Multiple I/O streams. One adapter. Converged I/O.



Dell[™] PowerEdge[™] M710 blade server





A Principled Technologies deployment guide commissioned by QLogic Corporation

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About Principled Technologies

EXECUTIVE SUMMARY

Introduction

Traditional networking, where each connection uses one or more cables, is evolving into a more streamlined system – converged networking. Where you previously needed a separate cable for each connection type, you can now combine multiple types of connections onto just one cable. This guide explains how to converge Ethernet and Fibre Channel (FC) networks for data center deployment with both network types flowing through the same physical connection. We will describe a simple network configuration containing a LAN connection and a SAN connection to preconfigured storage.

With Ethernet speeds increasing to 10 Gb/second, more traffic can go through a single cable without compromising performance. Converged network adapters take the benefits of 10Gb Ethernet one step further by allowing you to combine multiple types of traffic, such as TCP, iSCSI, and FCoE, on a single physical port.

NIC partitioning (NPAR), implemented with QLogic VMflex[™] technology, provides a seamless migration path for replacing many 1Gb Ethernet ports with fewer 10GbE ports, without compromising the performance, bandwidth provisioning flexibility, and isolation that physical server environments require.

The QLogic QME8242-k Converged Network Adapter can support up to four independent I/O partitions in one port, allowing you to reduce the number of components used for networking. The partitions are flexible, allowing you to change their function from iSCSI or FCoE to pure Ethernet with just a few steps. The QLogic QME8242-k uses a PCIe[®] Gen2 x8 bus to interface with the host server. The greater bus speed allows data to move more quickly between the processor and the converged adapter.

The QLogic QME8242-k uses QLogic FlexOffload[™] to reduce server CPU cycles required for TCP, FCoE, and iSCSI operations. This increases available CPU resources or CPU efficiency, which can improve performance for all applications and increase levels of consolidation in virtualized servers.



The benefits the QLogic QME8242-k Converged Network Adapter delivers are clear: fewer server CPU cycles, fewer cables, fewer switches, and greater efficiency—all of which yields you a greater return on your investment by allowing you to accomplish more work with less equipment.

QLogic QConvergeConsole

QLogic offers easy to use management tools to help manage its adapter, allowing you to change the functionality of your adapter's partitions from your operating system, along with a host of other features. It is available in both a command line interface (CLI) and a graphical user interface (GUI). Each provides similar functionality, but offers different ways of interacting with the adapter.

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2008 Enterprise 64-bit x64:Warning	Host Attribute Name	Host Attribute Value
⊕ QME8242:RFE1115A79738 □	Hostname:	localhost
⊕ 🕫 QME8242:RFE1115A79847:	OS Type:	Microsoft Windows Server 2008 Enterprise 64-bit x64
	OS Version:	Service Pack 2 (Build 6002)
	FC/FCoE Agent Version:	1.00.1282-20
	iSCSI Agent Version:	2.00.0026
	Ethernet Agent Version:	1.01.18
	Function Summary	
	Number of adapters:	2
	Number of physical ports:	4
	NIC	
	NIC Functions:	6
	FC/FCoE	
	FC Functions:	0
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	ISCSI	
	ISCSI Functions:	1
	iSCSI Targets:	0

Our report does not provide complete details about the QLogic QConvergeConsole[™] suite of software, though we do include instructions on how to modify the adapter and its partitions with the QConverge Console command line interface. For more information on the QConvergeConsole CLI and GUI, see the QLogic user guides at http://support.dell.com.

OVERVIEW OF THE PROCEDURE

This guide shows you how to use NIC partitioning to consolidate heterogeneous network traffic using the QLogic QME8242-k Converged Network Adapter, a Dell PowerEdge M710 server, and a Dell PowerConnect™ M8428-k switch. As a physical Ethernet switch and OSagnostic layer 2 technology, NPAR gives you a lot of freedom in how you configure your servers. For this guide, we chose Microsoft® Windows Server® 2008 R2 as the server OS, and show every step needed to connect a bare-metal blade to an existing Ethernet network and Fibre Channel-based SAN infrastructure. When the installation is complete, the server will send and receive both FCoE and Ethernet traffic through a single port on the 10Gb adapter.

