



Application Note

Configuring SR-IOV Using CCM with BIOS-based Boot on HPE ProLiant Servers

Products Affected

Product Name
HPE® StoreFabric® CN1100R Converged Network Adapters
HPE 53X Series Flexible Network Adapters

Introduction

This application note provides instructions for enabling and configuring single-root I/O virtualization (SR-IOV) on the HPE 53X Series Flexible Network Adapters and HPE StoreFabric CN1100R Converged Network Adapters using the Marvell Comprehensive Configuration Management (CCM) tool on the HPE ProLiant® server platform. CCM is integrated into the BIOS on each adapter.

Prerequisites

To configure SR-IOV, you need:

- One or more HPE 53X Series Flexible Network Adapters and/or HPE StoreFabric CN1100R Converged Network Adapters
- An HPE ProLiant server

Configuring SR-IOV

To enable and configure SR-IOV:

1. Start CCM (see the *Starting CCM with BIOS-Based Boot on HPE ProLiant Servers Application Note*, part number BC0051406-00), and then select an adapter and port to manage.
The Main Menu opens.
2. Select **Device Hardware Configuration**.
The Device Hardware Configuration menu opens.
3. Select **SR-IOV**.

4. Press the RIGHT ARROW key to change the value to **Enabled** (see [Figure 1](#)).

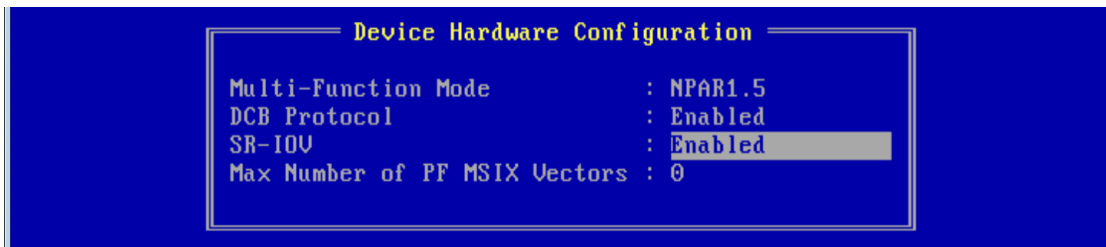


Figure 1. Device Hardware Configuration Menu—SR-IOV Enabled

SR-IOV mode is enabled per physical port; that is, on the same adapter, one physical port can be in SR-IOV mode, while another physical port has SR-IOV disabled.

5. Press ESC.
6. Configure the number of virtual functions that the adapter can support by doing one of the following:
 - If the **Multi-Function Mode** option is **SF** (single function), then the **Number of VFs per PF** option displays. The **Multi-Function Mode** option applies to the entire adapter; that is, all physical ports on the same adapter will be in that mode.
 - a. Select the **Number of VFs per PF** option to enter the desired value (see [Figure 2](#)).

