Release Notes for Linux Host Drivers, V3.7.0-LX

These release notes document information about the current release of the Oracle's Xsigo Linux-based host drivers.

Additional release notes exist for:

- Oracle's Xsigo Windows host drivers
- Oracle's XgOS and Oracle's Xsigo Fabric Director
- Oracle's Xsigo Fabric Director
- Oracle's Xsigo Ubuntu release notes

These notes contain the following sections:

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Overview

Oracle's Xsigo Fabric Director is a service-oriented platform that interconnects data-center resources based on application demands.

Customers and partners are requested to send comments and report bugs to Xsigo by filing a customer case through the Xsigo Technical Support web portal (http://support.xsigo.com). Xsigo is fully committed to responding to all feedback regarding our product and greatly appreciates customer involvement. If you need to contact Xsigo Customer Support, you can facilitate your interaction with Customer Support by gathering some troubleshooting information. For more information, see Technical Support Contact Information on page 14.

What's New in this Release

Release 3.7.0-LX host drivers support the following new features and enhancements:

- Citrix Xen 5.6 SP2 (32-bit hypervisor) hosts are now supported. In addition, SAN Boot over vHBA and PXE install of the SAN Boot image over vNIC are supported for these hosts. Other remote boot options are not yet supported, as documented in iSCSI Boot and NFS Install Are Not Yet Supported.
- Red Hat Enterprise Linux 6 Update 1 hosts now support SAN Boot over vHBA and PXE install of the SAN Boot image over vNIC. Other remote boot options are not yet supported, as documented in iSCSI Boot and NFS Install Are Not Yet Supported.

System Requirements

This section documents the system requirements for this version of host drivers.

Supported OS Levels

The following architecture is tested in this release:

The following 32-bit and 64-bit architectures are tested in this release:

- RHEL 4 Update 8
- RHEL 5 Updates 2, 3, 4, 5 and 6
- Oracle Enterprise Linux (OEL) 5 Update 6
- Oracle Unbreakable Linux (OUL) 5 Update 6 (32-bit only)
- Oracle Virtual Machine (OVM) 2.2.1
- Citrix Xen Server 5.6 FP1 (32-bit only)
- Debian Ubuntu version 10.04 (64-bit distribution only)

RHEL 5 GA, and RHEL 5 Update 1 OSes are supported through Xsigo host driver version 2.7.1 and earlier.

Supported Firmware Levels

The following firmware levels of firmware are supported for InfiniHost and Connect-X HCAs in this release:

- Infinihost Single Port HCA: 1.2.0
- Infinihost Dual Port HCA: 5.3.0
- Connect-X Dual Port HCA: 2.7.0 or higher
- ConnectX-2 Single or Dual-Port HCA: 2.7.0 or higher

System Limitations and Restrictions

This section documents system limitations and restrictions for this version of Citrix Xen host driver.

The remaster-xenserver-5.6fp1 Script Does Not Sanity Check Some Errors

Although the `remaster-xenserver-5.6fp1` script does correctly report most errors, the script does not sanity check for the following:

- The script does not check for version incompatibility between the IB stack and the Xsigo host drivers. For example, if you specify a version of IB stack that is less than the required version for the 3.8.6-LX host drivers, this error is not reported.
- The script does not check for version incompatibility between the IB stack plus host drivers, and the Citrix ISO. For example, if you have a valid combination of IB stack and Xsigo host driver, but inject them into an incompatible version of Citrix OS, this error is not reported.
- The script does not check for unique IB and Xsigo host driver RPMs. For example, if you pass two IB RPMs or two Xsigo host-driver RPMs—instead of one of each, which is required—this error is not reported.

In this situation, the remastered ISO compiles without any error, but it cannot be installed on the SAN. If you attempt to select a PXE boot vNIC or a SAN Boot vHBA, and no devices are found, the remaster-xenserver-5.6fp1 script might be incorrectly created. You can run the script in debug mode to begin troubleshooting. For information about the remaster ISO script for Citrix servers, see Documentation Addition—Support for Remaster ISO Script for Citrix Xen Hosts on page 7.

iSCSI Boot and NFS Install Are Not Yet Supported

SAN Boot and iSCSI Boot of Citrix Xen hosts are not yet supported. Also, PXE install and NFS install of Citrix Xen host drivers are not yet supported. Do not attempt to use these features in this release.

