStore Container used by the database already has a copy.
- ODA_BASE is in read-only mode or cannot start
  The `/OVS` directory is full and ODA_BASE is in read-only mode.
- 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`.
- 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.
- 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`.

Error when expanding storage on Oracle Database Appliance Virtualized Platform

When you run the `oakcli expand storage` command on Oracle Database Appliance Virtualized Platforms, an error is encountered.

The following error is encountered when running the `oakcli expand storage` command on Oracle Database Appliance Virtualized Platforms.

```
sh: /opt/oracle/oak/bin/odaadmcli: No such file or directory
```

For example, following is the error when you expand storage with 5 disks:

```
# oakcli expand storage -ndisk 5 -enclosure 0
sh: /opt/oracle/oak/bin/odaadmcli: No such file or directory
sh: /opt/oracle/oak/bin/odaadmcli: No such file or directory
sh: /opt/oracle/oak/bin/odaadmcli: No such file or directory
sh: /opt/oracle/oak/bin/odaadmcli: No such file or directory
sh: /opt/oracle/oak/bin/odaadmcli: No such file or directory
The disk(s) [e0_pd_00][e0_pd_01][e0_pd_02][e0_pd_03][e0_pd_04] is/are not
online in oakd
Aborting ...
```

This error occurs in Oracle Database Appliance Virtualized Platforms with Oracle Autonomous Health Framework version 19.3, where Oracle Autonomous Health Framework is installed in the DCS home directory (`/opt/oracle/dcs`) under `/opt/oracle/dcs/oracle.ahf/`.

You can check your AHF version:

```
# tfactl -version;orachk -v
TFA Version : 193000
TFA Build ID : 20200108023845
ORACHK  VERSION: 19.3.0_20200108
# cd /opt/oracle
# ls
dcs  extapi  oak
# cd dcs
# ls
oracle.ahf
#
```

Hardware Models

Oracle Database Appliance High-Availability hardware models Virtualized Platform deployments

Workaround

Uninstall the installed Oracle Autonomous Health Framework version and download the latest Oracle Autonomous Health Framework version on both nodes of your Oracle Database Appliance High-Availability deployment.

Run the following steps on **both** nodes:

1. Uninstall Oracle Autonomous Health Framework.

   ```
   # tfactl uninstall -local -deleterepo
   ```

   For Oracle Autonomous Health Framework version 19.3, manually remove the installed version, by running the following command:

   ```
   # rpm -e oracle-ahf
   ```

2. Check that no `oracle-ahf` rpm is installed on the system.

```
# rpm -qi oracle-ahf
package oracle-ahf is not installed
#
```

3. Remove the DCS home (`/opt/oracle/dcs`) and its sub-directories.

```
# cd /opt/oracle
# rm -rf /opt/oracle/dcs
```

4. Check and ensure the DCS home directory (`/opt/oracle/dcs`) does not exist under the `/opt/oracle` directory on the system.

```
 # cd /opt/oracle/
 # ls
 extapi  oak
 #
```

5. Download the latest Oracle Autonomous Health Framework version from My Oracle Support.
6. Copy the downloaded zip file to `/root` on your system, for example, `AHF-LINUX_v20.1.1.zip`. The zip file name for each Oracle Autonomous Health Framework version may change based on the latest release number.

```
 # /root/AHF-LINUX_v20.1.1.zip
```

7. Create the `ahfinstall` directory under `/tmp`.

```
# cd /tmp
# mkdir ahfinstall
```

8. Unzip the Oracle Autonomous Health Framework zip file into `/tmp/ahfinstall`.

```
# cd ahfinstall
# unzip /root/AHF-LINUX_v20.1.1.zip
```

9. Run the `ahf_setup` installer from `/tmp/ahfinstall`. During installation, select the default location for installation.
Note: Do not choose the DCS home directory as the default Oracle Autonomous Health Framework location for install.

```
 # ./ahf_setup
```

10. Check the Oracle TFA and ORAchk versions.

```
#tfactl -version;orachk -v
TFA Version : 201100
TFA Build ID : 20200331131556
ORACHK  VERSION: 20.1.1_20200331
#
```

