Oracle® Exalogic Elastic Cloud
Release Notes
Release EL X2-2, X3-2, X4-2, and X5-2
E18480-14

February 2015
This document lists the new features and enhancements in Exalogic Elastic Cloud Software, and lists the known issues and workarounds.
1 Release Notes for Exalogic Elastic Cloud Software

1.1 New Features and Enhancements in EECS 2.0.6 ................................................................. 1-1
1.1.1 Deploying Assemblies in the Exalogic vDC Using OVAB Deployer ......................... 1-1
1.1.2 Support for Hybrid Configurations .................................................................................. 1-2
1.1.3 Fewer VMs for the Exalogic Control Stack ................................................................. 1-2
1.1.4 LVM-Based Disk Partitioning on Guest vServers ......................................................... 1-2
1.1.5 Exabus/IMB 1.1 and Exalogic Java 1.1.6 ....................................................................... 1-3
1.1.6 Configuring DNS for EoIB Networks ............................................................................. 1-3
1.1.7 OSWatcher Included in the Base Image and Guest Template ................................... 1-3
1.1.8 imagehistory and imageinfo Commands Included in the Base Template .................. 1-3
1.1.9 Linux Server-Based Exalogic Guest Base Template ................................................... 1-4
1.1.10 Detailed View of Resource-Allocation by Account ...................................................... 1-4
1.2 New Features and Enhancements in EECS 2.0.4 ............................................................. 1-4
1.2.1 CPU Oversubscription .................................................................................................. 1-4
1.2.2 High Availability for Guest vServers ............................................................................. 1-4
1.3 Known Issues ..................................................................................................................... 1-5
1.3.1 Shared Storage Access for Customer vServers .............................................................. 1-5
1.3.2 Usage of the Maintenance Mode Feature ...................................................................... 1-5
1.3.3 Removing a Public Network from an Account Is Not Supported ................................ 1-5
1.3.4 Suspended State Is Not Supported for vServers ........................................................... 1-6
1.3.5 Full Job Log Not Visible in the Exalogic Control BUI ................................................ 1-6
1.3.6 Cloud Users Cannot Act on Alerts ............................................................................. 1-6
1.3.7 Exalogic Control BUI Should Not Be Used for Upgrading Firmware ......................... 1-7
1.3.8 Limit on Number of Volumes Attached to a vServer .................................................. 1-7
1.3.9 Cannot Add Alert Monitoring Rules for vServers Through the vDC Management Accordion 1-7
1.3.10 Time Zone of Guest vServers is Hard-Coded to PST .................................................. 1-7
1.3.11 Exalogic Control BUI May Select the Wrong vServer for Deletion ......................... 1-7
1.3.12 "Navigate to Selected Oracle VM Server and Virtual Server” Buttons Do Not Work ........ 1-8
1.3.13 Uploading a Server Template May Fail ........................................................................ 1-8
1.3.14 Late Lock Exception .................................................................................................. 1-8
1.3.15 vServer Shutdown Failure ......................................................................................... 1-8
1.3.16 Booting from ISO through ILOM on Oracle Exalogic Elastic Cloud X5-2 Compute Nodes Does Not Work 1-9
1.3.17  CheckHWnFWProfile Command Incorrectly Reports a Disk Controller Firmware Verification Failure  1-9