Use Citrix's Native Bonded Interfaces for High Availability

The Fabric Director offers high availability vNIC pairs (HA vNICs), but instead of configuring HA vNICs on the Fabric Director, Xsigo recommends that you create the vNICs on the Citrix server through Citrix's native bonded interfaces functionality.


Note

Do not use Citrix's native bonded interfaces for Service Console access because failover between the interfaces does not correctly occur. This restrictions is due to a limitation in the Citrix software, not due to any issue in the Xsigo host drivers for Citrix.

Overview

1. Bond your NICs together through the Citrix XenCenter GUI.
2. Create the VM using the bonded interfaces.

Procedure

To bond interfaces, you will use the Citrix XenCenter GUI. Follow this procedure:

Step 1 Log in to XenCenter

Step 2 Click the Networking tab.

Step 3 On the *Networking* tab, click the ***Add Network...*** button.

Step 4 On the resulting dialog, select the two NICs that you want to bond, then click ***Add...*** to move them to the *Bonded NICs* column.

Step 5 Click ***Finish*** to complete the bonding.

When your bonded interfaces are created, you can use them to create the Citrix VM.

Limitations on the Length of Virtual Resource Names Under Citrix Xen

With Citrix Xen operating systems, the names of virtual resources are restricted to the following lengths:

- vNICs: 10 characters (maximum)
- vHBAs: 15 characters (maximum)
- Server Profiles: 31 characters (maximum)

If you violate the length restrictions, vNICs will not work.

vNIC Names Must be Named “eth” Plus a Single-Digit Number

In this release, any vNIC you configure on a Citrix Xen server must be named `eth` plus a number from zero to nine—for example, `eth1`, `eth2`, and so on. Without this naming convention, the vNICs are not recognized by the Citrix VM. Be aware that the on-board physical interfaces also use the “`eth` plus number” format for interface names.

Before creating any vNICs, list all the devices on the Citrix Xen server and note any interfaces names already in use. To avoid a name collision, specify vNIC names that are not already in use. For example, if the Citrix server already has an `eth0` in use, do not use `eth0` as a vNIC name.

Virtual Resources Supported per Server

In this release, Citrix Xen servers have been tested to support the following number of virtual resources:

- Standalone vNICs: 8
- Standalone vHBAs: 4
- Bonded vNICs: 4 pairs
- Multipath vHBAs: 2 pairs

User Guides

User guides are available on CD for shipments to new customers, and by download from the Xsigo Technical Support site.

Xsigo Systems provides the following Fabric Director product documentation in PDF format:

- *Fabric Director Hardware and Host Drivers Installation Guide*
- *XgOS Software Upgrade Guide*
- *XgOS Command-Line User Guide*
- *XgOS Remote Booting Guide*
- *Fabric Manager Web User's Guide*
- *XgOS vNIC Switching Configuration Guide*

You can download these manuals by going to the Xsigo Support page (www.xsigo.com/support) and clicking the "Documentation" tab on the toolbar at the top of the page. You will need a login and password before downloading the manuals. See page 14.

Documentation Erratum and Addition

The following sections contain corrected and additional text for the Xsigo technical documentation.

Documentation Erratum

The following section contains a fix for errors in the Xsigo technical documentation.

Corrected Text for Linux Firmware and Option ROM Updates

Note the following correction to the "Firmware and Option ROM Levels" chapter of the *Remote Booting Guide*.

In the "Linux Firmware and Option ROM" section, the procedure is incorrect. The procedure instructs you to run the Option ROM upgrade tool (`xg_config`) first, then load the new HCA firmware by running an RPM. These steps are reversed because the `xg_config` tool is actually in the RPM.

If you are upgrading the HCA firmware and Option ROM for a Citrix Xen server, use the following corrected text:

Step 1 Log in into the Citrix Xen host server as root.

Step 2 Upgrade the Xsigo HCA firmware package on the server. For example:

```
rpm -ivh <xsigo-hca-firmware_number.i386.rpm>
```


Note

Replace `xsigo-hca-firmware_2.6.6.i386.rpm` with the xsigo firmware for your server. Supported host drivers for each operating system are listed in the release notes.

