

# Oracle® Exalogic Elastic Cloud Release Notes



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# Preface

This document contains information about new features, enhancements, and known issues in the Exalogic Elastic Cloud Software.

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## Related Documents

For more information, see the following documents:

- *Exalogic Elastic Cloud Owner's Guide*
- *Exalogic Elastic Cloud Administrator's Guide*

## Conventions

The following text conventions are used in this document:

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

# 1

## Release Notes for Exalogic Elastic Cloud Software

This chapter lists the new features and known issues in the Exalogic Elastic Cloud Software (EECS).

- [New Features and Enhancements in EECS 2.0.6.4.0](#)
- [New Features and Enhancements in EECS 2.0.6.3.0](#)
- [New Features and Enhancements in EECS 2.0.6](#)
- [New Features and Enhancements in EECS 2.0.4](#)
- [Known Issues](#)

### New Features and Enhancements in EECS 2.0.6.4.0

This section describes the new features and enhancements introduced in release 2.0.6.4.0 of the Exalogic Elastic Cloud Software (EECS).

- [Support of Exalogic Virtual 2.0.6.4.0](#)
- [Support of On-Node Components in Exalogic Virtual 2.0.6.4.0](#)
- [Support of Off-Node Components in Exalogic Virtual 2.0.6.4.0](#)
- [Support of Oracle Linux 7 in Exalogic Physical](#)
- [Support of On-Node Components in Oracle Linux 7](#)
- [Support of Off-Node Components in Oracle Linux 7](#)

### Support of Exalogic Virtual 2.0.6.4.0

#### Compute Nodes (dom0)

- Oracle VM Server 3.4.4 (OL6-based)
- UEK4 v4.1.12-112.14.13.el6uek.x86-64 (includes fixes for Spectre and Meltdown)
- OFED userspace RPMs for OL6/UEK4
- Security Updates

#### Exalogic Control

- OL6/UEK4 based Control vServers
- Oracle Database v12.2.0.1
- Oracle VM Manager 3.4.4
- EMOC Updates with support for DB 12c and OVMM 3.4.4

#### Oracle Linux 6 EGBT

- Oracle Linux 6.9

- 500MB Boot Partition
- UEK4 v4.1.12-112.14.13.el6uek.x86-64 (includes fixes for Spectre/Meltdown)
- Security Updates

#### Oracle Linux 7 EGBT

- Oracle Linux 7.4
- 500MB Boot Partition
- UEK4 v4.1.12-112.14.13.el7uek.x86-64 (includes fixes for Spectre/Meltdown)
- Security Updates

#### Oracle Linux EGBT

No support for Oracle Linux 5 EGBT on OVS 3.4.4

## Support of On-Node Components in Exalogic Virtual 2.0.6.4.0

- Disc Controller (HBA) FW is at April 2018 PSU level for all supported rack types (X3-2/X4-2 and X5-2/X6-2)
- Compute Node ILOM/BIOS is at April 2018 PSU level for all supported rack types.
- HCA (IB) Card FW is at April 2018 PSU level for all supported rack types.
- Oracle HW Management Pack v2.3.7.0-1.

#### Note:

For more information about the April 2018 PSU versions, see the following MOS note: [Exalogic Infrastructure Physical and Virtual Releases/PSUs – Software and Firmware Version Information \(Doc ID 1530781.1\)](#). Refer to the version details for the Virtual 2.0.6.3.180417 release for Linux.

## Support of Off-Node Components in Exalogic Virtual 2.0.6.4.0

- ZFS SW v2013.1.7.14 at April 2018 PSU level for all supported ZFS appliances on Exalogic (ZFS-7320, ZS3-ES, and ZS5-ES).
- ZFS ILOM at April 2018 PSU level for all supported ZFS appliances on Exalogic (ZFS-7320, ZS3-ES, and ZS5-ES).
- NM2 FW v2.2.9-3 is at April 2018 PSU level.

#### Note:

For more information about the April 2018 PSU versions, see the following MOS note: [Exalogic Infrastructure Physical and Virtual Releases/PSUs – Software and Firmware Version Information \(Doc ID 1530781.1\)](#). Refer to the version details for the Virtual 2.0.6.3.180417 release for Linux.

## Support of Oracle Linux 7 on Exalogic Physical

- Oracle Linux 7 support is only provided on fresh install of EECS 2.0.6.4.0 on Exalogic physical X3-2, X4-2, X5-2, and X6-2 racks. Upgrade from an earlier version of Oracle Linux is not supported.
- More operating system information about the supported version of Oracle Linux 7:
  - Oracle Linux Server release 7.4
  - UEK4 kernel 4.1.12-112.14.13.el7uek.x86\_64.
  - Includes security updates on top of the Oracle Linux 7.4 release.
  - 500MB boot partition.
- Oracle recommends strongly that reimaging and configuring the compute nodes to Oracle Linux 7 be performed by fully trained, qualified Oracle personnel or by formally accredited Oracle partners. For more information, contact Oracle Advanced Customer Support (<http://www.oracle.com/acs>).

## Support of On-Node Components in Oracle Linux 7

- Disc Controller (HBA) FW is at January 2018 PSU level for all supported rack types (X3-2/X4-2 and X5-2/X6-2)
- Compute Node ILOM/BIOS is at January 2018 PSU level for all supported rack types.
- HCA (IB) Card FW is at January 2018 PSU level for all supported rack types.
- Oracle HW Management Pack v2.4.2

 **Note:**

For more information about the January 2018 PSU versions, see the following MOS note: [Exalogic Infrastructure Physical and Virtual Releases/PSUs – Software and Firmware Version Information \(Doc ID 1530781.1\)](#). Refer to the version details for the physical 2.0.6.3.180116 release for Linux.

## Support of Off-Node Components in Oracle Linux 7

- ZFS SW v2013.1.7.13 at January 2018 PSU level for all supported ZFS appliances on Exalogic (ZFS-7320, ZS3-ES, and ZS5-ES).
- ZFS ILOM is at January 2018 PSU level for all supported ZFS appliances on Exalogic (ZFS-7320, ZS3-ES, and ZS5-ES).
- NM2 FW v2.2.8-2 is at January 2018 PSU level.

 **Note:**

For more information about the January 2018 PSU versions, see the following MOS note: [Exalogic Infrastructure Physical and Virtual Releases/ PSUs – Software and Firmware Version Information \(Doc ID 1530781.1\)](#). Refer to the version details for the physical 2.0.6.3.180116 release for Linux.

## New Features and Enhancements in EECS 2.0.6.3.0

This section describes the new features and enhancements introduced in release 2.0.6.3.0 of the Exalogic Elastic Cloud Software (EECS).

Besides enhanced reliability, robustness, performance, and usability, EECS 2.0.6.3.0 includes the following features and enhancements:

- [Support of New Exalogic X6-2 Rack](#)
- [Support of Oracle Linux 6.8](#)
- [Updates for Exalogic Control](#)
- [Updates for IaaS CLI](#)
- [Exalogic Tools Support of Exalogic X6-2 Rack](#)

### Support of New Exalogic X6-2 Rack

EECS 2.0.6.3.0 supports only fresh installs on Exalogic X6-2 racks. Reimaging of older physical racks, including X2-2/X3-2/X4-2/X5-2, continues to be supported using EECS 2.0.6.2.0, followed by an upgrade to the latest available Exalogic PSU.

See Hardware Components of Exalogic for more information about Exalogic X6-2 hardware components.

### Support of Oracle Linux 6.8

EECS 2.0.6.3.0 provides Oracle Linux 6 for Exalogic X6-2 physical or virtual racks. Oracle Solaris or Oracle Linux 5 is not supported on Exalogic X6-2 physical racks.

The Exalogic Guest Base Template (EGBT) in EECS 2.0.6.3.0 for Exalogic X6-2 virtual racks contains an Oracle Linux 6.8 server installation. The boot partition in the template has been increased to 500 MB from 100 MB. Oracle Linux 5 EGBT is not supported on Exalogic X6-2 virtual racks.

### Updates for Exalogic Control

EECS 2.0.6.3.0 includes updated versions of OVM Manager (OVMM 3.2.11) and EM Ops Center in the Exalogic Control Stack to manage the virtualized Exalogic system.

An updated version of Oracle Virtual Server (OVS 3.2.11) is installed on the compute nodes (dom0) in the Virtualized configuration.

EECS 2.0.6.3.0 also includes enhancements and bug fixes for Oracle Enterprise Manager Ops Center in Exalogic Control:

- Users can now edit DNS server information of an existing EoIB network from the Exalogic Control Browser User Interface (BUI). New vServers created using the updated EoIB network will keep the updated DNS server information in */etc/resolv.conf*.
- Exalogic Control BUI has a new view in Administration section of the Enterprise Controller to see the list of assets added to the blacklist to prevent Exalogic Control from enabling that asset for ASR
- Improved support for Exalogic Control BUI when zooming in and out in the web browser.
- Added a new feature of default limited membership for vServers using IPoIB-default.
- Storage Nodes are now listed under the Storage tree in the Exalogic Control BUI.
- IPoIB network is defined as EoIB network, using the same wizard. This helps users to use IPoIB networks to share between multiple vDC accounts.
- Order of the assigned networks bonds are enabled, when creating vServer in vDC.
- ZS5-ES version support is added as a new feature.
- vServer names are displayed in job details while performing operations.

