



User's Guide

PowerShell

Cavium FastLinQ 3400, 8400, 41000, 45000 Series Adapters

Document Revision History	
Rev A, March 10, 2017	
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Changes	Sections Affected
Removed references to the service program web page; this service is no longer available. Updated Contact Information. Added the following cmdlets: Get-QLGCPortAdvancedParameter Set-QLGCPortAdvancedParameter Set-QLGCiSCSI Start-CreateOrModifyifaceFile Added that the following cmdlets are supported only on the Windows OS: Get-QLGCResCfg Set-QLGCResCfg Reset-QLGCiSNSServer Added that the following cmdlet is supported only on the Linux OS: Start-CreateOrModifyifaceFile	“Technical Support” on page ix “Contact Information” on page x “Cmdlets by Name” on page 27 , “Cmdlets by Function” on page 33 “Cmdlets” on page 27

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Preface

Intended Audience

This guide is for users who want to install the QConvergeConsole® (QCC) PowerKit (Windows® PowerShell® cmdlets) to manage the QLogic® FastLinQ® 34xx/84xx/41xx/45xxx adapters from Cavium® on the system.

What Is in This Guide

This guide contains the basic information you need to get started using the Cavium cmdlets in the PowerShell application.

This preface specifies the intended audience, summarizes the contents of this guide, describes the typographic conventions used in this guide, refers you to the QLogic license agreements, and provides technical support and contact information.

The remainder of the user's guide is organized into the following chapters:

- [Chapter 1 General Information](#) describes Windows PowerShell and lists what you need to run it on a system containing Cavium adapters
- [Chapter 2 Installation](#). This chapter describes how to download and install the QCC PowerKit, which contains the Cavium cmdlets.
- [Chapter 3 Using PowerShell](#) describes how to start PowerShell, view all the Cavium cmdlets, and get help about individual cmdlets.
- [Chapter 4 Cmdlets](#) lists the available Cavium cmdlets and provides a brief description of each one.

Related Materials

For information about downloading documentation from the QLogic Web site, see [“Downloading Updates” on page ix](#).

Documentation Conventions

This guide uses the following documentation conventions:

- The QLogic FastLinQ® 34xx/84xx/41xxx/45xxx adapters from Cavium are collectively referred to as *Cavium adapter* or *adapter*.
- **NOTE** provides additional information.
- Text in **blue** font indicates a hyperlink (jump) to a figure, table, or section in this guide, and links to Web sites are shown in underlined blue. For example:
 - ❑ [Table 9-2](#) lists problems related to the user interface and remote agent.
 - ❑ See [“Installation Checklist” on page 6](#).
 - ❑ For more information, visit www.qlogic.com.
- Text in **bold** font indicates user interface elements such as menu items, buttons, check boxes, or column headings. For example:
 - ❑ Click the **Start** button, point to **Programs**, point to **Accessories**, and then click **Command Prompt**.
 - ❑ Under **Notification Options**, select the **Warning Alarms** check box.
- Text in `Courier` font indicates a file name, directory path, or command line text. For example:
 - ❑ To return to the root directory from anywhere in the file structure:
Type `cd /root` and press ENTER.
 - ❑ Issue the following command: `sh ./install.bin`.
- Key names and key strokes are indicated with UPPERCASE:
 - ❑ Press CTRL+P.
 - ❑ Press the UP ARROW key.
- Text in *italics* indicates terms, emphasis, variables, or document titles. For example:
 - ❑ For a complete listing of license agreements, refer to the *Software End User License Agreement*.
 - ❑ What are *shortcut keys*?
 - ❑ To enter the date type *mm/dd/yyyy* (where *mm* is the month, *dd* is the day, and *yyyy* is the year).
- Topic titles between quotation marks identify related topics either within this manual or in the online help, which is also referred to as *the help system* throughout this document.

License Agreements

Refer to the *QLogic Software End User License Agreement* for a complete listing of all license agreements affecting this product.

Technical Support

Customers should contact their authorized maintenance provider for technical support of their Cavium products. Cavium-direct customers may contact Cavium Technical Support; others will be redirected to their authorized maintenance provider. Visit the QLogic support Web site listed in [Contact Information](#) for the latest firmware and software updates.

Downloading Updates

The QLogic Web site provides periodic updates to product firmware, software, and documentation.

To download firmware, software, and documentation:

1. Go to the QLogic Downloads and Documentation page:
driverdownloads.qlogic.com
2. In the search box, type the QLogic model name.
3. In the search results list, locate and select the firmware, software, or documentation for your product.
4. View the product details Web page to ensure that you have the correct firmware, software, or documentation. For additional information, click **Read Me** and **Release Notes** under **Support Files**.
5. Click **Download Now**.
6. Save the file to your computer.
7. If you have downloaded firmware, software, drivers, or boot code, follow the installation instructions in the *Read Me* file.

Instead of typing a model name in the search box, you can perform a guided search as follows:

1. Click the product type tab: **Adapters**, **Switches**, or **Routers**.
2. Click the corresponding button to search **by Model** or **by Operating System**.
3. Click an item in each selection column to define the search, and then click **Go**.
4. Locate the firmware, software, or document you need, and then click the item's name or icon to download or open the item.

Training

Global Training maintains a Web site that offers online and instructor-led training for all QLogic products. In addition, sales and technical professionals may obtain Associate and Specialist-level certifications to qualify for additional benefits.

www.qlogictraining.com

Contact Information

Technical Support for products under warranty is available during local standard working hours excluding Cavium Observed Holidays. For Support phone numbers, see the Contact Support link:

support.qlogic.com

Support Headquarters

Cavium, Inc.
12900 Whitewater Drive
Suite 140
Minnetonka, MN 55343 USA

QLogic Web Site

www.qlogic.com

Technical Support Web Site

support.qlogic.com

Technical Support E-mail

globalsupport@cavium.com

Technical Training E-mail

training@qlogic.com

Knowledge Database

The QLogic knowledge database is an extensive collection of QLogic product information that you can search for specific solutions. QLogic is constantly adding to the collection of information in the database to provide answers to your most urgent questions. Access the database from the Technical Support Center:

support.qlogic.com

1 General Information

This section describes Windows PowerShell and lists what you need to run it on a system containing Cavium adapters.

PowerShell and Cavium Adapters

Windows PowerShell is a Microsoft-developed scriptable language for performing task automation and configuration management both locally and remotely.

PowerShell is based on the .NET framework and includes a command-line shell and a graphical user interface (GUI) integrated scripting environment (ISE) that allows you to create scripts without having to type all the commands in the command line. This compelling feature allows you to streamline and automate repetitive and monotonous Windows and Linux® server jobs through scripts by linking multiple instructions together.

In addition to being a powerful scripting tool, the Cavium PowerShell comes with a selection of preconfigured *cmdlets* to monitor and manage your Cavium adapters. A cmdlet is a script that performs a single function. For a list of the cmdlets and their functions, see [Chapter 4](#).

QCC PowerKit

The Cavium QConvergeConsole (QCC) PowerKit allows you to manage your Cavium adapters through the PowerShell interface.

The QCC PowerKit contains the following components:

- Windows management instrumentation (WMI) V2/open management interface (OMI) provider for Windows and Linux
- PowerShell cmdlets for managing Cavium adapters

System Requirements

This section lists the components you need to run PowerShell with Cavium adapters.

Hardware Requirements

The QCC PowerKit requires one or more Cavium 8400, 3400, 41000, or 45000 Series adapters.