Initial setup

For details, see the <u>Cabling the network</u> and <u>Connecting to the Dell</u> <u>PowerEdge M1000e CMC</u> sections below.

- 1. Connect the Dell PowerConnect M8428-k switch to the core Internet network and to the SAN infrastructure.
- 2. Use your browser to connect to the Dell PowerEdge M1000e CMC and launch the iDRAC GUI for the Dell PowerConnect M8428-k.

Setting up the Dell PowerConnect M8428-k switch

For details, see the <u>Configuring the Dell PowerConnect M8428-k switch</u> section below.

- 1. Create the VLANs to access the core network and the SAN infrastructure.
- 2. Configure the VLAN access.

Installing Windows Server[®] 2008 R2 and drivers for the QLogic QME8242-k

For details, see the <u>Installing Windows Server 2008 R2</u>, <u>Installing the</u> <u>drivers for the QLogic QME8428-k</u>, and Installing Windows <u>updates</u> sections below.

 Install a new copy of Windows Server 2008 R2 Enterprise (Full Installation) as the operating system on the Dell PowerEdge M710.
 If you have not already done so, download the drivers for the QLogic QME8242-k from <u>http://support.dell.com</u>.

3. Log in as administrator.

4. Install the QLogic Windows SuperInstaller and all its relevant components.

5. Now that the system has network connectivity, install Windows updates.

Enabling NPAR on the QLogic QME8242-k

NOTE

There are several ways to enable NPAR on the QLogic QME8242-k. In the body of this guide, we provide details on doing so with the QLogic QConvergeConsole CLI. You can also use the Dell Unified Server Configurator (USC) (see the <u>Appendix</u> of this guide).

The basic steps for enabling NPAR on the QLogic QME8242-k are as follows:

1. Start the QConvergeConsole CLI.

2. Through the NIC Partitioning menu, enable the additional ports, making sure to assign the fourth port for FCoE.

3. Reboot the server.

For details, see the Enabling NPAR on the QLogic QME8242-k section below.

Setting fiber access to the SAN

For details, see the <u>Setting access to the SAN</u> section below.

1. Start the Windows Server Manager, expand Storage, and select Disk Management.

2. Right-click the new disk, and select Online. In this guide, we are connecting to a preconfigured LUN. However, you would have the opportunity to initialize the drive at this point, if necessary.

DETAILED DEPLOYMENT STEPS

Cabling the network

This diagram shows how the network components are connected. The blue line represents the Network/IP connection, while the orange line represents the Storage/FC connection.



Dell PowerEdge M1000e Modular Blade Enclosure

This guide assumes a connection to the core Ethernet network, in our case, via a Cisco[®] Nexus[®] 5010 switch. Likewise, we connected to an existing SAN infrastructure via a Brocade[®] 200E switch. Configuring these switches is outside the scope of this guide. This guide shows how to configure all other components from bare metal.

Connecting to the Dell PowerEdge M1000e CMC

1. Enter the IP address of the Dell PowerEdge M1000e. At the warning about the Web site's security certificate, click Continue to this website (not recommended).



2. Enter the user name and password. The default root password is calvin.



3. To launch the console for the Dell PowerEdge M710, select the server, and click Launch Remote Console.

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- 6 SLOT-06	Attribute	Value
- 7 SLOT-07	Stat	4
- 9 SLOT-09		
-10 SLOT-10	Slot Name	MPTOHD
-11 SLOT-11	Present	Yes
-12 SLOT-12	Health	
-13 SLOT-13	Server Model	PowerEdgeM710HD
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-16 SLOT-16	ODAC Eirmune	9.00 (Duild 99)
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4. At the warning about the Web site's security certificate, click Continue to this website (not recommended).



5. Depending on your browser settings, you may need to give permission for the console to launch.



6. The console is running.



7. To launch the GUI for the Dell PowerConnect M8428-k, select the switch from Chassis Overview, and scroll down to click Launch I/O Module GUI.