This step unpacks the `xg_config` tool, which you can use to update the HCA firmware and Option ROM.

Step 3 Run `xg_config` to view the firmware and option ROM levels.

```
/opt/xsigo/bin/xg_config
################################################################################
# Main menu
```

```
################################################################################

Selected card:
   Node GUID          : '0002:c902:0020:4934'
   Board ID           : 'MT_0150000001'
   CA type            : 'MT25208'
   Firmware version   : '5.3.0'
   Hardware version   : 'a0'
   Option ROM version : 'XgBoot Version 2.2.11'
```

Verify that the firmware version is one of the following:

InfiniHost Single-Port HCA: 1.3.0 or higher

InfiniHost Dual-Port HCA: 5.3.0 or higher

ConnectX Dual-Port HCA: 2.8.0 or higher

ConnectX-2 Single and Dual-Port HCA: Firmware version 2.8.0 or higher

If your firmware and XgBoot versions are the same as listed above, you can skip Step 4.

Step 4 Run `xg_config` to upgrade the firmware and option ROM.

```
/opt/xsigo/bin/xg_config
################################################################################
# Main menu
################################################################################

Selected card:
   Node GUID          : '0002:c902:0020:4934'
   Board ID           : 'MT_0150000001'
   CA type            : 'MT25208'
   Firmware version   : '5.3.0'
   Hardware version   : 'a0'
   Option ROM version : 'XgBoot Version 2.2.11'

1) Flash HCA Firmware
2) Flash HCA Firmware + Option ROM
3) Flash Option ROM
4) Change selected card
0) Quit
Select option>
```

If you are using SAN Boot or might decide to in the future, select option 2. Otherwise, select option 1.

In the following example, option 2 was selected:

```
###########################################################################
# Flash HCA Firmware + Option ROM Menu
###########################################################################

Selected card:
   Node GUID          : '0002:c902:0020:4934'
   Board ID           : 'MT_0150000001'
   CA type            : 'MT25208'
   Firmware version   : '5.3.0'
   Hardware version   : 'a0'
   Option ROM version : 'XgBoot Version 2.2.11'

1) 5.3.0 (XgBoot Version 2.2.11)
2) 5.1.400 (XgBoot Version 1.5)
0) Return to previous menu
Select firmware to use>
*********************************************************
```

Step 5 Select the most recent firmware (the one displayed first). The one you select will be loaded into memory when the server reboots.

You will need to reboot for the firmware upgrade to take effect. However, you can wait to reboot until you have upgraded the host drivers.

Documentation Addition—Support for Remaster ISO Script for Citrix Xen Hosts

In previous versions of the Xsigo Linux host drivers, no script was present for remastering a boot ISO for Citrix Xen hosts. In this release, the `remaster-xenserver-5.6fp1` script has been added which allows creating a golden master image that injects the Xsigo host drivers into the base Citrix Xen OS image. This remastered Citrix Xen ISO can then be used to boot one or more Citrix Xen 5.6 FP1 servers. When you build a remastered ISO, you run `remaster-xenserver-5.6fp1` as a shell script, and pass all of the following arguments to the `remaster-iso` script:

- The InfiniBand RPM, which allows the appropriate InfiniBand stack to be loaded along with the host drivers into the remastered Citrix ISO.
- The Xsigo host drivers, which allows the appropriate version of Xsigo host drivers to be loaded into the remastered Citrix ISO.
- The Citrix Xen ISO, which is the Citrix Xen OS image into which the InfiniBand and Xsigo RPMs will be injected.

The remaster-iso script is supported through the following command:

`sh remaster-xenserver-5.6fp1.sh --ibrpm` `<InfiniBand RPM file>` **`--xsrpm`** `<Xsigo RPM file>` **`[--output`** `<Output ISO>`**`]`**

where:

`--ibrpm` `<Infiniband RPM file>` — Is the name of the InfiniBand RPM file. This file is provided by Xsigo Systems as part of the host driver bundle.

`--xsrpm` `<Xsigo RPM file>` — Is the name of the Xsigo host driver RPM file. This file is provided by Xsigo Systems as part of the host driver bundle.

