Oracle® Database Appliance
Release Notes

Release 18.5 for Linux x86-64

ORACLE®

Oracle Database Appliance Release Notes, Release 18.5 for Linux x86-64

F14005-04

Contents

1   What's New in This Release

2   Component Versions for Oracle Database Appliance

3   Oracle Database Appliance 18.5 Patches

4   Known Issues with the Oracle Database Appliance

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
- Documentation Accessibility
- Related Documents
- Conventions

Audience

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

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

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

Documentation Accessibility

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

Access to Oracle Support

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

Related Documents

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

- *Oracle Database Appliance Release Notes*
- *Oracle Database Appliance Licensing Information User Manual*
- *Oracle Database Appliance Security Guide*
- *Oracle Database Appliance Accessibility Guide*
- *Oracle Database Appliance 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/X3-2 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.

1
What's New in This Release

Oracle Database Appliance 18.5 release supports Oracle Database 18*c* functionality on Oracle Database Appliance hardware models.

New Features

This release supports Oracle Database Appliance models X7-2-HA, X7-2S, X7-2M, X6-2S, X6-2M, X6-2L, X6-2-HA, X5-2, X4-2, and X3-2. You can either create a new deployment or patch your existing Oracle Database Appliance deployment to 18.5.

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

- 18.5.0.0.190115
- 12.2.0.1.190115
- 12.1.0.2.190115
- 11.2.0.4.190115

The following Oracle RDBMS updates (October 2018 Oracle Database Release Update) for baremetal and Virtualized Platform are available in this release:

- 18.4.0.0.181016
- 12.2.0.1.181016
- 12.1.0.2.181016
- 11.2.0.4.181016

This release introduces the out-of-cycle patching feature. This feature enables administrators to patch databases in the Oracle Database Appliance deployment with the latest Oracle Database Release Update, outside of the Oracle Database Appliance releases. For more information about the procedure for out-of-cycle patching, see the topic *Applying Out-of-Cycle Database Patches* in the *Oracle Database Appliance Deployment Guide* for your hardware model.

GI Clone, Database RDBMS Clone, and ISO Image Patches

See the chapter *Oracle Database 18.5 Patches* for patch details and links.

Oracle Database Appliance patches are available in My Oracle Support. When selecting a patch, ensure that you select the 18.5 release from the drop down list.

- **Oracle Database Appliance 18.5.0.0 GI Clone for ODACLI/DCS stack:** Use patch 27604593 to perform an initial deployment of Oracle Database Appliance. The bundle contains the latest Grid Infrastructure components for deployment on an Oracle Database Appliance in the "shipped from factory" state, or an Oracle Database Appliance that has been re-imaged using the OS ISO Image. This patch is for all Oracle Database Appliance Hardware Models (Bare Metal).

- **Oracle Database Appliance18.5.0.0 RDBMS Clone File for ODACLI/DCS stack:** Use the Oracle 18.5.0.0.190115 RDBMS Software Clone file to create 18.5.0.0.190115 database homes. Patch 27604558 provides the database clone for this update. This patch is for all Oracle Database Appliance Hardware Models (Bare Metal). You can also optionally use this patch to create 18.4.0.0.181016 database homes on the ODACLI/DCS stack, by selecting 18.4 in the release drop down list.

- **Oracle Database Appliance 12.2.0.1 RDBMS Clone File for ODACLI/DCS stack:** Use the Oracle 12.2.0.1.190115 RDBMS Software Clone file to create 12.2.0.1.190115 database homes. Patch 27119402 provides the database clone for this update. This patch is for all Oracle Database Appliance Hardware Models (Bare Metal). You can also optionally use this patch to create 12.2.0.1.181016 database homes on the ODACLI/DCS stack, by selecting 18.4 in the release drop down list.

- **Oracle Database Appliance 12.1.0.2 RDBMS Clone File for ODACLI/DCS stack:** Use the Oracle 12.1.0.2.190115 RDBMS Software Clone file to create 12.1.0.2.190115 database homes. Patch 23494992 provides the database clone for this update. This patch is for all Oracle Database Appliance Hardware Models (Bare Metal). You can also optionally use this patch to create 12.1.0.2.181016 database homes on the ODACLI/DCS stack, by selecting 18.4 in the release drop down list.

- **Oracle Database Appliance 11.2.0.4 RDBMS Clone File for ODACLI/DCS stack:** Use the Oracle 11.2.0.4.190115 RDBMS Software Clone file to create 11.2.0.4.190115 database homes. Patch 23494997 provides this update. This patch is for all Oracle Database Appliance Hardware Models (Bare Metal). You can also optionally use this patch to create 11.2.0.4.181016 database homes on the ODACLI/DCS stack, by selecting 18.4 in the release drop down list.

- **(Optional) Oracle Database Appliance 18.5.0.0 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 18.5.0.0 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 18.5.0.0 RDBMS Clone for Virtualized Platform:** Use the Oracle 18.5.0.0.190115 RDBMS Software Clone file to create 18.5.0.0.190115 database homes for Virtualized Platform. Patch 28864456 provides this update. You can also optionally use this patch to create 18.4.0.0.181016 database homes for Virtualized Platform, by selecting 18.4 in the release drop down list.

- **Oracle Database Appliance 12.2.0.1 RDBMS Clone File for Virtualized Platform:** Use the Oracle 12.2.0.1.190115 RDBMS Software Clone file to create 12.2.0.1.190115 database homes for Virtualized Platform. Patch 27449599 provides the database clone for this update. You can also optionally use this patch to create 12.2.0.1.181016 database homes for Virtualized Platform, by selecting 18.4 in the release drop down list.

- **Oracle Database Appliance 12.1.0.2 RDBMS Clone File for Virtualized Platform:** Use the Oracle 12.1.0.2.190115 RDBMS Software Clone file to create 12.1.0.2.190115 database homes for Virtualized Platform. Patch 19520042 pro-

vides the database clone for this update. You can also optionally use this patch to create 12.1.0.2.181016 database homes for Virtualized Platform, by selecting 18.4 in the release drop down list.

- **Oracle Database Appliance 11.2.0.4 RDBMS Clone File for Virtualized Platform:** Use the Oracle 11.2.0.4.190115 RDBMS Software Clone file to create 11.2.0.4.190115 database homes for Virtualized Platform. Patch 17770873 provides the database clone for this update. You can also optionally use this patch to create 11.2.0.4.181016 database homes for Virtualized Platform, by selecting 18.4 in the release drop down list.