## Updates for IaaS CLI

EECS 2.0.6.3.0 includes enhancements and bug fixes for the IaaS CLI.

- Enhanced formatting, filtering, and sorting for IaaS CLI commands
- Now user can implement BUI, CLI and API changes for blacklisting the IP address from vNet.
- User can now expose vNet type in IaaS described vNets to show the type of network (Private or Public) being used.
- Exalogic IaaS CLI has the following new features:
  - Adding existing vServer(s) to a Distribution Group.
  - Removing an existing vServer from a Distribution Group.
  - Changing a vServer's Distribution Group.
  - Adding a list of vServers to a Distribution Group.
  - Removing a list of vServers from a Distribution Group.

## Oracle Virtual Assembly Builder Is Not Supported

EECS 2.0.6.3.0 doesn't support Oracle Virtual Assembly Builder (OVAB) to deploy instances of OVAB-generated assemblies in the Exalogic vDC

## Exalogic Tools Support of Exalogic X6-2 Rack

Exalogic Tools (ExaLogs, ExaPasswd, and ExaPatch) updates are included to support Exalogic X6-2 racks.

## New Features and Enhancements in EECS 2.0.6

This section describes the new features and enhancements introduced in release 2.0.6 of the Exalogic Elastic Cloud Software (EECS).

Besides enhanced reliability, robustness, performance, and usability, EECS 2.0.6 includes the following features and enhancements:

- [Deploying Assemblies in the Exalogic vDC Using OVAB Deployer](#)
- [Support for Hybrid Configurations](#)
- [Fewer VMs for the Exalogic Control Stack](#)
- [LVM-Based Disk Partitioning on Guest vServers](#)
- [Exabus/IMB 1.1 and Exalogic Java 1.1.6](#)
- [Configuring DNS for EoIB Networks](#)
- [OSWatcher Included in the Base Image and Guest Template](#)
- [imagehistory and imageinfo Commands Included in the Base Template](#)
- [Linux Server-Based Exalogic Guest Base Template](#)
- [Detailed View of Resource-Allocation by Account](#)

### Deploying Assemblies in the Exalogic vDC Using OVAB Deployer

When you upgrade to (or install) EECS 2.0.6, OVAB Deployer 11.1.1.6.2 is installed in the Exalogic Control VM. You can use OVAB Deployer to deploy instances of OVAB-generated assemblies in the Exalogic vDC.

For more information, see the "Deploying Assemblies in the Exalogic vDC Using OVAB Deployer" chapter in the *Oracle Exalogic Elastic Cloud Administrator's Guide*.

### Support for Hybrid Configurations

An Exalogic machine in a physical configuration—that is, all the compute nodes running Linux—can be converted to a hybrid configuration, where one half of the compute nodes run Oracle VM Server and serve as a virtualized data center, while the other nodes remain on Linux. While installing and configuring the Exalogic Elastic Cloud Software, you can choose the rack half (top or bottom) that should be virtual.

In addition, a hybrid machine can be converted to a full-virtual configuration.

The following hybrid configurations are supported:

- **Eighth:** Top 2 or bottom 2 compute nodes
- **Quarter:** Top 4 or bottom 4 nodes
- **Half:** Top 8 or bottom 8 nodes
- **Full:** Top 14 or bottom 16 nodes

 **Note:**

"Bottom" in this context refers to the compute nodes starting from node 1. For example, in the case of a quarter rack, nodes 1 through 4 make up the bottom half, and nodes 5 through 8 the top half.

Conversion from a physical configuration to a hybrid configuration and from hybrid to full virtual configuration, requires reimaging compute nodes from Oracle Linux to Oracle VM Server. Oracle recommends strongly that any such conversion be performed by fully trained, qualified Oracle personnel or by formally accredited Oracle partners. For more information, contact Oracle Advanced Customer Support (<http://www.oracle.com/acs>).

## Fewer VMs for the Exalogic Control Stack

The number of VMs that make up the Exalogic Control stack has been reduced from five in EECS 2.0.4 to three in 2.0.6.

The Exalogic Control stack in EECS 2.0.6 consists of the following VMs:

- Two Proxy Controller VMs
- Exalogic Control VM: This VM hosts the Enterprise Controller, Oracle VM Manager, and Oracle Virtual Assembly Builder components. The same VM also hosts the Oracle database used by EM Ops Center and Oracle VM Manager. In earlier releases, each of these components was hosted on a dedicated VM.

Note that, in EECS 2.0.6, the Exalogic Control VMs are distributed over fewer compute nodes: two nodes in the case of a fresh EECS 2.0.6 installation, and three nodes if you upgrade from EECS 2.0.4 to 2.0.6.

## LVM-Based Disk Partitioning on Guest vServers

The local disks on guest vServers that you create by using the EECS 2.0.6 Guest Base Template use Logical Volume Manager (LVM)-based partitioning, which gives the administrator more flexibility in allocating disk space to applications and users.

The appendix titled "Managing LVM Partitions on Guest vServers" in the *Oracle Exalogic Elastic Cloud Administrator's Guide* provides a few examples for LVM-based partition management.

For more information about using LVM, go to [http://www.howtoforge.com/linux\\_lvm](http://www.howtoforge.com/linux_lvm).

## Exabus/IMB 1.1 and Exalogic Java 1.1.6

EECS 2.0.6 includes version 1.1 of Oracle Exabus/IMB, which provides improved performance and stability for Java message passing in Oracle Fusion Middleware running on Exalogic. In addition, version 1.1 addresses bugs in the earlier version. EECS 2.0.6 also includes version 1.1.6 of Oracle Java loader for Exalogic.

## Configuring DNS for EoIB Networks

While creating an EoIB network, you can specify DNS settings that should be used to access guest vServers (associated with that network) from outside the Exalogic machine by using host names.

For more information, see the "Creating External EoIB Networks" section in the *Oracle Exalogic Elastic Cloud Administrator's Guide*.

## OSWatcher Included in the Base Image and Guest Template

A collection of shell scripts (called OSWatcher) is included in the Exalogic Guest Base Template and the Exalogic Base Image. OSWatcher collects and archives operating system and network metrics at fixed intervals, by running UNIX utilities such as `vmstat` and `netstat`. This data can be useful in diagnosing performance issues.

By default, OSWatcher is installed, configured, and running on all the Oracle VM Server nodes on an Exalogic machine and on all guest vServers created using the EECS 2.0.6 Guest Base Template. The utilities that OSWatcher invokes run as background processes and impose minimal incremental overhead on the system. By default, OSWatcher invokes the data-collection utilities once every 30 seconds. It archives the data for the last 48 hours on the local disk in the `/opt/oswbb` directory. You can configure the data-collection interval, the archive-retention period, and the archive location. You can also disable OSWatcher.

For more information about configuring, disabling, and enabling OSWatcher, see the *OS Watcher Black Box User's Guide* in the My Oracle Support document 1531223.1.

## `imagehistory` and `imageinfo` Commands Included in the Base Template

The Exalogic Guest Base Template in EECS 2.0.6 includes the following commands:

- `imageinfo`: You can use this command to identify the image and build version of a guest vServer, as shown in the following example:

```
# imageinfo
Exalogic 2.0.6.0.0 (build:r227074)

Image version      : 2.0.6.0.0
Image build version : 227074
Kernel version     : 2.6.32-400.26.3.el5uek
```

- `imagehistory`: You can use this command to view the lifecycle history of a guest vServer, as shown in the following example:

```
# imagehistory

Image version      : 2.0.6.0.0
Image build version : 227074
Image mode         : fresh
```

Note that in the case of a vServer for which the template was patched or upgraded, `Image mode` will show `update` and the kernel version will be displayed for all the image versions. In addition, for every upgrade and patch applied, the date and time when the image was activated and the status will be displayed, as shown in the following example:

```
# imagehistory
Image version      : 2.0.4.0.0
Image build version : 221802
Kernel version     : 2.6.32-200.21.2.el5uek

Image version      : 2.0.6.0.0
Image build version : 227074
Kernel version     : 2.6.32-400.26.3.el5uek
Image activated    : 2013-08-28 22:52:45 +0300
Image mode         : update
Image status       : SUCCESS
```

## Linux Server-Based Exalogic Guest Base Template

The Exalogic Guest Base Template in EECS 2.0.6 contains a Linux *server* installation, as opposed to a Linux *desktop* installation in earlier releases. With this change, you can run Oracle Fusion Middleware, Oracle Database, and Oracle applications on guest vServers without installing additional modules that are necessary for Linux servers.

## Detailed View of Resource-Allocation by Account

Cloud Admin users can get a consolidated view of the resources—vCPUs, storage, and memory—allocated to each account through the **Accounts** table in the Exalogic Control browser user interface.

For more information, see the "Examining the vDC" section in the *Oracle Exalogic Elastic Cloud Administrator's Guide*.

## New Features and Enhancements in EECS 2.0.4

This section lists the new features and enhancements in EECS 2.0.4.