`--iso` `<XenServer ISO>` — Is the name of the Citrix Xen Server ISO image. This file is provided by Citrix.

`--output` `<Output ISO>` — Is an optional argument that allows to specify a name of the remastered ISO that is created. If you want to name the file, you will need to enter the name. By default, the remastered ISO prepends `XG-` to the name of the Citrix Boot ISO.

Arguments in the script are not positional, so you can pass the InfiniBand RPM, Xsigo host driver RPM, and Citrix ISO to the script in any order. However, all required arguments must be present for the script to correctly build the remastered ISO.


Caution

Some conditions are not checked by the script. While you create the remastered ISO for Citrix servers, double check the validity of the script. For more information, see The remaster-xenserver-5.6fp1 Script Does Not Sanity Check Some Errors on page 3.


Note

The remaster script also has a **`--help`** and **`--debug`** options. The **`--debug`** option creates a log file that provides robust information about the individual stages of the remaster script. The log file is written to the same working directory as the remaster script. As an option, you can rename the log file.

If you suspect that the remastered ISO has not been correctly built, or if you are encountering errors when attempting to boot a host from the remastered ISO, run the script in **`--debug`** mode before contacting Xsigo Customer Support. By doing so, you will have access to debug information that can facilitate your contact with Customer Support.

To remaster an ISO for Citrix Xen 5.6 FP1 servers, follow this procedure:

Step 1 Install and successfully build your Citrix Xen server.

Step 2 Log in to the server as root.

Step 3 Install the Xsigo host drivers once. During this initial install, you will be prompted with an option to make an ISO file system (`mkisofs`).

Step 4 When prompted with `mkisofs`, enter **`y`** (yes), then allow the initial host driver install to run to completion.

Step 5 Reboot the Citrix Xen server.

Step 6 When the reboot completes, log in as `root` and run the `remaster-xenserver` script and specify all the required arguments. For example:

```
sh remaster-xenserver-5.6fp1.sh --ibrpm kernel-ib-1.5.3-
2.6.32.12_0.7.1.xs5.6.100.307.170586xen.i386.rpm --xsrpm xsigo-hostdrivers-kmod-
2.6.32.12_0.7.1.xs5.6.100.307.170586xen.i386.3.7.0.LX.i386.rpm --iso XenServer-
5.6.1-fp1-install-cd.iso
```


Note

The command example shows line breaks due to the length of the string. Do not insert the line breaks when running the `remaster-xenserver-5.6fp1` script. The command is one continuos string.

Step 7 When the script completes, boot from the remastered ISO:

- For the server on which the remastered ISO was created, you will need to reboot the server again to boot off of the remastered ISO.
- For other servers that were not used for remastering the ISO, you can just boot once from the remastered ISO which can be used as a golden master image to boot any number of Citrix Xen 5.6 FP1 servers.

Supported Host Drivers

This release supports the Linux-based host OSes.

Oracle

- oracle/xsigo-hostdrivers-kmod-2.6.18_238.el5.3.7.0.LX-native.x86_64.rpm
- oracle/xsigo-hostdrivers-kmod-2.6.18_238.el5PAE.3.7.0.LX-native.i386.rpm
- oracle/xsigo-hostdrivers-kmod-2.6.18_238.el5.3.7.0.LX-native.i386.rpm
- oracle/xsigo-hostdrivers-kmod-2.6.18_194.el5.3.7.0.LX-native.x86_64.rpm
- oracle/xsigo-boot-2.6.18-194.el5-3.7.0.LX-i386.tar
- oracle/xsigo-boot-2.6.18-194.32.1.0.1.el5-3.7.0.LX-x86_64.tar
- oracle/xsigo-boot-2.6.18-238.el5-3.7.0.LX-i386.tar
- oracle/xsigo-boot-2.6.18-238.el5PAE-3.7.0.LX-i386.tar
- oracle/xsigo-hostdrivers-kmod-2.6.18_194.0.0.0.3.el5.3.7.0.LX-native.x86_64.rpm
- oracle/xsigo-boot-2.6.32-100.26.2.el5-3.7.0.LX-x86_64.tar
- oracle/xsigo-boot-2.6.18-238.el5-3.7.0.LX-x86_64.tar
- oracle/xsigo-hostdrivers-kmod-2.6.18_194.32.1.0.1.el5.3.7.0.LX-native.x86_64.rpm
- oracle/xsigo-hostdrivers-kmod-2.6.18_194.el5PAE.3.7.0.LX-native.i386.rpm
- oracle/xsigo-hostdrivers-kmod-2.6.32_100.26.2.el5.3.7.0.LX-1.x86_64.rpm
- oracle/xsigo-boot-2.6.18-194.el5-3.7.0.LX-x86_64.tar
- oracle/xsigo-boot-2.6.18-194.0.0.0.3.el5-3.7.0.LX-x86_64.tar
- oracle/xsigo-hostdrivers-kmod-2.6.18_194.el5.3.7.0.LX-native.i386.rpm