11. Check that Oracle Autonomous Health Framework is installed in the `/opt/oracle.ahf` directory.

Example of Running the Workaround

```
#  tfactl -version;orachk -v
TFA Version : 193000
TFA Build ID : 20200108023845
ORACHK  VERSION: 19.3.0_20200108

# tfactl uninstall -local -deleterepo
Starting AHF Uninstall
AHF will be uninstalled on: node2

Do you want to continue with AHF uninstall ? [Y]|N : y

Stopping AHF service on local node node2...
Sleeping for 10 seconds...

Stopping TFA Support Tools...
TFA-00002 Oracle Trace File Analyzer (TFA) is not running
Stopping orachk scheduler ...
Removing orachk cache discovery....
Successfully completed orachk cache discovery removal.
Removed orachk from inittab
Removing AHF setup on node2:
Removing /etc/rc.d/rc0.d/K17init.tfa
Removing /etc/rc.d/rc1.d/K17init.tfa
Removing /etc/rc.d/rc2.d/K17init.tfa
Removing /etc/rc.d/rc4.d/K17init.tfa
Removing /etc/rc.d/rc6.d/K17init.tfa
Removing /etc/init.d/init.tfa...
Removing /opt/oracle.ahf/jre
Removing /opt/oracle.ahf/common
Removing /opt/oracle.ahf/bin
Removing /opt/oracle.ahf/python
Removing /opt/oracle.ahf/analyzer
Removing /opt/oracle.ahf/tfa
Removing /opt/oracle.ahf/orachk
Removing /opt/oracle.ahf/ahf
Removing /u01/app/grid/oracle.ahf/data/node2
Removing /opt/oracle.ahf/install.properties
Removing /u01/app/grid/oracle.ahf/data/repository
Removing /u01/app/grid/oracle.ahf/data
Removing /u01/app/grid/oracle.ahf
Removing AHF Home : /opt/oracle.ahf
# tfactl -version;orachk -v
-bash: /usr/bin/tfactl: No such file or directory
-bash: /usr/bin/orachk: No such file or directory
# rpm -e oracle-ahf
warning:    erase unlink of /opt/oracle.ahf failed: No such file or
directory
# rpm -qi oracle-ahf
package oracle-ahf is not installed
#
```

```
# cd /opt/oracle
# ls
dcs  extapi  oak
# rm -rf dcs/
# ls
extapi  oak
#
#cd /tmp
#mkdir ahfinstall
#cd ahfinstall/
# pwd
/tmp/ahfinstall
# unzip /root/AHF-LINUX_v20.1.1.zip
Archive:  /root/AHF-LINUX_v20.1.1.zip
  inflating: README.txt
  inflating: ahf_setup


# ls
ahf_setup  README.txt
# ./ahf_setup

AHF Installer for Platform Linux Architecture x86_64
AHF Installation Log : /tmp/ahf_install_85684_2020_04_01-00_15_38.log
Starting Autonomous Health Framework (AHF) Installation
AHF Version: 20.1.1 Build Date: 202003311315
Default AHF Location : /opt/oracle.ahf
Do you want to install AHF at [/opt/oracle.ahf] ? [Y]|N : y
AHF Location : /opt/oracle.ahf
AHF Data Directory stores diagnostic collections and metadata.
AHF Data Directory requires at least 5GB (Recommended 10GB) of free space.
Choose Data Directory from below options :

1. /u01/app/grid [Free Space : 51458 MB]
2. Enter a different Location

Choose Option [1 - 2] : 1

AHF Data Directory : /u01/app/grid/oracle.ahf/data

Do you want to add AHF Notification Email IDs ? [Y]|N :   xxxxxxxxxxxx

AHF will also be installed/upgraded on these Cluster Nodes :

1. node1

The AHF Location and AHF Data Directory must exist on the above nodes
AHF Location : /opt/oracle.ahf
AHF Data Directory : /u01/app/grid/oracle.ahf/data

Do you want to install/upgrade AHF on Cluster Nodes ? [Y]|N : N
Extracting AHF to /opt/oracle.ahf
Configuring TFA Services
Discovering Nodes and Oracle Resources
Not generating certificates as GI discovered
```

```
Starting TFA Services

.-------------------------------------------------------------------------
--------.
| Host          | Status of TFA | PID   | Port | Version    | Build
ID             |
+---------------+---------------+-------+------+------------
+----------------------+
| node2 | RUNNING       | 87939 | 5000 | 20.1.1.0.0 | 20110020200331131556
|
'---------------+---------------+-------+------+------------
+----------------------'

Running TFA Inventory...

Adding default users to TFA Access list...

.-----------------------------------------------------------------.
|                    Summary of AHF Configuration                 |
+-----------------+-----------------------------------------------+
| Parameter       | Value                                         |
+-----------------+-----------------------------------------------+
| AHF Location    | /opt/oracle.ahf                               |
| TFA Location    | /opt/oracle.ahf/tfa                           |
| Orachk Location | /opt/oracle.ahf/orachk                        |
| Data Directory  | /u01/app/grid/oracle.ahf/data                 |
| Repository      | /u01/app/grid/oracle.ahf/data/repository      |
| Diag Directory  | /u01/app/grid/oracle.ahf/data/node2/diag |
'-----------------+-----------------------------------------------'


Starting orachk daemon from AHF ...
AHF install completed on node1.
Installing AHF on Remote Nodes :
AHF will be installed on node1, Please wait.
Installing AHF on node1:
[node1] Copying AHF Installer
[node1] Running AHF Installer
Adding rpm Metadata to rpm database on ODA system
RPM File /opt/oracle.ahf/rpms/oracle-ahf-201100-20200331131556.x86_64.rpm
Preparing...                ##########################################
[100%]
---------

   1:oracle-ahf             ##########################################
[100%]
Upgrading oracle-ahf
warning:    erase unlink of /opt/oracle/dcs/oracle.ahf failed: No such
file or directory

AHF binaries are available in /opt/oracle.ahf/bin
AHF is successfully installed
Moving /tmp/ahf_install_85684_2020_04_01-00_15_38.log to /u01/app/grid/
oracle.ahf/data/node2/diag/ahf/
```

```
# tfactl -version;orachk -v
TFA Version : 201100
TFA Build ID : 20200331131556
ORACHK  VERSION: 20.1.1_20200331

# ls -l /opt/
........
drwxr-xr-x 11 root root 4096 Mar 31 13:16 oracle.ahf
........
#
```