2 Release Notes for Oracle Virtual Assembly Builder

2.1  Installation and Configuration Issues and Workarounds ......................................................... 2-1
2.1.1  Deployer Instance Directory Only Suitable for Use in Deployer-only Installation ............ 2-1
2.1.2  Disk Warning Causes Installation Failure ............................................................................. 2-2
2.1.3  Errors about Missing Libraries in the VM ........................................................................ 2-2
2.1.4  Incorrect sshd_config File in Base Image ........................................................................... 2-2
2.1.5  Exceptions in Message Log after Upgrade ....................................................................... 2-2
2.1.6  Oracle Virtual Assembly Builder Studio Installer May Fail on Large Disks ................. 2-2
2.2  General Issues and Workarounds ........................................................................................... 2-3
2.2.1  Oracle Virtual Assembly Builder Introspection Issues ..................................................... 2-3
2.2.1.1  Remote Introspection Must Be Run as Specific Users .................................................. 2-3
2.2.1.2  Unable to Create Secure Connections for Multiple OVMs in a Single Session ........ 2-3
2.2.1.3  Do Not Try to Import and Register a Template at the Same Time ........................ 2-3
2.2.1.4  Time Zones Must Match Between Base Image and Reference Systems .................. 2-3
2.2.2  Oracle Virtual Assembly Builder File Set Capture Issues .................................................. 2-4
2.2.2.1  Troubleshooting Template Registration Errors ............................................................ 2-4
2.2.2.2  Capturing File Sets with a Different userid than userid of Individual Who Installed Oracle Virtual Assembly Builder 2-4
2.2.2.3  Template Status Not Updated ....................................................................................... 2-4
2.2.2.4  Oracle Virtual Assembly Builder Instance Directory Should Not Reside in FWMHOME 2-4
2.2.2.5  Non-Root User Cannot Capture File Sets Owned by Root ............................................ 2-4
2.2.3  Oracle Virtual Assembly Builder Deployment Issues ....................................................... 2-5
2.2.3.1  Scale Operations and Failed Deployments ..................................................................... 2-5
2.2.3.2  Importing Using the ImportAs Option Removes All Deployment Plan Overrides .... 2-5
2.2.3.3  Unresolved IP Addresses Result in Error ...................................................................... 2-5
2.2.3.4  Complete Editing Operations on Assemblies Before Creating a Deployment Plan .... 2-5
2.2.3.5  NFS Mounting Not Supported in Reference Systems .................................................. 2-6
2.2.3.6  Firewall Implications for Template Registration ............................................................ 2-6
2.2.3.7  Recovering from Unexpected Errors During Deployment ........................................ 2-6
2.2.3.8  Deployment Failure Due to ‘Too Many Open Files’ Error .................................... 2-7
2.2.3.9  Deployment Plan Does Not Override MAC Address ................................................ 2-7
2.2.4  Other Oracle Virtual Assembly Builder Issues ................................................................... 2-7
2.2.4.1  Add DNS Button Does Not Work When Using OVAB Studio in Japanese Language  2-7
2.2.4.2  Large Delete Operations Can Make Oracle Virtual Assembly Builder Studio Appear to Lock Up 2-8
2.2.4.3  Virtual Machine Swap Space ....................................................................................... 2-8
2.2.4.4  Top-level Delete Messages in English Only ................................................................. 2-8
2.2.4.5  Export Operation Requires Temporary Local Storage ............................................... 2-8
2.2.4.6  Non-supported Character When Naming Vnets ........................................................... 2-8
2.2.4.7 Obsolete Assembly Archives After Download and Import ........................................... 2-8
2.2.4.8 Zero-count Appliances Cannot Be Scaled in Oracle Virtual Assembly Builder Studio 2-8