Related Topics

- Oracle Database Appliance Checklists
- Creating the Appliance
- Update Pre-checks Commands
- Adding Repositories for Patch Updates
- Viewing Component Information on the Appliance
- Loading and Saving Appliance Configurations
- About Patching Oracle Database Appliance
- About the Web Console
- Oracle Database Appliance Command-Line Interface
- ODACLI Command Reference for OAKCLI Migration
- Applying Out-of-Cycle Database Patches

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 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/X4-2/X3-2 Models
  The matrix display the component versions available for Oracle Database Appliance for X5-2/X4-2/X3-2.

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 2-1   Component Versions for X7-2-HA, X7-2M, and X7-2S in 18.5

Component Name	X7-2-HA	X7-2S and X7-2M
Controller	13.00.00.00	QDV1RE14
Expander	306	Not applicable
SSD	A122 For the HDD/SSD option: A374/A087	A122
NVMe (firmware version)	Not applicable	QDV1RE14
OS Disk (SSD firmware version)	0112	0112
ILOM (Oracle Integrated Lights Out Manager)	4.0.4.21.r126801	4.0.4.21.r126801
BIOS	41040100	41040100
IPMI (Intelligent Platform Management Interface)	1.8.12.4	1.8.12.4
HMP (Oracle Hardware Management Pack)	2.4.1.0.14	2.4.1.0.14

Table 2-1   (Cont.) Component Versions for X7-2-HA, X7-2M, and X7-2S in 18.5

Component Name	X7-2-HA	X7-2S and X7-2M
OAK	18.5.0.0.0	18.5.0.0.0
Oracle Linux	6.10	6.10
Kernel	4.1.12-124.18.6.el6uek.x86_64	4.1.12-124.18.6.el6uek.x86_64
GI_HOME	18.5.0.0.190115	18.5.0.0.190115
DB_HOME	18.5.0.0.190115	18.5.0.0.190115
Oracle Auto Service Request (Oracle ASR)	18.3.1	18.3.1

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

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

Table 2-2   Component Versions for Oracle Database Appliance X6-2S, X6-2M, and X6-2L in 18.5

Component Name	Version
Controller	4.650.00-7176
NVMe (firmware version)	KPYAIR3Q
OS Disk	OR3Q
ILOM (Oracle Integrated Lights Out Manager)	X6-2SM: 4.0.4.22.r126940 X6-2L:4.0.0.24.r121140
BIOS	X6-2SM:38110100 X6-2L:39090000
IPMI (Intelligent Platform Management Interface)	1.8.12.4
HMP (Oracle Hardware Management Pack)	2.4.1.0.14
OAK	18.5.0.0.0
Oracle Linux	6.10
Kernel	4.1.12-124.18.6.el6uek.x86_64
GI_HOME	18.5.0.0.190115
DB_HOME	18.5.0.0.190115
Oracle Auto Service Request (Oracle ASR)	18.3.1

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

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

Table 2-3   Component Versions for Oracle Database Appliance X6-2-HA in 18.5

Component Name	Version
Controller_INT	4.650.00-7176
Controller_Ext	13.00.00.00
Expander	0306
SSD_LOCAL	OR3Q
SSD_SHARED	A29A
ILOM (Oracle Integrated Lights Out Manager)	4.0.4.22 r126940
BIOS	38110100
IPMI (Intelligent Platform Management Interface)	1.8.12.4
HMP (Oracle Hardware Management Pack)	2.4.1.0.14
OAK	18.5
Oracle Linux	6.10
Kernel	4.1.12-124.18.6.el6uek.x86_64
GI_HOME	18.5.0.0.190115
DB_HOME	18.5.0.0.190115
Oracle Auto Service Request (Oracle ASR)	18.3.1

Component Versions for X5-2/X4-2/X3-2 Models

The matrix display the component versions available for Oracle Database Appliance for X5-2/X4-2/X3-2.

Table 2-4   Component Versions for Oracle Database Appliance X5-2 for 18.5

Component Name	Version
Controller_INT	4.650.00-7176
Controller_Ext	13.00.00.00
Expander	0018
SSD_LOCAL	n/a
SSD_SHARED	A29A
HDD_LOCAL	A7E0
HDD_SHARED	A3A0, PAG1
ILOM (Oracle Integrated Lights Out Manager)	4.0.2.26.b.r125868
BIOS	30130500
IPMI (Intelligent Platform Management Interface)	1.8.12.4
HMP (Oracle Hardware Management Pack)	2.4.1.0.14
OAK	18.5
Oracle Linux	6.10
Kernel	4.1.12-124.18.6.el6uek.x86_64

Table 2-4   (Cont.) Component Versions for Oracle Database Appliance X5-2 for 18.5

Component Name	Version
GI_HOME	18.5.0.0.190115
DB_HOME	18.5.0.0.190115
Oracle Auto Service Request (Oracle ASR)	18.3.1

Table 2-5   Component Versions for Oracle Database Appliance X4-2 in 18.5

Component Name	Version
Controller_INT	11.05.03.00
Controller_Ext	11.05.03.00
Expander	0018
SSD_LOCAL	n/a
SSD_SHARED	944A
HDD_LOCAL	AE70
HDD_SHARED	AE70
ILOM (Oracle Integrated Lights Out Manager)	4.0.2.27.b.r125869
BIOS	25060400
IPMI (Intelligent Platform Management Interface)	1.8.12.4
HMP (Oracle Hardware Management Pack)	2.4.1.0.14
OAK	18.5
Oracle Linux	6.10
Kernel	4.1.12-124.18.6.el6uek.x86_64
OVM (Oracle VM Server)	3.4.4
Dom0 Kernel	4.1.12-124.18.6.el6uek.x86_64
GI_HOME	18.5.0.0.190115
DB_HOME	18.5.0.0.190115
Oracle Auto Service Request (Oracle ASR)	18.3.1

Table 2-6   Component Versions for Oracle Database Appliance X3-2 in 18.5

Component Name	Version
Controller_INT	11.05.03.00
Controller_Ext	11.05.03.00
Expander	0018
SSD_LOCAL	n/a

ORACLE®

Table 2-6   (Cont.) Component Versions for Oracle Database Appliance X3-2 in 18.5

Component Name	Version
SSD_SHARED	944A
HDD_LOCAL	A4C0
HDD_SHARED	A7EO
ILOM (Oracle Integrated Lights Out Manager)	4.0.2.31.r126282
BIOS	17140300
IPMI (Intelligent Platform Management Interface)	1.8.12.4
HMP (Oracle Hardware Management Pack)	2.4.1.0.14
OAK	18.5
Oracle Linux	6.10
Kernel	4.1.12-124.18.6.el6uek.x86_64
OVM (Oracle VM Server)	3.4.4
Dom0 Kernel	4.1.12-124.18.6.el6uek.x86_64
GI_HOME	18.5.0.0.190115
DB_HOME	18.5.0.0.190115
Oracle Auto Service Request (Oracle ASR)	18.3.1

3
Oracle Database Appliance 18.5 Patches

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

- Minimum Software Version Requirements
  Review the minimum software version requirements for upgrading to this release of Oracle Database Appliance.

