Oracle® Database Appliance

Release Notes

Release 19.7 for Linux x86-64

F31473-01
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Oracle Database Appliance Release Notes, Release 19.7 for Linux x86-64

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Contents

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.

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What's New in This Release

Oracle Database Appliance release 19.7 supports Oracle Database 19*c* functionality on Oracle Database Appliance hardware models.

New Features

This release supports Oracle Database Appliance models X8-2-HA, X8-2M, X8-2S, X7-2-HA, X7-2M, X7-2S, X6-2S, X6-2M, X6-2L, X6-2-HA, and X5-2. You can either create a bare metal deployment on Oracle Database Appliance or patch your existing bare metal deployment to Oracle Database Appliance release 19.7. Read the chapter *Known Issues with Oracle Database Appliance in This Release* for critical fixes before deploying Oracle Database Appliance release 19.7.

For Oracle Database 19c 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:

- **Provisioning and Patching of Oracle Database Appliance**
  This release supports provisioning of bare metal deployments, and patching of bare metal deployments from Oracle Database Appliance releases 19.5 and 19.6.
- **Oracle Grid Infrastructure and Oracle Database Updates**

  The following Oracle Grid Infrastructure and Oracle Database updates (April 2020 Oracle Database Release Update) for bare metal systems are available in this release:

  - 19.7.0.0.200414
  - 18.10.0.0.200414
  - 12.2.0.1.200414
  - 12.1.0.2.200414
  - 11.2.0.4.200414

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

See the chapter *Oracle Database Appliance Release 19.7 Patches* for patch details and links.

Oracle Database Appliance patches are available in My Oracle Support. When selecting a patch, ensure that you select Oracle Database Appliance release 19.7 from the drop down list.

- **Oracle Database Appliance 19.7.0.0.0 Server Patch for ODACLI/DCS stack:** Use patch 31220620 to update your bare metal deployment to Oracle Database Appliance release 19.7.
- **Oracle Database Appliance 19.7.0.0.0 GI Clone for ODACLI/DCS stack:** Use patch 30403673 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 19.7.0.0.0 RDBMS Clone File for ODACLI/DCS stack:** Use the Oracle RDBMS 19.7.0.0.200414 Software Clone file to create 19.7.0.0.200414 Oracle Database homes. Patch 30403662 provides the database clone for this update. This patch is for all Oracle Database Appliance Hardware Models (bare metal).
- **Oracle Database Appliance 18.10.0.0.0 RDBMS Clone File for ODACLI/DCS stack:** Use the Oracle RDBMS 18.10.0.0.200414 Software Clone file to create 18.10.0.0.200414 Oracle Database homes. Patch 27604558 provides the database clone for this update. This patch is forall 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 12.2.0.1.200414 Software Clone file to create 12.2.0.1.200414 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 12.1.0.2.200414 Software Clone file to create 12.1.0.2.200414 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 11.2.0.4.200414 Software Clone file to create 11.2.0.4.200414 database homes. Patch 23494997 provides this update.
- **Oracle Database Appliance 19.7.0.0.0 ISO Image (Bare Metal):** Use patch 30403643 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.

Deprecation Notice for Oracle Java Development Kit (Oracle JDK), available in the /bin/java directory

Starting with Oracle Database Appliance Release 19.6, Java is installed in a new location. Java Runtime environment (JRE) is installed in the `/opt/oracle/dcs/java/` directory, and is updated during patching of Oracle Database Appliance. Patching of Oracle Java Development Kit (Oracle JDK), available in the `/bin/java` directory, during the Oracle Database Appliance server patching process is not supported. Oracle Java Development Kit (Oracle JDK), available in the `/bin/java` directory, is deprecated.

Related Topics

- Oracle Database Appliance Checklists
- Managing Storage on Oracle Database Appliance X8-2
- About the Browser User Interface
- Known Issues with Oracle Database Appliance in This Release
  The following are known issues deploying, updating, and managing Oracle Database Appliance in this release.