Software Requirements

The following software requirements must be met:

- The QCC PowerKit must be installed on the Windows® system from which you plan to manage the local/remote Windows/Linux host system with the Cavium adapter.
- The appropriate device driver for the Cavium adapter must be installed on the host system that will be managed by the QCC PowerKit.
- OmiServer must be installed before installing the OMI provider on host Linux systems.
- For managing iSCSI on Linux hosts, the open-iscsi and sg utilities must be installed on the Linux host.
- The Microsoft® iSCSI initiator must be installed on the Windows host server.

Server Agent Requirements

The following server agent requirements must be met:

- The WMIv2/OMI/QLNXRemote agent provider for Windows/Linux must be installed on the host system containing the Cavium adapter that will be managed through PowerShell.
- On the Windows machine where the QCC PowerKit will be installed, the QLNXRemote agent must be version 2.00.1000-79 or later.

Operating System Requirements

The QCC PowerKit supports multiple Windows OSs from Windows 2012 and later. For an up-to-date list, see the readme.txt file in the QCC PowerKit.

For the OMI provider, the PowerKit supports all Linux distributions on which the OMI server/CIM object manager (CIMOM) is supported.

Supported Cavium Adapters

PowerShell manages the FastLinQ 34xx/84xx/41xxx/45xxx families of adapters.

Deployment Scenarios

See [Figure 1-1](#) for different ways to deploy the QCC PowerKit.

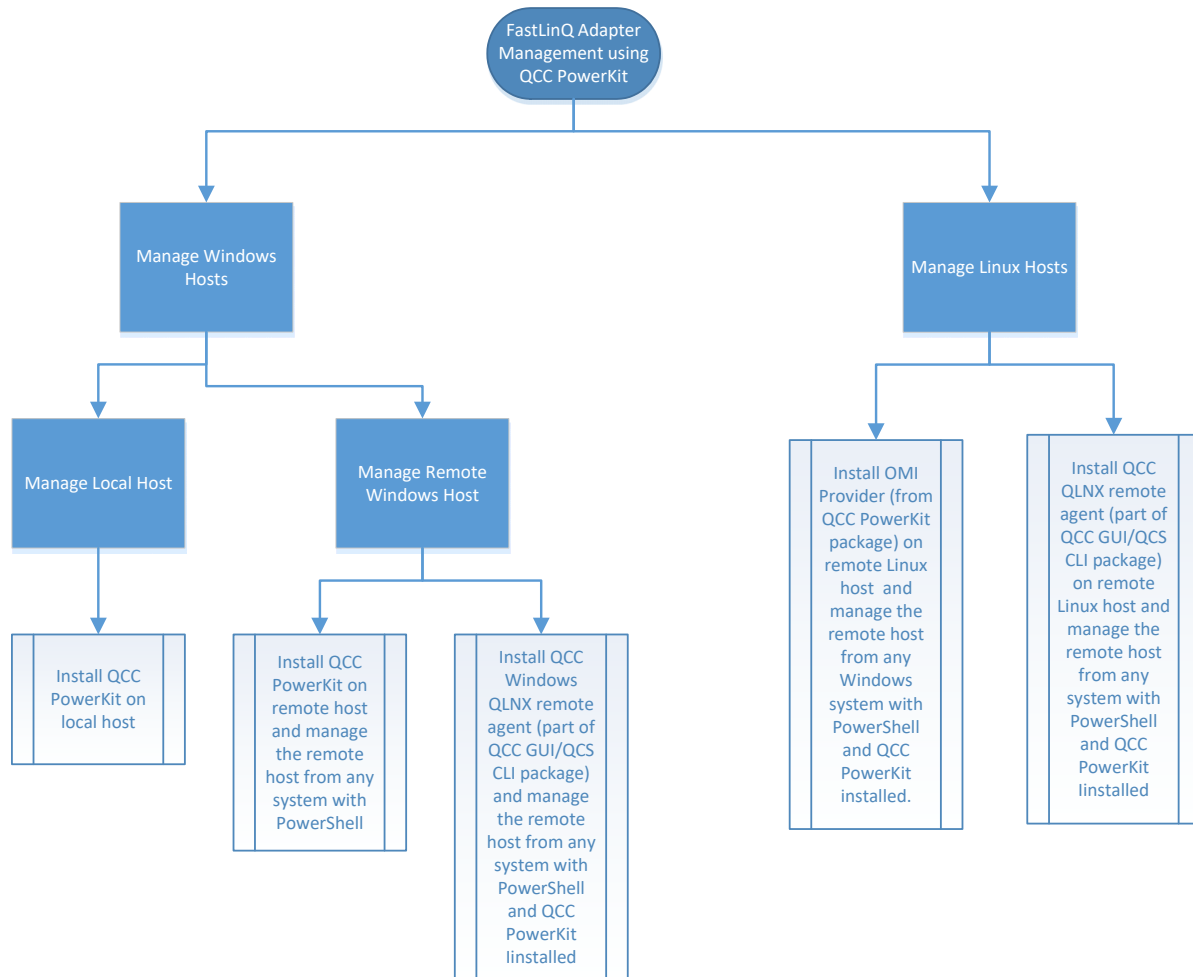


Figure 1-1. How to Deploy QCC PowerKit

2 Installation

This chapter describes how to download and install the QCC PowerKit, which contains the Cavium cmdlets.

Downloading the QCC PowerKit

The QCC PowerKit is available on the QLogic web site, www.qlogic.com. For instructions, see “[Downloading Updates](#)” on page ix.

Installing the QCC PowerKit

Follow the instructions for your OS in either the [Windows](#) or [Linux](#) section.

Windows

To install the QCC PowerKit in a Windows OS:

1. Copy the QCC PowerKit files to the Windows host.
2. Open a PowerShell prompt as an administrator.
3. Navigate to the directory where you copied the PowerKit files.
4. Issue the following command to install both the WMIv2 provider and the cmdlets:

```
Import-Module -Name .\InstallFastLinqPowerKit.ps1 -Force
```

If you are working with the same shell with which you installed the previous installer, version, append this command with “-Force”.

The cmdlets are now available for use.

A message appears asking if you want to run software from an untrusted publisher.

5. Type A (Always run).

6. Start typing `Get-QLGC`, and then press the TAB key.
The `Get-QLGCAdapter` cmdlet should auto-populate.
7. Issue the command to confirm that the cmdlets are working properly.

Linux

To install the QCC PowerKit in a Linux OS:

1. Download and install the latest OMI server/CIMOM from the following location:
<https://collaboration.opengroup.org/omi/>
2. Make sure that `omiserver` is running on the Linux host system.
3. Copy the appropriate OMI provider rpm package:
 - `QLGC_OMIProvider-<version-number>.i386.rpm` (For x86 Linux)
 - `QLGC_OMIProvider-<version-number>.x86_64.rpm` (For x64 Linux)
4. Install the appropriate OMI provider rpm package.
5. Restart the `omiserver` if necessary.
6. Add firewall exceptions to open the `omiserver` ports for remote cmdlets to talk to the OMI server/provider.

Uninstalling the QCC PowerKit

To uninstall the QCC PowerKit in a Windows or Linux OS:

1. Open a PowerShell prompt as an administrator.
2. Navigate to the directory containing the installer files.
3. Issue the following command to uninstall the cmdlets:
 - Windows

```
Import-Module .\UninstallFastLinqPowerKit.ps1 -Force
```
 - Linux

```
rpm -e QLGC_OMIProvider-<version-number>.x86_64
```
4. Confirm that the QCC PowerKit has been removed by typing the following cmdlet:

```
Get-QLGCAdapter
```

The command should fail. Any cmdlets that you have already used in the current PowerShell session may still auto-populate, but will not work if they are issued.

Additional Information

See the readme.txt file in the QCC PowerKit for:

- Limitations
- Known Issues
- Additional notes

3 Using PowerShell

This chapter describes how to start PowerShell, view all the Cavium cmdlets, and get help about individual cmdlets.