### CPU Oversubscription

To improve hardware utilization and to facilitate denser consolidation of applications, the Exalogic vDC can be configured to support more vCPUs than the available CPU threads—that is, the CPU resources can be oversubscribed.

For more information, see the "Configuring CPU Oversubscription" section in the *Oracle Exalogic Elastic Cloud Administrator's Guide*.

### High Availability for Guest vServers

When you create a vServer, high availability is enabled by default for the new vServer. If a HA-enabled vServer crashes, the failed vServer is restarted automatically on the same compute node.

For more information, see the "Managing High Availability of vServers" section in the *Oracle Exalogic Elastic Cloud Administrator's Guide*.

## Known Issues

This section lists the known issues in the Exalogic Elastic Cloud Software. The issues listed in this section are applicable to all EECS releases unless noted otherwise.

### Known Issues for Exalogic 2.0.6.4.0 Release

Refer to the following MOS document to verify existing known issues: Known Issues for Exalogic 2.0.6.4.0 Release (Doc ID 2360627.1).

### Shared Storage Access for Customer vServers

vServers created by customers can access shared file systems in Exalogic using the `IPoIB-vserver-shared-storage` network. Multiple accounts in the Exalogic virtualized environment use shared binaries across vServers. Oracle recommends that customers set access guidelines and restrictions accordingly.

### Usage of the Maintenance Mode Feature

In the Exalogic Control BUI on an Exalogic machine running EECS 2.0.4, the **Place in Maintenance Mode** action is enabled and clickable for any compute node that you select. However, you *must not* use that action for compute nodes on which any vServer is running.

In EECS 2.0.6, the **Place in Maintenance Mode** action is disabled when you select a compute node on which any vServer is running.

### Removing a Public Network from an Account Is Not Supported

**Affected release:** 2.0.4

Exalogic does not support removing a public network from an account.

#### Workaround

You can set the network resource limit for the account to zero, as follows:



#### Note:

Before setting the network resource limit for an account to zero, ensure that all the vIPs of the network have been deallocated as described in the "Deallocating Virtual IPs for an Account" section of the *Exalogic Elastic Cloud Administrator's Guide*.

1. Log in to the Exalogic Control BUI as a user with the `Cloud Admin` role.
2. Select **vDC Management** from the navigation pane on the left.
3. Expand **Accounts** and select the account from which you want to remove the network.

The dashboard for the account is displayed

4. From the Actions pane on the right, select **Update Account**.  
The Update Account wizard is displayed.
5. Click **Next**.
6. Scroll down to the Public Networks Resource Limits table.
7. Select the **Limit** field for the network you want to remove and set it to 0.
8. Click **Next**.
9. Click **Finish**.

## Suspended State Is Not Supported for vServers

Exalogic does not support the *suspended* state for vServers.

### Workaround

If a vServer is in the suspended state, you can do the following to return it to the running state:

1. Log in to the Oracle VM Manager console as `admin`:

```
https://host:7002/ovm/console/
```

`host` is the host name or IP address of the vServer hosting the Oracle VM Manager component of Exalogic Control.

2. **For EECS 2.0.4 (or earlier releases)**, do the following:
  - a. Under the **Home** view, select the vServer that is in the suspended state in the **Server Pools** folder.
  - b. Right-click on the vServer, and select **Kill** from the context menu.
  - c. Right-click on the vServer, and select **Start** from the context menu.

**For EECS 2.0.6**, do the following:

- a. In the toolbar above the navigation pane on the left, click **Find** (magnifying glass icon).  
The Find dialog box is displayed.
  - b. In the **Type** field, select **Virtual Machines**.
  - c. In the **Result** field, select the vServer that you want to kill, and then click **OK**.
  - d. On the resulting page, right-click on the required vServer, and select **Kill** from the context menu.
  - e. Right-click on the vServer, and select **Start** from the context menu.
3. Log out of the Oracle VM Manager console.

## Full Job Log Not Visible in the Exalogic Control BUI

**Affected release:** 2.0.4

For a job initiated by a user with the `Cloud User` role, the Exalogic Control BUI does not display the full job log when the same `Cloud User` or the `Exalogic System Admin` user is logged in.

#### Workaround

To view the full job log, log in as the `root` user.

## Cloud Users Cannot Act on Alerts

**Affected release:** 2.0.4

Users with the `Cloud User` role cannot act on alerts displayed in the Incidents tab of the Exalogic Control BUI.

#### Workaround

To act on alerts displayed in the Incidents tab of the Exalogic Control BUI, log in as a user with the `Cloud Admin` role.

## Exalogic Control BUI Should Not Be Used for Upgrading Firmware

**Affected release:** 2.0.4

In the Assets accordion of the Exalogic Control BUI, when a compute node, switch, or PDU is selected, the Update Firmware action is available in the Actions pane. However, *do not* use the Update Firmware action in the Exalogic Control BUI to upgrade the firmware of Exalogic assets.

To apply firmware updates provided in Exalogic Patch Set Updates (PSUs) and patches, follow the instructions in the README that is included in the relevant PSU or patch.

## Limit on Number of Volumes Attached to a vServer

When a guest vServer is created, a storage volume is created and associated with the vServer by default. This volume contains the `/`, `root`, and `swap` disks. In addition to this storage volume, a maximum of three more volumes can be attached to a single vServer. Attaching more than three additional volumes to a vServer is not permitted, and attempts to do so will fail with an appropriate error message.

## Cannot Add Alert Monitoring Rules for vServers Through the vDC Management Accordion

**Affected release:** 2.0.4

In the Exalogic Control BUI, alert-monitoring rules for vServers *cannot* be added through the vDC Management accordion—that is, by selecting a vServer, selecting the Monitoring tab, and clicking the **Add Alert Monitoring Rule** button (*plus* icon).

#### Workaround

You *can* add alert-monitoring rules for vServers by selecting the vServers in the Assets accordion, selecting the Monitoring tab, and then clicking the **Add Alert Monitoring Rule** button (*plus* icon) there.

## Time Zone of Guest vServers is Hard-Coded to PST

When a vServer is created, the time zone is hard-coded to Pacific Standard Time (PST).

### Workaround:

Do one of the following:

- Set the required time zone in the base template by modifying it.
- Set the required time zone in the vServers.

## Exalogic Control BUI May Select the Wrong vServer for Deletion

### Affected release: 2.0.4

In isolated cases, when a user selects a vServer in the Exalogic Control BUI and deletes it, Exalogic Control may select a different vServer. This issue occurs due to BUI refresh issues.

### Workaround

While deleting a vServer, before clicking the final **Delete** button, carefully verify the name of the vServer that is displayed as selected for deletion in the Confirmation screen.

## "Navigate to Selected Oracle VM Server and Virtual Server" Buttons Do Not Work

When you log in to the Exalogic Control BUI as a user with the Cloud Admin or Exalogic Systems Admin role, if you expand **Administration** in the navigation pane on the left, you can select the Oracle VM Manager and view a list of Oracle VM servers and virtual machines on the **Summary** tab. However, in the **Oracle VM Servers** and **Virtual Machines** sections of the **Summary** tab, the **Navigate to the selected Oracle VM Server** and **Navigate to the selected Virtual Server** buttons—with the  icon—do not work.

### Workaround

You can navigate to a specific vServer by doing the following:

1. In the navigation pane on the left, select **Assets**.
2. In the search field, enter the name of the vServer you want to find.
3. Click the **Down arrow** button adjacent to the search field.

## Uploading a Server Template May Fail

Uploading server templates may fail in the following circumstances:

- You are uploading a server template larger than the amount of free space on the Exalogic Control vServer.

- Multiple users are uploading server templates simultaneously with a total size greater than the free space on the Exalogic Control vServer.

## Late Lock Exception

**Affected release:** 2.0.6

When multiple vDC operations are running concurrently—such as vServer deletion and creation jobs running in parallel or OVAB assembly operations running in parallel, at times, some of the operations may fail.

For example, when five users concurrently register OVAB assemblies, while some of the assembly registration operations are completed successfully, a few may fail with an error message in the Exalogic Control console, as shown in the following example:

```
Result : Import Ovf Assembly from URL:  
http://192.168.20.13:8003/tmpResourceFile.1370426698682.ova Failed. Exception  
occurred: cannot create template from assembly: OVMAPI_A019E Server  
operationsucceeded but job failed due to a late lock exception.
```

This error is more likely to occur for operations involving vServers with a single vCPU than for vServers with more than one vCPU.

If this issue occurs, try the failed job again.

## vServer Shutdown Failure

**Affected release:** 2.0.6

At times, a vServer shutdown job may hang and remain in a suspended mode until Exalogic Control times out the operation. Until the operation is timed out, other jobs in the queue may be blocked.

### Workaround

Kill the vServer by using Oracle VM Manager, as follows:

1. Log in to the Oracle VM Manager BUI as `admin`:  

```
https://elcontrol_vm:7002/ovm/console/
```

  
`elcontrol_vm` is the host name or IP address of the Exalogic Control vServer.
2. Select the **Servers and VMs** tab.
3. In the toolbar above the navigation pane on the left, click **Find** (magnifying glass icon).  
The Find dialog box is displayed.
4. In the **Type** field, select **Virtual Machines**.
5. In the **Result** field, select the vServer that you want to kill, and then click **OK**.
6. On the resulting page, right-click on the required vServer, and select **Kill** from the context menu.
7. Log out of the Oracle VM Manager console.

