

Oracle® Exalytics In-Memory Machine

Release Notes

Exalytics X2-4 Release 1 (1.0)

E35146-09

June 2013

Oracle Exalytics In-Memory Machine is an engineered solution that includes a memory-centric hardware platform, proven in-memory technology from Oracle TimesTen, and an optimized version of Oracle Business Intelligence Foundation Suite functionality.

These release notes describe known issues and workarounds for Oracle Exalytics In-Memory Machine and apply to:

- Oracle Exalytics X2-4 Release 1 (1.0.0.0), also known as Release 11.1.1.6.0
- Oracle Exalytics X2-4 Release 1 Patchset 1 (1.0.0.1)
- Oracle Exalytics X2-4 Release 1 Patchset 2 (1.0.0.2)

For information about setting up Oracle Exalytics In-Memory Machine and installing software on it, consult the following manuals:

- *Oracle Fusion Middleware Installation and Administration Guide for Oracle Exalytics In-Memory Machine*
- *Oracle Exalytics In-Memory Machine Owner's Guide for Linux x86-64*

The manuals are available in the Oracle Exalytics Library at:

http://docs.oracle.com/cd/E27027_01/index.htm

The following list describes the sections of this document:

- [Section 1, "Oracle Exalytics Machine \(X2-4\) Release Notes"](#)
- [Section 2, "Oracle Exalytics Release 1 Software Release Notes"](#)
- [Section 3, "Documentation Accessibility"](#)

How to Use These Release Notes

Information about Oracle Exalytics Release 1 software has been added to these release notes from June 2012 up to and including May 2013.

Going forward, newly identified issues with Oracle Exalytics Release 1 software will be added to the Oracle Exalytics Release Notes X2-4 and X3-4 Release 1 (1.0) at

http://docs.oracle.com/cd/E41246_01/doc.1/e41259/toc.htm.

1 Oracle Exalytics Machine (X2-4) Release Notes

This section contains the following topics:

- [Section 1.1, "Latest Product Information"](#)

1.1 Latest Product Information

For the latest information about Sun Fire X4470 M2 Servers, including the product notes, see the following link:

http://docs.oracle.com/cd/E20781_01/index.html

2 Oracle Exalytics Release 1 Software Release Notes

This section contains the following topics:

- [Section 2.1, "Patch Requirements"](#)
- [Section 2.2, "Oracle Exalytics Issues and Workarounds Identified Since the Last Revision"](#)
- [Section 2.3, "Oracle Exalytics General Issues and Workarounds"](#)
- [Section 2.4, "Oracle Exalytics Installation Issues and Workarounds"](#)
- [Section 2.5, "Oracle Exalytics Post-Installation Issues and Workarounds"](#)
- [Section 2.6, "Oracle Exalytics Patching Issues and Workarounds"](#)
- [Section 2.7, "Oracle Exalytics Documentation Errata"](#)

2.1 Patch Requirements

Oracle Exalytics includes various software components with differing release numbers. Do not patch individual software components on the Exalytics Machine unless instructed to do so by Oracle Support. Patches for the Exalytics Machine are announced periodically. For more information, see Chapter 7, "Patching" in *Oracle Fusion Middleware Installation and Administration Guide for Oracle Exalytics In-Memory Machine*.

2.2 Oracle Exalytics Issues and Workarounds Identified Since the Last Revision

No newly identified issues have been added to these release notes since the last revision.

Going forward, newly identified issues with Oracle Exalytics Release 1 software will be added to the Oracle Exalytics Release Notes X2-4 and X3-4 Release 1 (1.0) at http://docs.oracle.com/cd/E41246_01/doc.1/e41259/toc.htm.

2.3 Oracle Exalytics General Issues and Workarounds

This section describes general issues and workarounds related to Oracle Exalytics. It includes the following topics:

- [Section 2.3.1, "Manually Editing Properties for Full-Text Search"](#)
- [Section 2.3.2, "Default Address Configured for the eth0 Interface Varies"](#)
- [Section 2.3.3, "Auto Service Request Not Supported When Running Oracle Virtual Server Image"](#)
- [Section 2.3.4, "Modifying the OPMN.xml File after Scripted Install"](#)
- [Section 2.3.5, "Guest Operating System Hangs with Soft Lockup: Error on Exalytics Virtual Machine"](#)