Launching PowerShell

Start PowerShell from your Windows or Linux system.

A Windows PowerShell instance can provide either local control on a Windows server or remotely control other Windows or Linux servers. Microsoft added support to run PowerShell on Linux. A Linux PowerShell instance can control that local Linux server, or remotely control other Windows or Linux servers.

Windows

To start PowerShell, click the PowerShell icon in the task bar.

Linux

To start PowerShell, open a terminal and issue the `powershell` command.

Getting Help

There is extensive help available for the Cavium cmdlets. For a list of the cmdlets, see [Chapter 4](#).

To view a list of all the cmdlets, issue the following command:

```
$FormatEnumerationLimit=-1
Get-Module -ListAvailable | Where-Object {
$_.Name.StartsWith('QLGC_') } | select name,exportedcommands |
Format-Table -Wrap
```

NOTE

PowerShell commands are not case sensitive.

The following sections describe the available help levels and provide examples.

Basic Help

Basic help provides information in [Table 3-1](#).

Table 3-1. Basic Help Content

Information	Description
Name	The cmdlet name
Synopsis	A brief description of the cmdlet
Syntax	The cmdlet parameters
Description	The parameters that are output when the cmdlet completes successfully
Related Links	Additional general information about PowerShell and other topics of interest
Remarks	Instructions for accessing other types of help

To get basic help, issue one of the following commands:

```
Get-Help <cmdlet name>
```

```
<cmdlet name> -?
```

For example:

```
get-help Get-QLGCFCoEBootConfigInfo
```

The following text is output when the previous command is issued:

NAME

```
Get-QLGCFCoEBootConfigInfo
```

SYNOPSIS

```
This Cmdlet is used to retrieve FCoE CFG block from NVRAM for 57710 and 579XX adapters.
```

SYNTAX

```
Get-QLGCFCoEBootConfigInfo [-FCoEHandle <UInt32[]>]  
[-FunctionHandle <UInt32[]>] [-wwnn <String[]>]  
[-wwpn <String[]>] [-MPIOMACAddress <String[]>] [-CimSession  
<CimSession[]>] [-ThrottleLimit <Int32>]  
[-AsJob [<SwitchParameter>]] [<CommonParameters>]
```

3-Using PowerShell Getting Help

DESCRIPTION

On successful completion of the Cmdlet user should get below parameters.

AuthenticationMode
bootSourceInfo_Enabled
bootSourceInfo_LUN
bootSourceInfo_wwpn
BootToFCoETarget
ChapID
ChapSecret
FabricDiscoveryTimeout
FCoEHandle
FIPPriority
FIPVLAN
FIPVLANDiscovery
FunctionHandle
HBAMode
HostHandle
LinkUpDelay
LUNBusyRetryCount
MPIOMACAddress
ReversedChapID
ReversedChapSecret
SymbolicPortName
TargetAsFirstHDD

RELATED LINKS

REMARKS

To see the examples, type: "get-help Get-QLGCFCoEBootConfigInfo -examples".
For more information, type: "get-help Get-QLGCFCoEBootConfigInfo -detailed".
For technical information, type: "get-help Get-QLGCFCoEBootConfigInfo -full".

Detailed Help

Detailed help provides the information in [Table 3-2](#).

Table 3-2. Detailed Help Content

Information	Description
Name	The cmdlet name
Synopsis	A brief description of the cmdlet
Syntax	The cmdlet parameters
Description	The parameters that are output when the cmdlet completes successfully
Parameters	Descriptions of the cmdlet parameters along with example cmdlet commands and output
Examples	Example cmdlet commands and output
Remarks	Instructions for accessing other types of help

To get detailed help, issue the following command:

```
get-help <cmdlet name> -detailed
```

For example:

```
get-help Get-QLGCFCoEBootConfigInfo -detailed
```

The following text is output when the previous command is issued:

NAME

```
Get-QLGCFCoEBootConfigInfo
```

SYNOPSIS

```
This Cmdlet is used to retrieve FCoE CFG block from NVRAM for 57710 and 579XX adapters.
```

SYNTAX

```
Get-QLGCFCoEBootConfigInfo [-FCoEHandle <UInt32[]>] [-FunctionHandle <UInt32[]>] [-wwnn <String[]>] [-wwpn <String[]>] [-MPIOMACAddress <String[]>] [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [-AsJob [<SwitchParameter>]] [<CommonParameters>]
```

DESCRIPTION

On successful completion of the Cmdlet user should get below parameters.

AuthenticationMode
bootSourceInfo_Enabled
bootSourceInfo_LUN
bootSourceInfo_wwpn
BootToFCoETarget
ChapID
ChapSecret
FabricDiscoveryTimeout
FCoEHandle
FIPPriority
FIPVLAN
FIPVLANDiscovery
FunctionHandle
HBAMode
HostHandle
LinkUpDelay
LUNBusyRetryCount
MPIOMACAddress
ReversedChapID
ReversedChapSecret
SymbolicPortName
TargetAsFirstHDD

PARAMETERS

-FCoEHandle <UInt32[]>

FCoE Function Handle.

-FunctionHandle <UInt32[]>

-wwnn <String[]>

WW Node Name

Displays the user-configured World Wide Node Name (WWNN) for the FCoE function.

`-wwpn <String[]>`
WW Port Name
Displays the World Wide Port Name (WWPN) assigned to a port in a Fibre Channel fabric.

`-MPIOMACAddress <String[]>`
Displays the Fabric Provided MAC Address (FPMA) for the port. FPMA is also known as a mapped MAC address.

`-CimSession <CimSession[]>`

`-ThrottleLimit <Int32>`

`-AsJob [<SwitchParameter>]`

`-InformationAction <actionpreference>`

`-InformationVariable <string>`

`<CommonParameters>`

This cmdlet supports the common parameters: `Verbose`, `Debug`, `ErrorAction`, `ErrorVariable`, `WarningAction`, `WarningVariable`, `OutBuffer`, `PipelineVariable`, and `OutVariable`. For more information, see `about_CommonParameters` (<http://go.microsoft.com/fwlink/?LinkID=113216>).

----- Example 1 -----

```
PS C:\> Get-QLGCFCoEBootConfigInfo
```

Generic command to get the FCoE Boot Config for all the 57710 and 579XX adapters present on the system.

3-Using PowerShell Getting Help

```
PS C:\> Get-QLGCFCoEBootConfigInfo
```

```
AuthenticationMode      : 0
bootSourceInfo_Enabled : {False, False, False, False...}
bootSourceInfo_LUN      : {0, 0, 0, 0...}
bootSourceInfo_wwpn     : {50:06:01:6C:41:E0:F4:00,00:00:00:00:00:00:00:00,
                          00:00:00:00:00:00:00:00,
                          00:00:00:00:00:00:00:00...}

BootToFCoETarget        : 1
ChapID                  :
ChapSecret              : 8
FabricDiscoveryTimeout  : 4
FCoEHandle              : 3072664642
FIPPriority              : 0
FIPVLAN                 : 0
FIPVLANDiscovery        : True
FunctionHandle          : 1313539385
HBAMode                 : True
HostHandle               : 3253799580
LinkUpDelay             : 0
LUNBusyRetryCount       : 0
MPIOMACAddress          : 00-00-00-00-00-00
ReversedChapID          :
ReversedChapSecret      : Ethernet
SymbolicPortName        :
TargetAsFirstHDD        : False
Valid                   :
wwnn                    : 00:00:00:00:00:00:00:00
wwpn                    : 00:00:00:00:00:00:00:00
PSComputerName          :

AuthenticationMode      : 0
bootSourceInfo_Enabled : {False, False, False, False...}
bootSourceInfo_LUN      : {0, 0, 0, 0...}
bootSourceInfo_wwpn     : {00:00:00:00:00:00:00:00,00:00:00:00:00:00:00:00,
                          00:00:00:00:00:00:00:00,
                          00:00:00:00:00:00:00:00...}

BootToFCoETarget        : 1
ChapID                  : 0
```