2.2.4.9 Password Field Is Not Editable When Configuring a New Domain 2-9

2.3 Component Specific Issues 2-9

2.3.1 Oracle Virtual Machine 2-9

2.3.1.1 Intermittent Errors When Using Oracle VM 2-10

2.3.1.2 Limit Virtual Machine Names to 100 Characters or Less 2-10

2.3.1.3 Limit Virtual Machine Passwords to 50 Characters or Less 2-10

2.3.1.4 Limitation on Number of Virtual Disks 2-10

2.3.1.5 VNC Access Only Available through Oracle VM Manager 2-10

2.3.2 Oracle WebLogic Server Issues 2-10

2.3.2.1 Forward Slashes in Server Service Names Cause Oracle WebLogic Server Deployment Failures 2-11

2.3.2.2 Applications with JDBC Remap May Need to be Manually Restarted 2-11

2.3.2.3 Applications Accessing Web Services Not Updated at Deployment 2-11

2.3.2.4 Limitation with Oracle WLS Domains Upgraded from 10.3.1 2-11

2.3.2.5 Admin URL Required to be Specified When Managed Server is No Longer Running 2-11

2.3.2.6 WLS Plug-in Does Not Support Changing Ownership of File Sets 2-11

2.3.2.7 Relocating Node Manager Home Not Supported 2-12

2.3.2.8 User-specific Changes to Setdomainenv.sh are Not Preserved 2-12

2.3.3 Oracle Web Cache Issues 2-12

2.3.3.1 Protocol Mismatch Error 2-12

2.3.3.2 Oracle Web Cache Administration Port Not a Privileged Port 2-12

2.3.3.3 Oracle Web Cache Scaling Issues 2-12

2.3.3.4 Update Virtual Host Map Properties When Making Port Changes 2-12

2.3.4 Oracle Database Issues 2-12

2.3.4.1 Deployment Error Due to Database Vault 2-13

2.3.4.2 Use default name LISTENER on Reference Systems 2-13

2.3.4.3 Limited Database Configuration Support 2-13

2.3.4.4 Upgraded 10g Oracle Homes Cannot be Introspected 2-14

2.3.5 Oracle Forms and Oracle Reports Issues 2-14

2.3.5.1 Change nm* Files Ownership 2-14

2.4 Documentation Errata 2-14

3 Release Notes for Exalogic Hardware Components

4 Release Notes for Oracle Linux on Exalogic

4.1 General Information 4-1

4.2 General Issues and Workarounds 4-2

4.2.1 File Owner Shown as nobody When Shared Drive Is Mounted with NFSv4 4-2

4.2.2 The limits.conf File May Contain Invalid Entries 4-2

4.2.3 Need to Remount File Systems After System Reboots When NFSv4 Is Used 4-2

4.2.4 Multicasting in Multi-Homed Environments for Oracle Linux 4-3
5 Release Notes for Oracle Solaris on Exalogic

5.1 Oracle Solaris 11.1 Release Notes ................................................................. 5-1
5.2 Oracle Solaris 11 Express Release Notes ....................................................... 5-1
5.3 Install Package for Oracle Universal Installer ............................................... 5-1
5.4 General Issues and Workarounds ................................................................. 5-1
5.4.1 Running Oracle Coherence on Oracle Solaris 11 Express ....................... 5-1
5.4.2 Extracting Contents of Repositories and Boot Media .............................. 5-2
5.4.3 Multicasting in Multi-Homed Environments for Oracle Solaris .............. 5-2
This document contains information about new features, enhancements, and known issues in the Exalogic Elastic Cloud Software.

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, 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:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>boldface</strong></td>
<td>Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.</td>
</tr>
<tr>
<td><em>italic</em></td>
<td>Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.</td>
</tr>
<tr>
<td><code>monospace</code></td>
<td>Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.</td>
</tr>
</tbody>
</table>
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
- New Features and Enhancements in EECS 2.0.4
- Known Issues

1.1 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:

- Section 1.1.1, "Deploying Assemblies in the Exalogic vDC Using OVAB Deployer"
- Section 1.1.2, "Support for Hybrid Configurations"
- Section 1.1.3, "Fewer VMs for the Exalogic Control Stack"
- Section 1.1.4, "LVM-Based Disk Partitioning on Guest vServers"
- Section 1.1.5, "Exabus/IMB 1.1 and Exalogic Java 1.1.6"
- Section 1.1.6, "Configuring DNS for EoIB Networks"
- Section 1.1.7, "OSWatcher Included in the Base Image and Guest Template"
- Section 1.1.8, "imagehistory and imageinfo Commands Included in the Base Template"
- Section 1.1.9, "Linux Server-Based Exalogic Guest Base Template"
- Section 1.1.10, "Detailed View of Resource-Allocation by Account"

1.1.1 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.
1.1.2 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).