- [Section 2.3.6, "InfiniBand Not Supported When Running Oracle Virtual Server Image"](#)
- [Section 2.3.7, "Unable to Modify Memory Settings of a Guest Virtual Machine"](#)

2.3.1 Manually Editing Properties for Full-Text Search

Impacted Releases: 1.0, 1.0.0.1, 1.0.0.2

If you configure the Full-Text Search on the Exalytics Machine, then you must manually edit the `BISearchConfig.properties` file so that the following properties point to the proper external IP addresses:

- `BIServerUrl`
- `BISearchServerUrl`
- `ECSF_DataServiceURL`
- `ECSF_RedirectServiceURL`
- `ECSF_SecurityServiceURL`

For information on editing the file, see "Configuring Properties for Full-Text Catalog Search Manually" in *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

2.3.2 Default Address Configured for the eth0 Interface Varies

Impacted Releases: 1.0, 1.0.0.1, 1.0.0.2

When an Oracle Exalytics In-Memory Machine is delivered, the default IP address that is configured for the `eth0` (physical `NET0` port) interface of the machine might vary. It can be any IP address in the class C subnet 192.168.1.0.

To determine the `eth0` IP address of an Exalytics Machine, connect to the Integrated Lights Out Manager (ILOM) of that machine through Secure Shell (SSH) using the default IP address 192.168.1.200. After logging in, run the following command to view the network configuration information:

```
show /SP/network
```

2.3.3 Auto Service Request Not Supported When Running Oracle Virtual Server Image

Impacted Releases: 1.0.0.1, 1.0.0.2

Auto Service Request (ASR) events generated by Integrated Lights Out Manager (ILOM) continue to be available when using Oracle Exalytics Base Image 2.0.1.1.0 for Exalytics Oracle VM x86-64, with one exception. ASR events for hard disk failures are not supported when using Oracle Exalytics Base Image 2.0.1.1.0 for Exalytics Oracle VM x86-64.

2.3.4 Modifying the OPMN.xml File after Scripted Install

Impacted Releases: 1.0.0.2

After performing an Oracle Exalytics install using the scripted install procedure, edit the resulting `opmn.xml` file as follows:

- For the `LD_LIBRARY_PATH` variable, add a forward slash after `append="true"`
Before the edit, the line looks like this: `$ORACLE_HOME/lib:/u01/app/oracle/product/TimesTen/tt1122/lib" append="true">`

After the edit, the line looks like this: \$ORACLE_
HOME/lib:/u01/app/oracle/product/TimesTen/tt1122/lib" append="true"/>

- For the TIMESTEN_DLL variable, remove the unnecessary </variable> tag at the end of the line

Before the edit, the line looks like: <variable id="TIMESTEN_DLL"
value="/u01/app/oracle/product/TimesTen/tt1122/lib/libttclient.so"/></variable>

After the edit, the line looks like: <variable id="TIMESTEN_DLL"
value="/u01/app/oracle/product/TimesTen/tt1122/lib/libttclient.so"/>

The opmn.xml file is in the following directory:

/u01/app/oracle/product/fmw/instances/instance1/config/OPMN

2.3.5 Guest Operating System Hangs with Soft Lockup: Error on Exalytics Virtual Machine

Impacted Releases 1.0.0.2

When installing a guest operating system on a virtual Exalytics Machine you might see an error message such as the following:

```
date_and_time wtigervml kernel: BUG: soft lockup - CPU#5 stuck for 141s!
sadc:1066]
date_and_time wtigervml kernel: Modules linked in: ovmapi(U) autofs4(U)
@ hidp(U) l2cap(U) bluetooth(U) rfkill(U) lockd(U) sunrpc(U) be2iscsi(U)
@ ib_iser(U) iscsi_tcp(U) bnx2i(U) cnic(U) uio(U) cxgb3i(U) libcxgbi(U)
@ cxgb3(U) mdio(U) libiscsi_tcp(U) libiscsi(U) scsi_transport_iscsi(U)
rdma_ucm(U) ib_sdp(U) rdma_cm(U) iw_cm(U) ib_addr(U) ib_ipoib(U) ib_cm(U)
ipv6(U) ib_uverbs(U) ib_umad(U) mlx4_vnic(U) mlx4_vnic_helper(U) mlx4_ib(U)
ib_sa(U) ib_mad(U) ib_core(U) mlx4_core(U) video(U) output(U) sbs(U) sbshc(U)
lp(U) serio_raw(U) parport_pc(U) parport(U) floppy(U) snd_seq_dummy(U)
snd_seq_oss(U) snd_seq_midi_event(U) snd_seq(U) snd_seq_device(U)
snd_pcm_oss(U) snd_mixer_oss(U) snd_pcm(U) snd_timer(U) snd(U) soundcore(U)
snd_page_alloc(U) pata_acpi(U) i2c_piix4(U) xen_netfront(U) pcspkr(U)
i2c_core(U) ata_piix(U) ata_generic(U) xen_blkfront(U) [last unloaded:
ipmi_msghandler]
date_and_time wtigervml kernel: CPU 5:
date_and_time wtigervml kernel: Modules linked in: ovmapi(U) autofs4(U)
@ hidp(U) l2cap(U) bluetooth(U) rfkill(U) lockd(U) sunrpc(U) be2iscsi(U)
@ ib_iser(U) iscsi_tcp(U) bnx2i(U) cnic(U) uio(U) cxgb3i(U) libcxgbi(U)
@ cxgb3(U) mdio(U) libiscsi_tcp(U) libiscsi(U) scsi_transport_iscsi(U)
rdma_ucm(U) ib_sdp(U) rdma_cm(U) iw_cm(U) ib_addr(U) ib_ipoib(U) ib_cm(U)
ipv6(U) ib_uverbs(U) ib_umad(U) mlx4_vnic(U) mlx4_vnic_helper(U) mlx4_ib(U)
ib_sa(U) ib_mad(U) ib_core(U) mlx4_core(U) video(U) output(U) sbs(U) sbshc(U)
lp(U) serio_raw(U) parport_pc(U) parport(U) floppy(U) snd_seq_dummy(U)
snd_seq_oss(U) snd_seq_midi_event(U) snd_seq(U) snd_seq_device(U)
snd_pcm_oss(U) snd_mixer_oss(U) snd_pcm(U) snd_timer(U) snd(U) soundcore(U)
snd_page_alloc(U) pata_acpi(U) i2c_piix4(U) xen_netfront(U) pcspkr(U)
i2c_core(U) ata_piix(U) ata_generic(U) xen_blkfront(U) [last unloaded:
ipmi_msghandler]
date_and_time wtigervml kernel: Pid: 1066, comm: sadc Not tainted
2.6.32-200.21.2.el5uek #1 HVM domU
date_and_time wtigervml kernel: RIP: 0010:[<ffffffff810652cd>]
[<ffffffff810652cd>] run_timer_softirq+0x212/0x221
```

To work around this issue, you must update the console of the Oracle Virtual Machine for the Oracle Exalytics Base Image 2.0.1.1.0 for Exalytics Oracle VM x86-64, from version 1.3.1 to version 1.3.2.

To update the console of the Oracle Virtual Machine:

1. Navigate to My Oracle Support and download patch number 15954524.
The patch number contains the *ovm-consoled-0.1-3.2.noarch.rpm* package.
2. Copy the package on all the servers in the pool.
3. Navigate to the directory where the previous ovm-consoled package is installed.
4. Enter the following command to update the rpm file:

```
# rpm -Uvh ovm-consoled-0.1-3.2.noarch.rpm
```
5. Enter the following command to restart the ovm-consoled service:

```
# service ovm-consoled restart
```

Note: To update all guest operating systems, you must restart the server.

6. Enter the following command to verify the upgrade:

```
# rpm -qi ovm-consoled
```
7. Confirm that the output is displayed as follows:

```
Name: ovm-consoled
Version: 0.1
Release: 3.2
Architecture: noarch
Install Date: (not installed)
Group: Applications/System
Size: 35030
```

2.3.6 InfiniBand Not Supported When Running Oracle Virtual Server Image

Impacted Releases: 1.0.0.1, 1.0.0.2

InfiniBand interfaces are not supported for network communication when using Oracle Exalytics Base Image 2.0.1.1.0 for Exalytics Oracle VM x86-64.

To establish network connectivity from virtual machines to Exadata, you must connect through 1GB or 10GB Ethernet interfaces.

2.3.7 Unable to Modify Memory Settings of a Guest Virtual Machine

Impacted Releases: 1.0.0.1, 1.0.0.2

When modifying the memory settings of an existing guest virtual machine, the following message may be displayed:

"The memory limit cannot be different than the current memory size on an HVM virtual machine".