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- 3 SLOT-02	Priver Status	<u> </u>	
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- 9 SLOT-09			
-11 SLOT-11	I/O Module Network Settings		Back to top
-13 SLOT-13	Attribute	Value	
- 14 SLOT-14	DHCP Enabled	Yes	
-15 SLOT-15	IP Address	10.41.2.108	
- I/O Module Overview	Subnet Mask	255 255 248 0	
A1 10 GEE KR	Gateway	10.41.0.1	
- A2 Not installed			
- B2 Not installed			
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8. Enter the user name and password. The default root password is calvin.

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9. The console is running.

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Configuring the Dell PowerConnect M8428-k

To configure the Dell PowerConnect M8428-k, you will need to use SSH to connect to the IP address of the switch and use the command-line interface.

1. To make changes to the switch, enter global configuration mode.

```
config t
```

2. Internal interface 0/1 will be carrying the combined traffic to the Dell PowerEdge M710. Make it an FCoE port, change the switchport mode to converged traffic, and enable the port.

```
interface internalTenGigabitEthernet 0/1
fcoeport
switchport mode converged
no shutdown
exit
```

3. External interface 0/17 will be carrying the Ethernet traffic to the Cisco Nexus 5010. Change the port to use VLAN 200, and enable the port.

interface externalTenGigabitEthernet 0/17
switchport mode access
switchport access vlan 200
no shutdown
exit

Installing Windows Server 2008 R2

1. Connect a DVD drive with the Windows Server 2008 R2 DVD to one of the USB ports on the front of the PowerEdge M710.

- 2. Launch the console and boot the server.
- 3. At the Install Windows screen, click Install now.



4. Select Windows Server 2008 R2 Enterprise (Full Installation) as the operating system to install, and click Next.

🔾 🚰 Install Windows			
Select the operating system you want to install			
Operating system	Architecture	Date modified	I
Windows Server 2008 R2 Standard (Full Installation)	x64	7/14/2009	
Windows Server 2008 R2 Standard (Server Core Installation)	x64	7/14/2009	18
Windows Server 2008 R2 Enterprise (Full Installation)	164	7/14/2009	
Windows Server 2008 R2 Enterprise (Server Core Installation)	:64	7/14/2009	
Windows Server 2008 R2 Datacenter (Full Installation)	164	7/14/2009	
Windows Server 2008 R2 Datacenter (Server Core Installation)	x64	7/14/2009	
Windows Web Server 2008 R2 (Full Installation)	x64	7/14/2009	
Windows Web Server 2008 R2 (Server Core Installation)	x64	7/14/2009	
Description: This option installs the complete installation of Windows Serve user interface, and it supports all of the server roles.	. This installation	includes the entire	
	_	Mest	

5. To accept the license terms, click the I accept the license terms checkbox, and click Next.



6. Set the Language to install, choose the appropriate Time and currency format and Keyboard of input method, and click Next.



7. Install a new copy of Windows Server 2008 R2. Select Custom (advanced).



8. Select the disk partition to install in, and click Next to begin the installation.

1 Install Windows		1000
Where do you want to install Window	N5?	
Name	Total Size	Free Space Type
Disk 0 Partition 1: System Reserved	100.0 MB	71.0 MB System
Disk 0 Partition 2	136.0 GB	135.9 GB Primary
€s Betresh ⊕ Load Driver		Drive options (advanced)
		_N

9. After the installation completes, set the administrator password.



Installing the drivers for the QLogic QME8242-k

At this point, Windows Server 2008 R2 is installed, but does not recognize the QLogic QME8242-k. Use a USB drive to copy the driver to the PowerEdge M710. The file we used was QLogic_1.00.0005.bin.zip, which is available for download at http://support.dell.com.

- 1. Right-click the file, and select Extract All.
- 2. Accept the default extraction location, and click Extract.