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

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

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

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

- Oracle Database Appliance X5-2/X4-2/X3-2 Patches
  Download the patches available for Oracle Database Appliance X5-2/X4-2/X3-2 in My Oracle Support, get information on the prerequisites, and how to apply the patches.

Minimum Software Version Requirements

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

To upgrade to Oracle Database Appliance Release 18.5, your deployment must be on Release 18.3.

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 18.5 from the release list.

Table 3-1   Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA Patches for Release 18.5.0.0.0

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	29235174	Use the server patch to update your deployment to Oracle Database Appliance 18.5. You can also optionally use this patch to apply the October 2018 Oracle Database Release Update (RU) to the database homes in your Oracle Database Appliance deployment.	Patching Oracle Database Appliance
Oracle Database Appliance ISO Image for X7-2-HA, X7-2S and X7-2M	27604623	Use the ISO image to re-image the operating system for Oracle Database Appliance 18.5. 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 18.5 ISO Image.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS 18.5.0.0.190115 Clone for ODACLI/DCS stack Oracle Database Appliance RDBMS 18.4.0.0.181016 Clone for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS 18.5.0.0.190115 Clone for ODACLI/DCS stack to create 18.5 database homes for the ODACLI/DCS stack. Use Oracle Database Appliance RDBMS 18.4.0.0.181016 Clone for ODACLI/DCS stack to create 18.4.0.0.181016 database homes.	Provisioning Oracle Database Appliance Software

Table 3-1   (Cont.) Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA Patches for Release 18.5.0.0.0

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS 12.2.0.1.190115 Clone for ODACLI/DCS stack Oracle Database Appliance RDBMS 12.2.0.1.181016 Clone for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS 12.2.0.1.190115 Clone for ODACLI/DCS stack to create 12.2.0.1 database homes for the 18.5 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS 12.2.0.1.181016 Clone for ODACLI/DCS stack to create 12.2.0.1.181016 database homes.	Installing Oracle Database Appliance Software
Oracle Database Appliance RDBMS 12.1.0.2.190115 Clone for ODACLI/DCS stack Oracle Database Appliance RDBMS 12.1.0.2.181016 Clone for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS 12.1.0.2.190115 Clone for ODACLI/DCS stack to create 12.1.0.2 database homes for the 18.5 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS 12.1.0.2.181016 Clone for ODACLI/DCS stack to create 12.1.0.2.181016 database homes.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS 11.2.0.4.190115 Clone for ODACLI/DCS stack Oracle Database Appliance RDBMS 11.2.0.4.181016 Clone for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS 11.2.0.4.190115 Clone for ODACLI/DCS stack to create 11.2.0.4 database homes for the 18.5 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS 11.2.0.4.181016 Clone for ODACLI/DCS stack to to create 11.2.0.4.181016 database homes.	Provisioning Oracle Database Appliance Software

ORACLE®

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 18.5 from the release list.

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

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

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for Virtualized Platforms	29234791	Use the server patch to update your deployment to Oracle Database Appliance 18.5. You can also optionally use this patch to apply the October 2018 Oracle Database Release Update (RU) to the database homes in your Oracle Database Appliance deployment.	Deploying an Oracle Database Appliance Virtualized Platform
VM ISO Image (DOM0)	16186163 From the drop-down list, select 18.5.	Use to reimage Oracle Database Appliance as a Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform

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

Patch Type	Patch Number	Description	Resources
VM Template (ODA_BASE)	16186172 From the drop-down list, select 18.5.	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 18.5.0.0.190115 Clone for Virtualized Platform Oracle Database Appliance RDBMS 18.4.0.0.181016 Clone for Virtualized Platform	28864456	Use Oracle Database Appliance RDBMS 18.5.0.0.190115 Clone for Virtualized Platform to create 18.5 database homes for Virtualized Platform. Use Oracle Database Appliance RDBMS 18.4.0.0.181016 Clone for Virtualized Platform to create 18.4.0.0.181016 database homes for Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform
Oracle Database Appliance RDBMS 12.2.0.1.190115 Clone for Virtualized Platforms Oracle Database Appliance RDBMS 12.2.0.1.181016 Clone for Virtualized Platform	27449599	Use Oracle Database Appliance RDBMS 12.2.0.1.190115 Clone for Virtualized Platform to create 12.2.0.1 database homes for the 18.5 Virtualized Platform. Use Oracle Database Appliance RDBMS 12.2.0.1.181016 Clone for Virtualized Platform to create 12.2.0.1.181016 database homes for Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform

ORACLE®

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

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS 12.1.0.2.190115 Clone for Virtual-ized Platform Oracle Database Appliance RDBMS 12.1.0.2.181016 Clone for Virtual-ized Platform	19520042	Use Oracle Database Appliance RDBMS 12.1.0.2.190115 Clone for Virtualized Platform to create 12.1.0.2 database homes for the 18.5 Virtualized Platform. Use Oracle Database Appliance RDBMS 12.1.0.2.181016 Clone for Virtualized Platform to create 12.1.0.2.181016 data-base homes for Vir-tualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform
Oracle Database Appliance RDBMS 11.2.0.4.190115 Clone for Virtual-ized Platform Oracle Database Appliance RDBMS 11.2.0.4.181016 Clone for Virtual-ized Platform	17770873	Use Oracle Database Appliance RDBMS 11.2.0.4.190115 Clone for Virtualized Platform to create 11.2.0.4 database homes for the 18.5 Virtualized Platform. Use Oracle Database Appliance RDBMS 11.2.0.4.181016 Clone for Virtualized Platform to to create 11.2.0.4.181016 data-base homes for Vir-tualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform

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

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

When downloading a patch from My Oracle Support, select 18.5 from the release list.

