



Cisco Broadband Access Center for Cable Command Line Interface Reference

Release 2.7

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GLOSSARY

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Preface

Welcome to the *Cisco Broadband Access Center for Cable Command Line Interface Reference*. This chapter provides an outline of the other chapters in this guide, and demonstrates the styles and conventions used in the guide.

This chapter contains the following sections:

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Audience

The *Cisco Broadband Access Center for Cable Command Line Interface Reference* is written for those wishing to use the Device Provisioning Engine (DPE) command line interface (CLI).

How this Guide is Organized

This guide is divided into these chapters describing how to use the Broadband Access Center for Cable (BACC) DPE CLI:

Chapter 1	Introduction to the Broadband Access Center for Cable Command Line Interface	Describes the DPE CLI and explains the differences between those commands that can be used on hardware DPEs, on Solaris only DPEs, or on both types.
Chapter 2	System Commands	Describes commands used to manage various system aspects of the DPE.

Chapter 3	Support and Troubleshooting Commands	Describes the commands used to support and troubleshoot the DPE.
Chapter 4	Device Provisioning Engine Configuration Commands	Describes the CLI configuration commands used on both hardware and software DPEs.
Chapter 5	Log System Management Commands	Describes those commands related to log management.
Chapter 6	PacketCable Voice Technology Commands	Describes those commands related to the PacketCable voice technology.
Chapter 7	SNMP Agent Commands	Describes the commands related to the DPE ANMP agent.
Glossary		Defines terminology used in this guide and generally applicable to the technologies being discussed.

Document Conventions

This guide uses the following conventions:

- **Boldface** is used for commands, keywords, and buttons.
- *Italic* is used for command input for which you supply values.
- `screen` font is used for examples of information that are displayed on the screen.
- **Boldface screen** font is used for examples of information that you enter.
- UNIX paths are indicated as follows: /tools/list/connections.



Note

Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the publication.



Caution

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

Related Documentation

Refer to these manuals for additional information:

- *Release Notes for Broadband Access Center for Cable, Release 2.7*
- *Cisco Broadband Access Center for Cable Installation Guide*
- *Cisco Broadband Access Center for Cable Administrator's Guide*
- To support the DPE-590:
 - *Device Provisioning Engine 590 Recovery CD-ROM Release Notes*
 - *Cisco Content Engine 500 Series Hardware Installation Guide*

- To support the DPE-2115:
 - *Device Provisioning Engine 2115 Recovery CD-ROM Release Notes*
 - *Installation and Setup Guide for the Cisco 1102 VLAN Policy Server*

**Caution**

Refer to this guide for port and connector identification and to perform hardware installation only. Do not attempt to perform any of the configuration instructions found in that guide.

- *Cisco Network Registrar User's Guide*
- *Cisco Network Registrar CLI Reference*

Obtaining Documentation

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Cisco.com

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You can access the Cisco website at this URL:

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San Jose, CA 95134-9883

We appreciate your comments.

Cisco Product Security Overview

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From this site, you can perform these tasks:

- Report security vulnerabilities in Cisco products.
- Obtain assistance with security incidents that involve Cisco products.
- Register to receive security information from Cisco.

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<http://www.cisco.com/go/psirt>

If you prefer to see advisories and notices as they are updated in real time, you can access a Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed from this URL:

http://www.cisco.com/en/US/products/products_psirt_rss_feed.html

Reporting Security Problems in Cisco Products

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- Emergencies—security-alert@cisco.com

An emergency is either a condition in which a system is under active attack or a condition for which a severe and urgent security vulnerability should be reported. All other conditions are considered nonemergencies.

- Nonemergencies—psirt@cisco.com

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532



Tip

We encourage you to use Pretty Good Privacy (PGP) or a compatible product to encrypt any sensitive information that you send to Cisco. PSIRT can work from encrypted information that is compatible with PGP versions 2.x through 8.x.

Never use a revoked or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one linked in the Contact Summary section of the Security Vulnerability Policy page at this URL:

http://www.cisco.com/en/US/products/products_security_vulnerability_policy.htm

The link on this page has the current PGP key ID in use.

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Cisco Technical Support & Documentation Website

The Cisco Technical Support & Documentation website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, at this URL:

<http://www.cisco.com/techsupport>

Access to all tools on the Cisco Technical Support & Documentation website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

**Note**

Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support & Documentation website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>

Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—Your network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

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- Networking products offered by Cisco Systems, as well as customer support services, can be obtained at this URL:
<http://www.cisco.com/en/US/products/index.html>
- Networking Professionals Connection is an interactive website for networking professionals to share questions, suggestions, and information about networking products and technologies with Cisco experts and other networking professionals. Join a discussion at this URL:
<http://www.cisco.com/discuss/networking>
- World-class networking training is available from Cisco. You can view current offerings at this URL:
<http://www.cisco.com/en/US/learning/index.html>



Introduction to the Broadband Access Center for Cable Command Line Interface

This chapter contains detailed information on the CLI commands that you use in conjunction with the DPE. It identifies how to start and stop the command line interface and differentiates between the hardware and Solaris device provisioning engines (DPEs).

The CLI described in this guide is used on both the DPE-590 and DPE-2115 devices. There are some differences between the commands used on these hardware DPEs and those used on the Solaris DPE. The “[Command Usage](#)” section on page 1-2 identifies the commands used on either type of DPE.

Accessing the DPE Command Line Interface

You access the command line interfaces for hardware and Solaris DPEs in different ways. The hardware DPE is accessed using either telnet or by accessing the console port on the actual DPE device. The Solaris CLI can only be accessed by Telnetting to port 2323.