3-Using PowerShell Getting Help

```
ChapSecret           :  
FabricDiscoveryTimeout : 4  
FCoEHandle          : 3361766594  
FIPPriority          : 0  
FIPVLAN             : 0  
FIPVLANDiscovery    : True  
FunctionHandle       : 3114690377  
HBAMode             : True  
HostHandle          : 3253799580  
LinkUpDelay         : 0  
LUNBusyRetryCount   : 0  
MPIOMACAddress      : 00-00-00-00-00-00  
ReversedChapID      :  
ReversedChapSecret   :  
SymbolicPortName    :  
TargetAsFirstHDD    : True  
Valid               :  
wwnn                : 00:00:00:00:00:00:00:00  
wwpn                : 00:00:00:00:00:00:00:00  
PSComputerName      :
```

----- Example 2 -----

```
PS C:\> Get-QLGCFCoEBootConfigInfo -FCoEHandle 3361766594
```

Command to get FCoE Boot config using FCoE handle.

```
PS C:\> Get-QLGCFCoEBootConfigInfo -FCoEHandle 3072664642  
AuthenticationMode      : 0  
bootSourceInfo_Enabled  : {False, False, False, False...}  
bootSourceInfo_LUN      : {0, 0, 0, 0...}  
bootSourceInfo_wwpn     : {50:06:01:6C:41:E0:F4:00, 00:00:00:00:00:00:00:00,  
                          00:00:00:00:00:00:00:00,  
                          00:00:00:00:00:00:00:00...}  
BootToFCoETarget        : 1  
ChapID                  :  
ChapSecret              : 8  
FabricDiscoveryTimeout  : 4
```



```
FCoEHandle           : 3072664642
FIPPriority           : 0
FIPVLAN              : 0
FIPVLANDiscovery     : True
FunctionHandle        : 1313539385
HBAMode              : True
HostHandle           : 3253799580
LinkUpDelay          : 0
LUNBusyRetryCount    : 0
MPIOMACAddress       : 00-00-00-00-00-00
ReversedChapID       :
ReversedChapSecret    : Ethernet
SymbolicPortName     :
TargetAsFirstHDD     : False
Valid                :
wwnn                 : 00:00:00:00:00:00:00:00
wwpn                 : 00:00:00:00:00:00:00:00
PSComputerName       :
```

REMARKS

To see the examples, type: "get-help Get-QLGCFCoEBootConfigInfo -examples".
For more information, type: "get-help Get-QLGCFCoEBootConfigInfo -detailed".
For technical information, type: "get-help Get-QLGCFCoEBootConfigInfo -full".

Technical Information

Technical information help provides the information in [Table 3-3](#).

Table 3-3. Technical Information Help Content

Information	Description
Name	The cmdlet name
Synopsis	A brief description of the cmdlet
Syntax	The cmdlet parameters
Description	The parameters that are output when the cmdlet completes successfully
Parameters	Descriptions of the cmdlet parameters and their valid values
Inputs	Input parameters for the cmdlet

Table 3-3. Technical Information Help Content (Continued)

Information	Description
Outputs	Output for the cmdlet
Notes	Additional information
Example	Example cmdlet commands and output
Related Links	Additional general information about PowerShell and other topics of interest

To get technical information, issue the following command:

```
get-help <cmdlet name> -full
```

For example:

```
get-help Get-QLCGFCoEBootConfigInfo -full
```

The following text is output when the previous command is issued:

NAME

```
Get-QLCGFCoEBootConfigInfo
```

SYNOPSIS

```
This Cmdlet is used to retrieve FCoE CFG block from NVRAM for 57710 and 579XX adapters.
```

SYNTAX

```
Get-QLCGFCoEBootConfigInfo [-FCoEHandle <UInt32[]>] [-FunctionHandle <UInt32[]>] [-wwnn <String[]>] [-wwpn <String[]>] [-MPIOMACAddress <String[]>] [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [-AsJob [<SwitchParameter>]] [<CommonParameters>]
```

DESCRIPTION

```
On successful completion of the Cmdlet user should get below parameters.
```

```
AuthenticationMode
```

```
bootSourceInfo_Enabled
```

```
bootSourceInfo_LUN
```

```
bootSourceInfo_wwpn
```

```
BootToFCoETarget
```

ChapID
ChapSecret
FabricDiscoveryTimeout
FCoEHandle
FIPPriority
FIPVLAN
FIPVLANDiscovery
FunctionHandle
HBAMode
HostHandle
LinkUpDelay
LUNBusyRetryCount
MPIOMACAddress
ReversedChapID
ReversedChapSecret
SymbolicPortName
TargetAsFirstHDD

PARAMETERS

-FCoEHandle <UInt32[]>

FCoE Function Handle.

Required?	false
Position?	named
Default value	
Accept pipeline input?	true (ByPropertyName)
Accept wildcard characters?	false

-FunctionHandle <UInt32[]>

Required?	false
Position?	named
Default value	
Accept pipeline input?	true (ByPropertyName)
Accept wildcard characters?	false

-wwnn <String[]>

WW Node Name

Displays the user-configured World Wide Node Name (WWNN) for the FCoE function.

Required?	false
Position?	named
Default value	
Accept pipeline input?	true (ByPropertyName)
Accept wildcard characters?	false

`-wwpn <String[]>`

WW Port Name

Displays the World Wide Port Name (WWPN) assigned to a port in a Fibre Channel fabric.

Required?	false
Position?	named
Default value	
Accept pipeline input?	true (ByPropertyName)
Accept wildcard characters?	false

`-MPIOMACAddress <String[]>`

Displays the Fabric Provided MAC Address (FPMA) for the port. FPMA is also known as a mapped MAC address.

Required?	false
Position?	named
Default value	
Accept pipeline input?	true (ByPropertyName)
Accept wildcard characters?	false

`-CimSession <CimSession[]>`

Required?	false
Position?	named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	false

`-ThrottleLimit <Int32>`

Required?	false
Position?	named

Default value
Accept pipeline input? false
Accept wildcard characters? false

-AsJob [<SwitchParameter>]

Required? false
Position? named
Default value
Accept pipeline input? false
Accept wildcard characters? false

-InformationAction <actionpreference>

Required? false
Position? named
Default value
Accept pipeline input? false
Accept wildcard characters? false

-InformationVariable <string>

Required? false
Position? named
Default value
Accept pipeline input? false
Accept wildcard characters? false

<CommonParameters>

This cmdlet supports the common parameters: Verbose, Debug, ErrorAction, ErrorVariable, WarningAction, WarningVariable, OutBuffer, PipelineVariable, and OutVariable. For more information, see about_CommonParameters (<http://go.microsoft.com/fwlink/?LinkID=113216>).