Table 3-3   Oracle Database Appliance X6-2S, X6-2M, and X6-2L Patches for Release 18.5.0.0.0

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	29235174	Use the server patch to update your deployment to Oracle Database Appliance 18.5. You can also optionally use this patch to apply the October 2018 Oracle Database Release Update (RU) to the database homes in your Oracle Database Appliance deployment.	Patching Oracle Database Appliance
Oracle Database Appliance ISO Image for X6-2S, X6-2M, and X6-2L	27604623	Use the ISO image to re-image the operating system for Oracle Database Appliance 18.5. 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 18.5 OS ISO Image.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS 18.5.0.0.190115 Clone for ODACLI/DCS stack Oracle Database Appliance RDBMS 18.4.0.0.181016 Clone for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS 18.5.0.0.190115 Clone for ODACLI/DCS stack to create 18.5 database homes for the ODACLI/DCS stack. Use Oracle Database Appliance RDBMS 18.4.0.0.181016 Clone for ODACLI/DCS stack to create 18.4.0.0.181016 database homes.	Provisioning Oracle Database Appliance Software

ORACLE®

Table 3-3   (Cont.) Oracle Database Appliance X6-2S, X6-2M, and X6-2L Patches for Release 18.5.0.0.0

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS 12.2.0.1.190115 Clone for ODACLI/DCS stack Oracle Database Appliance RDBMS 12.2.0.1.181016 Clone for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS 12.2.0.1.190115 Clone for ODACLI/DCS stack to create 12.2.0.1 database homes for the 18.5 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS 12.2.0.1.181016 Clone for ODACLI/DCS stack to create 12.2.0.1.181016 database homes.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS 12.1.0.2.190115 Clone for ODACLI/DCS stack Oracle Database Appliance RDBMS 12.1.0.2.181016 Clone for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS 12.1.0.2.190115 Clone for ODACLI/DCS stack to create 12.1.0.2 database homes for the 18.5 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS 12.1.0.2.181016 Clone for ODACLI/DCS stack to create 12.1.0.2.181016 database homes.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS 11.2.0.4.190115 Clone for ODACLI/DCS stack Oracle Database Appliance RDBMS 11.2.0.4.181016 Clone for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS 11.2.0.4.190115 Clone for ODACLI/DCS stack to create 11.2.0.4 database homes for the 18.5 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS 11.2.0.4.181016 Clone for ODACLI/DCS stack to create 11.2.0.4.181016 database homes.	Provisioning Oracle Database Appliance Software

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 18.5 from the release list.

Table 3-4   Oracle Database Appliance X6-2-HA Patches for Release 18.5.0.0.0

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	29235174	Use the server patch to update your deployment to Oracle Database Appliance 18.5 You can also optionally use this patch to apply the October 2018 Oracle Database Release Update (RU) to the database homes in your Oracle Database Appliance deployment.	Patching Oracle Database Appliance
Oracle Database Appliance Server Patch for Virtualized Platforms	29234791	Use the server patch to update your deployment to Oracle Database Appliance 18.5 You can also optionally use this patch to apply the October 2018 Oracle Database Release Update (RU) to the database homes in your Oracle Database Appliance deployment.	Patching 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 18.5 OS ISO Image.	Provisioning Oracle Database Appliance Software

Table 3-4   (Cont.) Oracle Database Appliance X6-2-HA Patches for Release 18.5.0.0.0

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS 18.5.0.0.190115 Clone for ODACLI/DCS stack Oracle Database Appliance RDBMS 18.4.0.0.181016 Clone for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS 18.5.0.0.190115 Clone for ODACLI/DCS stack to create 18.5 database homes for the ODA-CLI/DCS stack. Use Oracle Database Appliance RDBMS 18.4.0.0.181016 Clone for the ODACLI/DCS stack to create 18.4.0.0.181016 database homes.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS 12.2.0.1.190115 Clone for ODACLI/DCS stack Oracle Database Appliance RDBMS 12.2.0.1.181016 Clone for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS 12.2.0.1.190115 Clone for ODACLI/DCS stack to create 12.2.0.1 database homes for the 18.5 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS 12.2.0.1.181016 Clone for ODACLI/DCS stack to create 12.2.0.1.181016 database homes.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS 12.1.0.2.190115 Clone for ODACLI/DCS stack Oracle Database Appliance RDBMS 12.1.0.2.181016 Clone for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS 12.1.0.2.190115 Clone for ODACLI/DCS stack to create 12.1.0.2 database homes for the 18.5 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS 12.1.0.2.181016 Clone for ODACLI/DCS stack to create 12.1.0.2.181016 database homes.	Provisioning Oracle Database Appliance Software

Table 3-4   (Cont.) Oracle Database Appliance X6-2-HA Patches for Release 18.5.0.0.0

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS 11.2.0.4.190115 Clone for ODACLI/DCS stack Oracle Database Appliance RDBMS 11.2.0.4.181016 Clone for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS 11.2.0.4.190115 Clone for ODACLI/DCS stack to create 11.2.0.4 database homes for the 18.5 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS 11.2.0.4.181016 Clone for ODACLI/DCS stack to create 11.2.0.4.181016 database homes.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance ISO Image for X6-2-HA	27604623	Use the ISO image to re-image the operating system for Oracle Database Appliance 18.5. 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 18.5	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 18.5	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

Table 3-4   (Cont.) Oracle Database Appliance X6-2-HA Patches for Release 18.5.0.0.0

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS 18.5.0.0.190115 Clone for Virtualized Platform Oracle Database Appliance RDBMS 18.4.0.0.181016 Clone for Virtualized Platform	28864456	Use Oracle Database Appliance RDBMS 18.5.0.0.190115 Clone for Virtualized Platform to create 18.5 database homes for Virtualized Platform. Use Oracle Database Appliance RDBMS 18.4.0.0.181016 Clone for Virtualized Platform to create 18.4.0.0.181016 database homes for Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform
Oracle Database Appliance RDBMS 12.2.0.1.190115 Clone for Virtualized Platforms Oracle Database Appliance RDBMS 12.2.0.1.181016 Clone for Virtualized Platform	27449599	Use Oracle Database Appliance RDBMS 12.2.0.1.190115 Clone for Virtualized Platform to create 12.2.0.1 database homes for the 18.5 Virtualized Platform. Use Oracle Database Appliance RDBMS 12.2.0.1.181016 Clone for Virtualized Platform to create 12.2.0.1.181016 database homes for Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform
Oracle Database Appliance RDBMS 12.1.0.2.190115 Clone for Virtualized Platform Oracle Database Appliance RDBMS 12.1.0.2.181016 Clone for Virtualized Platform	19520042	Use Oracle Database Appliance RDBMS 12.1.0.2.190115 Clone for Virtualized Platform to create 12.1.0.2 database homes for the 18.5 Virtualized Platform. Use Oracle Database Appliance RDBMS 12.1.0.2.181016 Clone for Virtualized Platform to create 12.1.0.2.181016 database homes for Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform

Table 3-4   (Cont.) Oracle Database Appliance X6-2-HA Patches for Release 18.5.0.0.0

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS 11.2.0.4.190115 Clone for Virtualized Platform Oracle Database Appliance RDBMS 11.2.0.4.181016 Clone for Virtualized Platform	17770873	Use Oracle Database Appliance RDBMS 11.2.0.4.190115 Clone for Virtualized Platform to create 11.2.0.4 database homes for the 18.5 Virtualized Platform. Use Oracle Database Appliance RDBMS 11.2.0.4.181016 Clone for Virtualized Platform to create 11.2.0.4.181016 database homes for Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform

Oracle Database Appliance X5-2/X4-2/X3-2 Patches

Download the patches available for Oracle Database Appliance X5-2/X4-2/X3-2 in My Oracle Support, get information on the prerequisites, and how to apply the patches.