1.1.3 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.

1.1.4 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.

1.1.5 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.

1.1.6 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.

1.1.7 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.

1.1.8 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
  ```
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
```

1.1.9 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.

1.1.10 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.

1.2 New Features and Enhancements in EECS 2.0.4

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

1.2.1 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.

1.2.2 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.
1.3 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.

1.3.1 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.

1.3.2 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.

1.3.3 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 "Deallocation Internal 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.
7. Select the Limit field for the network you want to remove and set it to 0.
8. Click Next.
9. Click Finish.
1.3.4 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.

1.3.5 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.

1.3.6 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.
1.3.7 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.

1.3.8 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.

1.3.9 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.

1.3.10 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.

1.3.11 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.
1.3.12 "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.

1.3.13 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.

1.3.14 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:


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.

1.3.15 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.

1.3.16 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.

1.3.17 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.
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

2.1 Installation and Configuration Issues and Workarounds

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

- Section 2.1.1, "Deployer Instance Directory Only Suitable for Use in Deployer-only Installation"
- Section 2.1.2, "Disk Warning Causes Installation Failure"
- Section 2.1.3, "Errors about Missing Libraries in the VM"
- Section 2.1.4, "Incorrect sshd_config File in Base Image"
- Section 2.1.5, "Exceptions in Message Log after Upgrade"
- Section 2.1.6, "Oracle Virtual Assembly Builder Studio Installer May Fail on Large Disks"

2.1.1 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.
2.1.2 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

2.1.3 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.

2.1.4 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).

2.1.5 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.

2.1.6 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.
2.2 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:

- Section 2.2.1, "Oracle Virtual Assembly Builder Introspection Issues"
- Section 2.2.2, "Oracle Virtual Assembly Builder File Set Capture Issues"
- Section 2.2.3, "Oracle Virtual Assembly Builder Deployment Issues"
- Section 2.2.4, "Other Oracle Virtual Assembly Builder Issues"

2.2.1 Oracle Virtual Assembly Builder Introspection Issues

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

- Section 2.2.1.1, "Remote Introspection Must Be Run as Specific Users"
- Section 2.2.1.2, "Unable to Create Secure Connections for Multiple OVMs in a Single Session"
- Section 2.2.1.3, "Do Not Try to Import and Register a Template at the Same Time"
- Section 2.2.1.4, "Time Zones Must Match Between Base Image and Reference Systems"

2.2.1.1 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.

2.2.1.2 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.

2.2.1.3 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.

2.2.1.4 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.
2.2.2 Oracle Virtual Assembly Builder File Set Capture Issues

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

- Section 2.2.2.1, "Troubleshooting Template Registration Errors"
- Section 2.2.2.2, "Capturing File Sets with a Different userid than userid of Individual Who Installed Oracle Virtual Assembly Builder"
- Section 2.2.2.3, "Template Status Not Updated"
- Section 2.2.2.4, "Oracle Virtual Assembly Builder Instance Directory Should Not Reside in FMWHOME"
- Section 2.2.2.5, "Non-Root User Cannot Capture File Sets Owned by Root"

2.2.2.1 Troubleshooting Template Registration Errors

If you receive an error while registering a template (such as ImportError, or any error including oracle.ovs.biz.exception.OVSException) 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.

2.2.2.2 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.

2.2.2.3 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.

2.2.2.4 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.

2.2.2.5 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.