Red Hat

- redhat/xsigo-boot-2.6.18-92.el5-3.7.0.LX-i386.tar
- redhat/xsigo-hostdrivers-kmod-2.6.18_128.el5.3.7.0.LX-1.x86_64.rpm
- redhat/xsigo-hostdrivers-kmod-2.6.18_194.el5.3.7.0.LX-1.x86_64.rpm
- redhat/xsigo-hostdrivers-kmod-2.6.18_164.el5.3.7.0.LX-1.i386.rpm
- redhat/xsigo-boot-2.6.18-164.el5PAE-3.7.0.LX-i386.tar
- redhat/xsigo-hostdrivers-kmod-2.6.18_238.el5PAE.3.7.0.LX-1.i386.rpm

- redhat/xsigo-boot-2.6.18-194.el5-3.7.0.LX-i386.tar
- redhat/xsigo-hostdrivers-kmod-2.6.18_92.el5PAE.3.7.0.LX-1.i386.rpm
- redhat/xsigo-boot-2.6.18-128.el5-3.7.0.LX-x86_64.tar
- redhat/xsigo-boot-2.6.18-238.el5-3.7.0.LX-i386.tar
- redhat/xsigo-hostdrivers-kmod-2.6.18_194.3.1.el5.3.7.0.LX-1.i386.rpm
- redhat/xsigo-boot-2.6.18-164.el5-3.7.0.LX-x86_64.tar
- redhat/xsigo-boot-2.6.18-92.el5PAE-3.7.0.LX-i386.tar
- redhat/xsigo-boot-2.6.18-238.el5PAE-3.7.0.LX-i386.tar
- redhat/xsigo-boot-2.6.18-194.3.1.el5-3.7.0.LX-i386.tar
- redhat/xsigo-hostdrivers-kmod-2.6.9_89.0.25.ELsmp.3.7.0.LX-1.x86_64.rpm
- redhat/xsigo-hostdrivers-kmod-2.6.9_89.0.25.ELsmp.3.7.0.LX-1.i386.rpm
- redhat/xsigo-hostdrivers-kmod-2.6.18_194.el5.3.7.0.LX-1.i386.rpm
- redhat/xsigo-boot-2.6.18-164.el5-3.7.0.LX-i386.tar
- redhat/xsigo-boot-2.6.32-71.el6.x86_64-3.7.0.LX-x86_64.tar
- redhat/xsigo-hostdrivers-kmod-2.6.18_194.el5PAE.3.7.0.LX-1.i386.rpm
- redhat/xsigo-boot-2.6.18-194.3.1.el5-3.7.0.LX-x86_64.tar
- redhat/xsigo-boot-2.6.18-238.el5-3.7.0.LX-x86_64.tar
- redhat/xsigo-boot-2.6.18-128.el5PAE-3.7.0.LX-i386.tar
- redhat/xsigo-hostdrivers-kmod-2.6.18_92.el5.3.7.0.LX-1.i386.rpm
- redhat/xsigo-boot-2.6.32-71.el6.i686-3.7.0.LX-i386.tar
- redhat/xsigo-hostdrivers-kmod-2.6.32_71.el6.3.7.0.LX-1.i686.rpm
- redhat/xsigo-hostdrivers-kmod-2.6.18_92.el5.3.7.0.LX-1.x86_64.rpm
- redhat/xsigo-hostdrivers-kmod-2.6.18_128.el5PAE.3.7.0.LX-1.i386.rpm
- redhat/xsigo-hostdrivers-kmod-2.6.18_238.el5.3.7.0.LX-1.i386.rpm
- redhat/xsigo-hostdrivers-kmod-2.6.18_164.el5PAE.3.7.0.LX-1.i386.rpm
- redhat/xsigo-hostdrivers-kmod-2.6.18_128.el5.3.7.0.LX-1.i386.rpm
- redhat/xsigo-boot-2.6.18-194.el5-3.7.0.LX-x86_64.tar
- redhat/xsigo-hostdrivers-kmod-2.6.18_238.el5.3.7.0.LX-1.x86_64.rpm
- redhat/xsigo-boot-2.6.9-89.0.25.ELsmp-3.7.0.LX-i386.tar
- redhat/xsigo-boot-2.6.18-92.el5-3.7.0.LX-x86_64.tar
- redhat/xsigo-boot-2.6.18-128.el5-3.7.0.LX-i386.tar
- redhat/xsigo-boot-2.6.9-89.0.25.ELsmp-3.7.0.LX-x86_64.tar
- redhat/xsigo-hostdrivers-kmod-2.6.32_71.el6.3.7.0.LX-1.x86_64.rpm
- redhat/xsigo-hostdrivers-kmod-2.6.18_194.3.1.el5.3.7.0.LX-1.x86_64.rpm
- redhat/xsigo-hostdrivers-kmod-2.6.18_164.el5.3.7.0.LX-1.x86_64.rpm
- redhat/xsigo-boot-2.6.18-194.el5PAE-3.7.0.LX-i386.tar