To resolve the issue, increase the memory settings of the template used to create the virtual machine before you modify the memory settings of the guest machine.

To create a new guest virtual machine with a memory setting greater than the default, please set the required value in the template first, then create the guest virtual machine.

2.4 Oracle Exalytics Installation Issues and Workarounds

This section describes the installation issues and workarounds related to Oracle Exalytics. It includes the following sections:

- [Section 2.4.1, "Additional Step for Creating a Home Directory Partition Needed"](#)
- [Section 2.4.2, "Installation Fails with Permissions Error"](#)

2.4.1 Additional Step for Creating a Home Directory Partition Needed

Impacted Releases: 1.0

This issue is fixed in *Oracle Fusion Middleware Installation and Administration Guide for Oracle Exalytics In-Memory Machine* (E24076-04).

Chapter 2 of *Oracle Fusion Middleware Installation and Administration Guide for Oracle Exalytics In-Memory Machine* describes the process for installing software on the Exalytics machine. There is another step needed in the process before you download the software as follows:

To create a /home directory partition:

1. After logging in as the root user, configure the /home directory on the hard disk using commands such as the following ones:

```
# parted /dev/sd

(parted) mklabel msdos
(parted) mkpart
Primary/extended? Primary
File system type? [ext2]? ext3
Start? 0
End? 1797GB
(parted) quit

# mkfs.ext3 /dev/sdb1
# mount /dev/sdb1 /home
```

2. Add the following line to the /etc/fstab file:

```
/dev/sdb1          /home    ext3          defaults 1 2
```

3. Restart the computer.
4. Verify that the partition has been created by entering the following command:

```
df -lh
```

2.4.2 Installation Fails with Permissions Error

Impacted Releases: 1.0

This issue is fixed in *Oracle Fusion Middleware Installation and Administration Guide for Oracle Exalytics In-Memory Machine* (E24076-04).

As part of the process of installing software on the Exalytics Machine, you prepare to run installation scripts by editing the oraInst.loc file. When you run the scripts, you might find that they fail and display an error message such as the following one:

"You do not have permissions to write to the inventory at <inventory_location>"

In addition, you notice what appears to be two inventory directories with the same name in the location that is specified in the oraInst.loc file. In fact, the name of one directory likely includes an extra space at the end. The extra space is likely included because you inadvertently added it at the end of the line that contains the 'inventory_loc' path in the oraInst.loc file.

To resolve this issue, remove the space from the line in the oraInst.loc file that contains the path name and restart the installation.

2.5 Oracle Exalytics Post-Installation Issues and Workarounds

This section describes the post-installation issues and workarounds related to Oracle Exalytics. It includes the following sections:

- [Section 2.5.1, "Delete Extraneous Directory After Installation"](#)
- [Section 2.5.2, "Changes Required to sys.odbci.ini File After Installation"](#)
- [Section 2.5.3, "mcelog Warning Generated Unnecessarily"](#)

2.5.1 Delete Extraneous Directory After Installation

Impacted Releases: 1.0, 1.0.0.1, 1.0.0.2

When you use the installation scripts to install software on the Exalytics Machine, you see that the scripts create the following directory:

```
/home/oracle/aggregate_store/tt_aggr_store
```

The scripts create this directory in error, and you must delete it before instantiating the TimesTen database with a DSN called TT_AGGR_STORE.

You can leave intact the following directories, because they are referenced by the TimesTen DSN:

```
/home/oracle/aggregate_store/  
/home/oracle/aggregate_store/logs
```

2.5.2 Changes Required to sys.odbci.ini File After Installation

Impacted Releases: 1.0

This issue is fixed in *Oracle Fusion Middleware Installation and Administration Guide for Oracle Exalytics In-Memory Machine* (E24076-04).

When you use the installation scripts to install software on the Exalytics Machine, the scripts automatically add a DSN entry into the sys.odbci.ini file for TimesTen. You must edit this TT_AGGR_STORE DSN entry so that it reads as follows:

```
[TT_AGGR_STORE]  
Driver=/home/oracle/TimesTen/tt1122/lib/libtten.so  
DataStore=/home/oracle/aggregate_store/tt_aggr_store  
LogDir=/home/oracle/aggregate_store/logs  
DatabaseCharacterSet=AL32UTF8  
ConnectionCharacterSet=AL32UTF8  
LogFileSize=1024  
LogBufMB=1024  
LogBufParallelism=16  
Preallocate=0  
PermSize=25000
```

```
TempSize=25000
MemoryLock=4
CkptFrequency=30
CkptLogVolume=0
CkptRate=20
PrivateCommands=1
RecoveryThreads=40
```

The changes that you must make are the following:

- Change LogBufParallelism to a value of 16 from the installed value of 12.
- Remove the following lines:

```
RangeIndexType=1
Connections=1024
```

Note that the settings for PermSize and TempSize are altered per the requirements for each Exalytics Machine. The values that are set as part of the installation are only the initial settings.