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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 Models
  The matrix display the component versions available for Oracle Database Appliance X5-2 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 19.7

Component Name	X8-2-HA	X8-2S and X8-2M
Controller	16.00.08.00	Not applicable
Expander	0310	Not applicable
SSD	A959	Not applicable
NVMe (firmware version)	Not applicable	VDV1RL04
OS Disk (SSD firmware version)	0121	0121
ILOM (Oracle Integrated Lights Out Manager)	4.0.4.51.r133528	4.0.4.51.r133528
BIOS	52021000	52021000

Table 2-1 (Cont.) Component Versions for X8-2-HA, X8-2M, and X8-2S in Oracle Database Appliance Release 19.7

Component Name	X8-2-HA	X8-2S and X8-2M
IPMI (Intelligent Platform Management Interface)	1.8.15.0	1.8.15.0
HMP (Oracle Hardware Management Pack)	2.4.5.0.1	2.4.5.0.1
Oracle Linux	7.8	7.8
Kernel	kernel-uek-4.14.35-1902.301.1.el7uek.x86_64.rpm	kernel-uek-4.14.35-1902.301.1.el7uek.x86_64.rpm
GI_HOME	19.7.0.0.200414	19.7.0.0.200414
DB_HOME	19.7.0.0.200414	19.7.0.0.200414
Oracle Auto Service Request (Oracle ASR)	20.1.0	20.1.0

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 19.7

Component Name	X7-2-HA	X7-2S and X7-2M
Controller	16.00.08.00	Not applicable
Expander	0310	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)	4.0.4.52.r133103	4.0.4.52.r133103
BIOS	41060700	41060700
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	7.8	7.8
Kernel	kernel-uek-4.14.35-1902.301.1.el7uek.x86_64.rpm	kernel-uek-4.14.35-1902.301.1.el7uek.x86_64.rpm

Table 2-2 (Cont.) Component Versions for X7-2-HA, X7-2M, and X7-2S in Oracle Database Appliance Release 19.7

Component Name	X7-2-HA	X7-2S and X7-2M
GI_HOME	19.7.0.0.200414	19.7.0.0.200414
DB_HOME	19.7.0.0.200414	19.7.0.0.200414
Oracle Auto Service Request (Oracle ASR)	20.1.0	20.1.0

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 19.7

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	7.8
Kernel	kernel-uek-4.14.35-1902.301.1.el7uek.x86_64.rpm
GI_HOME	19.7.0.0.200414
DB_HOME	19.7.0.0.200414
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 19.7

Component Name	Version
Controller_INT	4.650.00-7176
Controller_Ext	16.00.08.00
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	7.8
Kernel	kernel-uek-4.14.35-1902.301.1.el7uek.x86_64.rpm
GI_HOME	19.7.0.0.200414
DB_HOME	19.7.0.0.200414
Oracle Auto Service Request (Oracle ASR)	20.1.0

Component Versions for X5-2 Models

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

Table 2-5 Component Versions for Oracle Database Appliance X5-2 for Oracle Database Appliance Release 19.7

Component Name	Version
Controller_INT	4.650.00-7176
Controller_Ext	16.00.08.00
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	7.8
Kernel	kernel-uek-4.14.35-1902.301.1.el7uek.x86_64.rpm

Table 2-5 (Cont.) Component Versions for Oracle Database Appliance X5-2 for Oracle Database Appliance Release 19.7

Component Name	Version
GI_HOME	19.7.0.0.200414
DB_HOME	19.7.0.0.200414
Oracle Auto Service Request (Oracle ASR)	20.1.0

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Oracle Database Appliance 19.7 Patches

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

- Patching from Previous Releases
  Understand the minimum versions for patching Oracle Database Appliance to later releases.
- Minimum Software Version Requirements
  Review the minimum software version requirements for 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 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 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 Patches
  Download the patches available for Oracle Database Appliance X5-2 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)
19.7.0.0	• 19.6.0.0 • 19.5.0.0
19.6.0.0	• 18.8.0.0
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
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 19.7 on Oracle Database Appliance bare metal systems. You can also patch your bare metal systems to Oracle Database Appliance release 19.7 from Oracle Database Appliance releases 19.6 and 19.5.

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 19.7 from the release list.