Extract Compressed (Zipped) Folders	X
Extract Compressed (Zipped) Folders	
Select a Destination and Extract Files	
Files will be extracted to this folder:	
C:\Users\Administrator\Desktop\QLogic_1.00.0005.bin	Browse
✓ Show extracted files when complete	
	Extract Cancel

3. Navigate to the unzipped folder, and double-click on Setup.exe to start the installation.

4. At the Windows SuperInstaller welcome screen, click Next.



5. Read the License Agreement, and click Agree to continue.

Installation Wizard	CALOGIC [*] The Ultimate in Performance
Main Page	Windows SuperInstaller
Exit	Installation and use of the installed applications requires acceptance of the following License Agreement:
	End User Software License Agreement Important: READ CAREFULLY BEFORE CLICKING ON THE "Agree" BUTTON OR INSTALLING THIS SOFTWARE THIS PRODUCT CONTAINS COMPUTER PROGRAMS AND RELATED DOCUMENTATION ("SOFTWARE") THAT BELONG TO QLOGIC CORPORATION. ("QLOGIC"), THE USE OF WHICH IS SUBJECT TO THIS END USER SOFTWARE LICENSE AGREEMENT ("AGREEMENT"). CLICKING ON THE "Agree" BUTTON BELOW OR INSTALLING/USING THE SOFTWARE CONSTITUTES ACCEPTANCE BY LICENSEE ("LICENSEE" MEANS YOU OR THE BUSINESS ENTITY ON WHOSE BEHALF YOU USE OR INSTALL THE SOFTWARE, AS APPLICABLE) OF ALL THE TERMS AND CONDITIONS OF THIS AGREEMENT. IF LICENSEE DOES NOT AGREE TO THE TERMS AND CONDITIONS OF THIS AGREEMENT, LICENSEE SHALL NOT INSTALL/USE THE SOFTWARE. WRITTEN APPROVAL IS NOT A PREREQUISITE TO THE VALIDITY OR ENFORCEABILITY OF THIS AGREEMENT.
	Version: 1.00.0005

6. Select the default installation (Install Drivers and Applications), check the VLAN / Teaming Driver checkbox, and click Install.



7. When the installation completes, click Finish. The server is now connected to the core Ethernet network.



Enabling NPAR on the QLogic QME8242-k

1. Start the QConvergeConsole CLI.



2. Once the QConvergeConsole CLI finishes discovering devices, select 7 (NIC Partitioning Configuration), and press Enter.



3. In the NIC Partitioning (NPAR) Configuration Selection menu, select 1 (NPAR Configuration), and press Enter.



4. In the NIC Partitioning (NPAR) Configuration menu, select 2 (Change PCI Function Personality), and press Enter.

ſ	📰 QConve	ergeConsole CLI	
		QConvergeConsole	
		CLI - Version 1.0.0 (Build 64)	
	NIC	Partitioning (NPAR) Configuration Selection	
	1:	NPAR Configuration	
		(p or Ø: Previous Menu; m or 98: Main Menu; ex or 99: Quit) Please Enter Selection: 1	
		QConvergeConsole	
		CLI - Version 1.0.0 (Build 64)	
	NIC	Partitioning (NPAR) Configuration	
	1: 2:	Bandwidth Configuration Change PCI Function Personality	
		(p or Ø: Previous Menu; m or 98: Main Menu; ex or 99: Quit) Please Enter Selection: 2	-

5. In the NIC Partitioning (NPAR) Port Configuration Selection menu, select the adapter you wish to modify (we chose port 1 of the first CNA, or option 2), and press Enter.

📰 QConvergeConsole CLI	_ 🗆 ×
(p or 0: Previous Menu; m or 98: Main Menu; ex or 99: Quit) Please Enter Selection: 2	_
QConvergeConsole	
CLI - Version 1.0.0 (Build 64)	
NIC Partitioning (NPAR) Port Configuration Selection	
CNA Model QME8242 SN: RFE1115A79738	
Function 1 [Type: NIC] [MAC Address: 00:0E:1E:05:C5:39] 2. Port 1	
Function Ø [Type: NIC] [MAC Address: 00:0E:1E:05:C5:38] Function 2 [Type: NIC] [MAC Address: 00:0E:1E:05:C5:3A] CNA Model QME8242 SN: RFE1115A72847	
3. Port 2 Function 1 [Type: NIC] [MAC Address: 00:0E:1E:05:C5:99]	
 FORT 1 Function Event 1 Event 1	
(p or 0: Previous Menu; m or 98: Main Menu; ex or 99: Quit) Please Enter Selection: 2	_