Citrix

- citrix/xsigo-hostdrivers-kmod-2.6.18_128.1.6.el5.xs5.5.0.496.1012xen.3.7.0.LX-1.i386.rpm
- citrix/xsigo-boot-2.6.32.12-0.7.1.xs5.6.100.307.170586xen-3.7.0.LX-i386.tar
- citrix/xsigo-boot-2.6.18-128.1.6.el5.xs5.5.0.496.1012xen-3.7.0.LX-i386.tar
- citrix/xsigo-hostdrivers-kmod-2.6.32.12_0.7.1.xs5.6.100.307.170586xen.3.7.0.LX-1.i386.rpm
- citrix/xsigo-boot-2.6.18-128.1.6.el5.xs5.5.0.505.1024xen-3.7.0.LX-i386.tar
- citrix/xsigo-hostdrivers-kmod-2.6.32.12_0.7.1.xs5.6.100.323.170596xen.3.7.0.LX-1.i386.rpm
- citrix/xsigo-hostdrivers-kmod-2.6.18_128.1.6.el5.xs5.5.0.505.1024xen.3.7.0.LX-1.i386.rpm
- citrix/xsigo-boot-2.6.32.12-0.7.1.xs5.6.100.323.170596xen-3.7.0.LX-i386.tar

Oracle (OVM 2.2.1)

- ovm/xsigo-hostdrivers-kmod-2.6.18_128.2.1.4.25.el5.3.7.0.LX-1.i386.rpm
- ovm/xsigo-hostdrivers-kmod-2.6.18_128.2.1.4.37.el5xen.3.7.0.LX-1.i386.rpm
- ovm/xsigo-hostdrivers-kmod-2.6.18_128.2.1.4.25.el5xen.3.7.0.LX-1.i386.rpm
- ovm/xsigo-hostdrivers-kmod-2.6.18_128.2.1.4.28.el5xen.3.7.0.LX-1.i386.rpm
- ovm/xsigo-hostdrivers-kmod-2.6.18_128.2.1.4.27.el5xen.3.7.0.LX-1.i386.rpm