Accessing the Hardware CLI

When using either the DPE-590 or DPE-2115, you must connect your computer to the serial console port on the hardware DPE . Once connected you should complete these steps:

-
- Step 1** Initiate a Hyper Terminal connection between your computer and the DPE. Once the connection is made, you are prompted to enter the DPE password.
 - Step 2** Enter the DPE password and then continue with the CLI operations you need to perform.



Note Although the default DPE password is **changeme**, it is NOT the same password used to enter into the BACC administrator’s user interface.

Accessing the Solaris CLI

You can access a Solaris device provisioning engine command line interface in one of two different ways; from a remote host or from a local host.

Accessing the Solaris DPE from a Remote Host

To access the command line interface for a Solaris DPE, from a remote host, run this command:

```
telnet remote-host-name 2323
```

Accessing the Solaris DPE from a Local Host

To access the command line interface for a Solaris DPE, from a local host, run either of these commands:

```
telnet localhost 2323
```

or

```
telnet 0 2323
```



Note

If a Telnet connection cannot be made to the Solaris CLI it is likely that the CLI is not running, you may need to start the CLI server using this command:

```
/etc/init.d/bprAgent start cli
```

Once you access the CLI, you must enter the DPE password before continuing.

Command Usage

Some CLI commands can be used on either the hardware or Solaris DPEs. Others however, can be used on one or the other, but not both. The DPEs supported by individual commands are identified appropriately in the descriptions of the individual commands. This support is also provided at a glance in [Table 1-1](#).

Table 1-1 DPE/CLI Command Support

Command	DPE Support	Command	DPE Support	Command	DPE Support
aaa authentication	Both	no debug dpe event-manager	Both	show dpe	Both
clear bundles	Both	no debug dpe exceptions	Both	show dpe config	Both
clear cache	Both	no debug dpe framework	Both	show hostname	Both
clear logs	Both	no debug dpe messaging	Both	show interface ethernet <0...1> config	Hardware
clock set	Hardware	no debug dpe netsnmp	Both	show interface ethernet <0...1> stats	Hardware

Table 1-1 DPE/CLI Command Support (continued)

Command	DPE Support	Command	DPE Support	Command	DPE Support
debug dpe cache	Both	no debug dpe registration	Both	show interface ethernet <intf0/intf1> config	Solaris
debug dpe connection	Both	no debug dpe registration - detail	Both	show interface ethernet <intf0/intf1> stats	Solaris
debug dpe dpe-server	Both	no debug dpe snmp	Both	show ip	Both
debug dpe event-manager	Both	no debug dpe tftp	Both	show ip route	Both
debug dpe exceptions	Both	no docsis shared-secret	Both	show log	Both
debug dpe framework	Both	no dpe provisioning-group primary	Both	show log last <1...9999>	Both
debug dpe messaging	Both	no dpe provisioning-group secondary	Both	show log run	Both
debug dpe netsnmp	Both	no ip default-gateway	Hardware	show memory	Both
debug dpe registration	Both	no ip domain-name	Hardware	show packetcable snmp log	Both
debug dpe registration - detail	Both	no ip name-server	Hardware	show packetcable snmp log last <1..9999>	Both
debug dpe snmp	Both	no ip route	Hardware	show packetcable snmp log run	Both
debug dpe tftp	Both	no ntp server	Hardware	show running-config	Both
debug on	Both	no packetcable	Both	show syslog	Hardware
disable	Both	no packetcable registration encryption	Both	show syslog last	Hardware
docsis shared-secret	Both	no packetcable snmp key-material	Both	show syslog run	Hardware
dpe port	Both	no snmp-server community <i>string</i> [rolrw]	Both	show tftp files	Both
dpe provisioning-group primary	Both	no snmp-server contact	Both	show version	Both
dpe provisioning-group secondary	Both	no snmp-server host	Both	snmp-server community <i>string</i> [rolrw]	Both
dpe rdu-server (host)	Both	no snmp-server inform	Both	snmp-server contact	Both
dpe rdu-server (IP)	Both	no snmp-server location	Both	snmp-server host	Both
dpe reload	Both	no snmp-server udp-port	Solaris	snmp-server inform	Both
dpe shared-secret	Both	no syslog log-server	Hardware	snmp-server location	Both
dpe start	Both	no tacacs-sever <host>	Both	snmp-server reload	Both
dpe stop	Both	no tftp allow-create-dirs	Both	snmp-server start	Both
enable	Both	no tftp allow-override	Both	snmp-server stop	Both
enable password	Both	no tftp allow-read-access	Both	snmp-server udp-port	Solaris
exit	Both	no tftp allow-write-access	Both	support bundle cache	Both
		no tftp verify-ip	Both	support bundle state	Both

Table 1-1 DPE/CLI Command Support (continued)