INPUTS

OUTPUTS

NOTES

----- Example 1 -----

```
PS C:\> Get-QLGCFCoEBootConfigInfo
```

Generic command to get the FCoE Boot Config for all the 57710 and 579XX adapters present on the system.

```
PS C:\> Get-QLGCFCoEBootConfigInfo
```

```
AuthenticationMode      : 0
bootSourceInfo_Enabled  : {False, False, False, False...}
bootSourceInfo_LUN      : {0, 0, 0, 0...}
bootSourceInfo_wwpn     : {50:06:01:6C:41:E0:F4:00, 00:00:00:00:00:00:00:00,
                          00:00:00:00:00:00:00:00,
                          00:00:00:00:00:00:00:00...}
BootToFCoETarget       : 1
ChapID                  :
ChapSecret              : 8
FabricDiscoveryTimeout  : 4
FCoEHandle              : 3072664642
FIPPriority              : 0
FIPVLAN                 : 0
FIPVLANDiscovery       : True
FunctionHandle          : 1313539385
HBAMode                 : True
HostHandle              : 3253799580
LinkUpDelay             : 0
LUNBusyRetryCount      : 0
MPIOMACAddress          : 00-00-00-00-00-00
ReversedChapID          :
ReversedChapSecret      : Ethernet
SymbolicPortName        :
TargetAsFirstHDD        : False
Valid                   :
wwnn                    : 00:00:00:00:00:00:00:00
wwpn                    : 00:00:00:00:00:00:00:00
```

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```
PSComputerName      :  
  
AuthenticationMode  : 0  
bootSourceInfo_Enabled : {False, False, False, False...}  
bootSourceInfo_LUN   : {0, 0, 0, 0...}  
bootSourceInfo_wwpn   : {00:00:00:00:00:00:00:00,  
00:00:00:00:00:00:00:00, 00:00:00:00:00:00:00:00,  
00:00:00:00:00:00:00:00...}  
BootToFCoETarget    : 1  
ChapID               : 0  
ChapSecret           :  
FabricDiscoveryTimeout : 4  
FCoEHandle           : 3361766594  
FIPPriority           : 0  
FIPVLAN              : 0  
FIPVLANDiscovery     : True  
FunctionHandle        : 3114690377  
HBAMode              : True  
HostHandle           : 3253799580  
LinkUpDelay          : 0  
LUNBusyRetryCount    : 0  
MPIOMACAddress       : 00-00-00-00-00-00  
ReversedChapID       :  
ReversedChapSecret   :  
SymbolicPortName     :  
TargetAsFirstHDD     : True  
Valid                :  
wwnn                  : 00:00:00:00:00:00:00:00  
wwpn                  : 00:00:00:00:00:00:00:00  
PSComputerName      :
```

----- Example 2 -----

```
PS C:\> Get-QLGCFCoEBootConfigInfo -FCoEHandle 3361766594
```

Command to get FCoE Boot config using FCoE handle.

```
PS C:\> Get-QLGCFCoEBootConfigInfo -FCoEHandle 3072664642
```

```
AuthenticationMode      : 0
bootSourceInfo_Enabled : {False, False, False, False...}
bootSourceInfo_LUN      : {0, 0, 0, 0...}
bootSourceInfo_wwpn     : {50:06:01:6C:41:E0:F4:00,00:00:00:00:00:00:00:00,
                          00:00:00:00:00:00:00:00, 00:00:00:00:00:00:00:00.
                          ..}
BootToFCoETarget        : 1
ChapID                  :
ChapSecret               : 8
FabricDiscoveryTimeout  : 4
FCoEHandle              : 3072664642
FIPPriority              : 0
FIPVLAN                 : 0
FIPVLANDiscovery        : True
FunctionHandle           : 1313539385
HBAMode                 : True
HostHandle               : 3253799580
LinkUpDelay              : 0
LUNBusyRetryCount       : 0
MPIOMACAddress          : 00-00-00-00-00-00
ReversedChapID          :
ReversedChapSecret       : Ethernet
SymbolicPortName        :
TargetAsFirstHDD        : False
Valid                   :
wwnn                    : 00:00:00:00:00:00:00:00
wwpn                    : 00:00:00:00:00:00:00:00
PSComputerName          :
```

RELATED LINKS

Examples

Example help provides the information in [Table 3-4](#).

Table 3-4. Example Help Content

Information	Description
Name	The cmdlet name
Synopsis	A brief description of the cmdlet
Example	Example cmdlet commands and output

To get example help, issue the following command:

```
get-help <cmdlet name> -examples
```

For example:

```
get-help Get-QLGCFCoEBootConfigInfo -examples
```

The following text is output when the previous command is issued:

NAME

```
Get-QLGCFCoEBootConfigInfo
```

SYNOPSIS

```
This Cmdlet is used to retrieve FCoE CFG block from NVRAM for 57710 and 579XX adapters.
```

```
----- Example 1 -----
```

```
PS C:\> Get-QLGCFCoEBootConfigInfo
```

```
Generic command to get the FCoE Boot Config for all the 57710 and 579XX adapters present on the system.
```

```
PS C:\> Get-QLGCFCoEBootConfigInfo
```

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```
AuthenticationMode      : 0
bootSourceInfo_Enabled : {False, False, False, False...}
bootSourceInfo_LUN     : {0, 0, 0, 0...}
bootSourceInfo_wwpn    : {50:06:01:6C:41:E0:F4:00,00:00:00:00:00:00:00:00,
                        00:00:00:00:00:00:00:00,
                        00:00:00:00:00:00:00:00...}
BootToFCoETarget       : 1
ChapID                  :
ChapSecret              : 8
FabricDiscoveryTimeout : 4
FCoEHandle              : 3072664642
FIPPriority              : 0
FIPVLAN                 : 0
FIPVLANDiscovery       : True
FunctionHandle          : 1313539385
HBAMode                 : True
HostHandle              : 3253799580
LinkUpDelay             : 0
LUNBusyRetryCount      : 0
MPIOMACAddress         : 00-00-00-00-00-00
ReversedChapID         :
ReversedChapSecret     : Ethernet
SymbolicPortName       :
TargetAsFirstHDD       : False
Valid                   :
wwnn                    : 00:00:00:00:00:00:00:00
wwpn                    : 00:00:00:00:00:00:00:00
PSComputerName         :
```

```
AuthenticationMode      : 0
bootSourceInfo_Enabled : {False, False, False, False...}
bootSourceInfo_LUN     : {0, 0, 0, 0...}
bootSourceInfo_wwpn    : {00:00:00:00:00:00:00:00,00:00:00:00:00:00:00:00,
                        00:00:00:00:00:00:00:00,
                        00:00:00:00:00:00:00:00...}
BootToFCoETarget       : 1
ChapID                  : 0
ChapSecret              :
FabricDiscoveryTimeout : 4
FCoEHandle              : 3361766594
```

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```
FIPPriority           : 0
FIPVLAN              : 0
FIPVLANDiscovery     : True
FunctionHandle       : 3114690377
HBAMode              : True
HostHandle           : 3253799580
LinkUpDelay          : 0
LUNBusyRetryCount    : 0
MPIOMACAddress       : 00-00-00-00-00-00
ReversedChapID       :
ReversedChapSecret   :
SymbolicPortName     :
TargetAsFirstHDD     : True
Valid                :
wwnn                  : 00:00:00:00:00:00:00:00
wwpn                  : 00:00:00:00:00:00:00:00
PSComputerName       :
```

----- Example 2 -----

```
PS C:\> Get-QLGCFCoEBootConfigInfo -FCoEHandle 3361766594
```

Command to get FCoE Boot config using FCoE handle.