Ubuntu

- ubuntu/xsigo-hostdrivers-kmod-2.6.32_27_server.3.7.0.LX-1.x86_64.rpm
- ubuntu/xsigo-hostdrivers-kmod-2.6.32_26_server.3.7.0.LX-1.x86_64.rpm
- ubuntu/xsigo-hostdrivers-kmod-2.6.32_24_server.3.7.0.LX-1.x86_64.rpm
- ubuntu/xsigo-hostdrivers-kmod_2.6.32_28_server.3.7.0.LX-1-1_amd64.deb
- ubuntu/xsigo-hostdrivers-kmod_2.6.32_25_server.3.7.0.LX-1-1_amd64.deb
- ubuntu/xsigo-hostdrivers-kmod_2.6.32_24_server.3.7.0.LX-1-1_amd64.deb
- ubuntu/xsigo-hostdrivers-kmod_2.6.32_27_server.3.7.0.LX-1-1_amd64.deb
- ubuntu/xsigo-hostdrivers-kmod-2.6.32_25_server.3.7.0.LX-1.x86_64.rpm
- ubuntu/xsigo-hostdrivers-kmod_2.6.32_26_server.3.7.0.LX-1-1_amd64.deb

Downloading Supported Drivers

You need access to the Xsigo support site to download the drivers. To get the drivers:

Step 1 Log in to the support portal (http://support.xsigo.com/support/) with a user name and password.

Step 2 Navigate to the SOFTWARE tab and select CURRENT RELEASE. You will want the following file:

`xsigo-hostdrivers-kmod-2.6.32.12_0.7.1.x55.6.100.307.170586xen.3.7.0.LX.rpm`

Step 3 On that page, select the driver you need. If the driver you need is not present, contact Xsigo Customer Support as documented in Technical Support Contact Information on page 14.

Linux Host Drivers

This release supports the Linux-based host drivers for Red Hat Linux, CentOS, Oracle Enterprise Linux, Oracle Unbreakable Linux, and Citrix XenServer. For the RPM file appropriate to your host servers, see Supported Host Drivers on page 9.


Note

When upgrading Linux host drivers, the server must be rebooted after the new RPM is installed.

Known Problems

Table 1 lists known problems in the Xsigo Citrix host drivers for this version.

Table 1 Known Problems in 3.7.0-LX

Number	Description
9953	When using Citrix, an HA VLAN does not show the IP address on the secondary VLAN.

11806	The Linux kernel version is truncated when issuing the **`show physical-server`** command on the Fabric Director even though the string is shorter than the 32-character limit. But, when you issue the uname -a command on the Citrix server, the kernel version is correctly displayed. Consider the following example:
	`vp780-q>`**`show physical-server`**
	`Linux/2.6.18-128.1.6.el5.xs5.6.0.505/i686`
	`[root@x ~]#` **`uname -a`**
	`Linux s 2.6.18-128.1.6.el5.xs5.6.0.505.1024xen`
	(Red text indicates the truncated part of the version string when displayed through the Fabric Director.)
	When displaying the server's kernel version string, use **`uname -a`** on the host.

11827	During scalability testing, a problem prevented a Linux host server with one vHBA from detecting 8 targets with 512 LUNs. When the problem occurred, only 7 targets and 240 LUNs were discovered.
12407	On Linux hosts, issuing the **`system cold-restart`** command repeatedly numerous times can prevent the vNIC queue pairs between the server and Fabric Director from connecting after the Fabric Director comes back online. The failure to connect queue pairs was shown as soon as the 7th cold restart in a row, but can occur at a random number of intervals afterward. You can work around this issue by setting the affected vNIC(s) down, then up again. For example: **`set vnic`** `<name>` **`down`** **`set vnic`** `<name>` **`up`**