6. In the NIC Partitioning (NPAR) PCI Function Configuration Selection menu, select 3 (Function: 6), and press Enter.

🚟 QConvergeConsole CLI	
Function 2 [Type: NIC] [MAC Address: 00:0E:1E:05:C5:3A] CNA Model QME8242 SN: RFE1115A79847	-
3. Port 2 Function 1 [Type: NIC] [MAC Address: 00:0E:1E:05:C5:99] 4. Port 1	
Function 0 [Type: NIC] [MAC Address: 00:0E:1E:05:C5:98] Function 2 [Type: NIC] [MAC Address: 00:0E:1E:05:C5:9A]	
(p or Ø: Previous Menu; m or 98: Main Menu; ex or 99: Quit) Please Enter Selection: 2	
QConvergeConsole	
CLI - Version 1.0.0 (Build 64)	
NIC Partitioning (NPAR) PCI Function Configuration Selection	
1: Function: 2 MAC: 00:0E:1E:05:C5:3A Type: NIC 2: Function: 4 MAC: 00:0E:1E:05:C5:3C Type: Disabled 3: Function: 6 MAC: 00:0E:1E:05:C5:3E Type: Disabled	
(p or Ø: Previous Menu; m or 98: Main Menu; ex or 99: Quit) Please Enter Selection: 3_	•

7. When asked for the personality you wish to change the partition to, select 3 (FCoE), and press Enter.



8. The console will warn you that you need to reboot the system for changes to take effect. Press Enter to continue.



9. Type 99 and press Enter to quit.



10. Reboot your server. The fourth partition will be configured as an FCoE physical function type upon rebooting.

Installing Windows updates



1. Launch Windows Update.



NOTE



2. Optionally, turn on Automatic Updating.



3. Click Install updates. We installed all important updates, including SP1.



4. To accept the license agreement, click the I accept the license terms radio button, and click Finish.



A Principled Technologies deployment guide 25

5. To restart the system, click Restart now.



Setting access to the SAN

The following steps assume that you are connecting to a pre-configured LUN.

1. Start Server Manager.



2. Expand Storage, and select Disk Management.

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3. Right-click the new disk, and select Online.

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Server Marager (NDN-50VQ/NEX0	Disk Hanagement Volume List + Graphical Yese	Actions
Roles	Volume Layout Type Pile System Status	Ded Hasagement
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4. Close Server Manager.

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Conclusion

The deployment is complete. You can now access both the core Ethernet network and your SAN through a single interface.

As you have seen, using NPAR with the QLogic QME8242-k is simple. Once you have enabled NPAR using the steps described in the Configuring the QLogic QME8242-k section, all other setup is the same as for an installation without NPAR.

The QLogic QME8242-k, with QLogic VMflex and QLogic FlexOffload technologies, lets you get more done with less. It provides a seamless migration path for replacing many 1Gb Ethernet ports with fewer 10GbE ports, makes better use or precious processor resources, and simplifies the data center.

APPENDIX: USING THE DELL UNIFIED SERVER CONFIGURATOR TO ENABLE NPAR ON THE QLOGIC QME8242-K

NOTE

The USC will let you configure the QLogic QME8242-k even before you have installed the operating system.

If you choose to use the USC, you must boot into UEFI rather than into BIOS. If your system already boots into UEFI, skip to Step 5.

You do not have to boot into UEFI to use NIC partitioning. Once you have configured the QLogic QME8242-k, boot into BIOS or UEFI as appropriate. It is also possible to configure the NIC partitioning in Windows, as detailed in Enabling NPAR on the QLogic QME8242-k.

1. Boot the server. When the system prompts you, press F2 to enter system setup.



2. Use the down arrow key to highlight Boot Settings, and press Enter.

Under Keyboard Mouse Options Power Media Help	- 1fps
Dell Inc. (www.del BIOS Ve	l.com) - PowerEdge M710HD ersion 1.1.10
Service Tag: HCJ3JM1	Asset Tag:
System Time System Date	10:31:04 ▲ Thu Apr 21, 2011
Memory Settings Processor Settings	<pre> <enter> <enter></enter></enter></pre>
Boot Settings	<enter></enter>
Integrated Devices PCI IRQ Assignment	<pre> <enter> <enter></enter></enter></pre>
Serial Communication	<enter></enter>
Power Management System Security	<pre> <enter> <enter></enter></enter></pre>
Keyboard NumLock	On 🔻
Up,Down Arrow to select SPACE,	+,- to change ESC to exit F1=Help