Command	DPE Support	Command	DPE Support	Command	DPE Support
help	Both	ntp server (host)	Hardware	support daemon ftp enabled	Hardware
host (host)	Hardware	ntp server (IP)	Hardware	support daemon telnet enabled	Hardware
host (IP)	Hardware	packetcable enable	Both	syslog log-server	Hardware
hostname	Hardware	packetcable registration encryption	Both	syslog mode both	Hardware
interface ethernet <intf0 intf1> provisioning enabled	Solaris	packetcable registration kdc-service-key	Both	syslog mode local	Hardware
interface ethernet <intf0 intf1> provisioning fqdn <fqdn>	Solaris	packetcable registration policy-privacy	Both	syslog mode remote	Hardware
interface ethernet 0...1 ip address	Hardware	packetcable snmp key-material	Both	tacacs-server retries	Both
interface ethernet 0...1 ip enabled	Hardware	packetcable snmp timeout	Both	tacacs-server timeout	Both
interface ethernet 0...1 provisioning enabled	Hardware	password	Both	tacacs-sever <host>	Both
interface ethernet 0...1 provisioning fqdn	Hardware	ping (host)	Hardware	tftp allow-create-dirs	Both
ip default-gateway	Hardware	ping (IP)	Hardware	tftp allow-override	Both
ip domain-name	Hardware	poweroff	Hardware	tftp allow-read-access	Both
ip name-server	Hardware	reload	Hardware	tftp allow-write-access	Both
ip route	Hardware	show bundles	Both	tftp verify-ip	Both
log level	Both	show clock	Both	traceroute (host)	Hardware
no debug	Both	show commands	Both	traceroute (IP)	Hardware
no debug dpe cache	Both	show cpu	Both	upgrade	Hardware
no debug dpe connection	Both	show device-config	Both	uptime	Both
no debug dpe dpe-server	Both	show disk	Both		

Command Line Interface Organization

The BACC CLI is organized into the following functional groups and are further organized into these chapters:

- [Chapter 2, “System Commands”](#)
- [Chapter 3, “Support and Troubleshooting Commands”](#)
- [Chapter 4, “Device Provisioning Engine Configuration Commands”](#)
- [Chapter 5, “Log System Management Commands”](#)
- [Chapter 6, “PacketCable Voice Technology Commands”](#)
- [Chapter 7, “SNMP Agent Commands”](#)



System Commands

This chapter contains detailed information about the command line interface (CLI) commands that you can use to manage and monitor aspects of the Broadband Access Center for Cable (BACC) hardware DPE.

Commands

This section describes the system commands that affect the entire DPE. These commands include:

- [clock set, page 2-2](#)
- [disable, page 2-3](#)
- [enable password, page 2-3](#)
- [enable, page 2-4](#)
- [exit, page 2-5](#)
- [help, page 2-5](#)
- [hostname, page 2-6](#)
- [interface ethernet 0...1 ip address, page 2-7](#)
- [interface ethernet 0...1 ip enabled, page 2-7](#)
- [ip default-gateway, page 2-8](#)
- [no ip default-gateway, page 2-8](#)
- [ip domain-name, page 2-9](#)
- [no ip domain-name, page 2-9](#)
- [ip name-server, page 2-10](#)
- [no ip name-server, page 2-10](#)
- [ip route, page 2-11](#)
- [no ip route, page 2-11](#)
- [ntp server \(host\), page 2-12](#)
- [ntp server \(IP\), page 2-13](#)
- [no ntp server, page 2-13](#)
- [password, page 2-13](#)

- poweroff, page 2-15
- reload, page 2-15
- show clock, page 2-16
- show commands, page 2-16
- show cpu, page 2-17
- show disk, page 2-17
- show hostname, page 2-18
- show interface ethernet <0...1> config, page 2-18
- show interface ethernet <0...1> stats, page 2-19
- show interface ethernet <intf0lintf1> config, page 2-19
- show interface ethernet <intf0lintf1> stats, page 2-20
- show ip route, page 2-21
- show ip, page 2-21
- show memory, page 2-22
- show running-config, page 2-22
- show tftp files, page 2-23
- show version, page 2-23
- tacacs-server <host>, page 2-24
- no tacacs-server <host>, page 2-25
- tacacs-server retries, page 2-25
- tacacs-server timeout, page 2-26
- upgrade, page 2-27
- uptime, page 2-28

clock set

Usage Guidelines

This command sets the current time, using the 24-hour format, and date used by the DPE. The DPE uses GMT to keep time and any time changes made take affect immediately.



Note

You do not have to use this command if the network time protocol (NTP) is being used. See the “[ntp server \(host\)](#)” section on page 2-12 for additional information.

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **clock set** command, you must use this syntax:

```
clock set <hh:mm:ss> <day> <month> <yyyy>
```


Where:

- `<hh:mm:ss>`—Identifies the current time in the 24 hour format. For example, 5 a.m. is identified as 05:00:00, and 11:37:30 p.m. is identified as 23:37:30.
- `<day>`—Identifies the day specified as a two digit number.
- `<month>`—Identifies the current month as a two digit number.
- `<yyyy>`—Identifies the current year using four digits.

Examples

This is an example of how to use the **clock set** command:

```
dpe# clock set 11:26:00 21 12 2001
```

```
Fri Dec 21 11:26:00 GMT 2001
```



Note

This command is only used in conjunction with a hardware DPE.

disable

Usage Guidelines

Use the **disable** command only when the DPE CLI is in the enable mode. Once the disable mode is activated, only those commands that allow viewing the system configuration are available.



Note

This command is used with both the hardware and Solaris DPEs.

Examples

This is an example of how to use the **disable** command:

```
dpe# disable
```

enable password

Usage Guidelines

This command is used to change the access password for entering into an enabled state on the DPE. You can only change the enable password when you are in the enabled mode. Once the password is changed, all users who, from that point forward, attempt to enter into an enabled mode, will be required to use the new password.

You do not use this command whenever TACACS authentication is enabled (see the [aaa authentication, page 4-2](#) for additional information).



Note

This command does not change the login password.