In addition, in the section of the sys.odbc.ini file that starts `#[sampledb_1122]`, the scripts incorrectly include duplicate entries that you must delete or comment out, as shown in the following list:

```
ConnectionCharacterSet=AL32UTF8
LogFileSize=1024
LogBufMB=1024
LogBufParallelism=16
Preallocate=0
PermSize=25000
TempSize=25000
MemoryLock=4
CkptFrequency=30
CkptLogVolume=0
CkptRate=20
PrivateCommands=1
RangeIndexType=1
Connections=1024
RecoveryThreads=40
```

2.5.3 mcelog Warning Generated Unnecessarily

Impacted Releases: 1.0, 1.0.0.1, 1.0.0.2

On the Exalytics Machine as delivered, the cron daemon emails the following warning message to the system administrator every hour:

```
mcelog: warning: record length longer than expected. Consider
update.
```

To prevent this warning message from occurring, edit the `/etc/cron.hourly/mcelog.cron` file and comment out the line that contains the command that runs mcelog.

Before you make the change, the line in the mcelog.cron file is shown as follows:

```
/usr/sbin/mcelog --ignorenodev --filter >> /var/log/mcelog
```

After you make the change, the line in the mcelog.cron file is shown as follows:

```
#/usr/sbin/mcelog --ignorenodev --filter >> /var/log/mcelog
```


2.6 Oracle Exalytics Patching Issues and Workarounds

This section describes the patching issues and workarounds related to Oracle Exalytics Release 1 Patchset 1 (1.0.0.1). It includes the following sections:

- [Section 2.6.1, "Configuring Oracle TimesTen Checkpoint Frequency When Not Using Aggregate Persistence"](#)
- [Section 2.6.2, "Downloading Oracle Essbase 11.1.2.2.100 for Release 1 Patchset 1 \(1.0.0.1\)"](#)

2.6.1 Configuring Oracle TimesTen Checkpoint Frequency When Not Using Aggregate Persistence

Impacted Releases: 1.0.0.1

This issue is fixed in *Oracle Fusion Middleware Installation and Administration Guide for Oracle Exalytics In-Memory Machine* (E24076-06).

When you load data into an Oracle TimesTen database schema that uses Aggregate Persistence, set the CkptFrequency parameter to -1 by following the instructions in Section 7.2.6.1.1 "Configuring Oracle TimesTen Checkpoint Frequency" of *Oracle Fusion Middleware Installation and Administration Guide for Oracle Exalytics In-Memory Machine*.

If you load data into an Oracle TimesTen database schema that does not use Aggregate Persistence, then locate the DSN entry for the schema in the *timesten-install-dir/info/sys.odbc.ini* file and edit the three parameters for that DSN entry as follows:

- CkptFrequency=30
- CkptLogVolume=0
- CkptRate=0

2.6.2 Downloading Oracle Essbase 11.1.2.2.100 for Release 1 Patchset 1 (1.0.0.1)

Impacted Releases: 1.0.0.1

This issue is fixed in *Oracle Fusion Middleware Installation and Administration Guide for Oracle Exalytics In-Memory Machine* (E24076-06).

If Oracle Essbase is deployed on the Exalytics machine, then download and install Oracle Essbase 11.1.2.2.000, Patchset 11.1.2.2.100 from the Oracle Software Delivery Cloud web site.

To download Oracle Essbase 11.1.2.2.100 for Release 1 Patchset 1:

1. Navigate to the Oracle Software Delivery Cloud web site at the following link:
<http://edelivery.oracle.com>
2. For Product Pack, select **Oracle Enterprise Performance System**.
3. For Platform, select **Linux x86-64**.
4. Click **Go**.
5. Select and download **Oracle Enterprise Performance Management System (11.1.2.2.0) Media Pack for Linux x86-64**.

The 11.1.2.2.0 media pack contains Oracle Essbase 11.1.2.2.100.