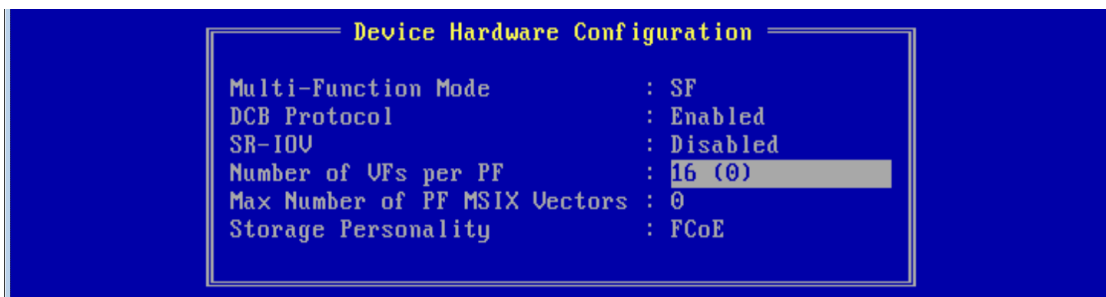
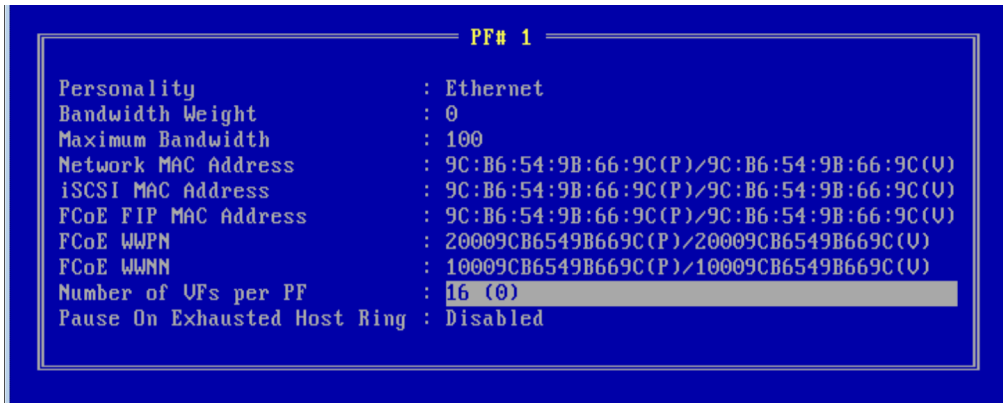


Figure 2. Number of VFs per PF in SF Mode

This option can be set from 0 to 64 in increments of 8 (the default is 16).

- If the **Multi-Function Mode** option is **NPAR1.5**:
 - a. Press ESC to return to the Main Menu.
 - b. Select **NIC Partition Configuration**.
 - c. Select the NPAR physical function (**PF#**) to configure.

-
- d. Select the **Number of VFs per PF** option to enter the desired value (see [Figure 3](#)).



```
PF# 1
Personality           : Ethernet
Bandwidth Weight     : 0
Maximum Bandwidth    : 100
Network MAC Address  : 9C:B6:54:9B:66:9C(P)/9C:B6:54:9B:66:9C(U)
iSCSI MAC Address    : 9C:B6:54:9B:66:9C(P)/9C:B6:54:9B:66:9C(U)
FCoE FIP MAC Address : 9C:B6:54:9B:66:9C(P)/9C:B6:54:9B:66:9C(U)
FCoE WWPN            : 20009CB6549B669C(P)/20009CB6549B669C(U)
FCoE WWNN            : 10009CB6549B669C(P)/10009CB6549B669C(U)
Number of VFs per PF : 16 (0)
Pause On Exhausted Host Ring : Disabled
```

Figure 3. Number of VFs per PF in NPAR Mode

This option can be set from 0 to 64 in increments of 8 (the default is 16). Therefore, the combined VFs of all four NPAR partitions cannot exceed 64.

No VFs can be enabled on or assigned to an NPAR1.5 or FlexFabric® partition that also has FCoE-Offload or iSCSI-Offload enabled. No VFs are lost; they are reassignable and usable on the other Ethernet-only partitions of the same physical port.

- e. Press ESC to return to the NIC Partition Configuration menu and repeat these steps to configure another **PF#**.

See your hypervisor software for instructions on using an SR-IOV-enabled adapter.

References

For more information, see the following:

- *Marvell Starting CCM with BIOS-Based Boot on HPE ProLiant Servers Application Note*, part number BC0051406-00

Document Revision History

Initial release, January 26, 2015

Revision B, July 31, 2019

Changes

Re-branded to Marvell.

In [Step 4](#), added a new paragraph indicating that SR-IOV mode is enabled per physical port.

In [Step 6](#):

In the first bullet, added that the Multi-Function Mode option applies to all ports on the same adapter.

In [Step d](#), added a new third paragraph indicating that “No VFs can be enabled on or assigned to an NPAR1.5 or FlexFabric partition that also has FCoE-Offload or iSCSI-Offload enabled.”

In the References section, removed the HPE document, *Broadcom Comprehensive Configuration Management for HPE FlexFabric Adapters User Guide*, which is no longer available.



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