Table 3-2 Oracle Database Appliance X8-2S, X8-2M, and X8-2-HA Patches for Oracle Database Appliance Release 19.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	31220620	Use the server patch to update your deployment to Oracle Database Appliance release 19.7.	Patching Oracle Database Appliance
Oracle Database Appliance ISO Image	30403643	Use the ISO image to re-image the operating system for Oracle Database Appliance release 19.7. Re-imaging a server installs the new operating system on the local disks on that server.	Re-imaging Oracle Database Appliance

Table 3-2 (Cont.) Oracle Database Appliance X8-2S, X8-2M, and X8-2-HA Patches for Oracle Database Appliance Release 19.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance GI Clone for ODACLI/DCS stack	30403673	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 19.7 ISO Image.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 19.7.0.0.200414 for ODACLI/DCS stack	30403662	Use Oracle Database Appliance RDBMS Clone 19.7.0.0.200414 for ODACLI/DCS stack to create 19.7 database homes for the ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 18.10.0.0.200414 for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS Clone 18.10.0.0.200414 for ODACLI/DCS stack to create 19.7 database homes for the ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.2.0.1.200414 for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.200414 for ODACLI/DCS stack to create 12.2.0.1 database homes for the 19.7 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.200414 for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.200414 for ODACLI/DCS stack to create 12.1.0.2 database homes for the 19.7 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files

Table 3-2 (Cont.) Oracle Database Appliance X8-2S, X8-2M, and X8-2-HA Patches for Oracle Database Appliance Release 19.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 11.2.0.4.200414 for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.200414 for ODACLI/DCS stack to create 11.2.0.4 database homes for the 19.7 ODACLI/DCS stack.	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 19.7 from the release list.

Table 3-3 Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA Patches for Oracle Database Appliance Release 19.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	31220620	Use the server patch to update your deployment to Oracle Database Appliance release 19.7.	Patching Oracle Database Appliance
Oracle Database Appliance ISO Image	30403643	Use the ISO image to re-image the operating system for Oracle Database Appliance release 19.7. Re-imaging a server installs the new operating system on the local disks on that server.	Re-imaging Oracle Database Appliance

Table 3-3 (Cont.) Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA Patches for Oracle Database Appliance Release 19.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance GI Clone for ODACLI/DCS stack	30403673	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 19.7 ISO Image.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 19.7.0.0.200414 for ODACLI/DCS stack	30403662	Use Oracle Database Appliance RDBMS Clone 19.7.0.0.200414 for ODACLI/DCS stack to create 19.7 database homes for the ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 18.10.0.0.200414 for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS Clone 18.10.0.0.200414 for ODACLI/DCS stack to create 19.7 database homes for the ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.2.0.1.200414 for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.200414 for ODACLI/DCS stack to create 12.2.0.1 database homes for the 19.7 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.200414 for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.200414 for ODACLI/DCS stack to create 12.1.0.2 database homes for the 19.7 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files

Table 3-3 (Cont.) Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA Patches for Oracle Database Appliance Release 19.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 11.2.0.4.200414 for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.200414 for ODACLI/DCS stack to create 11.2.0.4 database homes for the 19.7 ODACLI/DCS stack.	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 19.7 from the release list.

Table 3-4 Oracle Database Appliance X6-2S, X6-2M, and X6-2L Patches for Oracle Database Appliance Release 19.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	31220620	Use the server patch to update your deployment to Oracle Database Appliance release 19.7.	Patching Oracle Database Appliance
Oracle Database Appliance ISO Image	30403643	Use the ISO image to re-image the operating system for Oracle Database Appliance release 19.7. Re-imaging a server installs the new operating system on the local disks on that server.	Re-imaging Oracle Database Appliance

Table 3-4 (Cont.) Oracle Database Appliance X6-2S, X6-2M, and X6-2L Patches for Oracle Database Appliance Release 19.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance GI Clone for ODACLI/DCS stack	30403673	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 19.7 .	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 19.7.0.0.200414 for ODACLI/DCS stack	30403662	Use Oracle Database Appliance RDBMS Clone 19.7.0.0.200414 for ODACLI/DCS stack to create 19.7 database homes for the ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 18.10.0.0.200414 for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS Clone 18.10.0.0.200414 for ODACLI/DCS stack to create 19.7 database homes for the ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.2.0.1.200414 for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.200414 for ODACLI/DCS stack to create 12.2.0.1 database homes for the 19.7 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.200414 for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.200414 for ODACLI/DCS stack to create 12.1.0.2 database homes for the 19.7 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files

Table 3-4 (Cont.) Oracle Database Appliance X6-2S, X6-2M, and X6-2L Patches for Oracle Database Appliance Release 19.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 11.2.0.4.200414 for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.200414 for ODACLI/DCS stack to create 11.2.0.4 database homes for the 19.7 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 19.7 from the release list.