## Booting from ISO through ILOM on Oracle Exalogic Elastic Cloud X5-2 Compute Nodes Does Not Work

**Affected release:** 2.0.6.2

Booting from ISO through Integrated Lights Out Manager (ILOM) on Oracle Exalogic Elastic Cloud X5-2 compute nodes doesn't work with the version of ILOM shipped with ECCS 2.0.6.2.0.

### Workaround

User must reimage Exalogic compute nodes using Preboot Execution Environment (PXE) boot server.

## CheckHWnFWProfile Command Incorrectly Reports a Disk Controller Firmware Verification Failure

**Affected release:** 2.0.6.2

When Oracle Solaris 11.2 is installed on Oracle Exalogic Elastic Cloud X5-2 compute nodes, the command `/opt/exalogic.tools/tools/CheckHWnFWProfile` incorrectly reports a firmware verification failure containing the following message: *Does not contain supported disk controller. Required LSI MR9261-8i. But has LSI MR9361-8i.*

### Workaround

User can disregard this error message, the disk controller firmware version LSI MR9361-8i is supported.

## Zero Storage Allocated at VDC Level

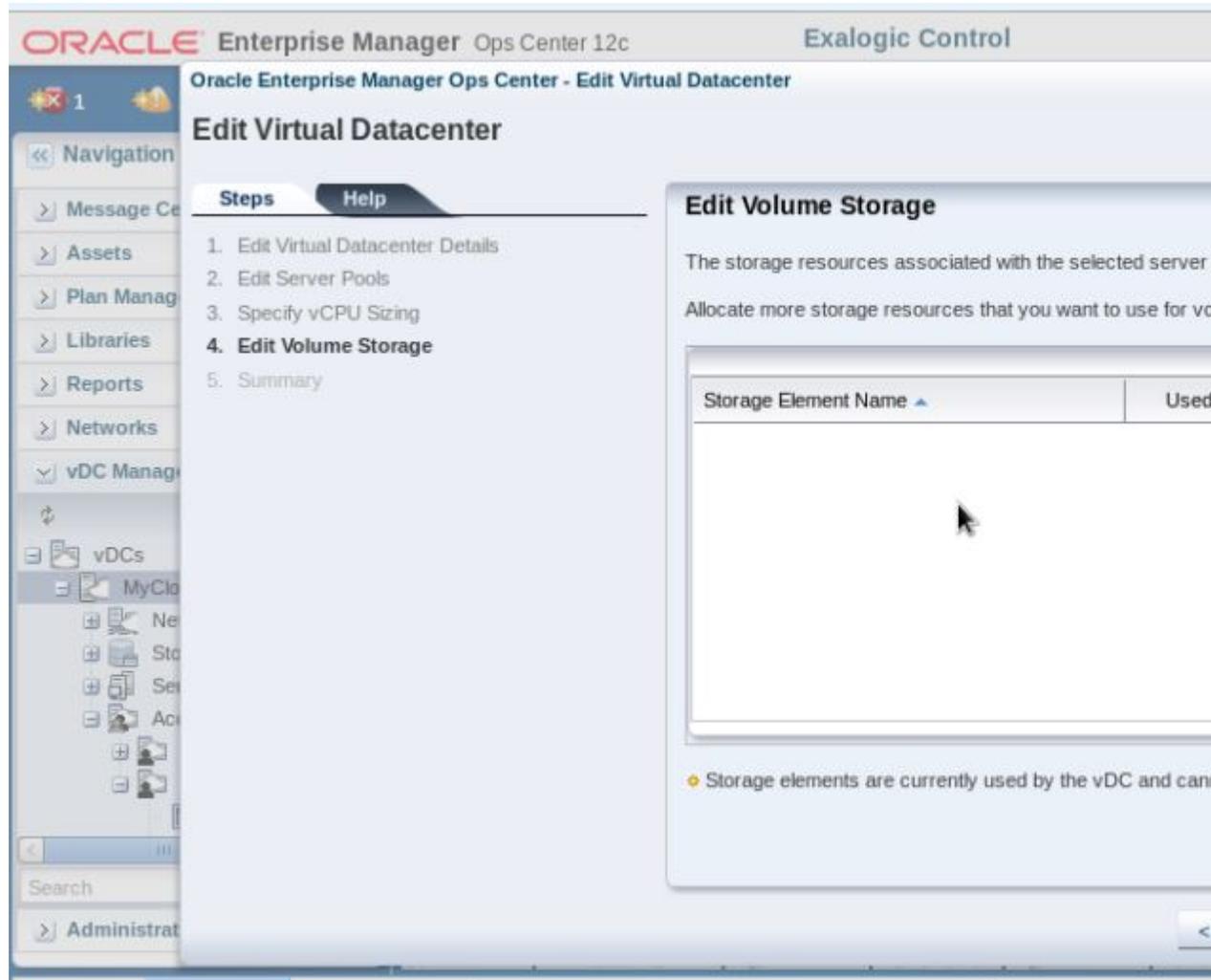
Storage value shows zero allocation at VDC level. This can be found on Enterprise Manager Ops Center 12c.

Following are the steps to find the same:

1. Navigate to **vDC > MyCloud > Edit Virtual Datacenter**.
2. Click **Next** till **Edit Volume Storage**.
3. Under **Edit Volume Storage** nothing is shown as value.

### Note:

In PSUs default storage is assigned.



**Workaround**

This is an intermittent issue and it is a result of storage not discovered properly.

This issue can be resolved by restarting the Control Stack.

# 2

## Release Notes for Oracle Virtual Assembly Builder

This chapter describes issues associated with Oracle Virtual Assembly Builder. It includes the following topics:

- [Installation and Configuration Issues and Workarounds](#)
- [General Issues and Workarounds](#)
- [Component Specific Issues](#)
- [Documentation Errata](#)

### Installation and Configuration Issues and Workarounds

This section describes issues related to installation of Oracle Virtual Assembly Builder. It includes these items:

- [Deployer Instance Directory Only Suitable for Use in Deployer-only Installation](#)
- [Disk Warning Causes Installation Failure](#)
- [Errors about Missing Libraries in the VM](#)
- [Incorrect sshd\\_config File in Base Image](#)
- [Exceptions in Message Log after Upgrade](#)
- [Oracle Virtual Assembly Builder Studio Installer May Fail on Large Disks](#)

#### Deployer Instance Directory Only Suitable for Use in Deployer-only Installation

When you perform a combined (Studio and Deployer) installation of Oracle Virtual Assembly, and subsequently configure the Deployer in an Oracle WebLogic Server domain, the installation creates an `ab_instance` directory under the Oracle WebLogic Server domain root ("Deployer instance directory"). This `ab_instance` will not be functional for the purposes of using `abctl`.

Instead, in the case of a combined installation you should only use the "Studio Instance directory" that is created by the Oracle Virtual Assembly Builder installer (typically located directly under `MIDDLEWARE_HOME`).

A Deployer instance directory is only suitable for use in a Deployer-only installation.

#### Disk Warning Causes Installation Failure

When installing Oracle Virtual Assembly Builder on an Oracle Exalogic machine with a large disk space, a known issue with the Oracle Universal Installer prevents the

installation from completing. You can see an error that includes "errorString:Space required for Oracle home is 350 MB.[[ Space Available: 0 MB ]."

The workaround is to launch the installer as follows:

```
./runInstaller -novalidation -ignoreDiskWarning
```

## Errors about Missing Libraries in the VM

If certain libraries are missing from the VM, an exception may be recorded in the logs on the VM. The exception is the result of a file copy, and is harmless. The file is still successfully copied. The exception appears similar to the following:

```
[2012-04-25T03:04:04.949-04:00] [as] [TRACE] []  
[oracle.as.assemblybuilder.common] [tid: 11] [SRC_CLASS:  
oracle.as.assemblybuilder.common.jni.Native] [SRC_METHOD: <init>] Unable to load  
native library.
```

## Incorrect sshd\_config File in Base Image

The base images used in creating the VMs has an incorrect sshd\_config file. The line

```
#AllowTcpForwarding yes
```

is commented out and should read:

```
AllowTcpForwarding yes
```

To allow remote introspection, you must update the `/etc/ssh/sshd_config` file on the VMs and restart SSH (`/etc/rc.d/init.d/sshd stop/start`).

## Exceptions in Message Log after Upgrade

After upgrading Oracle Virtual Assembly Builder, you may see exceptions in the Message.log after launching Oracle Virtual Assembly Builder Studio for the first time. These exceptions can be ignored.

### Workaround

If you reopen Oracle Virtual Assembly Builder Studio, you no longer see the exceptions.

## Oracle Virtual Assembly Builder Studio Installer May Fail on Large Disks

The Oracle Virtual Assembly Builder Studio installer ("runInstaller") may fail on large disks. The failure appears as an error message in the wizard erroneously stating that there is not enough disk space together with error messages on the console from which the installer was launched.