When downloading a patch from My Oracle Support, select 18.5 from the release list.

Table 3-5   Oracle Database Appliance X5-2/X4-2/X3-2 Patches for Release 18.5

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for ODACLI/DCS Stack	29235174	Use the server patch to update your deployment to Oracle Database Appliance 18.5. You can also optionally use this patch to apply the October 2018 Oracle Database Release Update (RU) to the database homes in your Oracle Database Appliance deployment.	Patching Oracle Database Appliance

Table 3-5   (Cont.) Oracle Database Appliance X5-2/X4-2/X3-2 Patches for Release 18.5

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance Server Patch for Virtualized Platforms	29234791	Use the server patch to update your deployment to Oracle Database Appliance 18.5. You can also optionally use this patch to apply the October 2018 Oracle Database Release Update (RU) to the database homes in your Oracle Database Appliance deployment.	Patching 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 18.5 OS ISO Image.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS 18.5.0.0.190115 Clone for ODACLI/DCS stack Oracle Database Appliance RDBMS 18.4.0.0.181016 Clone for ODACLI/DCS stack	27604558	Use Oracle Database Appliance RDBMS 18.5.0.0.190115 Clone for ODACLI/DCS stack to create 18.5 database homes for the ODACLI/DCS stack. Use Oracle Database Appliance RDBMS 18.4.0.0.181016 Clone for ODACLI/DCS stack to create 18.4.0.0.181016 database homes.	Provisioning Oracle Database Appliance Software

Table 3-5   (Cont.) Oracle Database Appliance X5-2/X4-2/X3-2 Patches for Release 18.5

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS 12.2.0.1.190115 Clone for ODACLI/DCS stack Oracle Database Appliance RDBMS 12.2.0.1.181016 Clone for ODACLI/DCS stack	27119402	Use Oracle Database Appliance RDBMS 12.2.0.1.190115 Clone for ODACLI/DCS stack to create 12.2.0.1 database homes for the 18.5 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS 12.2.0.1.181016 Clone for ODACLI/DCS stack to create 12.2.0.1.181016 database homes.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS 12.1.0.2.190115 Clone for ODACLI/DCS stack Oracle Database Appliance RDBMS 12.1.0.2.181016 Clone for ODACLI/DCS stack	23494992	Use Oracle Database Appliance RDBMS 12.1.0.2.190115 Clone for ODACLI/DCS stack to create 12.1.0.2 database homes for the 18.5 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS 12.1.0.2.181016 Clone for ODACLI/DCS stack to create 12.1.0.2.181016 database homes.	Provisioning Oracle Database Appliance Software
Oracle Database Appliance RDBMS 11.2.0.4.190115 Clone for ODACLI/DCS stack Oracle Database Appliance RDBMS 11.2.0.4.181016 Clone for ODACLI/DCS stack	23494997	Use Oracle Database Appliance RDBMS 11.2.0.4.190115 Clone for ODACLI/DCS stack to create 11.2.0.4 database homes for the 18.5 ODACLI/DCS stack. Use Oracle Database Appliance RDBMS 11.2.0.4.181016 Clone for ODACLI/DCS stack to create 11.2.0.4.181016 database homes.	Provisioning Oracle Database Appliance Software

ORACLE®

Table 3-5   (Cont.) Oracle Database Appliance X5-2/X4-2/X3-2 Patches for Release 18.5

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance ISO Image for X5-2/X4-2/X3-2	27604623	Use the ISO image to re-image the operating system for Oracle Database Appliance 18.5. 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 18.5	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 18.5	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 RDBMS18.5.0.0.190115Clone for Virtualized Platform Oracle Database Appliance RDBMS 18.4.0.0.181016 Clone for Virtualized Platform	28864456	Use Oracle Database Appliance RDBMS 18.5.0.0.190115 Clone for Virtualized Platform to create 18.5 database homes for Virtualized Platform. Use Oracle Database Appliance RDBMS 18.4.0.0.181016 Clone for Virtualized Platform to create 18.4.0.0.181016 database homes for Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform

Table 3-5   (Cont.) Oracle Database Appliance X5-2/X4-2/X3-2 Patches for Release 18.5

Patch Type	Patch Number	Description	Resources
Oracle Database Appliance RDBMS 12.2.0.1.190115 Clone for Virtualized Platforms Oracle Database Appliance RDBMS 12.2.0.1.181016 Clone for Virtualized Platform	27449599	Use Oracle Database Appliance RDBMS 12.2.0.1.190115 Clone for Virtualized Platform to create 12.2.0.1 database homes for the 18.5 Virtualized Platform. Use Oracle Database Appliance RDBMS 12.2.0.1.181016 Clone for Virtualized Platform to create 12.2.0.1.181016 database homes for Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform
Oracle Database Appliance RDBMS 12.1.0.2.190115 Clone for Virtualized Platform Oracle Database Appliance RDBMS 12.1.0.2.181016 Clone for Virtualized Platform	19520042	Use Oracle Database Appliance RDBMS 12.1.0.2.190115 Clone for Virtualized Platform to create 12.1.0.2 database homes for the 18.5 Virtualized Platform. Use Oracle Database Appliance RDBMS 12.1.0.2.181016 Clone for Virtualized Platform to create 12.1.0.2.181016 database homes for Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform
Oracle Database Appliance RDBMS 11.2.0.4.190115 Clone for Virtualized Platform Oracle Database Appliance RDBMS 11.2.0.4.181016 Clone for Virtualized Platform	17770873	Use Oracle Database Appliance RDBMS 11.2.0.4.190115 Clone for Virtualized Platform to create 11.2.0.4 database homes for the 18.5 Virtualized Platform. Use Oracle Database Appliance RDBMS 11.2.0.4.181016 Clone for Virtualized Platform to to create 11.2.0.4.181016 database homes for Virtualized Platform.	Deploying an Oracle Database Appliance Virtualized Platform

ORACLE®

4
Known Issues with the Oracle Database Appliance

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.