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **enable password** command, you can either provide the password on a command line or when prompted. The syntax you must use is:

```
enable password <password>
```

Where the *<password>* identifies the password currently in effect or, optionally, provides a new password. If this parameter is omitted, you are prompted for the password.

Examples

These are examples of how to use the **enable password** command:

**Note**

In these examples, please note the different password messages that might appear.

Example 1:

```
dpe# enable password
New enable password:
Retype new enable password:
Password changed successfully.
```

Results:

These results occur when the password is changed successfully.

Example 2:

```
dpe# enable password
New enable password:
Retype new enable password:
Sorry, passwords do not match.
```

Results:

These results occur when the password is not entered consistently.

Example 3:

```
dpe# enable password cisco
Password changed successfully
```

Results:

These results occur when the password was successfully changed.

enable

Usage Guidelines

Use the **enable** command to enter the enabled mode. Viewing system configuration does not require the enabled mode. However, the enabled mode is required to change the system configuration, state, and data.

**Note**

This command is used with both the hardware and Solaris DPEs.

Syntax Description

You must use this syntax when entering the **enable** command:

```
enable
```

After entering the command, you are prompted to enter the password used to place the DPE into the enabled state.

**Note**

Refer to the [“enable password” section on page 2-3](#) for information on setting the password.

Examples

This is an example of how to use the **enable** command:

```
dpe# enable
Password:
dpe#
```

exit

Usage Guidelines

This command closes a Telnet or console connection to the DPE and returns to the login prompt on the console.

**Note**

This command is used with both the hardware and Solaris DPEs.

Syntax Description

You must use this syntax when entering the **exit** command:

```
exit
```

After running this command a prompt is displayed to indicate that the Telnet connection has been closed.

Examples

This is an example of how to use the **exit** command:

```
dpe# exit
Connection closed.
```

help

Usage Guidelines

This command displays a help screen to assist you in using the DPE CLI. If you need help on a particular command, or to list all available commands, enter `<system_command> ?` or `? ?` respectively.

**Note**

This command is used with both the hardware and Solaris DPEs.

Command Types

Two types of help are provided:

1. Full help is available when you are ready to enter a command argument, such as **show ?**, and describes each possible argument.
2. Partial help is provided when you enter an abbreviated argument and want to know what arguments match the input. For example, **show stat?**.

Syntax Description

You must use this syntax when entering the **help** command:

```
help
```

After entering the command, a screen prompt appears to explain how you can use the help function.

Examples

This is an example of how to use the **help** command:

```
dpe# help
```

```
Help may be requested at any point in a command by entering a question mark '?'. If nothing matches, the help list will be empty and you must backup until entering a '?' shows the available options.
```

- 1) Full help is available when you are ready to enter a command argument (e.g. 'show ?') and describes each possible argument.
- 2) Partial help is provided when an abbreviated argument is entered and you want to know what arguments match the input (e.g. 'show stat?').

hostname

Usage Guidelines

This command is used to set the DPE hostname. The hostname is used primarily for display in the DPE and should correspond to the DNS name for the DPEs IP address.

**Note**

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **hostname** command, you must use this syntax:

```
hostname <hostname>
```

Where: the *<hostname>* identifies the host name of the DPE being addressed.

When this command is used, you must follow it by running the **reload** command to make the changes take effect. See the [“reload” section on page 2-15](#) for additional information.

Examples

This is an example of how to use the **hostname** command:

```
dpe# hostname BPR_DPE_name
%OK (Requires appliance restart "> reload")
```

interface ethernet 0...1 ip address

Usage Guidelines

This command sets the IP address of the Ethernet interface being used by the DPE. This IP address must be kept current with a valid gateway. If the gateway is invalid, rebooting could occur and this might cause the DPE to become unavailable on the network. If the IP address is configured incorrectly, use the DPE console port to reconfigure the device with a valid IP.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **interface ethernet <0...1> ip address** command, you must use this syntax:

```
interface ethernet <0...1> ipaddress <x.x.x.x> <y.y.y.y>
```

Where:

- <0...1>—identifies the Ethernet interface
- <x.x.x.x>—identifies the IP address of the DPE being addressed
- <y.y.y.y>—identifies the subnet mask

When this command is used, you must follow it by running the **reload** command to make the changes take effect. See the “[reload](#)” section on page 2-15 for additional information.

Examples

This is an example of how to use the **interface ethernet <0...1> ip address** command:

```
dpe# interface ethernet 0 ip address 10.10.10.5 255.255.255.0
%OK (Requires appliance restart "> reload")
```



Note

Changes do not take effect until you restart the device.

interface ethernet 0...1 ip enabled

Usage Guidelines

This command controls whether or not the Ethernet interface is configured to support IP communications. If both interfaces are disabled, the device will have no network connectivity. Typically, both interfaces are enabled and connected to the network, to provide either redundancy or to use split-networking.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **interface ethernet <0...1> IP address** command, you must use this syntax:

```
interface ethernet <0...1> ip enabled <true/false>
```

Where:

- `<0...1>`—identifies the Ethernet interface
- `<true/false>`—indicates whether or not the IP interface on the DPE is enabled

When this command is used, you must follow it by running the **reload** command to make the changes take effect. See the “[reload](#)” section on page 2-15 for additional information.

Examples

This is an example of how to use the **interface ethernet <0...1> ip enabled** command:

```
dpe# interface ethernet 0 ip enabled true
%OK (Requires appliance restart "> reload")
```

ip default-gateway

Usage Guidelines

This command configures a default gateway for the DPE. This default gateway must be directly accessible by one of the DPE interfaces otherwise the DPE becomes unavailable.

