

HBC The Leader in Digital Solutions

FCOE NIC PARTITIONING:

Step 1: Accessing BIOS Settings

Power on the server and enter the **BIOS settings**. In the **Main Menu**, navigate to **Setup Mode** and select **Text Mode** for configuration.

BIOS Information		Choose the system default
Project Name	857	language
Product Name	B5700 G5	
BIOS Version	5.73 V100R001B05D090	
Build Date and Time	03/28/2024 10:37:36	
System Uuid	59AAE782-04A9-04CC-E611- B8CFD67095D0	
Access Level	Administrator	
Platform Information		
Processor	606A6 - ICX M1	
PCH	LEG QS/PRQ - C621A - S2	
RC Revision	30.P26	
Marchine and Article		++ : Select Screen
Memory Information		11 : Select Item
Total Memory	512 GB	Enter : Select
Usable Memory	512 GB	+/- : Change Option
Total DCPMM Memory	0 GB	ESC : Exit
Current Memory Frequency	2666 MHz	F1 : General Help F2 : Previous Values
System Language	[English]	F3 : Optimized Defaults
Setup Mode	[Text]	F4 : Save & Exit Setup
System Date	[Thu 03/06/2025]	(M) : Scroll help downwards
System Time	[10:55:49]	

Step 2: Navigating to Dynamic Device Configuration

Go to the **Advanced Settings** section and access **Dynamic Device Configuration**. Here, you will see available **NIC partitioning slots** for configuration.



Step 3: Enabling NIC Partitioning

Select the desired **NIC slot** and choose **NPAR (NIC Partitioning) Mode** to enable partitioning.

Power State: O Power Video Video Mouse +	Options • Keyboard • Send Keys • Hot Keys •	▼ Video Record ▼ Help ▼	
	Advanced	Aptio Setup - AMI	
	 Finnuare Image Properties Device Level Configuration Port Level Configuration FCoE Configuration Partitions Configuration Partitioning Mode Device Name Chip Type PCI Device ID PCI Address Link Status Link Speed Permanent MAC Address FCOE Mac Address FCOE Mac Address FCOE Wirtual MAC Address FCOE Wirtual MAC Address FCOE Wirtual MAC Address FCOE Wirtual MAC Madress FCOE Wirtual MAC Madress FCOE Wirtual MAC Madress FCOE Wirtual MAC Madress FCOE Wirtual MACN FCOE Virtual WMPN FCOE Virtual MMNN 	(NPAR) NIC-ETH6821-Mb-2*256 QL41401 A2 8070 B1:00 Connected 25 Gbps 78:A1:3E:15:37:48 00:00:00:00:000 78:A1:3E:15:37:40 00:00:00:00:00:00 20:00:78:A1:3E:15:37:40 00:00:00:00:00:00:00 10:00:78:A1:3E:15:37:40 00:00:00:00:00:00:00:00	View device firmware version information. ++ : Select Screen 11 : Select Item Enter : Select +/- : Change Option ESC : Exit F1 : General Help F2 : Previous Values F3 : Optimized Defaults F4 : Save & Exit Setup K> : Scroll help upwards

Step 4: Configuring FCoE Boot Mode

In the **Advanced Settings** of the server, navigate **NIC Partitioning** and access the **Port-Level Configuration** section. Locate the **iSCSI Offload** option and **disable** it to prevent conflicts with FCoE. Then, **enable FCoE Mode**.

Link Speed FEC Mode Toot Hod DOEX Priotocol ROCE Priotity ISOSI Offload FCOE Offload PXE VLAN Mode Link Up Delay RDMA Protocol Support SAR-2 Size VF BAR-2 Size	(Emart4A) (Auto) (Auto) (Dynamic) 0 (Enabled) (Disabled) (Disabled) 30 (IHARP + ROCE) (8M) (256K)	Select preferred boot protocol, or disable. Options for NIC Only device are * PXE - PXE boot through UND1 * ISOSI (SH) - Non-offloaded ISOSI boot (IBFT) * Disabled - No network boot protocol Options for licensed CNA will elso Include **: Select Screen T1: Select Itam Enter: Select	
		ESC: Exit F1: General Halp F2: Previous Values F3: Optimized Defaults F4: Save & Exit Setup GD: Scroll halp area upwards (MD: Scroll halp area downwards	

Advanced		
Link Speed FED Mode BOBX Protocol RoCE Priority PKE VLAN Mode Link Up Delay	(SmartAM) [Auto] [Cognamic] 0 [D1sabled] 20	Configure preferred link speed. Auto negotiation is not supported with SFP connector modules, please choose fixed speed per connector capability. ++ : Select Screen 11 : Select Item Enter : Select +/- : Change Option ESC : Exit F1 : General Help F2 : Previous Values F3 : Optimized Defaults F4 : Save & Exit Setup

Step 5: Partition Configuration

In the Advanced Settings, go to Partition Configuration. Assign Partition 1 as Ethernet and Partition 2 as FCoE, while keeping all remaining partitions disabled.



STEP 6:

In the Advanced Settings, navigate to Partition Configuration and select Global Bandwidth Allocation. Assign 100% Minimum TX Bandwidth to Partition 2, while keeping Partition 1 and all remaining partitions at 0%. Ensure that the Maximum TX Bandwidth for all partitions remains set at 100% for optimal performance.