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

- Error when patching 11.2.0.4 database homes
  Patching 11.2.0.4 Oracle Database homes to Release 18.5 may fail if bug#2015 exists in the inventory.

- Failure in patching Oracle Grid Infrastructure when applying server patch
  When you apply the server patch to update Oracle Database Appliance deployment from 18.3 to 18.5, the update may fail.

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

- Local server patching hangs on the second node
  Local server patching does not complete on the second node.

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

- Stack migration fails during patching
  After patching the OAK stack, the following error is encountered when running `odacli` commands:

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

- Error when patching a 11.2.0.4 database
  Patching a 11.2.0.4 DB home that was created using the 11.2.0.4.190115 database clone, fails with the following error:

- Some files missing after patching the appliance
  Some files are missing after patching the appliance.

- Space issues with /u01 directory after patching
  After patching to 18.5, the directory `/u01/app/18.0.0.0/grid/log/hostname/client` fills quickly with `gpnp` logs.

- Errors when deleting database storage after migration to DCS stack
  After migrating to the DCS stack, some volumes in the database storage cannot be deleted.

- Repository in offline or unknown status after patching
  After rolling or local patching of both nodes to 18.5, repositories are in offline or unknown state on node 0 or 1.

- Oracle ASR version is 5.5.1 after re-imaging Oracle Database Appliance
  Oracle Auto Service Request (ASR) version is not updated after re-imaging Oracle Database Appliance

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

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

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

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

Resilvering of Oracle ADVM processes impacting performance after upgrading to 18.3

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

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

Hardware Models

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

Workaround

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

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

This issue is tracked with Oracle bug 29520544.

Error when patching 11.2.0.4 database homes

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

Hardware Models

All Oracle Database Appliance Bare Metal and Virtualized Platform Deployments.

Workaround

Delete bug#2015 if it exists in the inventory.

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

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

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

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

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

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

4. Take a backup of `inventory.xml`.

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

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

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

This issue is tracked with Oracle bugs 29834563 and 29446248.

Failure in patching Oracle Grid Infrastructure when applying server patch

When you apply the server patch to update Oracle Database Appliance deployment from 18.3 to 18.5, the update may fail.

If you have upgraded to release 18.3 from 12.1.2.12, or 12.2.2.1.x, or 12.1.0.2 to 12.2.0.1, and then to Oracle Database Appliance release 18.3, and are patching to Oracle Database Appliance release 18.5, then patching to release 18.5 may fail.

The `/u01/app/oraInventory/ContentsXML/inventory.xml` file may have the 12.1 or 12.2 `grid` home listed as the default Oracle Clusterware home.

Hardware Models

All Oracle Database Appliance hardware models.

Workaround

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

1. Detach the 12.1.0.2 home:

   ```
   /u01/app/18.0.0.0/grid/oui/bin/runInstaller -silent -detachHome
   ORACLE_HOME="/u01/app/12.1.0.2/grid" ORACLE_HOME_NAME="OraGrid12102" -
   local
   ```

2. Detach the 12.2.0.1 home:

   ```
   /u01/app/18.0.0.0/grid/oui/bin/runInstaller -silent -detachHome
   ORACLE_HOME="/u01/app/12.2.0.1/grid" ORACLE_HOME_NAME="OraGrid12201" -
   local
   ```

3. Note the output of the following command. You must substitute the node names in the next step.

   ```
   /u01/app/18.0.0.0/grid/bin/olsnodes
   ```

   If the output of the above command is `node1 node2`, then the cluster nodes are `"node1,node2"`.

4. Run the grid installer in silent mode to update the nodelist in the inventory:

   ```
   /u01/app/18.0.0.0/grid/oui/bin/runInstaller -silent -local
   -updateNodeList ORACLE_HOME_NAME="OraGrid18000"
   ORACLE_HOME="/u01/app/18.0.0.0/grid"
   CLUSTER_NODES="node1,node2"  CRS="true"
   ```

After running the steps above, patch your deployment to Oracle Database Appliance release 18.5.

This issue is tracked with Oracle bug 29476961.

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

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

Hardware Models

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

Workaround

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

This issue is tracked with Oracle bugs 29206350 and 28308268.

Local server patching hangs on the second node

Local server patching does not complete on the second node.

When patching Oracle Database Appliance using the `-local` option, the patching activity may hang and not complete on the second node due to a HAIP error.

Hardware Models

Oracle Database Appliance high-availability hardware models baremetal deployments.

Workaround

Stop `crs` on both nodes and start `crs` one by one.

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

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

2. Stop `crs` on both nodes.

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

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

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

4. View job details and check if the patching activity completed.

```
# odacli list-jobs
6157593a-e3d1-444c-a99f-7211f05e075c     Server Patching  April 17,
2019 9:47:43 PM BRT   Running
```

5. Verify whether the operating system or firmware was updated in the patching operation.

```
# odacli describe-job -i 6157593a-e3d1-444c-a99f-7211f05e075c
```

If the operating system or firmware was updated, then restart the nodes manually. If the operating system or firmware was not updated, then restart the `dcs-agent` using the `initctl` command.

This issue is tracked with Oracle bug 29663931.

Server patching fails to start Oracle Clusterware

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

Hardware Models

Oracle Database Appliance high-availability hardware models baremetal deployments.

Workaround

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

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

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

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

3. Update the server.

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

This issue is tracked with Oracle bug 29549267.

Stack migration fails during patching

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

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

Hardware Models

All Oracle Database Appliance Hardware models

Workaround

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

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

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

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

This issue is tracked with Oracle bug 29216717.

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

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

The following error is reported in the log file:

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

Hardware Models

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

Workaround

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

```
SQL> show parameter _disk_sector_size_override;

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

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

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

SQL> alter diskgroup DATA mount;

Diskgroup altered.

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

System altered
```

This issue is tracked with Oracle bug 29220984.

Error when patching a 11.2.0.4 database

Patching a 11.2.0.4 DB home that was created using the 11.2.0.4.190115 database clone, fails with the following error:

```
ERROR: 2019-03-06 00:04:14: Unable to apply db patch on the following
Homes :
/u01/app/oracle/product/11.2.0.4/database_name
```

Hardware Models

Oracle Database Appliance Hardware models running Virtualized Platform

Workaround

None.

This issue is tracked with Oracle bug 29446260.