You must verify this setting before attempting to reboot the DPE. If an incorrect value is configured, it may become necessary to physically connect to the DPE through the console port; long distances may make this impractical.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **ip default-gateway** command, you must use this syntax:

```
ip default-gateway <x.x.x.x>
```

Where the `(x.x.x.x)` is the IP address of the default gateway.

When this command is used, you must follow it by running the **reload** command to make the changes take effect. See the “[reload](#)” section on page 2-15 for additional information.

Examples

This is an example of how to use the **ip default-gateway** command:

```
dpe# ip default-gateway 10.10.20.10
%OK (Requires appliance restart "> reload")
```

no ip default-gateway

Usage Guidelines

This command clears the DPE’s default gateway. If a default gateway is not specified, the DPE is only available with direct network connectivity or through the console port on the DPE.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **no ip default-gateway** command, you must use this syntax:

```
dpe# no ip default-gateway
```

When this command is used, you must follow it by running the **reload** command to make the changes take effect. See the “[reload](#)” section on page 2-15 for additional information.

Examples

This is an example of how to use the **ip default-gateway** command:

```
dpe# no ip default-gateway
%OK (Requires appliance restart "> reload")
```

ip domain-name

Usage Guidelines

This command configures the DPE domain name for use when resolving names for communication operations, such as connecting to the RDU, or using the **ping** and **traceroute** commands. The domain name is also associated with the DPE.

**Note**

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **ip domain-name** command, you must use this syntax:

```
ip domain-name <sub.domain.com>
```

Where the *<sub.domain.com>* identifies the fully qualified domain name (FQDN) of the DPE.

Examples

This is an example of how to use the **ip domain-name** command:

```
dpe# ip domain-name cisco.com
%OK
```

**Note**

The changes you introduce through this command take effect immediately.

no ip domain-name

Usage Guidelines

This command clears the DPE’s domain name. If a domain name is not specified, all remote host names must be specified using the fully qualified domain names.

**Note**

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **no ip domain-name** command, you must use this syntax:

```
dpe# no ip domain-name
```

Examples

This is an example of how to use the **no ip domain-name** command:

```
dpe# no ip domain-name
%OK
```

**Note**

The changes you introduce through this command take effect immediately.

ip name-server

Usage Guidelines

This command configures the IP address of the name servers for use on the DPE. These servers are used to resolve host names into IP addresses for communication. If an FQDN is used to specify the RDU, you must specify a valid name server for successful communication with the RDU.

**Note**

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **ip name-server** command, you must use this syntax:

```
ip name-server <x.x.x.x>*
```

Where:

- <x.x.x.x>—identifies the IP address of the name-server
- *—allows the entry of multiple IP addresses if multiple name servers are used

Examples

This is an example of how to use the **ip name-server** command:

```
dpe# ip name-server 10.10.10.5 10.10.10.8
%OK
```

**Note**

The changes you introduce through this command take effect immediately.

no ip name-server

Usage Guidelines

This command clears the DPE name servers. When no name servers are configured, all communication must be performed using explicit IP addresses.

**Note**

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **no ip name-server** command, you must use this syntax:

```
dpe# no ip name-server
```

Examples

This is an example of how to use the **no ip name-server** command:

```
dpe# no ip name-server
%OK
```

ip route

Usage Guidelines

This command configures a custom route on the DPE. Three parameters are required, as shown in the following syntax description.

**Note**

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **ip route** command, you must use this syntax:

```
ip route <x.x.x.x> <y.y.y.y> <z.z.z.z>
```

Where:

- <x.x.x.x>—identifies the destination network
- <y.y.y.y>—identifies the subnet mask
- <z.z.z.z>—identifies the gateway to use when communicating to this network

Examples

This is an example of how to use the **ip route** command:

```
dpe# ip route 10.10.10.5 255.255.255.0 10.10.20.10
%OK
```

no ip route

Usage Guidelines

This command clears the specified custom route, but the default route cannot be removed this way. Use the **ip default-gateway** command to change the default route.

**Note**

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **no ip route** command, you must use this syntax:

```
no ip route <x.x.x.x>
```

Where the `<x.x.x.x>` identifies the route to be removed from the system.

**Note**

The changes you introduce through this command take effect immediately.

Examples

This is an example of how to use the **no ip route** command:

```
dpe# no ip route 10.10.10.5
%OK
```

ntp server (host)

Usage Guidelines

This command lets you specify one or more network time protocol (NTP) servers, for time synchronization, as hosts. You can specify as many hosts as required to identify all of the servers.

**Note**

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **ntp server (host)** command, you must use this syntax:

```
dpe# ntp server <host_n> <host_n+>
```

Where:

- `<host_n>`—identifies the first server host name.
- `<host_n+>`—identifies the next server host name. This can be omitted if you are only entering a single host name.

Examples

These examples illustrate the use of the `ntp server` command with single and multiple hosts.

Example 1

This is an example of how to use the **ntp server** command with a single host:

```
dpe# ntp server clock.cisco.com
```

Example 2

This is an example of how to use the **ntp server** command with multiple hosts:

```
dpe# ntp server clock_1.cisco.com clock_2.cisco.com clock_3.cisco.com
```

ntp server (IP)

Usage Guidelines

This command lets you specify one or more network time protocol (NTP) servers, for time synchronization, using an IP address format. You can specify as many IP addresses as required to identify all of the servers.