3. Set the Boot Mode to UEFI.

10.41.2.123, PowerEdge M710HD, Slot 9, User: cmc_root - Ofp: Video Keyboard Mouse Options Power Media Help	
Dell Inc. (www.dell.c BIOS Vers	om) – PowerEdge M710HD ion 1.1.10
Service Tag: HCJ3JM1	Asset Tag:
System Time System Date	10:31:52 ▲ Thu Apr 21, 2011
Memory Boot Mode Proces Boot Sequence Boot S Sequence Retry	UEFI <pre></pre>
Integrated Devices PCI IRQ Assignment	<enter> <enter></enter></enter>
Serial Communication	<enter></enter>
Power Management System Security	
Keyboard NumLock	On 🔻
Up,Down Arrow to select SPACE,+,-	to change ESC to exit F1=Help

4. Press Esc twice to exit the BIOS. Press Enter to select Save changes and exit.

10.41.2.123, PowerEdge M710HD, Slot 9, User: cmc_root - 0fp Video Keyboard Mouse Options Power Media Help	os	. <u> </u>
Dell Inc. (www.dell.c BIOS Vers	com) – PowerEdge M710HD sion 1.1.10	
Service Tag: HCJ3JM1	Asset Tag:	
System Time System Date	10:33:52 Thu Apr 21, 2011	
Memory Settings Processor Settings		
Boot Settings Save change Discard cha	es and exit (ENTER)	
PCI IRQ Assignment	(ENTER)	
Serial Communication Power Management	<enter> <enter></enter></enter>	
System Security Keyboard NumLock	<enter></enter>	
Up,Down Arrow to select SPACE,+,-	to change ESC to exit F1=Help	

5. When the system reboots, press F10 to enter the USC.



6. Select Hardware Configuration, and press Enter. In the right pane, select HII Advanced Configuration, and press Enter.

	CONFIGURATOR LIFECYCLE CONTROLLER ENABLED
	Hardware Configuration
Home Lifecycle Log Platform Update Hardware Configuration OS Deployment Platform Restore	Configuration Wizards guide system device set up (Ex: RAID, iDRAC, Encryption). HII Advanced Configuration configures Human Interface Infrastructure(HII)– enabled devices (Ex: BIDS, NICS). Hardware Inventory is used to view or export the server's current hardware inventory or the factory shipped hardware inventory. Delete Configuration and Reset Defaults deletes the Lifecycle Controller configuration and restores factory defaults.
Hardware Diagnostics USC Settings	Configuration Wizards
About	HII Advanced Configuration Hardware Inventory Delete Configuration and Reset Defaults
Exit and Reboot	
UEFI v2.1	

7. The QLogic QME8242-k presents four interfaces to the USC. Select the first interface, and press Enter.



8. Select NIC Partitioning Configuration, and press Enter.

200010 0000 10 01200010 2000100	00.02.12.0	5.05.00			
Main Configuration Page					
Firmware Image Properties					
NIC Configuration					
iSCSI Configuration					
FCoE Configuration					
NIC Partitioning Configurati	on				
Device Name	_				
QME8242					
Chip Type					
NIC					
Link Status					
Disconnected					-
Configure NIC Partitioning par	ameters				
contradic Mic Full (if(ioning pul	unic (c) 3.				

9. Select Partition 2 Configuration, and press Enter.

DØLL	UNIFIED SERVER CONFIGURATOR	LIFECYCLE CONTROLLER ENABLED		?
QLogic CNA	10 Gigabit Ethernet-00:0E:1E:05	:C5:38		
NIC Partit	ioning Configuration			
NIC Partit	ioning			-
Enabled	ł		v	
Global B	andwidth Allocation			
Partition	1			
Enabled	ł.		<u>~</u>	
Partitio	n 1 Configuration			
Partition	2			
Enabled	l 		<u> </u>	
Partition	3			
Enabler	-		-	
Partitio	n 3 Configuration			
Partition	4			
Enabled	k		~	
Partitio	n 4 Configuration			
Number of	Partitions Supported			
4				
Number of	PCI-e Functions Supported per Po	nt		-
				_
Configure	this partition			-
UEFI v2.1			Back	