Some files missing after patching the appliance

Some files are missing after patching the appliance.

Hardware Models

Oracle Database Appliance X7-2 hardware models

Workaround

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

This issue is tracked with Oracle bug 28308268.

Space issues with /u01 directory after patching

After patching to 18.5, the directory `/u01/app/18.0.0.0/grid/log/hostname/client` fills quickly with `gpnp` logs.

Hardware Models

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

Workaround

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

   On Node0:

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

   On Node1:

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

   This issue is tracked with Oracle bug 28865162.

Errors when deleting database storage after migration to DCS stack

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

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

Hardware Models

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

Workaround

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

This issue is tracked with Oracle bug 28987135.

Repository in offline or unknown status after patching

After rolling or local patching of both nodes to 18.5, 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.

Oracle ASR version is 5.5.1 after re-imaging Oracle Database Appliance

Oracle Auto Service Request (ASR) version is not updated after re-imaging Oracle Database Appliance

When re-imaging Oracle Database Appliance to Release 18.5, the Oracle Auto Service Request (ASR) RPM is not updated to 18.5. Oracle ASR is updated when you apply the patches for Oracle Database Appliance Release 18.5.

Hardware Models

All Oracle Database Appliance deployments that have Oracle Auto Service Request (ASR).

Workaround

Update to the latest server patch for the release.

This issue is tracked with Oracle bug 28933900.

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, re-imaging, 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 re-
quired
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 apply-
ing 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 resour-
ces locally
Killed
# Connection to server.example.com closed.
```

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

Hardware Models

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

Workaround

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

Perform the following steps as the GRID owner:

1. Set the environment variables as grid OS user:

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

2. Log on to the ASM instance as `sysasm`

   ```
   $ORACLE_HOME/bin/sqlplus / as sysasm
   ```

3. Execute the following SQL command:

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

This issue is tracked with Oracle bug 27322213.

Error in patching database home locally using the Web Console

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

Models

All Oracle Database Appliance Hardware Models

Workaround

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

This issue is tracked with Oracle bug 28909972.

Error when patching Oracle Database 11.2.0.4

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

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

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

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

Hardware Models

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

Workaround

There is no workaround for this issue.

This issue is tracked with Oracle bug 28032876.

Known Issues When Deploying Oracle Database Appliance

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

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

- Snapshot databases can only be created on the primary database
  For `oakcli` stack, snapshot database can be created from the primary database, and not from the standby database.

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

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

- Database creation hangs when using a deleted database name for database creation
  The accelerator volume for data is not created on flash storage, for database created during provisioning of appliance.

- Error when updating 12.1.0.2 database homes
  When updating Oracle Database homes from 12.1.0.2 to 18.3, using the command `odacli update-dbhome -i dbhomeId -v 18.3.0.0.0`, the following error may be seen:

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

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

- **Database connection fails after database upgrade**
  After upgrading the database from 11.2 to 12.1.0.2, database connection fails due to `job_queue_processes` value.

- **Failure in creating 18.3 database with DSS database shape odb1s**
  When creating 18.3 databases, with DSS database shape odb1s, the creation fails, with the following eror message:

- **Errors in clone database operation**
  Clone database operation fails due to the following errors.

- **Database creation fails when multiple SCAN listeners exist**
  Creation of 11.2 database fails when multiple SCAN listeners exist.

- **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 the following error:

Only one network interface displayed after rebooting node

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

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

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

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

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


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

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

Hardware Models

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

Workaround

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

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

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

2. Stop `crs` on both nodes.

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

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

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

This issue is tracked with Oracle bug 29613692.

Snapshot databases can only be created on the primary database

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

If the database name (`db_name`) and database unique name (`db_unique_name`) are different when creating 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. For `oakcli` stack, create snapshot database from the primary database, and not from the standby database.

This issue is tracked with Oracle bug 28649665.

Creation of CDB for 12.1.0.2 databases may fail

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

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

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

Hardware Models

All Oracle Database Appliance hardware models for Virtualized Platform

Workaround

None.

This issue is tracked with Oracle bug 29231958.

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

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

Hardware Models

Oracle Database Appliance X7-2-HA

Workaround

1. Remove the following directory in Node0: `/opt/oracle/dcs/repo/node_0`

2. Remove the following directory in Node1: `/opt/oracle/dcs/repo/node_1`

3. Restart the `dcs-agent` on both nodes.

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

This issue is tracked with Oracle bug 27527676.

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

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

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

Hardware Models

All Oracle Database Appliance high-availability environments

Workaround

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

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

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

This issue is tracked with Oracle bug 28916487.

Error when updating 12.1.0.2 database homes

When updating Oracle Database homes from 12.1.0.2 to 18.3, using the command `odacli update-dbhome -i` *dbhomeId* `-v 18.3.0.0.0`, the following error may be seen:

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

Hardware Models

All Oracle Database Appliance hardware models bare metal deployments

Workaround

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

This issue is tracked with Oracle bug 28975529.

Error encountered after running cleanup.pl

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

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

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

Hardware Models

All Oracle Database Appliance hardware models for bare metal deployments

Workaround

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

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

This issue is tracked with Oracle bug 29038717.

Accelerator volume for data is not created on flash storage

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

Hardware Models

Oracle Database Appliance high capacity environments with HDD disks

Workaround

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

This issue is tracked with Oracle bug 28836461.

Database connection fails after database upgrade

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

Hardware Models

All Oracle Database Appliance hardware models

Workaround

Follow these steps:

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

2. Upgrade the database to 12.1.0.2.

3. After upgrading the database, set the value of `job_queue_processes` to the earlier value, for example, x.

This issue is tracked with Oracle bug 28987900.

Failure in creating 18.3 database with DSS database shape odb1s

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

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

Hardware Models

All Oracle Database Appliance Hardware Models

Workaround

None.

This issue is tracked with Oracle bug 28444642.

Errors in clone database operation

Clone database operation fails due to the following errors.

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

Hardware Models

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

Workaround

Create the clone database from source database which has the same db name and db unique name, in lowercase letters, and the source database instance is running on the same node from which the clone database creation is triggered.

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

Database creation fails when multiple SCAN listeners exist

Creation of 11.2 database fails when multiple SCAN listeners exist.

Hardware Models

All Oracle Database Appliance hardware models bare metal deployments

Workaround

Apply patch 22258643 to fix the issue.

This issue is tracked with Oracle bug 29056579.

Errors after restarting CRS

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

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

Hardware Models

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

Workaround

Follow these steps:

1. Start the High Availability Virtual IP on node1.

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

2. Stop the `oakVmAgent.py` process on `dom0`.

3. Run the lazy unmount option on the `dom0` repository mounts:

   ```
   umount -l mount_points
   ```

This issue is tracked with Oracle bug 20461930.

Unable to create an Oracle ASM Database for Release 12.1

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

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

Hardware Models

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

Workaround

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

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

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

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

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

Database creation fails for odb-01s DSS databases

When attempting to create an DSS database with shape odb-01s, the job may fail with the following error:

```
CRS-2674: Start of 'ora.test.db' on 'rwsoda609c1n1' 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/rwsoda609c1n2/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.