To work around this issue, install a 64-bit Oracle HotSpot Java JDK6 or JRE6 on the host where the installation will occur. Then explicitly specify the path to the JRE using the `-jreLoc` command line argument, for example:

```
% runInstaller -jreLoc <path-to-jre>
```

Note that Java 7 is not supported in this release of Oracle Virtual Assembly Builder.

## General Issues and Workarounds

This section describes general issues and workarounds for Oracle Virtual Assembly Builder Studio operations, such as introspection, capturing file sets, and deployment. It includes these items:

- [Oracle Virtual Assembly Builder Introspection Issues](#)
- [Oracle Virtual Assembly Builder File Set Capture Issues](#)
- [Oracle Virtual Assembly Builder Deployment Issues](#)
- [Other Oracle Virtual Assembly Builder Issues](#)

## Oracle Virtual Assembly Builder Introspection Issues

This section describes issues observed during introspection. It includes these items:

- [Remote Introspection Must Be Run as Specific Users](#)
- [Unable to Create Secure Connections for Multiple OVMs in a Single Session](#)
- [Do Not Try to Import and Register a Template at the Same Time](#)
- [Time Zones Must Match Between Base Image and Reference Systems](#)

### Remote Introspection Must Be Run as Specific Users

The `remoteUser` specified for remote WLS introspection must be either the owner of the WLS process that is running on the reference system, or must be a user that has permission to read files that the owner of the WLS process creates.

### Unable to Create Secure Connections for Multiple OVMs in a Single Session

You can create secure connections to multiple OVMs using Oracle Virtual Assembly Builder Studio. However, you cannot create secure connections to multiple OVMs during a single Studio session. In order to create multiple secure connections, you must create a secure connection, then exit Oracle Virtual Assembly Builder Studio. Restart Studio and create the next secure OVM connection. You must repeat this process for each desired secure OVM connection.

### Do Not Try to Import and Register a Template at the Same Time

Do not attempt to import and register a template at the same time. Doing so will cause the registration to fail and may cause unforeseen side-effects.

### Time Zones Must Match Between Base Image and Reference Systems

It is possible to have a time zone in your base image that is significantly different from the time zone of a reference system being introspected. If the introspected reference system is an Oracle WebLogic Server installation that has demo SSL certificates that were recently created you can experience a deployment failure caused by invalid SSL certificates. This is due to the valid time listed in the certificate being in the future relative to the time in the base image. Make sure the time zone in your base image matches the time zone of your reference systems to avoid this type of failure.

## Oracle Virtual Assembly Builder File Set Capture Issues

This section describes issues observed during file set capture operations. It includes these items:

- [Troubleshooting Template Registration Errors](#)
- [Capturing File Sets with a Different userid than userid of Individual Who Installed Oracle Virtual Assembly Builder](#)
- [Template Status Not Updated](#)
- [Oracle Virtual Assembly Builder Instance Directory Should Not Reside in FMWHOME](#)
- [Non-Root User Cannot Capture File Sets Owned by Root](#)

### Troubleshooting Template Registration Errors

If you receive an error while registering a template (such as `ImportError`, or any error including `oracle.ovs.biz.exception.OVSEException`) in the Oracle Virtual Assembly Builder log file, be sure to check the Oracle VM logs for the root cause, as it may not be expressed in the Oracle Virtual Assembly Builder logs.

### Capturing File Sets with a Different userid than userid of Individual Who Installed Oracle Virtual Assembly Builder

When capturing file sets on a local reference system that was installed using a different OS userid than the one used for the Oracle Virtual Assembly Builder installation, capturing file sets will fail with file permission errors. There are two workarounds for this issue. Use either:

- Run Oracle Virtual Assembly Builder as root. When you do this, all generated artifacts in catalog (such as metadata, file sets, and others) are owned by the root user and all subsequent operations must also be executed as root user.
- Run local file set capture through remote ssh. Treat the local reference system as remote and perform remote file set capture, using an ssh user that has read permission of the reference system installation.

### Template Status Not Updated

An intermittent problem has been reported in which the status of a template is not immediately updated after the status has changed. If you encounter this issue, stop and restart Oracle Assembly Builder Studio.

### Oracle Virtual Assembly Builder Instance Directory Should Not Reside in FMWHOME

During introspection, you may receive a full disk error even though you have the required disk space available. You encounter this issue if you have specified an Oracle Virtual Assembly Builder instance that is located within a Fusion Middleware instance home. To correct the problem, move your Oracle Virtual Assembly Builder instance directory outside of the Fusion Middleware instance home.

## Non-Root User Cannot Capture File Sets Owned by Root

During introspection, if there are files owned by root in a directory such as ORACLE\_HOME, a non-root user is prevented from capturing the file sets in the ORACLE\_HOME as part of the introspection.

The solution is to remove these files, or have their ownership changed to the user that is capturing the file sets.

## Oracle Virtual Assembly Builder Deployment Issues

This section describes issues observed during deployment. It includes these items:

- [Scale Operations and Failed Deployments](#)
- [Importing Using the ImportAs Option Removes All Deployment Plan Overrides](#)
- [Unresolved IP Addresses Result in Error](#)
- [Complete Editing Operations on Assemblies Before Creating a Deployment Plan](#)
- [NFS Mounting Not Supported in Reference Systems](#)
- [Firewall Implications for Template Registration](#)
- [Recovering from Unexpected Errors During Deployment](#)
- [Deployment Failure Due to 'Too Many Open Files' Error](#)
- [Deployment Plan Does Not Override MAC Address](#)

### Scale Operations and Failed Deployments

Scale operations are affected by failed deployments.

Scale down operations only remove properly (successfully) deployed instances. In the case of failed deployments, those instances are not removed during scale down. Failed instances are left for you to troubleshoot. If you want to remove instances that failed to deploy, you must undeploy them, fix the plan, and then redeploy.

Scale up operations are prohibited if a failed instance exists in the assembly. As above, you must undeploy, fix the problem, and then redeploy.

### Importing Using the ImportAs Option Removes All Deployment Plan Overrides

When importing an assembly or assembly archive (OVA file) using the 'importAs' option, the deployment plans are imported, but any overrides that were in the original deployment plan are not imported. It will appear as if you have a new deployment plan with no overridden properties.

### Unresolved IP Addresses Result in Error

Deployment attempts will fail if IP addresses specified in the deployment plan are unresolved on the Oracle Virtual Assembly machine (the machine on which Deployer is running). To avoid this issue, ensure that IP addresses are resolvable.

## Complete Editing Operations on Assemblies Before Creating a Deployment Plan

If you have created deployment plans for an assembly, and then made certain modifications to the assembly (notably, adding or removing network interfaces from one of the assembly's appliances), then deployment plan values may become misassigned. (For example, the IP address and netmask for a deleted network interface may be assigned to a different network interface).

To avoid this, it is recommended that you create and populate deployment plans only after you have completed all desired editing operations on the assembly. The safest approach is to create an assembly archive first, then create deployment plans. This is because creating the assembly archive prevents further edit operations that may invalidate the deployment plan.

## NFS Mounting Not Supported in Reference Systems

Oracle Virtual Assembly Builder does not support NFS mounting in the reference system, since these NFS mounts will not be created by Assembly Builder in the deployment environment. In some cases, deployment will fail if the reference system has an NFS mount.

A number of third-party tools require mounting file systems as part of their configuration. This can require specific workarounds. For example, when using the Websphere MessageQueue external JMS server, you may encounter the following issues:

- The configuration for the JMS Server requires access to a class provided by Websphere. In some environments, those classes (also known as jars) are added to the `PRE_CLASSPATH` environment variable prior to starting Oracle WebLogic Server. Ensure that the configuration for your environment does not require modification for Oracle WebLogic Server to be able to see these jar files automatically on startup.
- The Oracle WebLogic Server configuration for the JMS server requires a JNDI connection URL as follows, `'file://<path to mq config>'`. This file resides on the external Websphere server, and must be mounted locally so it can be used.

## Firewall Implications for Template Registration

To allow template registration, the Oracle VM host must be able to download the template through HTTP from the Assembly Builder host. If you are using a firewall (for example, iptables on Linux) then you must properly configure that firewall to allow the communication. By default Oracle Virtual Assembly Builder specifies its HTTP port to be "0" which causes the system to issue one (so there is no default port).

You can specify the port by setting the `"ovmPort"` property in `deployer.properties`.

A simpler solution is to turn off the firewall. For iptables, use the following command: `/etc/init.d/iptables stop`

To configure your firewall, refer to the documentation for your firewall.

## Recovering from Unexpected Errors During Deployment

Whenever an unexpected error occurs during deployment, you typically want to examine what went wrong and perform necessary cleanup before recovering from the error. For these reasons, Oracle Virtual Assembly Builder provides neither an automatic recovery mechanism, nor a tool to recover from a failure.

To perform recovery of the Deployer:

1. Examine the resource pools in the corresponding Oracle Virtual Machine managers configured in the `resource-pools.xml` file relevant to the crashed `AB_INSTANCE` and perform cleanup. This includes cleaning up (stopping and destroying) all instances initiated by Oracle Virtual Assembly Builder.
2. Delete the `.hastore` file.

This returns the Deployer to a clean state.