2.7 Oracle Exalytics Documentation Errata

This section describes errata in Oracle Exalytics documentation and help systems. It includes the following topics:

- [Section 2.7.1, "Oracle Fusion Middleware Installation and Administration Guide for Oracle Exalytics In-Memory Machine"](#)
- [Section 2.7.2, "Oracle Exalytics In-Memory Machine Owner's Guide for Linux x86-64"](#)

2.7.1 Oracle Fusion Middleware Installation and Administration Guide for Oracle Exalytics In-Memory Machine

This section describes documentation errata in *Oracle Fusion Middleware Installation and Administration Guide for Oracle Exalytics In-Memory Machine*. It includes the following topics:

- [Section 2.7.1.1, "Updates to Procedure for Configuring ASR"](#)
- [Section 2.7.1.2, "Incorrect Indication of sys.odbc.ini File"](#)
- [Section 2.7.1.3, "Incorrect Instructions for Editing the Properties File"](#)

2.7.1.1 Updates to Procedure for Configuring ASR Impacted Releases: 1.0.0.1

This issue is fixed in *Oracle Fusion Middleware Installation and Administration Guide for Oracle Exalytics In-Memory Machine* (E24076-06).

Chapter 7 contains Section 7.2.5, "Installing the Oracle Exalytics Release 1 Patchset 1." That section includes a procedure for configuring Auto Service Request (ASR). Replace the steps in that procedure with the ones in [Section 2.7.2.1, "Updates to Procedure for Configuring ASR."](#)

2.7.1.2 Incorrect Indication of sys.odbc.ini File Impacted Releases: 1.0.0.1

This issue is fixed in *Oracle Fusion Middleware Installation and Administration Guide for Oracle Exalytics In-Memory Machine* (E24076-06).

The references to the sys.odbc.ini file are incorrect in two locations of the guide. In Section 4.5.3 (Step 4) and Section 7.2.6.1.1 (Step 1), the file name is shown as *timesten-install-root/info/sys.odbc.ini*. The file name must be changed to the following: *timesten-install-dir/info/sys.odbc.ini*.

2.7.1.3 Incorrect Instructions for Editing the Properties File Impacted Releases: 1.0.0.1

This issue is fixed in *Oracle Fusion Middleware Installation and Administration Guide for Oracle Exalytics In-Memory Machine* (E24076-07).

Section 3.2.7, "Step 7: Editing the Properties File" contains points to keep in mind as you edit the file. The fourth point in the list is to ensure that the file system does not include a bim.mw.home directory, which is incorrect. The line should read as follows:

"Ensure that the file system includes an empty directory to be used as the bim.mw.home directory in the properties file."

2.7.2 Oracle Exalytics In-Memory Machine Owner's Guide for Linux x86-64

This section describes documentation errata in *Oracle Exalytics In-Memory Machine Owner's Guide for Linux x86-64*. It includes the following topic:

- [Section 2.7.2.1, "Updates to Procedure for Configuring ASR"](#)

2.7.2.1 Updates to Procedure for Configuring ASR Impacted Releases: 1.0.0.1

This issue is fixed in *Oracle Exalytics In-Memory Machine Owner's Guide for Linux x86-64* (E25369-06).

Chapter 8 contains Section 8.3, "Before You Begin." That section includes a procedure for configuring ASR. Replace the steps in that procedure with the following ones:

1. Create a directory using a command such as the following:

```
mkdir -p /opt/exalytics/asr
```

2. Copy the following files into the new directory from the directory where you previously extracted them, and ensure that the two Perl files have execute permissions:

```
bda_mon_hw_asr.pl
```

```
setup_asr_ilom.pl
```

```
common_subs.pm
```

```
SUN-HW-TRAP-MIB.mib
```

3. Add the following line to the `/etc/inittab` file:

```
emh1:345:respawn:/opt/exalytics/asr/bda_mon_hw_asr.pl -server
```

4. At the command line, execute the `init q` command to initialize and start the `bda_mon` server.

5. Run the following commands to add executive permissions on the pl script:

```
chmod +x setup_asr_ilom.pl
```

```
chmod +x bda_mon_hw_asr.pl
```

6. Use the client to configure ASR destinations by using the instructions that are available from the following command that you execute from the `/opt/exalytics/asr` directory:

```
./bda_mon_hw_asr.pl -help
```

3 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 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.

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