Driver Installation or Update Process in an ESXi Host

STEP 1: Uploading Drivers to ESXi Datastore

- Log in to the ESXi Host Client.
- Navigate to **Storage** from the left-hand menu.
- Select datastore1 (or the relevant datastore).
- Click on Datastore Browser.
- In the Datastore Browser, upload the required driver files.

		-1	-			
Vm	ESAI Host Clief	nı.			roolgilo.o.ioi.ai • Help •	Q search
Ω N	lavigator	~	atastore1			
\sim .	Manage		්ලී Register a VM 🔄 Datastore	browser * Tincrease capacity C Refresh 🌣 Actions	STORAGE	FREE: 317.50 GB 0%
	Monitor		datastore1		USED: 1.42 GB	CAPACITY: 319 GB
6	Virtual Machines	0		VMFS6		
~B	Storage	1	Location:	/vmfs/volumes/67bed60d-d181186b-400c-04a959ab7634		
	vmhba67			67bed60d-d181186b-400c-04a959ab7634		
~	datastore1		Hosts:	1		
	Monitor		virtual Machines.	v		
	More storage		+ VMFS details			
~©	Networking	1	Version	6.82		
	🛱 vmnic4		Local	Yes		
	More networks		Block size	1 MB		
			UUID	67bed60d-d181186b-400c-04a959ab7634		
			Recent tasks			E
			Task	Target v Initiator v Queued v Started v	Result A	Completed V

STEP 2: Enabling ESXi Shell and SSH in ESXi Host Client

- In the ESXi Host Client, navigate to the Host section in the left panel.
- Click on Manage under the Host menu.
- Go to the **Services** tab.
- Locate TSM (ESXi Shell) and TSM-SSH (SSH) services.
- Click Start to enable both services.

_			
vm ESXi Host Client		root@10.0.101.31 - Help -	Q Search
슈 Navigator 《	atastore1		
✓ ☐ Host Manage	여권 Register a VM 🔄 Datastore browser *급 Increase capacity C Refresh 🗘 Actions	STORAGE	FREE: 317.58 GB
Monitor	datastore1 Type: VMFS6 Location: /wnfs/volumes/67bed6Od-d181186b-400c-04a959ab7634 UUID: 67bed6Od-d181186b-400c-04a959ab7634 Hosts: 1 Virtual Machines: 0	USED: 1.42 GB	CAPACITY: 319 GB
More storage Networking	VMFS details Version 6.82 Local Yes Block size 1 MB UUID 67bed6od-d181186b-400c-04a959ab7634		
	2 Recent tasks		
	Task v Target v Initiator v Queued v Started v Resu	lt 🔺 🗸 🗸	Completed V

STEP 3: Steps to Install or Update Drivers in ESXi

1. Access the ESXi Command Line Interface (CLI)

- Open the ESXi CLI using SSH.
- Navigate to the directory where the driver file is stored.

2. Install or Update the Driver

• To install a driver, execute:

esxcli software vib install -d /path/to/driver/xxx.zip

• To update a driver, execute:

esxcli software vib update -d /path/to/driver/xxx.zip

[root@localhost:~] esxcli software vib install -d /vmfs/volumes/datastore1/682/MRVL-E4-CNA-Driver-Bundle 6.0.345.0-10EM.800.1.0.20143090_20529
171.zip
Installation Result
Message: The update completed successfully, but the system needs to be rebooted for the changes to be effective.
Reboot Required: true
VIBs Installed: QLC_bootbank_gedentv_3.71.10.0-10EM.800.1.0.20143090, QLC_bootbank_gedf_2.30.13.0-10EM.800.1.0.20143090, QLC_bootbank_gedi_
2.30.12.0-10EM.800.1.0.20143090, QLC_bootbank_gedrntv_3.71.9.0-10EM.800.1.0.20143090
VIBs Removed: VMW_bootbank_gedentv_3.40.5.70-4vmw.800.1.0.20513097, VMW_bootbank_gedrntv_3.40.5.70-1vmw.800.1.0.20513097
VIBs Skipped:
<pre>[root@localhost:~]</pre>

3. Restart the ESXi Host

• After a successful installation or update, restart the ESXi host for changes to take effect.



4. Verify the Driver Update

• To check the updated driver version, execute:

esxcli network nic get -n vmnicX

• (Replace X with the network interface number you are checking.)

```
[root@localhost:~] esxcli network nic get -n vmnic2
   Advertised Auto Negotiation: true
   Advertised Link Modes: Auto, 10000BaseKR/Full, 25000BaseKR/Full
   Auto Negotiation: true
   Backing DPUId: N/A
  Cable Type: FIBRE
Current Message Level: 0
  Driver Info:
         Bus Info: 0000:17:00:0
         Driver: gedentv
         Firmware Version: mfw 8.55.43.0 storm 8.70.4.0
  Version: 3.71.10.0
Link Detected: true
  Link Status: Up
  Name: vmnic2
  PHYAddress: 0
  Pause Autonegotiate: true
  Pause RX: true
  Pause TX: true
   Supported Ports: FIBRE
   Supports Auto Negotiation: true
   Supports Pause: true
  Supports Wakeon: true
  Transceiver: external
  Virtual Address: 00:50:56:5f:be:17
  Wakeon: MagicPacket(tm)
```