## Deployment Failure Due to 'Too Many Open Files' Error

Some components may require a large number of open files to deploy successfully. Even if a base image with the required limits is provided, the limit will be reset to 4096 by the Oracle Virtual Assembly Builder service that runs on the VM.

The workaround is to edit `$ORACLE_HOME/resources/bottler/ab/etc/ab_service.sh` to set the desired limit instead of 4096, and then to create (or recreate) the assembly archive.

## Deployment Plan Does Not Override MAC Address

In an Oracle Exalogic deployment, using the deployment plan to override a MAC address for an appliances network interface does not actually take effect on the appliance. The deployment succeeds, but the appliance uses a different MAC address, allocated from IaaS.

You should avoid setting the interface MAC address property in your deployment plan to a custom MAC address.

## Other Oracle Virtual Assembly Builder Issues

This section describes other issues observed while performing operations in Oracle Virtual Assembly Builder. It includes these items:

- [Add DNS Button Does Not Work When Using OVAB Studio in Japanese Language](#)
- [Large Delete Operations Can Make Oracle Virtual Assembly Builder Studio Appear to Lock Up](#)
- [Virtual Machine Swap Space](#)
- [Top-level Delete Messages in English Only](#)
- [Export Operation Requires Temporary Local Storage](#)
- [Non-supported Character When Naming Vnets](#)
- [Obsolete Assembly Archives After Download and Import](#)

- [Zero-count Appliances Cannot Be Scaled in Oracle Virtual Assembly Builder Studio](#)
- [Password Field Is Not Editable When Configuring a New Domain](#)

## Add DNS Button Does Not Work When Using OVAB Studio in Japanese Language

When following the procedure to create resource pools using the graphical interface of Oracle Virtual Assembly Builder Studio set to the Japanese locale, the **Add DNS** button does not function. To work around this problem, set the locale to English:

1. Exit Oracle Virtual Assembly Builder
2. Execute the commands:

```
export LC_ALL= c
./abstudio.sh
```
3. Create resource pool connection in the English locale.

## Large Delete Operations Can Make Oracle Virtual Assembly Builder Studio Appear to Lock Up

When large top-level items are deleted through Oracle Virtual Assembly Builder Studio, the interface may appear to have locked-up, when in fact it is running normally. This is normal behavior, allow the application to finish its task.

## Virtual Machine Swap Space

Ensure your virtual machines have at least 500MB of available swap space (on each machine).

## Top-level Delete Messages in English Only

Messages displayed during top-level delete of items are displayed in English only.

## Export Operation Requires Temporary Local Storage

In an export operation, the AB\_INSTANCE/tmp directory is used for storage of intermediary artifacts. This means that an export may fail if there is not enough space in the disk where AB\_INSTANCE is located, even though the destination directory may be located in another disk.

## Non-supported Character When Naming Vnets

It is possible to create networks in Oracle VM 3.0 that have the period ('.') character in the name. But Oracle Virtual Assembly Builder does not support this character in the name so you will not be able to name your Vnet in Oracle Virtual Assembly Builder after the actual network name in your Oracle VM 3.0 environment.

The `createAssembly` command in the Oracle Virtual Assembly Builder `abctl` command-line interface fails to disallow a Vnet name containing the '.' character. The Oracle Virtual Assembly Builder Studio graphical user interface correctly disallows it.

## Obsolete Assembly Archives After Download and Import

In a Oracle Virtual Assembly Builder Studio or combined (Studio and Deployer) installation, downloading an assembly archive from the Deployer or from the EM Software Library automatically imports the archive into the local catalog. If you optionally specify a new name for the assembly when downloading, then the archive file will be saved on disk using the new name, and imported into the catalog using the new name. However, the contents inside the archive will still refer to the original assembly name, and hence this downloaded archive should be considered obsolete.

Therefore, after a successful download and import, the downloaded archive should not be used. It can be deleted manually from `AB_INSTANCE/archives`, or it can be overwritten by using the `createAssemblyArchive` command with the `-force` option, or the create template wizard in the Oracle Virtual Assembly Builder Studio graphical user interface (which implicitly uses the `-force` option).

## Zero-count Appliances Cannot Be Scaled in Oracle Virtual Assembly Builder Studio

If you deploy an assembly that contains a 'zero-count' appliance - that is, an appliance with its scaling minimum and initial target both set to 0 - you will not be able to scale that appliance up using the Oracle Virtual Assembly Builder Studio graphical user interface. Use the Oracle Virtual Assembly Builder command-line interface `scale` command instead. If the `describeScalingGroups` command does not show the group you want to scale, use the `appliance id`, which can be found in the 'Appliances' column of the `describeAssemblyInstances` output.

## Password Field Is Not Editable When Configuring a New Domain

**Platform:** Linux

On Linux systems, when creating a new domain in the Oracle Fusion Middleware Configuration Wizard, the **Password** and **Confirm Password** fields are sometimes not editable, and you cannot enter a password to create a domain.

### Workaround

There are two ways to work around this issue:

- To work around the issue each time it happens, click the Close Window **X** button in the upper right corner of the Configuration Wizard. In the confirmation dialog that appears, click **No** to return to the Configuration Wizard. You can then enter and confirm the password for the domain.

- To fix this issue permanently:

1. Kill all `scim` processes. For example:

```
kill `pgrep scim`
```

2. Modify (or create) the file `~/.scim/config` to include the following line (case-sensitive):

```
/FrontEnd/X11/Dynamic = true
```

3. If you are running VNC, restart the VNC server.
4. Run the Configuration Wizard again.

## Component Specific Issues

This section describes specific issues for components that Oracle Virtual Assembly Builder can introspect. The list of issues for each component presents the most severe or frequently encountered issues first, followed by lower priority issues.

This section describes the following topics:

- [Oracle Virtual Machine](#)
- [Oracle WebLogic Server Issues](#)
- [Oracle Web Cache Issues](#)
- [Oracle Database Issues](#)
- [Oracle Forms and Oracle Reports Issues](#)

### Oracle Virtual Machine

This section describes issues for Oracle VM. It includes these items:

- [Intermittent Errors When Using Oracle VM](#)
- [Limit Virtual Machine Names to 100 Characters or Less](#)
- [Limit Virtual Machine Passwords to 50 Characters or Less](#)
- [Limitation on Number of Virtual Disks](#)
- [VNC Access Only Available through Oracle VM Manager](#)

### Intermittent Errors When Using Oracle VM

Intermittent errors have been reported when using Oracle VM. If you receive an error that includes `oracle.ovs.biz`, check the Oracle VM logs to ensure you understand the root cause of the problem. In some cases, simply reattempting the task will solve the problem, but consulting the logs is the best approach.

### Limit Virtual Machine Names to 100 Characters or Less

Oracle Virtual Machine limits virtual machine names to 100 characters or less. If your names are too long, you will receive the error:

```
oracle.ovs.biz.exception.invalidNameException: OVM-4008
```

Oracle Virtual Assembly Builder Deployer determines virtual machine names based on the following format:

```
deploymentId_subassemblyName_applianceName_instanceName0
```

In order to have virtual machine name length in the defined 100 character limit, the assembly name (and all subassembly names) and appliance names combined must be short enough that, when combined, are less than 100 characters.

### Limit Virtual Machine Passwords to 50 Characters or Less

Oracle Virtual Machine limits virtual machine passwords to 50 characters or less; your virtual machine password must be less than 50 characters long. If your password is

too long, you will receive the error: Oracle.ovs.biz.exception.OVSException: OVM-5101  
The template{0} cannot be found

## Limitation on Number of Virtual Disks

Oracle VM supports handling an appliance with up to 26 virtual disks. If you attempt to perform operations to create a larger number of virtual disks, you will experience a failure and an error message indicating that a 'disk image declared in the OVF does not exist in the OVA.'

## VNC Access Only Available through Oracle VM Manager

Although you must supply a VNC password when creating templates, and can override this password in a deployment plan, neither of these values will actually take effect. You must access virtual machine VNC consoles through the Oracle VM Manager console, using the appropriate credentials as defined by Oracle VM Manager.

## Oracle WebLogic Server Issues

This section describes issues for Oracle WebLogic Server. It includes these items:

- [Forward Slashes in Server Service Names Cause Oracle WebLogic Server Deployment Failures](#)
- [Applications with JDBC Remap May Need to be Manually Restarted](#)
- [Applications Accessing Web Services Not Updated at Deployment](#)
- [Limitation with Oracle WLS Domains Upgraded from 10.3.1](#)
- [Admin URL Required to be Specified When Managed Server is No Longer Running](#)
- [WLS Plug-in Does Not Support Changing Ownership of File Sets](#)
- [Relocating Node Manager Home Not Supported](#)
- [User-specific Changes to Setdomainenv.sh are Not Preserved](#)

## Forward Slashes in Server Service Names Cause Oracle WebLogic Server Deployment Failures

You can create a WebLogic Server service (such as a JMS server definition or a data source definition) with a name that contains a forward slash ('/'). Services with forward slashes in their names will cause WebLogic Server deployments to fail. To work around this, ensure that your WebLogic Server services do not have the '/' character in their names.

