Emulex Drivers for VMware Release Notes

Versions: ESX/ESXi 4.1 drivers
FC/FCoE: 8.2.1.141.55
NIC: 4.2.324.4
iSCSI: 4.2.324.12

ESXi 5.0 driver
FC/FCoE: 8.2.4.141.55
NIC: 4.2.327.0
iSCSI: 4.2.324.12

Systems: ESX/ESXi 4.1
ESXi 5.0

Date: October 2012

Purpose and Contact Information

These release notes describe the resolved issues, known issues, and technical tips associated with these Emulex® drivers for VMware releases.

For the latest product documentation, go to www.Emulex.com. If you have questions or require additional information, contact an authorized Emulex technical support representative at tech.support@emulex.com, 800-854-7112 (US/Canada toll free), +1 714-885-3402 (US/International), or +44 1189-772929 (Europe, Middle East, and Africa).

Resolved Issues

Resolved Issues, All Versions

1. **If the DOS Ghost Cloning application is used to clone an operating system installation, the utility does not hang during the cloning process.**
2. **After updating firmware on an Emulex 16 Gb/s HBA, a system reboot is no longer required.**

Known Issues

Known Issues, All Versions

1. **Link Aggregation Control Protocol (LACP) cannot be used on the same port as FCoE or iSCSI.**

   Workaround

   None.

2. **The adapter model name and description do not match the vendor brand name field.**

   The VMware vSphere client only displays adapter family model names with a single port. For example, it displays the OneConnect OCe10102 universal converged network adapter (UCNA) as the OneConnect OCe10100 10GbE, FCoE UCNA. This issue is seen

with the native tool lspci as well. The vSphere client gets the adapter model name and description from xml package files installed with the operating system or with an out-of-box kit rather than from the adapter's VPD data. Other native tools work in a similar manner.

Workaround

To see the correct model name and description, read the driver's procfs node with this command:

```
cat /proc/scsi/lpfc820/<Instance_Number>
```

or use the Emulex OneCommand™ Manager application.

3. **Storage I/O with VMotion fails because of lost vmkernel 10GB network.**

   Rarely, while running I/O intensive applications Windows Server 2003 with a 32-bit virtual machine (VM), CPU usage can spike to 100% and Ethernet performance can be slow. This is due to the TCP/IP offload-enabled network adapter consuming a great deal of nonpaged pool memory and requesting large blocks of contiguous memory.

   Workaround

   Disabling the TCP Checksum Offload (IPv4) feature improves system and network performance because the large amounts of memory are no longer in use.

   To disable TCP Checksum Offload from your Windows Desktop:

   1. Click on **Start > Control Panel > Network Connections > Local Area Connection**.
   2. Click **Properties**.
   3. Click **Configure** (next to vmxnet3 Ethernet Adapter).
   4. Click **Advanced**.
   5. Disable **TCP Checksum Offload (IPv4)**.

4. **Possible issues with boot from SAN support on the LPe12000 family of adapters.**

   Boot from SAN can experience issues on the LPe12000 family of adapters. Issues include not finding the boot LUN or not successfully booting from the boot LUN.

   Workaround

   Boot from SAN support on the LPe12000 series adapters requires the Emulex Universal Boot Code 5.12a2 or later. Emulex recommends using firmware version 2.00a4 or later.

5. **Restriction in assigning Data Center Bridging (DCB) priorities to priority groups.**

   Although there are eight priority groups to which priorities can be assigned, you are able to assign priorities and bandwidths to only two of the priority groups. To one priority group you must assign the FCoE or iSCSI priority and to the other priority group you must assign the other seven (NIC) priorities.

   Note: If you are using a DCBX - enabled switch to configure the priority groups, configure it for only two priority groups to work correctly with the OneConnect adapter.

   Workaround

   None.

ESX/ESXi 4.1 Known Issues

1. **The offline-bundle name of the package changed in ESX 4.1.**

   Thus, ISO install scripts that were written specifically for ESX 4.0 may fail in ESX 4.1.

   Workaround

   Revise any ESX 4.0-specific ISO install scripts to work in ESX 4.1.

ESXi 5.0 Known Issues

1. **When using the vSphere 5.0 NIC driver with Emulex UCNAs in an HP Flex-10 or IBM Virtual Fabric Adapter (VFA) environment, connectivity may not work properly on Windows virtual machines or on the server when VLANs are configured.**

   Workaround

   Do not use the NIC driver bundled with vSphere 5.0. Obtain an updated driver from Emulex, HP, or IBM that supports HP Flex-10 or IBM VFA systems.

Technical Tips

1. **Safe method of changing firmware in flash memory.**

   For operations such as firmware download, Emulex recommends the server be brought into ESX maintenance mode prior to flashing the firmware.

2. **Installing drivers and directly mounting the ISO image. (ESX 4.1 Only)**

   The VMware documentation recommends creating a CD from each driver ISO image and using the CD to access the offline bundle to be installed on the system. For more information on the driver installation process for VMware ESX, refer to the ESXi Patch Management Guide available on the VMware website: http://www.vmware.com

   Instead of creating a CD, you can use the following process to directly mount the ISO image:

   ```
   [root@testmachine ~]# mkdir /tmp/mountpoint
   [root@testmachine ~]# mount -r -o loop
   ```

   Once the ISO image is mounted, you can access the offline bundle in the /tmp/mountpoint/offline-bundle/ directory. Since the offline bundle file name will vary depending on the package that is to be installed, this example uses the name 'offline-bundle' – replace this file name with the name of the offline bundle to be installed.

   ```
   [root@testmachine ~]# esxupdate --maintenancemode --nosigcheck update
   --bundle=/tmp/mountpoint/<lpfcdriver.zip>
   ```

3. **Installing an offline bundle locally on VMware ESXi5.0 with the esxcli command.**

   Install an offline bundle on a VMware ESX server locally using the esxcli command.

   ```
   [root@testmachine ~]# esxcli software vib install --maintenance-mode -d
   <offline-bundle.zip>
   ```

   Where <*offline-bundle.zip*> is the file name of the offline bundle to be installed.

4. **Installing an offline bundle on VMware ESX and ESXi with the vSphere Command Line Interface.**

   Install an offline bundle on a VMware ESX or ESXi server remotely using the vihostupdate command.

1. Enter maintenance mode if the offline bundle is installing the FCoE, NIC, or iSCSI driver. (Maintenance mode is not required to install the Emulex CIM provider.) Maintenance mode can be specified using vSphere Client, vCenter Server, or by using the "hostops.pl" tool available in the vSphere Command Line Interface as in the following example on a RHEL 5.1 host:

   ```
   [root@testmachine ~]# /usr/lib/vmware-cli/apps/host/hostops.pl --server
   test.machine.address --target_host test.machine.address --operation
   enter_maintenance
   ```

2. Install the offline bundle as in the following example:

   ```
   [root@testmachine ~]# vihostupdate --server test.machine.address
   --install --bundle=<offline-bundle.zip>
   ```

   Where <*offline-bundle.zip*> is the file name of the offline bundle to be installed.

3. Reboot the system unless the "Upgrade Procedure" section specifies to not reboot the system.

4. Exit maintenance mode using vSphere Client, vCenter Server, or use the "hostops.pl" tool as in the following example:

   ```
   [root@testmachine ~]# /usr/lib/vmware-cli/apps/host/hostops.pl --server
   test.machine.address --target_host test.machine.address --operation
   exit_maintenance
   ```