- ODA_BASE is in read-only mode or cannot start
  The /OVS directory is full and ODA_BASE is in read-only mode.

- Restriction in moving database home for database shape greater than odb8
  When creating databases, there is a policy restriction for creating databases with database shapes odb8 or higher for Oracle Database Standard Edition.

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

- Unable to use the Web Console on Microsoft web browsers
  Oracle Appliance Manager Web Console does not display correctly on Microsoft Edge and Microsoft Internet Explorer web browsers.

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

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

- Incorrect results returned for the describe-component command in certain cases
  The `describe-component` command may return incorrect results in some cases.

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

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

- OAKERR:7007 Error encountered while starting VM
  When starting a virtual machine (VM), an error message appears that the domain does not exist.

- Error in node number information when running network CLI commands
  Network information for node0 is always displayed for some `odacli` commands, when the `-u` option is not specified.

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

ODA_BASE is in read-only mode or cannot start

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

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

Hardware Models

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

Oracle Database Appliance X7-2-HA Virtualized Platform.

Workaround

Perform the following to correct or prevent this issue:

- Periodically check the file usage on Dom 0 and clean up the `vmcore` file, as needed.

- Edit the `oda_base vm.cfg` file and change the `on_crash = 'coredump-restart'` parameter to `on_crash = 'restart'`. Especially when ODA_BASE is using more than 200 GB (gigabytes) of memory.

This issue is tracked with Oracle bug 26121450.

Restriction in moving database home for database shape greater than odb8

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

To maintain consistency with this policy restriction, do not migrate any database to an Oracle Database Standard Edition database home, where the database shape is

greater than odb8. The database migration may not fail, but it may not adhere to policy rules.

Hardware Models

All Oracle Database Appliance Hardware Models bare metal deployments

Workaround

None.

This issue is tracked with Oracle bug 29003323.

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

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

Hardware Models

All Oracle Database Appliance Hardware bare metal systems

Workaround

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

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

This issue is tracked with Oracle bug 28547433.

Unable to use the Web Console on Microsoft web browsers

Oracle Appliance Manager Web Console does not display correctly on Microsoft Edge and Microsoft Internet Explorer web browsers.

Models

Oracle Database Appliance X7-2-HA, X7-2S, X7-2M, X6-2S, X6-2M, X6-2L

Workaround

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

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

Disk space issues due to Zookeeper logs size

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

Hardware Models

All Oracle Database Appliance hardware models for bare metal deployments

Workaround

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

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

```
initctl stop initdcsagent
```

2. Stop the zookeeper service on both nodes.

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

3. Clean the zookeeper logs after taking the backup, by manually deleting the existing file or by following steps 4 to 10.

4. Set the ZOO_LOG_DIR as an environment variable to a different log directory, before starting the zookeeper server.

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

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

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

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

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

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

7. Start zookeeper on both nodes.

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

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

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

9. Start the dcs agent on both nodes.

```
initctl start initdcsagent
```

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

This issue is tracked with Oracle bug 29033812.

Error after running the cleanup script

After running the `cleanup.pl` script, the following error message appears:

```
DCS-10001:Internal error encountered: Fail to start hand shake.
```

The error is 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 local-
   host: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 stand-alone.

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

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

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

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

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

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

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

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

Hardware Models

All Oracle Database Appliance hardware models.

Workaround

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

This issue is tracked with Oracle bug 29680034.

Old configuration details persisting in custom environment

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

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

Models

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

Workaround

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

This issue is tracked with Oracle bug 27036374.

Incorrect SGA and PGA values displayed

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

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

- `sga_target` is set as 128 GB instead of 144 GB

- `pga_aggregate_target` is set as 64 GB instead of 72 GB

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

- `sga_target` is set as 64 GB instead of 72 GB

- `pga_aggregate_target` is set as 128 GB instead of 144 GB

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

- `sga_target` is set as 128 GB instead of 144 GB

- `pga_aggregate_target` is set as 64 GB instead of 72 GB

- `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.

OAKERR:7007 Error encountered while starting VM

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

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

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

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

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

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

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

970c644ea.img,xvda,w']
```

```
maxvcpus = 2
maxmem = 2048
```

Hardware Models

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

Oracle Database Appliance X7-2-HA Virtualized Platform.

Workaround

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

1. Open the `vm.cfg` file for the virtual machine (vm) that failed to start.

    •   Dom0 : /Repositories/ vm_repo_name /.ACFS/snaps/ vm_name / VirtualMachines/ vm_name

    •   ODA_BASE : /app/sharedrepo/ vm_repo_name /.ACFS/snaps/ vm_name / VirtualMachines/ vm_name

2. Delete the following line: `extra='NODENAME=`*`vmname`*`'`. For example, if virtual machine `vm4` failed to start, delete the line `extra = 'NODENAME=vm4'`.

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

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

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

```
# oakcli start vm vm4
```

This issue is tracked with Oracle bug 25943318.

Error in node number information when running network CLI commands

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

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

Hardware Models

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

Workaround

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

This issue is tracked with Oracle bug 27251239.

Unrecognized Token Messages Appear in /var/log/messages

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

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

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

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

Hardware Models

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

Workaround

Perform the following to remove the parameters:

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

   ```
   cat /etc/opensm/opensm.conf  | egrep -w
   'max_seq_redisc|rereg_on_guid_migr|aguid_inout_notice|sm_as-
   ```

```
sign_guid_func|repo
rts|per_module_logging|consolidate_ipv4_mask' | grep -v ^#
max_seq_redisc 0
rereg_on_guid_migr FALSE
aguid_inout_notice FALSE
sm_assign_guid_func uniq_count
reports 2
per_module_logging FALSE
consolidate_ipv4_mask 0xFFFFFFFF
```

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

This issue is tracked with Oracle bug 25985258.

A
Documentation Addendum

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

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

Setup Poster X7-2-HA

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

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

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

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

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

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

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

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

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

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

  ```
  vncserver
  ```

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

Index

C

component versions, *2-1*, *2-2*