## Applications with JDBC Remap May Need to be Manually Restarted

An error has been reported in which an application using JDBC data source mapping configured at the application scope fails to start. The failure occurs only for deployments on Oracle WebLogic Server AdminServer, and only immediately after the AdminServer itself is deployed.

To correct this problem, manually start the AdminServer.

## Applications Accessing Web Services Not Updated at Deployment

An application that accesses a Web service that is also hosted on the Oracle WebLogic Server reference system will not be updated to point to the new web service location upon deployment. You must update the application to access the web service WSDL on the new Oracle VM host, and then redeploy the application through Oracle WebLogic Server administration tools, such as Admin Console or `wlst`, to the Oracle VM Oracle WebLogic Server environment.

## Limitation with Oracle WLS Domains Upgraded from 10.3.1

Oracle Virtual Assembly Builder uses a pack/unpack utility when moving Oracle WebLogic Server domains. An issue with the utility causes the unpack operation to fail when using the utility to move a domain that was originally a 10.3.1 domain, but which was upgraded to 10.3.2 during installation of 10.3.2.

## Admin URL Required to be Specified When Managed Server is No Longer Running

This issue applies to an uncommon scenario in which Oracle Virtual Assembly Builder has deployed and started the required instances in the assembly, including the Oracle WebLogic Server Managed Servers, and later the Managed Server (but not the guest OS) has either crashed or been explicitly shutdown through an external tool.

If you want to perform manual starts from the context of the guest OS, you must manually modify the `StartManagedServer.sh` script to provide the correct Admin Server URL (Admin Server hostname). This is required because the default admin URL has the wrong value (the machine name of the Admin Server is not known at the time of template creation).

You can still start or stop the server through the node manager in Admin Console.

## WLS Plug-in Does Not Support Changing Ownership of File Sets

The Oracle WebLogic Server plug-in does not support changing the ownership of file sets. The default 'oracle' user must be used or unexpected results, including possible deployment failure, could result.

## Relocating Node Manager Home Not Supported

You observe an error where servers in an Oracle WebLogic Server cluster cannot start through Node Manager. This error can occur if you have relocated your Node Manager home, which is not supported. Specifically, the node manager configuration at introspection time only occurs when the `nodemanager.properties` file resides in the `<weblogic_home>/common/nodemanager` directory.

## User-specific Changes to `Setdomainenv.sh` are Not Preserved

If you set any user-specific parameters (such as `JAVA_OPTS`, `PRE_CLASSPATH`, or `POST_CLASSPATH`) in `setDomainEnv.sh` these settings are lost during the reconfiguration of the domain to Oracle VM.

## Oracle Web Cache Issues

This section describes issues for Oracle Web Cache. It includes these items:

- [Protocol Mismatch Error](#)
- [Oracle Web Cache Administration Port Not a Privileged Port](#)
- [Oracle Web Cache Scaling Issues](#)
- [Update Virtual Host Map Properties When Making Port Changes](#)

### Protocol Mismatch Error

If Oracle WebCache has been registered with Enterprise Manager and is introspected, the resulting Enterprise Manager registration output cannot be connected to the Oracle WebLogic Server Admin server input due to a protocol mismatch.

The workaround is to manually edit the `appliance.xml` file for Oracle Web Cache. Under `$AB_INSTANCE/catalog/metadata` find the `appliance.xml` file for the Oracle Web Cache component. Edit it and search for the 'EMRegistration' output. Change the protocol from 'HTTP' to 'http'. You should now be able to connect the output to the Oracle WebLogic Server Admin server input.

### Oracle Web Cache Administration Port Not a Privileged Port

Oracle Virtual Assembly Builder does not support the deployment of an Oracle Web Cache appliance with a privileged port (a port number less than 1024) as its administration port.

### Oracle Web Cache Scaling Issues

Oracle Virtual Assembly Builder does not automatically update the `webcache.xml` file for each instance after you perform scaling. Even when the scaling operation completes without errors, you must still update the `webcache.xml` file for each instance so that the instance recognizes all the members in the cluster.

### Update Virtual Host Map Properties When Making Port Changes

In Oracle Web Cache, there is not necessarily a correlation between the ports in the virtual host map (VHM) elements and those in the listen elements of the Oracle Web Cache configuration. Whenever you make a port change, you must update your VHM ports by manually updating the properties associated with the VHMs.

## Oracle Database Issues

This section describes issues for Oracle Database. It includes these items:

- [Deployment Error Due to Database Vault](#)
- [Use default name LISTENER on Reference Systems](#)
- [Limited Database Configuration Support](#)
- [Upgraded 10g Oracle Homes Cannot be Introspected](#)

## Deployment Error Due to Database Vault

If the database vault has been configured in your reference system's database home, you may experience failures during some Oracle Virtual Assembly Builder operations.

In order to avoid any problems, complete these steps:

1. Before introspection, execute the following command on your system to temporarily disable Database Vault in the database home:

```
$ make -f $ORACLE_HOME/rdbms/lib/ins_rdbms.mk dv_off ioracle
```

2. Re-start the database on your reference system and then shut it down.
3. After capturing the file sets, execute the following command on your reference system to re-enable Database Vault in the database home:

```
$ make -f $ORACLE_HOME/rdbms/lib/ins_rdbms.mk dv_on ioracle
```

4. Re-start the database on your reference system.
5. After deployment, execute the following command on the new virtual machine to enable Database Vault in the database home:

```
$ make -f $ORACLE_HOME/rdbms/lib/ins_rdbms.mk dv_on ioracle
```

6. Re-start the database on the new virtual machine.

## Use default name LISTENER on Reference Systems

During Oracle Virtual Assembly Builder operations, the listener on newly-created virtual machines starts using the default name LISTENER. If you used a different name for the listener on your reference system, you will receive an error. To avoid this error, ensure that you use the default name (LISTENER).

If you must use a different listener name, start your listener manually with the correct name:

```
$ORACLE_HOME/bin/lsnrctl start <listener name>
```



### Note:

To view the correct listener name, see: `$ORACLE_HOME/network/admin/listener.ora`.

## Limited Database Configuration Support

The database introspector expects the listeners (the listener.ora configuration) to be configured as follows:

```
(ADDRESS = (PROTOCOL = TCP)(HOST = example.cm)(PORT = 5521))
```

 **Note:**

The protocol, host, and port are all required, and must appear in the order above.

## Upgraded 10g Oracle Homes Cannot be Introspected

You cannot introspect a single-instance database Oracle Home if that Oracle Home has been upgraded from Release 10g.

## Oracle Forms and Oracle Reports Issues

This section describes issues for Oracle Forms and Oracle Reports. It includes these items:

- [Change nm\\* Files Ownership](#)

### Change nm\* Files Ownership

After deploying an assembly, in Oracle HTTP Server, Oracle Forms and/or Oracle Reports deployed virtual machines, change the ownership of the following files to the "root" user:

- \$ORACLE\_HOME/bin/nmo
- \$ORACLE\_HOME/bin/nmb
- \$ORACLE\_HOME/bin/nmhs

Alternatively, you can run `$ORACLE_HOME/bin/root.sh` as the root user which sets the right ownership on these files.

Not having the ownership set to "root" for these files impacts the Oracle EM Agent's ability to collect performance metrics.

## Documentation Errata

There are no documentation errata at this time.

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## Release Notes for Exalogic Hardware Components

This chapter provides links to release notes for Exalogic compute nodes, InfiniBand switches and the storage appliance.

- Oracle Server X6-2:  
[http://docs.oracle.com/cd/E62159\\_01/index.html](http://docs.oracle.com/cd/E62159_01/index.html)
- Oracle Server X5-2:  
[http://docs.oracle.com/cd/E41059\\_01/index.html](http://docs.oracle.com/cd/E41059_01/index.html)
- Sun Fire X4170 M2 Servers:  
<http://docs.oracle.com/cd/E19477-01/index.html>
- Sun Server X4-2:  
[http://docs.oracle.com/cd/E36975\\_01/html/E38016/index.html](http://docs.oracle.com/cd/E36975_01/html/E38016/index.html)
- Sun Fire X3-2 Servers:  
[http://docs.oracle.com/cd/E22368\\_01/html/E22356/index.html](http://docs.oracle.com/cd/E22368_01/html/E22356/index.html)
- Sun Network QDR InfiniBand Gateway Switches:  
[http://docs.oracle.com/cd/E26699\\_01/html/E26705/index.html](http://docs.oracle.com/cd/E26699_01/html/E26705/index.html)
- Sun Datacenter InfiniBand Switch 36:  
[http://docs.oracle.com/cd/E26698\\_01/html/E26702/index.html](http://docs.oracle.com/cd/E26698_01/html/E26702/index.html)
- Storage appliance software:  
<https://support.oracle.com/rs?type=doc&id=2021771.1>

For information on the version of the storage appliance software included for each EECS release, see MOS document ID 1530781.1:

<https://support.oracle.com/epmos/faces/DocumentDisplay?id=1530781.1>

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## Release Notes for Oracle Linux on Exalogic

The Oracle Linux operating system is pre-installed on the compute nodes of the Exalogic machine. This chapter lists the known issues in Oracle Linux on Exalogic. This chapter contains the following sections:

- [General Information](#)
- [General Issues and Workarounds](#)

### General Information

You can ignore the following messages that are displayed when you install or boot Oracle Linux:"

- The following error message appears on each Oracle Linux boot:
  - Starting mlx4\_vnic\_conf: Configuration file does not exist: /etc/infiniband/mlx4\_vnic.conf [[FAILED]|pages/createpage.action?spaceKey=JRP&title=FAILED&linkCreation=true&fromPageId=15410642]

This error is benign.