```
PS C:\> Get-QLGCFCoEBootConfigInfo -FCoEHandle 3072664642
```

```
AuthenticationMode   : 0
bootSourceInfo_Enabled : {False, False, False, False...}
bootSourceInfo_LUN    : {0, 0, 0, 0...}
bootSourceInfo_wwpn   : {50:06:01:6C:41:E0:F4:00, 00:00:00:00:00:00:00:00,
                        00:00:00:00:00:00:00:00,
                        00:00:00:00:00:00:00:00...}
BootToFCoETarget     : 1
ChapID                :
ChapSecret            : 8
FabricDiscoveryTimeout : 4
FCoEHandle            : 3072664642
FIPPriority           : 0
FIPVLAN              : 0
FIPVLANDiscovery     : True
FunctionHandle        : 1313539385
```

3-Using PowerShell Getting Help

```
HBAMode           : True
HostHandle        : 3253799580
LinkUpDelay       : 0
LUNBusyRetryCount : 0
MPIOMACAddress    : 00-00-00-00-00-00
ReversedChapID    :
ReversedChapSecret : Ethernet
SymbolicPortName  :
TargetAsFirstHDD  : False
Valid             :
wwnn              : 00:00:00:00:00:00:00:00
wwpn              : 00:00:00:00:00:00:00:00
PSComputerName    :
```

4 Cmdlets

This chapter lists the available Cavium cmdlets and provides a brief description of each one. The cmdlets are organized by name (see [Table 4-1](#)) and by function (see [Tables 4-3](#) through [4-12](#)).

For more information about the cmdlets, use the PowerShell online help as shown in [“Getting Help” on page 7](#).

Cmdlets by Name

[Table 4-1](#) lists the cmdlets alphabetically.

Table 4-1. Cmdlets by Name

cmdlet	Description
Add-QLGCDiscoveryPortal	Adds a discovery portal
Add-QLGCiSCSIStaticTarget	Adds a static target
Add-QLGCiSNSServer	Adds an Internet storage name service (iSNS) server
Connect-QLGCHost	Connects to the host
Disconnect-QLGCHost	Disconnects from the host
Disconnect-QLGCHostHandle	Disconnects from the host handle
Get-QLGCAdapter	Retrieves information about one or more Cavium adapters on the system
Get-QLGCFCoE	Retrieves information about one or more Fibre Channel over Ethernet (FCoE) functions of the Cavium adapters installed on the system
Get-QLGCFCoEBootConfigInfo	Retrieves the FCoE boot from SAN configuration (CFG) block from the NVRAM for Cavium adapters

Table 4-1. Cmdlets by Name (Continued)

cmdlet	Description
Get-QLGCFCoEGeneralConfig	Retrieves general time-out configuration information about one or more FCoE functions of Cavium adapters installed on the system. This cmdlet is supported only on Windows systems.
Get-QLGCFCoELun	Retrieves LUN information about one or more FCoE LUNs configured on the system
Get-QLGCFCoEStats	Retrieves run-time statistics for the FCoE protocol
Get-QLGCFCoETarget	Retrieves information about one or more FCoE targets configured on the Cavium adapters installed on the system.
Get-QLGCFirmwareInfo	Retrieves firmware information about one or more Cavium adapters on the system. Firmware information is usually specified with a firmware type/ firmware version pair.
Get-QLGCFunction	Retrieves function information about one or more Cavium adapters on the system
Get-QLGCifaceFileInfo	Retrieves information about one or more iface files configured on the system This cmdlet is supported only on Linux systems.
Get-QLGCiSCSI	Retrieves information about one or more iSCSI devices of Cavium adapters installed on the system
Get-QLGCiSCSIBootCfg	Retrieves iSCSI boot from SAN configuration from NVRAM for Cavium adapters
Get-QLGCiSCSIConnection	Retrieves connection information about one or more iSCSI devices of Cavium adapters installed on the system
Get-QLGCiSCSIIPv4Addresses	Retrieves information about one or more iSCSI IPv4 addresses of iSCSI devices found on the system
Get-QLGCiSCSIIPv6Addresses	Retrieves information about one or more iSCSI IPv6 addresses of iSCSI devices found on the system

Table 4-1. Cmdlets by Name (Continued)

cmdlet	Description
Get-QLGCiSCSILun	Retrieves information about one or more iSCSI LUNs configured on one or more iSCSI targets connected to Cavium adapters installed on the system
Get-QLGCiSCSINegotiationInfo	Retrieves negotiation information about one or more iSCSI devices of Cavium adapters installed on the system
Get-QLGCiSCSIPortal	Retrieves information about iSCSI portals. The list includes target portals and initiator portals.
Get-QLGCiSCSISession	Retrieves information about one or more iSCSI sessions of Cavium adapters installed on the system connecting to one or more iSCSI targets
Get-QLGCiSCSITarget	Retrieves information about one or more iSCSI targets configured on Cavium adapters installed on the system
Get-QLGCiSNSServers	Retrieves information about one or more iSNS servers
Get-QLGCLicenseInfo	Retrieves specific license information for the adapter
Get-QLGCManagedLocalHost	Retrieves local host managed information
Get-QLGCManagedRemoteHost	Retrieves remote host managed information
Get-QLGCNdisAdvancedParameter	Retrieves NIC parameter information
Get-QLGCNdisStatsInfo	Retrieves the NIC statistics of Cavium adapters installed on system
Get-QLGCNic	Retrieves information about one or more NIC functions of Cavium adapters installed on the system
Get-QLGCNicParameter	Retrieves information about virtual bus device (VBD) advanced parameters of Cavium adapters installed on the system
Get-QLGCNicPartConfig	Retrieves NPAR configuration information of all NPAR-capable Cavium adapters
Get-QLGCNicPartFunctionConfig	Retrieves NPAR configuration information at the function level

Table 4-1. Cmdlets by Name (Continued)

cmdlet	Description
Get-QLGCNicPartPortConfig	Retrieves NPAR configuration information at the port level. This information includes flow control, minimum bandwidth, and default mode protocol. The default mode protocol parameter only applies to the Cavium 45000 Series adapters.
Get-QLGCParmValueDesc	Retrieves more information about the current value of a NIC advanced parameter and its other valid values
Get-QLGCPhyPort	Retrieves information about one or more physical ports of Cavium adapters installed on the system
Get-QLGCPhyPortDCBXInfo	Retrieves data center bridging exchange (DCBX) information about one or more physical ports of Cavium adapters installed on the system
Get-QLGCPhyPortLLDPConfig	Retrieves link layer discovery protocol (LLDP) configuration parameters of the specified NIC port
Get-QLGCPhyPortMBACfg	Retrieves pre-execution environment (PXE) parameters from NVRAM; for example, Option-Rom, wake on LAN (WOL), HotKey, VlanId, and so on The input parameter PhyPortHandle must be to a physical NIC/VBD.
Get-QLGCPhyPortStats	Retrieves DCBX statistics
Get-QLGCPortAdvancedParameter	Retrieves link setting information for the specified port.
Get-QLGCPortLLDPInfo	Retrieves LLDP parameters of the specific NIC port
Get-QLGCResCfg	Retrieves resource configuration parameters of the specified adapter. The parameters are related to iSCSI, FCoE, RDMA, TCP/IP offload engine (TOE), and so on This cmdlet is supported only on Windows systems.

Table 4-1. Cmdlets by Name (Continued)

cmdlet	Description
Get-QLGCSRIOVSwitchInfo	Retrieves single root input/output virtualization (SR-IOV) switch information for all the functions of the valid Cavium adapters
Get-QLGCSRIOVSwitchStats	Retrieves the SR-IOV switch statistics for all valid NetXtreme II® switches
Get-QLGCSrionVFInfo	Retrieves the SR-IOV virtual functions that are present for supported functions
Get-QLGCTransceiverInfo	Retrieves information about the transceiver used for the physical port
Get-QLGCVNPort	Retrieves information about all the FCoE virtual ports (VPs) present on the system. You can provide parameters to filter out specific VPs.