Note

This command is only used in conjunction with a hardware DPE.

Examples

These examples illustrate the use of this command with single and multiple IP addresses.

Example 1

This is an example of how to use the **ntp** command with a single IP address:

```
dpe# ntp server 10.10.10.5
```

Example 2

This is an example of how to use the **ntp** command with multiple IP addresses:

```
dpe# ntp server 10.10.10.5 10.10.10.6 10.10.10.7
```

no ntp server

Usage Guidelines

This command disables the network time protocol (NTP).



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **no ntp server** command, you must use this syntax:

```
dpe# no ntp server
```

Examples

This is an example of how to use the **no ntp server** command:

```
dpe# no ntp server
```

password

Usage Guidelines

This command changes the current system password and is not used whenever TACACS authentication is enabled (see the [aaa authentication, page 4-2](#) for additional information). The password is changed automatically for future logins and for FTP access using the administrator account.

**Note**

The changes you introduce through this command take effect for new users, but users who are currently logged on are not disconnected.

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **password** command, you must use this syntax:

```
password <password>
```

Where the *<password>* identifies the new DPE password.

Examples

These are examples of how to use the **password** command:

Example 1

```
dpe# password
New password:
Retype new password:
Password changed successfully.
```

Results:

These results occur when the password is changed successfully.

Example 2

```
dpe# password
New password:
Retype new password:
Sorry, passwords do not match.
```

Results:

These results occur when the password is not entered consistently.

Example 3

```
dpe# password cisco
Password changed successfully.
```

Results:

These results occur when the password is changed (using an approach easier for scripting).

poweroff

Usage Guidelines

This command turns the DPE power off. It removes all current users from the system and shuts the DPE down cleanly. Prior to executing this command, you should verify that there has been no hard drive activity for approximately 30 seconds.



Caution

Using the power switch on the device can potentially cause partial corruption of the DPE cache. This could result in the DPE needing more time to rebuild its cache the next time it is powered up.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **poweroff** command, you simply enter the command as indicated below:

```
dpe# poweroff
```

Examples

This is an example, as shown from a Telnet session, of how to use the **poweroff** command:

```
dpe# poweroff
```

reload

Usage Guidelines

This command reboots the DPE, disconnecting all current users from the system.



Caution

Using the power switch on the device can potentially cause partial corruption of the DPE cache. This could result in the DPE needing more time to rebuild its cache the next time it is powered up.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **reload** command, you simply enter the command as indicated below:

```
dpe# reload
```

Examples

This is an example of how to use the **reload** command:

```
dpe# reload
```

show clock

Usage Guidelines

This command shows the current system time and date.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **show clock** command, you simply enter the command as indicated below:

```
dpe# show clock
```

Once the command is entered, the date and time are displayed.

Examples

This is an example of how to use the **show clock** command:

```
dpe# show clock
Fri Dec 21 11:39:31 GMT 2001
```

show commands

Usage Guidelines

Depending on the connection type in use (enabled or disabled), this command displays all available DPE commands. For security reasons, this command shows different output based on whether a Telnet session or the console mode of operation is used on the hardware DPE.

Syntax Description

When entering the **show commands** command, you simply enter the command as indicated below:

```
dpe# show commands
```

Once the command is entered, a list of available DPE commands are displayed.

Examples

This is an example of how to use the **show commands** command:

```
dpe# show commands
> clear bundles
> clear cache
> clear logs
> clock set <hh:mm:ss> <1-31> <1-12> <yyyy>
> debug dpe cache
> debug dpe connection
```



Note

The output presented in this example is trimmed.

show cpu

Usage Guidelines

This command identifies CPU usage for the device on which the DPE is running.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **show cpu** command, you simply enter the command as indicated below:

```
dpe# show cpu
```

Once the command is entered, cpu activities and statistics are displayed.

Examples

This is an example of how to use the **show cpu** command for a hardware DPE:

```
dpe# show cpu
avg-cpu:  %user  %nice  %sys  %idle
          0.00    0.00   0.00 100.00
```

This is an example of how to use the **show cpu** command for a Solaris DPE:

```
# show cpu
```

CPU	minf	mjf	xcal	intr	ithr	csw	icsw	migr	smtx	srw	syscl	usr	sys	wt	idl
0	30	0	0	464	323	406	0	0	0	0	280	0	1	0	99
0	6	0	0	465	324	405	1	0	0	0	232	0	0	0	100

show disk

Usage Guidelines

This command identifies the disk on which the DPE is currently using.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **show disk** command, you simply enter the command as indicated below:

```
dpe# show disk
```

Once the command is entered, the disk drive statistics are displayed.

Examples

This is an example of how to use the **show disk** command:

```
dpe# show disk
```

Filesystem	Size	Used	Avail	Use%	Mounted on
/dev/sda1	1.9G	198M	1.6G	11%	/
/dev/sda5	14M	57M	13M	1%	/opt

show hostname

Usage Guidelines

This command displays the DPEs host name.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **show hostname** command, you simply enter the command as indicated below:

```
dpe# show cpu
```

Once the command is entered, the host's name is displayed.

Examples

This is an example of how to use the **show hostname** command:

```
dpe# show hostname
hostname = BACC_host
```

show interface ethernet <0...1> config

Usage Guidelines

This command shows the configuration for the Ethernet interface. These are the settings that the DPE uses when it reboots. Use the **show interface ethernet <0...1> config** command to identify the currently configured IP address.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **show interface ethernet <0...1> config** command, you must use this syntax:

```
show interface ethernet <0...1> config
```

Where the **<0...1>** identifies the Ethernet interface number.