10. From the NIC Mode drop-down box, select Enabled. This will enable the second partition on the QLogic QME8242-k.

WEDRIC CNF	TO BIGBDIT Ethernet-00.0E.IE.05.05.30	
Partition	2 Configuration	
NIC Mode		
Enabled		•
PC Disable	d	
Enabled		
Bus:Dev:Fu	in	
05.00.0	2	
Mac Addres	'S	
00:0E:1	E:05:05:3A	
Virtual MA	iC Address	
00:0E:1	E:05:05:3A	
Device Cla	iss Code	
0200		
Port Numbe	۳	
1		
Instance N	umber	
2		
Enable or	Disable NIC Function	
Endbie of		

11. Highlight Back, press Enter, select Partition 3 Configuration, and press Enter.

QLogic CNA 10 Gigabit Ethern	et-00:0E:1E:05:C5:38	
NIC Partitioning Configuration	DN	
NIC Partitioning		
Enabled		
Global Bandwidth Allocation		
Partition 1		
Enabled		-
Partition 1 Configuration		
Partition 2		
Enabled		<u>*</u>
Partition 2 Configuration		
Partition 3		
Enabled		Ψ
Partition 3 Configuration		
Partition 4		
Enabled		
Partition 4 Configuration		
Number of Partitions Support	30 	
4 Number of DOT a Supervisions Out	exerted and Dest	
Number of FCI-e Functions Su	pponted per Pont	
Configure this partition		

12. From the NIC Mode drop-down box, select Enabled. This will enable the third partition on the QLogic QME8242-k.

VIC Mode	onu 1994 ortau
NIC Mode	
NIC Mode	
Disable	1
is(Disabled	1
Enabled	
°CI Device	ID
8020	
Bus:Dev:Fur	
05.00.04	
lac Address	,
00:0E:1E	:05:05:30
/irtual MAG	; Address
00:0E:1E	:05:05:30
ISCSI MAC A	ıddress
00:0E:1E	:05:05:30
/irtual iSC	SI MAC Address
00:0E:1E	:05:C5:30
Device Clas	is Code
0200	

13. Highlight Back, press Enter, select Partition 4 Configuration, and press Enter.

NIC Partit	ioning Configuration	
NIC Partit	ioning	
Enabled		*
Global B	indwidth Allocation	
Partition	1	
Enabled		-
Partitio	1 Configuration	
Partition	2	
Enabled		
Partitio	(2 Configuration	
Partition	3	
Enabled	- O Carfiguration	<u> </u>
Partition	4	
Enabler		Ŧ
Partitio	4 Configuration	
Number of	Partitions Supported	
4		
Number of	PCI-e Functions Supported per Port	
Configuno	this partition	
com igure	this partition	

14. From the FCoE Offload Mode drop-down box, select Enabled. This will enable FCoE on the fourth partition on the QLogic QME8242-k.

WEDGIE ENH ID BIGBDIE EUNERNEE	-00.00.10.03.03.30	
Partition 4 Configuration		
NTC Mode		
Disabled		1
FCOE Offload Mode		9
Disabled	•	
PC:Disabled		1
Enabled		
Bus:Dev:Fun		
05.00.06		Ľ
Mac Address		
00:0E:1E:05:C5:3E		1
Virtual MAC Address		
00:0E:1E:05:C5:3E		1
FIP MAC Address		
00:0E:1E:05:C5:3E		
Virtual FIP MAC Address		
00:0E:1E:05:C5:3E		
Device Class Code		
0200		
Enchie on Dischie FRaf Supetio		
Enable of Disable FLOE Function		

15. Highlight Back and press Enter twice, highlight Finish, and press Enter. When a window appears asking if you want to save changes, highlight Yes, and press Enter.

Main Configuration Page		
Firmware Image Properties		
ISCSI Configuration FCoE Configuration NIC Partitioning Configuration		
Device Name [OME8242 Chip Type NIC	Hessage Settings have changed. Do you want to save the changes?	
Link Status Disconnected	Yes No	<u> </u>

16. Repeat steps 7 through 15 for the additional 3 NICs in the USC.

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