Get-QLGCVPDInfo	Retrieves vital product data (VPD) information about one or more Cavium adapters on the system. Usually, VPD information has one or more tags and a value for each tag.
New-QLGCVNPort	Creates a new virtual port
Remove-QLGCDiscoveryPortal	Removes a discovered portal
Remove-QLGCiSCSIStaticTarget	Removes a static target
Remove-QLGCiSNSServer	Disables an iSNS server connection
Remove-QLGCVNPort	Deletes an existing virtual port
Reset-QLGCHandle	Resets the Cavium adapters' handles
Reset-QLGCHost	Resets the host
Reset-QLGCiSNSServer	Resets the iSNS server This cmdlet is supported only on Windows systems.
Set-QLGCFCoEBootConfigInfo	Sets the FCoE boot from SAN CFG block in NVRAM for the Cavium adapters
Set-QLGCFCoEGeneralConfig	Modifies FCoE general time-out configuration information of FCoE devices of Cavium adapters installed on the system. This cmdlet is supported only on Windows systems.

Table 4-1. Cmdlets by Name (Continued)

cmdlet	Description
Set-QLGCFunction	Enables and/or disables SR-IOV and modifies the number of the virtual function (VF) of the function object
Set-QLGCiSCSI	Configures the iSCSI devices of the Cavium adapters installed on the system.
Set-QLGCiSCSIBootCfg	Sets the iSCSI boot from SAN configuration parameters
Set-QLGCNdisAdvancedParameter	Sets NIC parameters
Set-QLGCNicParameter	Modifies the current value of a NIC advanced parameter
Set-QLGCNicPartConfig	Configures adapter-level NPAR configurations, such as switching between single function or default mode to multifunction or NPAR mode
Set-QLGCNicPartFunctionConfig	Modifies NPAR configuration information at the function level, such as personality configuration, physical function (PF) allocation, relative bandwidth weight (minimum bandwidth), and maximum bandwidth
Set-QLGCNicPartPortConfig	Modifies NPAR configuration information at the port level. At this level, only flow control and minimum bandwidth can be set to new values
Set-QLGCPhyPortLLDPConfig	Sets the LLDP configuration parameters of the specific NIC port, for example, MsgTxInterval, MsgFastTx, TxCreditMax, TxFast, MsgTxHold, and OverwriteSettings
Set-QLGCPhyPortMBACfg	Sets PXE parameters in NVRAM, for example, OptionRom, WOL, HotKey, VLanId, and so on The input parameter PhyPortHandle must be to a physical NIC/VBD.
Set-QLGCPortAdvancedParameter	Sets the link settings for the specified port.
Set-QLGCRemoteAgentPassword	Sets the password for the remote agent

Table 4-1. Cmdlets by Name (Continued)

cmdlet	Description
Set-QLGCResCfg	Sets the resource configuration parameters of the specific NIC. The parameters are related to iSCSI, FCoE, RDMA, TOE, and so on. TOE, iSCSI, and FCoE can only be configured on certain adapters and require a license key. License keys are preprogrammed in the hardware. This cmdlet is supported only on Windows systems.
Start-CreateOrModifyifaceFile	Creates a new iface file or modifies an existing iface file. This cmdlet is supported only on Linux systems.
Start-QLGCFuncDiagnostic	Runs diagnostic tests at the function level
Start-QLGCiSCSIDiagnostic	Checks connectivity from the iSCSI device to an iSCSI target
Start-QLGCiSCSILoginToTarget	Logs into an iSCSI target
Start-QLGCiSCSILogout	Logs out of an iSCSI target
Start-QLGCNicDiagnostic	Pings an IP address
Update-QLGCAIUsingMBI	Updates the monolithic binary image (MBI) across all connected hosts
Update-QLGCFirmware	Updates the designated firmware component of Cavium adapters installed on the system

Cmdlets by Function

Tables 4-2 through 4-12 list the cmdlets by function.

Table 4-2. Generic Adapter cmdlets

cmdlet	Description
Get-QLGCAdapter	Retrieves information about one or more Cavium adapters on the system
Set-QLGCRemoteAgentPassword	Sets the password for the remote agent

Table 4-2. Generic Adapter cmdlets (Continued)

cmdlet	Description
Get-QLGCManagedRemoteHost	Retrieves remote host managed information

Table 4-3. NIC cmdlets

cmdlet	Description
Get-QLGCNdisAdvancedParameter	Retrieves NIC parameter information
Get-QLGCNdisStatsInfo	Retrieves the NIC statistics of Cavium adapters installed on system
Get-QLGCNic	Retrieves information about one or more NIC functions of Cavium adapters installed on the system
Start-QLGCNicDiagnostic	Pings an IP address
Get-QLGCNicParameter	Retrieves information about VBD advanced parameters of Cavium adapters installed on the system
Set-QLGCNdisAdvancedParameter	Sets NIC parameters
Set-QLGCNicParameter	Modifies the current value of a NIC advanced parameter

Table 4-4. FCoE cmdlets

cmdlet	Description
Get-QLGCFCoE	Retrieves information about one or more Fibre Channel over Ethernet (FCoE) functions of the Cavium adapters installed on the system
New-QLGCVNPort	Creates a new virtual port
Get-QLGCVNPort	Retrieves information about all the FCoE virtual ports (VPs) present on the system. You can provide parameters to filter out specific VPs.
Remove-QLGCVNPort	Deletes an existing virtual port

Table 4-4. FCoE cmdlets (Continued)

cmdlet	Description
Get-QLGCFCoEBootConfigInfo	Retrieves the FCoE boot from SAN configuration (CFG) block from the NVRAM for Cavium adapters
Set-QLGCFCoEBootConfigInfo	Sets the FCoE boot from SAN CFG block in NVRAM for the Cavium adapters
Get-QLGCFCoEGeneralConfig	Retrieves general time-out configuration information about one or more FCoE functions of Cavium adapters installed on the system This cmdlet is supported only on Windows systems.
Set-QLGCFCoEGeneralConfig	Modifies FCoE general time-out configuration information of FCoE devices of Cavium adapters installed on the system This cmdlet is supported only on Windows systems.
Get-QLGCFCoELun	Retrieves LUN information about one or more FCoE LUNs configured on the system
Get-QLGCFCoEStats	Retrieves run-time statistics for the FCoE protocol
Get-QLGCFCoETarget	Retrieves information about one or more FCoE targets configured on the Cavium adapters installed on the system
Get-QLGCFCoE	Retrieves information about one or more FCoE functions of the Cavium adapters installed on the system
New-QLGCVNPort	Creates a new virtual port
Get-QLGCVNPort	Retrieves information about all the FCoE virtual ports (VPs) present on the system. You can provide parameters to filter out specific VPs.
Remove-QLGCVNPort	Deletes an existing virtual port
Get-QLGCFCoEBootConfigInfo	Retrieves the FCoE boot from SAN configuration (CFG) block from the NVRAM for Cavium adapters

Table 4-4. FCoE cmdlets (Continued)

cmdlet	Description
Set-QLGCFCoEBootConfigInfo	Sets the FCoE boot from SAN CFG block in NVRAM for the Cavium adapters
Get-QLGCFCoEGeneralConfig	Retrieves general time-out configuration information about one or more FCoE functions of Cavium adapters installed on the system This cmdlet is supported only on Windows systems.
Set-QLGCFCoEGeneralConfig	Modifies FCoE general time-out configuration information of FCoE devices of Cavium adapters installed on the system This cmdlet is supported only on Windows systems.
Get-QLGCFCoELun	Retrieves LUN information about one or more FCoE LUNs configured on the system
Get-QLGCFCoEStats	Retrieves run-time statistics for the FCoE protocol
Get-QLGCFCoETarget	Retrieves information about one or more FCoE targets configured on the Cavium adapters installed on the system

Table 4-5. iSCSI cmdlets

cmdlet	Description
Get-QLGCiSCSI	Retrieves information about one or more iSCSI devices of Cavium adapters installed on the system