Table 1 (continued) Known Problems in 3.7.0-LX

Number	Description
12719	On rare occasions a problem can occur that causes queue pairs to remain disconnected after a Linux server and Fabric Director are simultaneously powered down and left powered off for over an hour. In this situation, when you powered the Fabric Director and the server back on, you would expect reconnection to occur and queue pairs to be up. The problem occurred in a dual-chassis configuration with 5 chassis level HA vNICs configured on 10 GE modules, and was observed very rarely.
13601	On Citrix Xen hosts, setting vNICs to support jumbo frames can cause a problem that prevents traffic greater than 1500 Bytes from being forwarded to the Xen bridge interface. When the problem occurs, jumbo packets on the vNIC are dropped at the virtual interface. You can work around this problem by setting the MTU size to 9K on the virtual interface itself. When the vNIC and virtual interface are both set to the same MTU, jumbo frames will not be dropped.
18139	When you run `xsigo-support`, it gathers system information that is useful for troubleshooting. However, on Citrix Xen servers, the xsigo-support information does not gather: • host name • host OS version • host OS architecture If you need to contact Xsigo Support, please gather this information in addition to running `xsigo-support`, and provide the host name, OS version, and OS architecture to Xsigo Support as well as the output of `xsigo-support`.
18588	A known issue in the Citrix software prevents the failover of bonded interfaces on the Service Console access. The Citrix XenServer expects a single physical interface for Service Console access, but the Xsigo host drivers do allow you to configure a bonded interface. If you do, then only one of the interfaces operates. Do not use bonded interfaces for Service Console access.
18881	After SAN Booting a Citrix 5.6 FP1 host that has an InfiniHost HCA, the vNICs on the host do not come up even though they are displayed in `up/up` state on the Fabric Director. When this problem occurs, the vNIC devices are shown as port state `down` in `/proc/driver/xsvnic`.
18882	When SAN Booting an OEL or OUL 5u6 server, a `udev` timeout can delay the server's boot up. This problem is an inconvenience because it delays the boot up by approximately 5 minutes, but after the delay, the server does successfully boot up.
18883	Currently, the `remaster-iso` script for Citrix does not perform any error checking. For more information, see The remaster-xenserver-5.6fp1 Script Does Not Sanity Check Some Errors on page 3. This issue will be addressed in future version of the Xsigo's Linux host drivers.
19262	For Citrix 5.6 SP2 hosts using multipath, a failed path is not always restored when the reason for the failure is resolved. The vHBA is displayed as available through `/proc/drive/xsvhba/devices/<vhba-name>` and the targets are visible in `/proc/drive/xsvhba/target_info/<vhba-name>`, but the CitrixXen multipath daemon sees only one active path. You can work around this problem by issuing the **`/opt/xsigo/bin/xsigo-scan -r -a`** command on the Citrix 5.6 SP2 host where this is occurring.

Fixed Problems

Table 2 lists the fixes in the 3.7.0-LX host drivers.This release contains fixes from previous versions of Linux host drivers. Such fixes are indicated in text.

Table 2 Fixed Problem in 3.7.0-LX

Number	Description
18423	On RHEL 4u8 hosts, a timing issue occurred when loading the Xsigo software modules during host bootup. When the problem occurred, host-side VLAN tagging was failing for an interval of approximately 10 seconds while the host was booting and the Xsigo software modules were being loaded. This problem is fixed in the host driver version 3.6.8-LX.
18574	A problem prevented a Windows guest VM(s) in Citrix XenServer from starting if one or more vNICs were deployed to the VM(s) even though physical NICs operated correctly and the Windows VM(s) started predictably when using physical NICs. This problem is fixed in Linux host driver version 3.6.8-LX.

Technical Support Contact Information

Xsigo is a wholly owned subsidiary of Oracle. Xsigo customers may contact support via the Xsigo website, telephone or e-mail. In order to expedite troubleshooting, all new support requests must be submitted via the Xsigo self-service portal at: http://support.xsigo.com. In addition to opening cases, the Xsigo Support Portal will allow you to update your support cases, download software, search for and view knowledge-base articles, and access technical documentation.

In order to access the customer support portal, you will need to have a Xsigo Support Portal login. Your account team will provide you with the necessary login information to access the support portal. If you need additional logins for your staff, please contact your account team for assistance.

For all Critical (P1) cases, please call the Xsigo support center at either of the following phone numbers:

- **866-974-4647** (toll free)
- **1 408-736-3013** (international).

Alternatively, you can email `supportP1@xsigo.com` and you will be responded to within 30 minutes.

Gathering Information for Xsigo Technical Support — Citrix Xen

If the Xsigo Fabric Director is supporting Citrix Xen servers and problems are encountered, please gather the information in the following section before contacting Xsigo Technical Support or filing a case through the support website.

On the Xsigo Fabric Director

- Type and number of servers connected (brand, model, number of CPUs, size and type of memory)
- Output from the **`get-log-files -all`** command (for Oracle's Xsigo Fabric Director), which will gather the **`show tech-support`** information plus all log files, and place this information into `xsigo-logs.tar.gz`

On the Host Server

- The file output from **`/opt/xsigo/bin/xsigo-support -o`** `<filename>`