Examples

This is an example of how to use the **show interface ethernet <0..1> config** command:

```
dpe# show interface ethernet 0 config
ip address = 10.10.10.5
netmask = 255.255.255.0
enabled = true
for prov = true
```

show interface ethernet <0..1> stats

Usage Guidelines

This command shows statistics for the DPE's Ethernet interface.

**Note**

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **show interface ethernet <0..1> stats** command, you must use this syntax:

```
show interface ethernet <0..1> stats
```

Where the *<0..1>* identifies the Ethernet interface number.

Examples

This is an example of how to use the **show interface ethernet <0..1> stats** command:

```
dpe# show interface ethernet 0 stats
eth0  Link encap:Ethernet HWaddr 00:B0:D0:F7:07:C2
      inet addr:10.10.10.5 Bcast:10.10.10.2 Mask:255.255.255.0
      UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
      RX packets:3539 errors:0 dropped:0 overruns:0 frame:0
      TX packets:3233 errors:0 dropped:0 overruns:0 carrier:0
      collisions:0 txqueuelen:100
```

show interface ethernet <intf0|intf1> config

Usage Guidelines

This command shows the configuration for the Ethernet interface. These are the settings that the DPE uses when it reboots. Use the **show interface ethernet [intf0|intf1] config** command to see the currently configured IP address.

**Note**

This command is only used in conjunction with a Solaris DPE.

Syntax Description

When entering the **show interface ethernet [intf0|intf1] config** command, you must use this syntax:

```
show interface ethernet <intf0/intf1> config
```

Where the <intf0/intf1> identifies the Ethernet interface number.

Examples

This is an example of how to use the **show interface ethernet <intf0/intf1> config** command:

```
dpe# show interface ethernet hme0 config
ip address = 10.10.10.5
netmask = 255.255.255.0
enabled = true
for prov = true
```

show interface ethernet <intf0|intf1> stats

Usage Guidelines

This command shows statistics for the DPE's Ethernet interface.

**Note**

This command is only used in conjunction with a Solaris DPE.

Syntax Description

When entering the **show interface ethernet [intf0/intf1] stats** command, you must use this syntax:

```
show interface ethernet <intf0/intf1> stats
```

Where the <intf0/intf1> identifies the Ethernet interface number.

Examples

This is an example of how to use the **show interface ethernet [intf0|intf1] stats** command:

```
dpe# show interface ethernet hme0 stats
hme0   Link encap:Ethernet HWaddr 00:B0:D0:F7:07:C2
       inet addr:10.10.10.5 Bcast:10.10.10.2 Mask:255.255.255.0
       UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
       RX packets:3539 errors:0 dropped:0 overruns:0 frame:0
       TX packets:3233 errors:0 dropped:0 overruns:0 carrier:0
       collisions:0 txqueuelen:100
```

show ip route

Usage Guidelines

This command shows the DPEs IP routing table, including any custom routes. The default gateway is indicated by The G flag in the flags column indicates the default gateway start.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **show ip route** command, you simply enter the command as indicated below:

```
dpe# show ip route
```

Once the command is entered, the routing table is displayed.

Examples

This is an example of how to use the **show ip route** command

```
dpe# show ip route
```

Destination	Gateway	Genmask	Flags	Metric	Ref	Use	Iface
10.10.10.5	10.10.20.10	255.255.0.0	U	0	0	0	eth0
10.10.10.6	10.10.20.25	255.255.0.125	U	0	0	0	lo
10.10.10.9	10.10.20.50	255.255.0.255	UG	0	0	0	eth0

show ip

Usage Guidelines

This command shows the DPEs current general IP settings. For specific interface settings, use the **show interface** commands. These are the settings used when the DPE is rebooted.



Note

This command is used with both the hardware and Solaris DPEs

Syntax Description

When entering the **show ip** command, you simply enter the command as indicated below:

```
dpe# show ip
```

Once the command is entered, the DPE's IP settings are displayed.

Examples

This is an example of how to use the **show ip** command:

```
dpe# show ip
hostname = BPR_host
domainname = cisco.com
gateway = 10.10.20.10
```

show memory

Usage Guidelines

This command identifies how much current memory and swap space is available on the device running the DPE.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **show memory** command, you simply enter the command as indicated below:

```
dpe# show memory
```

Once the command is entered, the current memory statistics are displayed.

Examples

This is an example of how to use the **show memory** command:

```
dpe# show memory
```

```
Mem:      255112K av,      148928K used      106184K free      OK shrd      5428K buff
Swap:     265032K av,      0K used           265032 free           72468K cached
```

show running-config

Usage Guidelines

This command displays the current configuration of the DPE. All of the configuration options are displayed using the actual commands to set the options.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **show running-config** command, you simply enter the command as indicated below:

```
dpe# show running-config
```

Examples

This is an example of how to use the **show running-config** command:

```
dpe# show running-config
dpe port 49186
dpe rdu-server server_x.cisco.com 49187
hostname dpe
interface ethernet 0 ip address 10.10.10.5 255.255.255.0
interface ethernet 0 ip enabled true
```



Note

The output presented in this example is trimmed.

show tftp files

Usage Guidelines

This command identifies only the files that are stored in the DPE cache and not those in the local directory. The file size is also shown.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.  
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **show tftp files** command, you simply enter the command as indicated below:

```
dpe# show tftp files
```

Once the command is entered, all TFTP files that are currently saved in cache are listed on screen.