Table 3-5 Oracle Database Appliance X6-2-HA Patches for Oracle Database Appliance Release 19.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	31220620	Use the server patch to update your deployment to Oracle Database Appliance release 19.7	Patching Oracle Database Appliance
Oracle Database Appliance GI Clone for ODACLI/DCS stack	30403673	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 19.7.	Provisioning Oracle Database Appliance Software

Table 3-5 (Cont.) Oracle Database Appliance X6-2-HA Patches for Oracle Database Appliance Release 19.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 19.7.0.0.200414 for ODACLI/DCS stack	30403662	Use Oracle Database Appliance RDBMS Clone 19.7.0.0.200414 for ODACLI/DCS stack to create 19.7 database homes for the ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 18.10.0.0.200414 for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS Clone 18.10.0.0.200414 for ODACLI/DCS stack to create 19.7 database homes for the ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.2.0.1.200414 for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.200414 for ODACLI/DCS stack to create 12.2.0.1 database homes for the 19.7 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 12.1.0.2.200414 for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.200414 for ODACLI/DCS stack to create 12.1.0.2 database homes for the 19.7 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance RDBMS Clone 11.2.0.4.200414 for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.200414 for ODACLI/DCS stack to create 11.2.0.4 database homes for the 19.7 ODACLI/DCS stack.	Updating Oracle Database Appliance Repository with Database Clone Files
Oracle Database Appliance ISO Image	30403643	Use the ISO image to re-image the operating system for Oracle Database Appliance 19.7. Re-imaging a server installs the new operating system on the local disks on that server.	Re-imaging Oracle Database Appliance

Oracle Database Appliance X5-2 Patches

Download the patches available for Oracle Database Appliance X5-2 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 19.7 from the release list.

Table 3-6 Oracle Database Appliance X5-2 Patches for Oracle Database Appliance Release 19.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	31220620	Use the server patch to update your deployment to Oracle Database Appliance release 19.7.	Patching Oracle Database Appliance
Oracle Database Appliance GI Clone for ODACLI/DCS stack	30403673	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 19.7.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 19.7.0.0.200414 for ODACLI/DCS stack	30403662	Use Oracle Database Appliance RDBMS Clone 19.7.0.0.200414 for ODACLI/DCS stack to create 19.7 database homes for the ODACLI/DCS stack.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 18.10.0.0.200414 for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS Clone 18.10.0.0.200414 for ODACLI/DCS stack to create 19.7 database homes for the ODACLI/DCS stack.	Provisioning Oracle Database Appliance Software

Table 3-6 (Cont.) Oracle Database Appliance X5-2 Patches for Oracle Database Appliance Release 19.7

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS Clone 12.2.0.1.200414 for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS Clone 12.2.0.1.200414 for ODACLI/DCS stack to create 12.2.0.1 database homes for the 19.7 ODACLI/DCS stack.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 12.1.0.2.200414 for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS Clone 12.1.0.2.200414 for ODACLI/DCS stack to create 12.1.0.2 database homes for the 19.7 ODACLI/DCS stack.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS Clone 11.2.0.4.200414 for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS Clone 11.2.0.4.200414 for ODACLI/DCS stack to create 11.2.0.4 database homes for the 19.7 ODACLI/DCS stack.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance ISO Image	30403643	Use the ISO image to re-image the operating system for Oracle Database Appliance 19.7. Re-imaging a server installs the new operating system on the local disks on that server.	Re-imaging Oracle Database Appliance

4

Known Issues with Oracle Database Appliance in This Release

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

- Known Issues When 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.

- TFA not running after server or database patching
  Oracle TFA does not run after server or database patching.
- Error in patching Oracle Database Appliance server
  When patching Oracle Database Appliance, an error is encountered.
- Disk firmware not updated after patching
  After patching Oracle Database Appliance, disk firmware is not updated on some Oracle Database Appliance hardware models.
- Error in server patching
  An error is encountered when patching the server.
- Error in database patching
  An error is encountered when patching the database.
- Server status not set to Normal when patching
  When patching Oracle Database Appliance, 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.
- Patching of M.2 drives not supported
  Patching of M.2 drives (local disks SSDSCKJB48 and SSDSCKJB480G7) is not supported.