### 2.2.3 Oracle Virtual Assembly Builder Deployment Issues

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

- Section 2.2.3.1, "Scale Operations and Failed Deployments"
- Section 2.2.3.2, "Importing Using the ImportAs Option Removes All Deployment Plan Overrides"
- Section 2.2.3.3, "Unresolved IP Addresses Result in Error"
- Section 2.2.3.4, "Complete Editing Operations on Assemblies Before Creating a Deployment Plan"
- Section 2.2.3.5, "NFS Mounting Not Supported in Reference Systems"
- Section 2.2.3.6, "Firewall Implications for Template Registration"
- Section 2.2.3.7, "Recovering from Unexpected Errors During Deployment"
- Section 2.2.3.8, "Deployment Failure Due to 'Too Many Open Files' Error"
- Section 2.2.3.9, "Deployment Plan Does Not Override MAC Address"

#### 2.2.3.1 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.

#### 2.2.3.2 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.

#### 2.2.3.3 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.

#### 2.2.3.4 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.

2.2.3.5 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.

2.2.3.6 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.

2.2.3.7 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.
2.2.3.8 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.

2.2.3.9 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.

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

- Section 2.2.4.1, "Add DNS Button Does Not Work When Using OVAB Studio in Japanese Language"
- Section 2.2.4.2, "Large Delete Operations Can Make Oracle Virtual Assembly Builder Studio Appear to Lock Up"
- Section 2.2.4.3, "Virtual Machine Swap Space"
- Section 2.2.4.4, "Top-level Delete Messages in English Only"
- Section 2.2.4.5, "Export Operation Requires Temporary Local Storage"
- Section 2.2.4.6, "Non-supported Character When Naming Vnets"
- Section 2.2.4.7, "Obsolete Assembly Archives After Download and Import"
- Section 2.2.4.8, "Zero-count Appliances Cannot Be Scaled in Oracle Virtual Assembly Builder Studio"
- Section 2.2.4.9, "Password Field Is Not Editable When Configuring a New Domain"

2.2.4.1 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= en
   ./abstudio.sh
   ```
2.2.4.2 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.

2.2.4.3 Virtual Machine Swap Space
Ensure your virtual machines have at least 500MB of available swap space (on each machine).

2.2.4.4 Top-level Delete Messages in English Only
Messages displayed during top-level delete of items are displayed in English only.

2.2.4.5 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.

2.2.4.6 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.

2.2.4.7 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).

2.2.4.8 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.

2.2.4.9 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.

2.3 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:

■ Section 2.3.1, "Oracle Virtual Machine"

■ Section 2.3.2, "Oracle WebLogic Server Issues"

■ Section 2.3.3, "Oracle Web Cache Issues"

■ Section 2.3.4, "Oracle Database Issues"

■ Section 2.3.5, "Oracle Forms and Oracle Reports Issues"

2.3.1 Oracle Virtual Machine

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

■ Section 2.3.1.1, "Intermittent Errors When Using Oracle VM"

■ Section 2.3.1.2, "Limit Virtual Machine Names to 100 Characters or Less"

■ Section 2.3.1.3, "Limit Virtual Machine Passwords to 50 Characters or Less"

■ Section 2.3.1.4, "Limitation on Number of Virtual Disks"

■ Section 2.3.1.5, "VNC Access Only Available through Oracle VM Manager"
2.3.1.1 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.

2.3.1.2 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.

2.3.1.3 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

2.3.1.4 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.'

2.3.1.5 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.

2.3.2 Oracle WebLogic Server Issues
This section describes issues for Oracle WebLogic Server. It includes these items:
- Section 2.3.2.1, "Forward Slashes in Server Service Names Cause Oracle WebLogic Server Deployment Failures"
- Section 2.3.2.2, "Applications with JDBC Remap May Need to be Manually Restarted"
- Section 2.3.2.3, "Applications Accessing Web Services Not Updated at Deployment"
- Section 2.3.2.4, "Limitation with Oracle WLS Domains Upgraded from 10.3.1"
- Section 2.3.2.5, "Admin URL Required to be Specified When Managed Server is No Longer Running"
- Section 2.3.2.6, "WLS Plug-in Does Not Support Changing Ownership of File Sets"
- Section 2.3.2.7, "Relocating Node Manager Home Not Supported"
- Section 2.3.2.8, "User-specific Changes to Setdomainenv.sh are Not Preserved"

2.3.2.1 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.

2.3.2.2 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.

2.3.2.3 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 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.

2.3.2.4 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.

2.3.2.5 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.

2.3.2.6 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.
2.3.2.7 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.

2.3.2.8 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.

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

- Section 2.3.3.1, "Protocol Mismatch Error"
- Section 2.3.3.2, "Oracle Web Cache Administration Port Not a Privileged Port"
- Section 2.3.3.3, "Oracle Web Cache Scaling Issues"
- Section 2.3.3.4, "Update Virtual Host Map Properties When Making Port Changes"

2.3.3.1 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.

2.3.3.2 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.

2.3.3.3 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.

2.3.3.4 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.

2.3.4 Oracle Database Issues
This section describes issues for Oracle Database. It includes these items:
2.3.4.1 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:
   
   ```bash
   $ 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:

   ```bash
   $ 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:

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

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

2.3.4.2 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:

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

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

2.3.4.3 Limited Database Configuration Support

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

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

**Note:** The protocol, host, and port are all required, and must appear in the order above.
2.3.4.4 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.

2.3.5 Oracle Forms and Oracle Reports Issues
This section describes issues for Oracle Forms and Oracle Reports. It includes these items:
- Section 2.3.5.1, "Change nm* Files Ownership"

2.3.5.1 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.

2.4 Documentation Errata
There are no documentation errata at this time.
This chapter provides links to release notes for Exalogic compute nodes, InfiniBand switches and the storage appliance.

- Oracle Server X5-2:
  http://docs.oracle.com/cd/E41059_01/index.html

- Sun Fire X4170 M2 Servers:
  http://docs.oracle.com/cd/E19762-01/E22382/index.html

- Sun Server X4-2:
  http://docs.oracle.com/cd/E36975_01/html/E38016/index.html

- Sun Fire X3-2 Servers:

- Sun Network QDR InfiniBand Gateway Switches:
  http://docs.oracle.com/cd/E26699_01/html/E26705/index.html

- Sun Datacenter InfiniBand Switch 36:

- Storage appliance software:
  https://wikis.oracle.com/display/FishWorks/Software+Updates

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
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

### 4.1 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.d: Configuration file does not exist: /etc/infiniband/mlx4_vnic.conf
  
  This error is benign.

- grep: /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
4.2 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

4.2.1 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.

4.2.2 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 X865536, change the value to 65536 manually, save, and close.

4.2.3 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

### 4.2.4 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:**

<table>
<thead>
<tr>
<th>Kernel IP routing table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destination</td>
</tr>
<tr>
<td>192.168.10.0</td>
</tr>
<tr>
<td>10.204.80.0</td>
</tr>
<tr>
<td>224.0.0.0</td>
</tr>
<tr>
<td>0.0.0.0</td>
</tr>
</tbody>
</table>
This chapter lists known issues in Oracle Solaris on Exalogic.
It contains the following sections:

- Oracle Solaris 11.1 Release Notes
- Oracle Solaris 11 Express Release Notes
- Install Package for Oracle Universal Installer
- General Issues and Workarounds

5.1 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/

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

5.3 Install Package for Oracle Universal Installer
If you are running the Oracle Universal Installer (OUI) on Oracle Solaris, then you must install the SUNWxwplt package.

5.4 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

5.4.1 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
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:

```bash
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
```

### 5.4.2 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:

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

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

   ```bash
   192.168.10.15:/export/common/images /share/images nfs
rw,bg,hard,nointr,rsize=131072,wsize=131072,tcp,vers=3
   ```

4. Save the file and exit.

5. Run the following command to mount the directory:

   ```bash
   # mount -a
   ```

6. Run the following command:

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

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

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

8. Run the following command:

   ```bash
   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:

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

### 5.4.3 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.