Get-QLGCifaceFileInfo	Retrieves information about one or more iface files configured on the system This cmdlet is supported only on Linux systems.
Start-QLGCiSCSIDiagnostic	Checks connectivity from the iSCSI device to an iSCSI target
Start-QLGCiSCSILoginToTarget	Logs into an iSCSI target

Table 4-5. iSCSI cmdlets (Continued)

cmdlet	Description
Start-QLGCIscsiLogout	Logs out of an iSCSI target
Get-QLGCIscsiConnection	Retrieves connection information about one or more iSCSI devices of Cavium adapters installed on the system
Get-QLGCIscsiIpv4Addresses	Retrieves information about one or more iSCSI IPv4 addresses of iSCSI devices found on the system
Set-QLGCIscsi	Configures the iSCSI devices of the Cavium adapters installed on the system.
Get-QLGCIscsiIpv6Addresses	Retrieves information about one or more iSCSI IPv6 addresses of iSCSI devices found on the system
Get-QLGCIscsiLun	Retrieves information about one or more iSCSI LUNs configured on one or more iSCSI targets connected to Cavium adapters installed on the system
Get-QLGCIscsiNegotiationInfo	Retrieves negotiation information about one or more iSCSI devices of Cavium adapters installed on the system
Get-QLGCIscsiPortal	Retrieves information about iSCSI portals. The list includes target portals and initiator portals.
Get-QLGCIscsiSession	Retrieves information about one or more iSCSI sessions of Cavium adapters installed on the system connecting to one or more iSCSI targets
Get-QLGCIscsiTarget	Retrieves information about one or more iSCSI targets configured on Cavium adapters installed on the system
Get-QLGCLicenseInfo	Retrieves specific license information for the adapter
Add-QLGCDiscoveryPortal	Adds a discovery portal
Add-QLGCIscsiStaticTarget	Adds a static target
Add-QLGCIscsiSNSServer	Adds an iSNS server
Connect-QLGCHost	Connects to the host

Table 4-5. iSCSI cmdlets (Continued)

cmdlet	Description
Disconnect-QLGCHost	Disconnects from the host
Disconnect-QLGCHostHandle	Disconnects from the host handle
Get-QLGCManagedLocalHost	Retrieves local host managed information
Get-QLGCiSNSServers	Retrieves information about one or more iSNS servers
Remove-QLGCDiscoveryPortal	Removes a discovered portal
Remove-QLGCiSCSIStaticTarget	Removes a static target
Reset-QLGCHandle	Resets the Cavium adapters' handles
Reset-QLGCHost	Resets the host
Reset-QLGCiSNSServer	Resets the iSNS server This cmdlet is supported only on Windows systems.
Remove-QLGCiSNSServer	Disables an iSNS server connection
Get-QLGCiSCSIBootCfg	Retrieves iSCSI boot from SAN configuration from NVRAM for Cavium adapters
Set-QLGCiSCSIBootCfg	Sets the iSCSI boot from SAN configuration parameters
Start-CreateOrModifyifaceFile	Creates a new iface file or modifies an existing iface file. This cmdlet is supported only on Linux systems.

Table 4-6. Firmware cmdlets

cmdlet	Description
Get-QLGCFirmwareInfo	Retrieves firmware information about one or more Cavium adapters on the system. Firmware information is usually specified with a firmware type/ firmware version pair.
Update-QLGCFirmware	Updates the designated firmware component of Cavium adapters installed on the system

Table 4-6. Firmware cmdlets (Continued)

cmdlet	Description
Get-QLGCVPDInfo	Retrieves VPD information about one or more Cavium adapters on the system. Usually, VPD information has one or more tags and a value for each tag.
Get-QLGCPhyPortMBACfg	Retrieves PXE parameters from NVRAM; for example, OptionRom, wake on LAN (WOL), HotKey, VlanId, and so on. The input parameter PhyPortHandle must be to a physical NIC/virtual bus device (VBD).
Update-QLGCAIUsingMBI	Updates the monolithic binary image (MBI) across all connected hosts

Table 4-7. Physical Function cmdlets

cmdlet	Description
Get-QLGCFunction	Retrieves function information about one or more Cavium adapters on the system
Set-QLGCFunction	Enables and/or disables SR-IOV and modifies the number of the VF of the function object
Start-QLGCFuncDiagnostic	Runs diagnostic tests at the function level
Get-QLGCParamValueDesc	Retrieves more information about the current value of a NIC advanced parameter and its other valid values

Table 4-8. NPAR cmdlets

cmdlet	Description
Get-QLGCNicPartConfig	Retrieves NPAR configuration information of all NPAR-capable Cavium adapters.
Set-QLGCNicPartConfig	Configures adapter-level NPAR configurations such as switching between single function or default mode to multifunction or NPAR mode

Table 4-8. NPAR cmdlets (Continued)

cmdlet	Description
Get-QLGCNicPartFunctionConfig	Retrieves NPAR configuration information at the function level
Set-QLGCNicPartFunctionConfig	Modifies NPAR configuration information at the function level, such as personality configuration, physical function (PF) allocation, relative bandwidth weight (minimum bandwidth), and maximum bandwidth
Get-QLGCNicPartPortConfig	Retrieves NPAR configuration information at the port level. This information includes flow control, minimum bandwidth, and default mode protocol. The default mode protocol parameter is applicable only for the Cavium 45000 Series adapters.
Set-QLGCNicPartPortConfig	Modifies NPAR configuration information at the port level. At this level, only flow control and minimum bandwidth can be set to new values.

Table 4-9. PHY Port cmdlets

cmdlet	Description
Get-QLGCPhyPort	Retrieves information about one or more physical ports of Cavium adapters installed on the system
Get-QLGCPhyPortDCBXInfo	Retrieves DCBX information about one or more physical ports of Cavium adapters installed on the system
Get-QLGCPhyPortLLDPConfig	Retrieves LLDP configuration parameters of the specified NIC port
Set-QLGCPhyPortLLDPConfig	Sets the LLDP configuration parameters of the specific NIC port, for example, MsgTxInterval, MsgFastTx, TxCreditMax, TxFast, MsgTxHold, and OverwriteSettings

Table 4-9. PHY Port cmdlets (Continued)

cmdlet	Description
Set-QLGCPhyPortMBACfg	Sets MBA parameters in NVRAM, for example, OptionRom, WOL, HotKey, VlanId, and so on The input parameter PhyPortHandle must be to a physical NIC/VBD.
Get-QLGCPhyPortStats	Retrieves DCBX statistics
Get-QLGCPortLLDPInfo	Retrieves LLDP parameters of the specific NIC port
Get-QLGCPortAdvancedParameter	Retrieves link setting information for the specified port.
Set-QLGCPortAdvancedParameter	Sets the link settings for the specified port.

Table 4-10. NIC, TOE, iSCSI-Offload, FCoE Offload Resource Configuration cmdlets

cmdlet	Description
Get-QLGCResCfg	Retrieves resource configuration parameters of the specified adapter. The parameters are related to iSCSI, FCoE, RDMA, TCP/IP offload engine (TOE), and so on. This cmdlet is supported only on Windows systems.
Set-QLGCResCfg	Sets the resource configuration parameters of the specific NIC. The parameters are related to iSCSI, FCoE, RDMA, TOE, and so on TOE, iSCSI, and FCoE can only be configured on certain adapters and require a license key. License keys are preprogrammed in the hardware. This cmdlet is supported only on Windows systems.

Table 4-11. SR-IOV cmdlets

cmdlet	Description
Get-QLGCSRIOVSwitchInfo	Retrieves SR-IOV switch information for all the functions of the valid Cavium adapters
Get-QLGCSRIOVSwitchStats	Retrieves the SR-IOV switch statistics for all valid NetXtreme II switches
Get-QLGCSriovVFInfo	Retrieves the SR-IOV virtual functions that are present for supported functions

Table 4-12. Transceiver cmdlet

cmdlet	Description
Get-QLGCTransceiverInfo	Retrieves information about the transceiver used for the physical port



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