- 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.

TFA not running after server or database patching

Oracle TFA does not run after server or database patching.

TFA is shut down during patching of Oracle Database and Oracle Database Appliance.

Hardware Models

All Oracle Database Appliance bare metal deployments

Workaround

Run `tfactl start` to start TFA manually.

This issue is tracked with Oracle bug 31091006.

Error in patching Oracle Database Appliance server

When patching Oracle Database Appliance, an error is encountered.

When patching the appliance, Oracle Grid Infrastructure `clone.pl` failed to run.

Hardware Models

All Oracle Database Appliance hardware models with custom grid user name which was migrated from OAKCLI to ODACLI stack in Oracle Database Appliance release 18.3

Workaround

1. Remove the directory `/u01/app/19.0.0.0` on both nodes.
2. Create the directory `/u01/app/`*`grid_user`* on both nodes.
3. Set permissions to 755 for the directory created in step 2.
4. Set owner as *`grid_user`* for the directory created in step 2.
5. Retry patching by running the `odacli update-server` command.
   For example, for grid user *`tmpgrid`*, the steps are:

```
rm -rf /u01/app/19.0.0.0
mkdir /u01/app/tmpgrid
chmod 755 /u01/app/tmpgrid
chown tmpgrid /u01/app/tmpgrid
odacli update-server -v 19.6.0.0
```

This issue is tracked with Oracle bug 31111872.

Disk firmware not updated after patching

After patching Oracle Database Appliance, disk firmware is not updated on some Oracle Database Appliance hardware models.

The `odacli describe-component` command shows available version for disks as 0112 but the `odacli update-storage` and `odacli update-server` commands do not update the disk firmware.

Hardware Models

All Oracle Database Appliance X7-2-HA hardware models

Workaround

None

This issue is tracked with Oracle bug 30841243.

Error in server patching

An error is encountered when patching the server.

When running the command `odacli update-server -v` *`release_number`*, the following error is encountered:

```
DCS-10001:Internal error encountered: patchmetadata for 19.6.0.0.0
missing
target version for GI.
```

Hardware Models

All Oracle Database Appliance hardware models

Workaround

Follow these steps:

1. Change the file ownership temporarily to the appropriate `grid` user for the `osdbagrp` binary in the *`grid_home`*`/bin` location. For example:

   ```
   $ chown -R grid:oinstall /u01/app/18.0.0.0/grid/bin/osdbagrp
   ```

2. Run either the `update-registry -n gihome` or the `update-registry -n system` command.

This issue is tracked with Oracle bug 31125258.

Error in database patching

An error is encountered when patching the database.

When running the command `odacli update-dbhome -v` *`release_number`* on database homes that have Standard Edition High Availability enabled, an error is encountered.

Hardware Models

All Oracle Database Appliance hardware models

Workaround

Run datapatch with list of all valid PDBs by connecting all the databases that are running from database home. Follow these steps:

1. Find all databases running from the database home. For example:

   ```
   odacli list-databases|grep DB home resource ID
   ```

2. Find the PDBs for each database:

   ```
   #su oracle
       #export ORACLE_HOME=Database home location
       #export ORACLE_SID=Database SID
       #sqlplus "/as sysdba"
       SQL> SELECT NAME, OPEN_MODE FROM V$CONTAINERS WHERE
   OPEN_MODE='READ
   WRITE';
   ```

   This query returns all PDB names including `CDB$ROOT` if the PDB is in "READ WRITE" mode.

3. Exit from SQL*Plus.
4. Run datapatch:

   ```
   #su oracle
       #export ORACLE_HOME=Database home location
       #export ORACLE_SID=Database SID
       #$ORACLE_HOME/OPatch/datapatch -pdbs "PDB name","PDB name"
   ```

5. As `root` user, run the `odacli update-dbhome` command again to correct the metadata entries.

   ```
   # odacli update-dbhome -i dbhome id -v 19.7.0.0.0
   ```

This issue is tracked with Oracle bug 31399885.