This issue is tracked with Oracle bug 31014517.

Inconsistency in available and current system firmware

The current system firmware may be different from the available firmware after applying the latest patch.

Oracle Database Appliance X8-2 with expander model ORACLE/DE3-24C are at version 0309 but patching of expander firmware from earlier versions to 0309 is not supported in this release. Oracle Database Appliance Release 18.8 contains the patch for expander version 0306, so when you run odacli describe-component command, the available expander version is displayed as 0306.

Oracle Database Appliance X8-2 with controller model LSI Logic/0x0097 are at version 16.00.00.00 but patching of controller firmware from earlier versions to 16.00.00.00 is not supported in this release. Oracle Database Appliance Release 18.8 contains the patch for controller version 13.00.00.00, so when you run odacli describe-component command, the available expander version is displayed as 13.00.00.00.

Hardware Models

Oracle Database Appliance X8-2 hardware models

Workaround

Ignore this inconsistency, since this is a display issue and does not affect the installed firmware version.

This issue is tracked with Oracle bug 30787910.

DCS logs not collected by the odaadmcli manage diagcollect command

By default, the DCS logs are not collected when you run the `odaadmcli manage diagcollect` command.

Hardware Models

Oracle Database Appliance hardware models bare metal deployments

Workaround

Use the CLI command `odaadmcli manage diagcollect --components dcs` to collect DCS logs.

This issue is tracked with Oracle bug 30760941.

Inconsistency in ORAchk summary and details report page

ORAChk report summary on the Browser User Interface may show different counts of Critical, Failed, and Warning issues than the report detail page.

Hardware Models

Oracle Database Appliance hardware models bare metal deployments

Workaround

Ignore counts of Critical, Failed, and Warning issues in the ORAchk report summary on the Browser User Interface. Check the report detail page.

This issue is tracked with Oracle bug 30676674.

Error in attaching vdisk to guest VM

The current system firmware may be different from the available firmware after applying the latest patch.

When multiple vdisks from the oda_base driver_domain are attached to the guest VM, their entries are not written on the xenstore, vdisks are not attached to the VM, and the VM may not start.

The following errors are logged on `xen-hotplug.log` in ODA_BASE:

```
xenstore-write: could not write path backend/vbd/6/51728/node
xenstore-write: could not write path backend/vbd/6/51728/hotplug-error
```

Hardware Models

Oracle Database Appliance Virtualized Platform

Workaround

1. Add the followng into the `/etc/sysconfig/xencommons` file in `dom0`:

   ```
   XENSTORED_ARGS="--entry-nb=4096 --transaction=512"
   ```

2. Reboot `dom0`.

This issue is tracked with Oracle bug 30886365.

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.

iRestore, recovery, and update operations on a database fail

iRestore, recovery, and update operations on a database fail, if the ObjectStore Container used by the database already has a copy.

Hardware Models

All Oracle Database Appliance hardware models

Workaround

When performing iRestore, recovery, and update operations on a database, ensure that files are not copied to the ObjectStore Container.

This issue is tracked with Oracle bug 30529607.

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.

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 30077007, 30099089, and 29887027.

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 causes 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 `dcsagent`:

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

   For a single-node environment, the status should be: leader, or follower, or standalone.
2. Restart the `dcsagent` on Node0 after running the `cleanup.pl` script.

   ```
   # initctl stop initdcsagent
   # initctl start initdcsagent
   ```

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 26978354.

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
- `inmmory_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.

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.

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