

Broadcom Shell

- About the Broadcom Shell, on page 1
- Guidelines and Limitations, on page 1
- Accessing the Broadcom Shell (bcm-shell), on page 1

About the Broadcom Shell

The switch's front panel and fabric module line cards contain Broadcom Network Forwarding Engines (NFE). The number of NFEs varies depending upon the specific model of the front panel line card (LC) or the fabric module (FM).

Guidelines and Limitations

You can access and read information from the T2 ASICs without any limitations. However, Cisco does not recommend changing the T2 configuration settings. Use caution when accessing the Broadcom Shell.

Accessing the Broadcom Shell (bcm-shell)

The following sections describe approaches to access the Broadcom Shell (bcm-shell).

Accessing bcm-shell with the CLI API

The bcm-shell commands are passed directly from the Cisco NX-OS CLI to the specific T2 ASIC instance. The T2 ASIC instance can be on the fabric module or on the front panel line card.

The command syntax is as follows:

bcm-shell module *module_number* [*instance_number:command*]

Where

module_number	Module number in the chassis.

instance_number	T2 instance number • When not specified, the T2 instance number defaults to 0. • When a wildcard ('*') is specified, all T2 instances are processed.
command	Broadcom command

Note Cisco NX-OS command extensions such as ‘pipe include’ or ‘redirect output to file’ can be used to manage command output.

Note Entering commands with the CLI API are recorded in the system accounting log for auditing purposes. Commands that are entered directly from the bcm-shell are not recorded in the accounting log.

Accessing the Native bcm-shell on the Fabric Module

An eight-slot line card (LC) chassis can host a maximum of six fabric modules (FMs). These slots are numbered 21 through 26.You must specify the FM that you wish to access the bcm-shell on.

The following example shows how to access the bcm-shell on the FM in slot 24, access context help, and exit the bcm-shell.

- Use the **show module** command to display the FMs.

```
switch# show module
Mod Ports Module-Type Model Status
--- ----- ------------------------------------ ------------------ ----------
3 36 36p 40G Ethernet Module N9k-X9636PQ ok
4 36 36p 40G Ethernet Module N9k-X9636PQ ok
21 0 Fabric Module Nexus-C9508-FM ok
22 0 Fabric Module Nexus-C9508-FM ok
23 0 Fabric Module Nexus-C9508-FM ok
24 0 Fabric Module Nexus-C9508-FM ok
25 0 Fabric Module Nexus-C9508-FM ok
26 0 Fabric Module Nexus-C9508-FM ok
27 0 Supervisor Module Nexus-SUP-A active *
29 0 System Controller Nexus-SC-A active
```

- Attach to module 24 to gain access to the command line for the FM in slot 24.

```
switch# attach module 24
Attaching to module 24 ...
To exit type 'exit', to abort type '$.'
```

- Enter the command to gain root access to the fabric module software.

```
module-24# test hardware internal bcm-usd bcm-diag-shell
Available Unit Numbers: 0 1
bcm-shell.0> 1
```

  At this point, you are at the Broadcom shell for the fabric module in slot 24, T2 ASIC instance 1. Any commands that you enter are specific to this specific ASIC instance.

- Use the exit command to exit the bcm-shell and to detach from the FM.

```
bcm-shell.1> exit
module-24# exit
rlogin: connection closed.
```

Accessing the bcm-shell on the Line Card

When connecting to the T2 ASIC on the line card (LC), you first attach to the module, enter root mode, run the shell access exec, and select the ASIC instance to which you want to attach. The number of available ASICs depends on the model of the line card to which you are attached.

The following example shows how to access the bcm-shell of ASIC instance 1 on the LC in slot 2 and exit the bcm-shell on an LC that contains three T2 instances.

- Attach to module 2 to gain access to the command line for the LC in slot 2.

```
switch# attach module 2
Attaching to module 2 ...
To exit type 'exit', to abort type '$.'
Last login: Wed Aug 7 14:13:15 UTC 2013 from sup27 on ttyp0
```

- Enter the command to gain root access to the line card software.

```
switch-2# test hardware internal bcm-usd bcm-diag-shell
Available Unit Numbers: 0 1 2
bcm-shell.0> 1
bcm-shell.1>
```

  At this point, you are at the Broadcom shell for the line card module in slot 2, T2 ASIC instance 1.

- Use the **exit** command to exit the bcm-shell and detach from the FM.

```
bcm-shell.1> exit
module-2# exit
rlogin: connection closed.
```