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:

   ```
   Grid_home/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:

   ```
   Grid_home/bin/crsctl query crs activeversion -f
   ```

This issue is tracked with Oracle bug 30099090.

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.

Patching of M.2 drives not supported

Patching of M.2 drives (local 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.

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 19.7, the Oracle Auto Service Request (ASR), or Oracle TFA Collector, or Oracle ORAchk RPMs may not be updated to release 19.7. The components are updated when you apply the patches for Oracle Database Appliance release 19.7.

Hardware Models

All Oracle Database Appliance deployments

Workaround

Update to the latest server patch for the release.

This issue is tracked with Oracle bugs 28933900 and 30187516.

Known Issues When Deploying Oracle Database Appliance

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

- Error when performing backup and recovery of Standard Edition High Availability Database
  When performing backup and recovery of Standard Edition High Availability Database, an error is encountered.
- NTP service not running after rebooting node
  The Network Time Protocol daemon (ntpd) fails to start after rebooting the node.

- Cannot create 11.2.0.4 and 12.1 Oracle ACFS databases with Oracle Flex redundancy
  Creation of 11.2.0.4 and 12.1 Oracle ACFS databases with Oracle Flex redundancy fails.
- Error in creating 11.2.0.4.200414 databases
  Creation of 11.2.0.4.200414 Oracle ACFS database fails.
- Error when creating 11.2.0.4 database
  An error is encountered when creating 11.2.0.4 databases.
- Error when creating or restoring 11.2.0.4 database
  An error is encountered when creating or restoring 11.2.0.4 databases.
- Error when upgrading database from 11.2.0.4 to 12.1 or 12.2
  When upgrading databases from 11.2.0.4 to 12.1 or 12.2, an error is encountered.
- Error when creating 19c single-instance database
  When creating 19c single-instance database, an error is encountered.
- Error when upgrading 12.1 single-instance database
  When upgrading 12.1 single-instance database, a job failure error is encountered.
- 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.
- 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
- 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.

Error when performing backup and recovery of Standard Edition High Availability Database

When performing backup and recovery of Standard Edition High Availability Database, an error is encountered.

Associating a backup configuration to Standard Edition High Availability Database, and backup and recovery operations of Standard Edition High Availability Database fail with the following error:

```
DCS-10089:Database  is in an invalid state 'NOT_RUNNING'. Database dbname
must be running.
```

Hardware Models

All Oracle Database Appliance hardware models

Workaround

None.

This issue is tracked with Oracle bug 31173818.

NTP service not running after rebooting node

The Network Time Protocol daemon (ntpd) fails to start after rebooting the node.

On Oracle Linux 7 environment, even though Network Time Protocol (NTP) was configured during provisioning, the Network Time Protocol daemon (ntpd) fails to start.

Hardware Models

All Oracle Database Appliance hardware models bare metal deployments

Workaround

Follow the instructions described in My Oracle Support Note 2422378.1.

This issue is tracked with Oracle bug 31399685.

Cannot create 11.2.0.4 and 12.1 Oracle ACFS databases with Oracle Flex redundancy

Creation of 11.2.0.4 and 12.1 Oracle ACFS databases with Oracle Flex redundancy fails.

Hardware Models

All Oracle Database Appliance hardware deployments

Workaround

Optionally, create a 11.2.0.4 or 12.1 database home.

Create a 11.2.0.4 or 12.1 database based on an existing 11.2.0.4 or 12.1 database home.

This issue is tracked with Oracle bug 31016061.

Error in creating 11.2.0.4.200414 databases

Creation of 11.2.0.4.200414 Oracle ACFS database fails.

Hardware Models

All Oracle Database Appliance hardware deployments

Workaround

Manually apply Oracle ACFS patch 31323577 on Oracle Grid Infrastructure home and then create the 11.2.0.4 Oracle ACFS Database.

This issue is tracked with Oracle bug 31321374.

Error when creating 11.2.0.4 database

An error is encountered when creating 11.2.0.4 databases.

When you run the command `odacli create-database` for 11.2.0.4 databases specifying the Oracle Database version as 18.10.0.0, the command fails.

Hardware Models

All Oracle Database Appliance hardware models

Workaround

Run the command specifying a five digit Oracle Database version, for example, 18.10.0.0.200414.

This issue is tracked with Oracle bug 31328317.

Error when creating or restoring 11.2.0.4 database

An error is encountered when creating or restoring 11.2.0.4 databases.

When you run the command `odacli create-database` or `odacli irestore-database` for 11.2.0.4 databases, the command fails to run at the Configuring DB Console step. This error may also occur when creating 11.2.0.4 databases using the Browser User Interface.

Hardware Models

All Oracle Database Appliance hardware models

Workaround

Run the commands without enabling DB Console.

This issue is tracked with Oracle bug 31017360.

Error when upgrading database from 11.2.0.4 to 12.1 or 12.2

When upgrading databases from 11.2.0.4 to 12.1 or 12.2, an error is encountered.

Database upgrade can cause the following warning in the `UpgradeResults.html` file, when upgrading database from 11.2.0.4 to 12.1 or 12.2:

```
Database is using a newer time zone file version than the Oracle home
```

Hardware Models

All Oracle Database Appliance bare metal deployments

Workaround

1. Refer to the *Database Upgrade Guide* for manual steps for fixing the time zone.
2. After manually completing the database upgrade, run the following command to update DCS metadata:

   ```
   /opt/oracle/dcs/bin/odacli update-registry update-registry -n db -f
   ```

This issue is tracked with Oracle bug 31125985.

Error when creating 19c single-instance database

When creating 19c single-instance database, an error is encountered.

When creating a 19c single-instance database with different `dbName` and `dbUniqueName`, the password file is stored in the local storage instead of shared storage.

Hardware Models

All Oracle Database Appliance hardware models

Workaround

Use the same `dbName` and `dbUniqueName` when creating a 19c single-instance database.

This issue is tracked with Oracle bug 31194087.

Error when upgrading 12.1 single-instance database

When upgrading 12.1 single-instance database, a job failure error is encountered.

Hardware Models

All Oracle Database Appliance hardware models bare metal deployments

Workaround

Use the following workaround:

1. Before upgrading the 12.1 single-instance database, run the following PL/SQL command to change the `local_listener` to an empty string:

   ```
   ALTER SYSTEM SET LOCAL_LISTENER='';
   ```

2. After upgrading the 12.1 single-instance database successfully, run the following PL/SQL command to change the `local_listener` to the desired value:

   ```
   ALTER SYSTEM SET LOCAL_LISTENER='-oracle-none-';
   ```

This issue is tracked with Oracle bugs 31202775, 31214657, 31210407, and 31178058.

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 operating 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.

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.

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 and X5-2

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 relocating database
  When relocating a database having host name in upper case letters, an error is encountered.
- Error in relocating a running database
  When relocating a database, an error message saying the database is not running may be observed, even though the database is running.
- Error when connecting to the database after relocation
  When connecting to the database after relocation, an error is encountered.
- Error when recovering a single-instance database
  When recovering a single-instance database, an error is encountered.
- Errors when running ORAchk or the odacli create-prepatchreport command
  When you run ORAchk or the `odacli create-prepatchreport` command, an error is encountered.
- Database ID incorrectly displayed in odacli describe-database output
  Database ID is incorrectly displayed in the output of the command `odacli describe-database`.
- Error when rebooting the appliance
  When rebooting Oracle Database Appliance, the user interactive screen is displayed.
- Job history not erased after running cleanup.pl
  After running `cleanup.pl`, job history is not erased.
- 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.
- 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.
- The odaeraser tool does not work if oakd is running in non-cluster mode
  After cleaning up the deployment, the Secure Eraser tool does not work if oakd is running in non-cluster mode.
- Issues with the Web Console on Microsoft web browsers
  Oracle Database Appliance Web Console has issues on Microsoft Edge and Microsoft Internet Explorer web browsers.
- Disk space issues due to Zookeeper logs size
  The Zookeeper log files, `zookeeper.out` and `/opt/zookeeper/log/zkMonitor.log`, are not rotated, when new logs are added. This can cause disk space issues.
- Error after running the cleanup script
  After running the `cleanup.pl` script, the following error message appears: `DCS-10001:Internal error encountered: Fail to start hand shake`.

- Incorrect 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.
- Unrecognized Token Messages Appear in /var/log/messages
  After updating Oracle Database Appliance, unrecognized token messages appear in `/var/log/messages`.

Error when relocating database

When relocating a database having host name in upper case letters, an error is encountered.

If the database host name has uppercase letters, then the operation to relocate the database fails.

Hardware Models

All Oracle Database Appliance hardware models

Workaround

Specify the host name with lower case letters, or use the `-g` option to specify target node number.

This issue is tracked with Oracle bug 31386630.

Error in relocating a running database

When relocating a database, an error message saying the database is not running may be observed, even though the database is running.

Hardware Models

All Oracle Database Appliance hardware models

Workaround

Download and install the patch from bug 31332777.

This issue is tracked with Oracle bug 31315150.

Error when connecting to the database after relocation

When connecting to the database after relocation, an error is encountered.

After relocating a cloned database, there is an error when connecting to the database using SQL*Plus.

Hardware Models

All Oracle Database Appliance hardware models

Workaround

1. Copy the password file from the current location to `/u02/app/oracle/oradata/`*`sourcedbUniqueName/dbName`*`/dbs`.

2. Change the password file owner and group to `oracle:oinstall`.
3. Modify the password file location using the command:

```
srvctl modify database -db dbUniqueName -pwfile newPwFileLoc
```

This issue is tracked with Oracle bug 31317837.

Error when recovering a single-instance database

When recovering a single-instance database, an error is encountered.

When a single-instance database is running on the remote node, and you run the operation for database recovery on the local node, the following error is observed:

```
DCS-10001:Internal error encountered: DCS-10001:Internal error
encountered:
Missing arguments : required sqlplus connection  information is not
provided
```

Hardware Models

All Oracle Database Appliance hardware models

Workaround

Perform recovery of the single-instance database on the node where the database is running.

This issue is tracked with Oracle bug 31399400.

Errors when running ORAchk or the odacli create-prepatchreport command

When you run ORAchk or the `odacli create-prepatchreport` command, an error is encountered.

The following error messages may be seen:

```
Table AUD$[FGA_LOG$] should use Automatic Segment Space Management
diagsnap or pstack are configured to collect first failure diagnostic
Initialization parameter RESOURCE_MANAGER_PLAN should be set.
One or more log archive destination and alternate log archive destination
settings are not as recommended
Software home check failed
```

Hardware Models

Oracle Database Appliance hardware models bare metal deployments

Workaround

Ignore the error messages and continue the deployment.

This issue is tracked with Oracle bug 30931017.

Database ID incorrectly displayed in odacli describe-database output

Database ID is incorrectly displayed in the output of the command `odacli describe-database`.

The ID field in the output of the command `odacli describe-database` wrongly displays the databaseId instead of db object ID.

Hardware Models

All Oracle Database Appliance bare metal deployments

Workaround

Run the `odacli list-databases` command to view the correct ID. You can also view the correct ID details using the Browser User Interface.

This issue is tracked with Oracle bug 31121016.

Error when rebooting the appliance

When rebooting Oracle Database Appliance, the user interactive screen is displayed.

Hardware Models

Oracle Database Appliance X7-2-HA hardware models

Workaround

From the system console, select or highlight the kernel using the Up or Down arrow keys and then press Enter to continue with the reboot of the appliance.

This issue is tracked with Oracle bug 31196452.

Job history not erased after running cleanup.pl

After running `cleanup.pl`, job history is not erased.

After running `cleanup.pl`, when you run `/opt/oracle/dcs/bin/odacli list-jobs` commands, the list is not empty.

Hardware Models

All Oracle Database Appliance hardware models for bare metal deployments

Workaround

1. Stop the DCS Agent by running the following commands on both nodes.
   For Oracle Linux 6, run:

   ```
   initctl stop initdcsagent
   ```

   For Oracle Linux 7, run:

   ```
   systemctl stop initdcsagent
   ```

2. Run the cleanup script sequentially on both the nodes.

This issue is tracked with Oracle bug 30529709.

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.

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.

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 caused when you run the following steps:

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

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

Hardware Models

Oracle Database Appliance X7-2-HA

Workaround

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

```
# systemctl stop initdcsagent
# systemctl start initdcsagent
```

This issue is tracked with Oracle bug 26996134.

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.

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.

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