Emulex® Poll Mode Driver/DPDK Release Notes

Version: 11.2.1150.0 supports RHEL 7.1-7.2, RHEL 6.7-6.8, SLES 12 SP1 and SLES 12 SP2

Date: January 30, 2017

Purpose and Contact Information

These release notes describe new features, known issues, and technical tips associated with this Emulex® Poll Mode Driver (PMD)/Data Plane Development Kit (DPDK) release.

For the latest product documentation, go to www.broadcom.com. If you have questions or require additional information, contact an authorized Broadcom technical support representative at ccx-tech.support@broadcom.com or request assistance online at https://oemsupportportal.emulex.com/web2tech/ccx.html.

New Features

- The SUSE Linux Enterprise Server (SLES) 12 SP2 operating system is now supported.

Known Issues

1. **When using DPDK over single root input/output virtualization (SR-IOV) on Red Hat Enterprise Linux (RHEL 7.1) systems, the virtual machine (VM) does not power on after setting the `Copy host CPU configuration` option in the Virtual Machine Manager (VMM).**

   Workaround

   Use one of two methods to set up a server for DPDK over SR-IOV.

   First method:

   1. Make sure you have the latest Emulex firmware and PMD installed.

   2. Enable SR-IOV on the host.

   3. Compile DPDK 2.0 or DPDK 2.2 on the host.

   4. Compile the PMD+Surf driver on the host.

   5. Using VMM on the RHEL 7.1 or RHEL 7.2 host, create a VM and install RHEL 7.1 on it.

   6. After installation, turn off the VM, and enable the `Copy host CPU configuration` option under the processor settings of the guest operating system in the VMM.

   Note: If you are using RHEL 7.1, the VM does not boot, and an error stating that the CPU does not support the invtsc feature appears. Use the command `virsh edit <VM name>` to remove the line `<feature policy='require' name='invtsc'/>` from the XML file, and then reboot the VM. (This workaround is not required for RHEL 7.2 systems.)

Second method:

1. Make sure you have the latest Emulex firmware and PMD driver installed.

2. Enable SR-IOV on the host.

3. Using VMM on the RHEL 7.1 or RHEL 7.2 host, create a VM and install RHEL 7.1 or RHEL 7.2 on it.

4. Compile DPDK 2.0 or DPDK 2.2 on the VM.

5. Compile the PMD+SURF driver on the VM.

6. Shut down the VM.

7. Reboot the VM.

2. **The DPDK 2.2 kit does not compile on RHEL 6.8.**

   This general framework compilation issue is on that distribution. It is not a PMD issue.

   Workaround

   Disable `CONFIG_RTE_EAL_IGB_UIO` and `CONFIG_RTE_KNI_KMOD` in the `dpdk-2.2/config/common_linuxapp` configuration file.

Technical Tips

1. **When using DPDK, the Network Manager can interfere with the underlying be2net host interfaces that are being used as DPDK ports and, in some scenarios, can lead to an unrecoverable error in the adapter.**

   Workaround

   For each be2net network interface being used by DPDK, disable Network Manager for just that interface, or disable Network Manager completely. Also disable any scripts that might access the underlying be2net interface.

   ```
   /etc/sysconfig/network-scripts/ifcfg-eth0
   ```

   ```
   NM_CONTROLLED="no"
   ```

   Or

   ```
   chkconfig NetworkManager off
   ```

   ```
   service NetworkManager stop
   ```