  - grep: /sys/class/net/bond1/bonding/slaves: No such file or directory/etc/sysconfig/network-scripts/ifup-eth: line 99: /sys/class/net/bond1/bonding/slaves: No such file or directory

Two instances of the above will occur each time `open-ib` boots. These messages do not prevent the image from functioning.
- The following error appears during Oracle Linux PXE install and is captured in the `install.log` file:

```
Installing kernel-uek-2.6.32-200.21.1.el5uek.x86_64

WARNING: No module ehci-hcd found for kernel
2.6.32-200.21.1.el5uek, continuing anyway

WARNING: No module ohci-hcd found for kernel
2.6.32-200.21.1.el5uek, continuing anyway

WARNING: No module uhci-hcd found for kernel
2.6.32-200.21.1.el5uek, continuing anyway
```

### General Issues and Workarounds

This section describes general issues and workarounds for Oracle Linux:

- [File Owner Shown as nobody When Shared Drive Is Mounted with NFSv4](#)

- [The limits.conf File May Contain Invalid Entries](#)
- [Need to Remount File Systems After System Reboots When NFSv4 Is Used](#)
- [Multicasting in Multi-Homed Environments for Oracle Linux](#)

## File Owner Shown as nobody When Shared Drive Is Mounted with NFSv4

On the Oracle Linux operating system, when you mount a shared drive with NFSv4 as the file system protocol on the client side, the ownership of any previously created files is shown as `nobody`. To avoid this problem, use an NIS or LDAP Server to configure name services associated with the user on Exalogic compute nodes running Oracle Linux.

## The limits.conf File May Contain Invalid Entries

If the `soft nofile` parameter in the `/etc/security/limits.conf` file on Oracle Linux contains a value of `XS65536`, change the value to `65536` manually, save, and close.

## Need to Remount File Systems After System Reboots When NFSv4 Is Used

When you use NFSv4, you are required to re-mount all file systems by running the `mount -a` command on Oracle Linux each time you reboot the compute node.

To automatically re-mount the file systems rebooting a compute node running Oracle Linux, complete the following steps:

1. Log in to the compute node as a `root` user.
2. Create a script named `nfs4_automount_on_init.sh` in `/etc/init.d/` directory (Log in as `root` user)

```
# vi /etc/init.d/ nfs4_automount_on_init.sh
```

3. Add the following to the script:

```
#!/bin/bash
#chkconfig: 345 80 05
#description: NFSv4 Automount
case "$1" in
    "start")
        mount -a
        ;;
    "stop")
        ;;
esac
```

 **Note:**

In `chkconfig: 345 80 05`, the first number `345` indicates the runLevels. The second number `80` is the start priority, and the third number `05` is the stop priority. The second number and the third number should be unique among all registered services, so you may need to adjust the values for your environment, if you have installed any other services.

4. Set up executable permission on the script:

```
# chmod +x /etc/init.d/ nfs4_automount_on_init.sh
```

5. Run the following command to register the script:

```
# chkconfig --add /etc/init.d/nfs4_automount_on_init.sh
```

6. Optionally, run the following command to verify the registration of the script:

```
# chkconfig --list
```

## Multicasting in Multi-Homed Environments for Oracle Linux

Exalogic compute nodes are multi-homed. They have multiple network interfaces, each in a different LAN segment.

Upon IP configuration, these interfaces initiate a static route to their respective subnets. For all other networks, a default route is used. Multicasting also follows the system-wide routing table. By default, multicast packets are sent over the default route because it is a class D network.

If you want to enforce multicasting over a specific interface or network, you must add a route manually.

To multicast over the `bond0` (IPoIB) interface, complete the following steps:

As a root user, run the following command on the command line:

```
route add -net 224.0.0.0 netmask 240.0.0.0 dev bond0
```

To make it persistent across reboots, create the `/etc/sysconfig/network-scripts/route-bond0` file with the following content:

```
224.0.0.0/4 dev bond0
```

To verify, you can use the `netstat` command as follows:

```
netstat -rn
```

**Example:**

```
Kernel IP routing table
Destination Gateway Genmask Flags MSS Window irtt Iface
192.168.10.0 0.0.0.0 255.255.255.0 U 0 0 0 bond0
10.204.80.0 0.0.0.0 255.255.254.0 U 0 0 0 eth0
224.0.0.0 0.0.0.0 240.0.0.0 U 0 0 0 bond0
0.0.0.0 10.204.80.1 0.0.0.0 UG 0 0 0 eth0
```

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## Release Notes for Oracle Solaris on Exalogic

This chapter lists known issues in Oracle Solaris on Exalogic. It contains the following sections:

- [Oracle Solaris 11.2 Release Notes](#)
- [Oracle Solaris 11.1 Release Notes](#)
- [Oracle Solaris 11 Express Release Notes](#)
- [Install Package for Oracle Universal Installer](#)
- [General Issues and Workarounds](#)

### Oracle Solaris 11.2 Release Notes

The release notes document for Oracle Solaris 11.2 is available at:

[http://docs.oracle.com/cd/E26502\\_01/html/E28978/](http://docs.oracle.com/cd/E26502_01/html/E28978/)

### Oracle Solaris 11.1 Release Notes

The release notes document for Oracle Solaris 11.1 is available at:

[http://docs.oracle.com/cd/E26502\\_01/html/E28978/](http://docs.oracle.com/cd/E26502_01/html/E28978/)

### Oracle Solaris 11 Express Release Notes

The release notes document for Oracle Solaris 11 Express is available at:

<http://docs.oracle.com/cd/E19963-01/html/821-1479/index.html>

### Install Package for Oracle Universal Installer

If you are running the Oracle Universal Installer (OUI) on Oracle Solaris, then you must install the `SUNWxwp1t` package.

### General Issues and Workarounds

This section describes the following issues and workarounds:

- [Running Oracle Coherence on Oracle Solaris 11 Express](#)
- [Extracting Contents of Repositories and Boot Media](#)
- [Multicasting in Multi-Homed Environments for Oracle Solaris](#)

## Running Oracle Coherence on Oracle Solaris 11 Express

Keep the following points in mind when running Oracle Coherence on Oracle Solaris 11 Express:

- Use Oracle Sun JDK 1.6.0\_23 for Oracle Coherence.
- Do not configure Oracle Coherence to loop back traffic on localhost (127.0.0.1). To loop back traffic, you must configure Oracle Coherence to use an IP that is bound to the machine.
- Enable `-Djava.net.preferIPv4Stack=true` in the start-up property. The underlying JDK/Solaris interaction will result in the following message:

```
java.io.IOException: Message too long
```

- Oracle Coherence on Oracle Exalogic dynamically adjusts buffering to the MTU of the interface. To use dynamic buffering, you must run the following parameters:

```
ndd -set /dev/ip ip_reass_queue_bytes 16777216
ndd -set /dev/tcp tcp_max_buf 8388608
ndd -set /dev/udp udp_max_buf 8388608
```

## Extracting Contents of Repositories and Boot Media

To extract the contents of repositories and boot media, complete the following steps:

1. Use an SSH client, such as PuTTY, to log in to the first compute node (also referred to as master node located in Unit 1 of your Exalogic machine rack) using the NET0 IP address. The default NET0 IP address for this compute node is 192.168.1.1. Log in as `root`.

2. After login, run the following command on the command line:

```
# mkdir -p /share/images
```

3. Edit the `/etc/fstab` file to add the following entry:

```
192.168.10.15:/export/common/images /share/images nfs
rw,bg,hard,nointr,rsiz=131072,wsiz=131072,tcp,vers=3
```

4. Save the file and exit.
5. Run the following command to mount the directory:

```
# mount -a
```

6. Run the following command:

```
# cd /share/images
```

7. Extract the contents of the repository by running the following command:

```
tar -pxzvf el_x2-2_baseimage_solaris_1.0.0.1.0_64.tgz
```

8. Run the following command:

```
cd el_x2-2_baseimage_solaris_1.0.0.1.0_64
```

9. Extract the contents of the boot media by running the following commands:

```
tar -pxzvf exa-family_1.0.0.1.0_64.tgz
```

## Multicasting in Multi-Homed Environments for Oracle Solaris

Exalogic compute nodes are multi-homed. They have multiple network interfaces, each in a different LAN segment.

Upon IP configuration, these interfaces initiate a static route to their respective subnets. For all other networks, a default route is used. Multicasting also follows the system-wide routing table. By default, multicast packets are sent over the default route because it is a class D network.

If you want to enforce multicasting over a specific interface or network, you must add a route manually.

To multicast over the `bond0` (IPoIB) interface, run the following command as a `root` user on the command line:

```
route -p add -net 224.0.0.0 netmask 240.0.0.0 dev bond0
```

Where `bond0` is the name of the IPMP group for the default IPoIB interface.