Examples

This is an example of how to use the **show tftp files** command:

```
dpe# show tftp files  
The list of TFTP files currently in DPE cache  
filename                size  
bronze.cm                310  
gold.cm                  310  
silver.cm                 310
```



Note

A maximum of 500 TFTP files can be displayed using this command.

show version

Usage Guidelines

This command is used to identify the current version of DPE software running on the device.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **show version** command, you simply enter the command as indicated below:

```
dpe# show version
```

Once the command is entered, the current BACC version installed is identified on screen.

Examples

This is an example of how to use the show version command:

```
dpe# show version
Version: BACC 2.7 (bacc_27_S_000000000000)
```

tacacs-server <host>

Usage Guidelines

The CLI maintains a list of TACACS+ servers. This command adds a TACACS+ server to the end of the CLI's list of TACACS+ servers. When TACACS+ authentication is enabled, it attempts to authenticate each server sequentially in the list until a successful authentication exchange is executed, or the list is exhausted. If the list is exhausted, the CLI automatically falls back into the local authentication mode.

An encryption key can be optionally specified to use TACACS+ encryption on the CLI. If this encryption key is used, it **must** match the key configured at the specified TACACS+ server. Omitting the encryption key disables TACACS+ encryption.

**Note**

This command is used with both the hardware and Solaris DPE. On the hardware DPE, it is used only in the console mode.

Syntax Description

When entering the **tacacs-server** command, you simply enter the command as indicated below:

```
tacacs-server host <host> [key <encryption-key>]
```

Where:

- *<host>*—specifies either the IP address or the host name of the TACACS+ server
- *<encryption-key>*—identifies the actual encryption key

Examples

These are examples of how to use the **tacacs-server** command:

Example 1

This example adds a TACACS+ server, using its IP address (10.0.1.1), but without encryption.

```
tacacs-server host 10.0.1.1
% OK
```

Example 2

This example adds a TACACS+ server, using its IP address (10.0.1.1), with an encryption key (hg667YHHj).

```
tacacs-server host 10.0.1.1 key hg667YHHj
% OK
```

Example 3

This example adds a TACACS+ server using its host name (tacacs1.cisco.com), but without encryption.

```
tacacs-server host tacacs1.cisco.com
% OK
```

Example 4

This example adds a TACACS+ server, using its host name (tacacs1.cisco.com), with an encryption key (hg667YHHj).

```
tacacs-server host tacacs1.cisco.com key hg667YHHj
% OK
```

no tacacs-server <host>

Usage Guidelines

This command removes a TACACS+ server from the CLI's list of TACACS+ servers.

**Note**

This command is used with both the hardware and Solaris DPE. On the hardware DPE, it is used only in the console mode.

Syntax Description

When entering the **no tacacs-server** command, you simply enter the command as indicated below:

```
tacacs-server host <host>
```

Where <host> specifies either the IP address or the host name of the TACACS+ server.

Examples

These are examples of how to use the **no tacacs-server** command:

Example 1

This example removes a TACACS+ server, using its IP address.

```
dpe# no tacacs-server host 10.0.1.1
% OK
```

Example 2

This example removes a TACACS+ server using its host name.

```
dpe# no tacacs-server host tacacs1.cisco.com
% OK
```

tacacs-server retries

Usage Guidelines

Set the number of times the TACACS+ protocol exchanges are retried before the CLI considers a specific TACACS+ server unreachable. When this limit is reached, the CLI will move to the next server in its TACACS+ server list or fallback into local authentication mode if the TACACS+ list has been exhausted.

**Note**

This command is used with both the hardware and Solaris DPE. On the hardware DPE, it is used only in the console mode.

Syntax Description

When entering the **tacacs-server retries** command, you simply enter the command as indicated below:

```
tacacs-server retries <value>
% OK
```

Where *<value>* is a dimensionless number within the range of 1 and 100 inclusive. The default value for this command is 2.

**Note**

Note that this value applies to all TACACS+ servers.

Examples

This is an example of how to use the **tacacs-server retries** command:

```
dpe# tacacs-server retries 10
% OK
```

tacacs-server timeout

Usage Guidelines

This command sets the maximum time that the CLI waits for a TACACS+ server response before it considers the protocol exchange to have failed.

**Note**

This command is used with both the hardware and Solaris DPE. On the hardware DPE, it is used only in the console mode.

Syntax Description

When entering the **tacacs-server timeout** command, you simply enter the command as indicated below:

```
tacacs-server timeout <value>
```

Where *<value>* specifies the amount of time that the CLI will wait. This value must be within the range of 1 to 300 seconds; the default value is 5 seconds.

**Note**

Note this value applies to all TACACS servers.

Examples

This is an example of how to use the **tacacs-server timeout** command to set the timeout value to 10 seconds.

```
dpe# tacacs-server timeout 10
% OK
```


upgrade

Usage Guidelines

This command is used whenever the DPE requires a new software upgrade, using uploaded upgrade files. These files, which end in the file extension `.bpr`, should be FTP'd into the incoming directory. The upgrade process scans all available updates and determines which ones are required. It separates the files into these categories:

- **invalid**—These are the files that do not match the format required by the DPE.
- **not applicable**—The DPE does not accept these patches because either the update is from an earlier version, or because the difference between versions (the current and updated versions) is too great.
- **applicable**—The DPE can upgrade using these files.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **upgrade** command, you simply enter the command as indicated below:

```
dpe# upgrade
```

Once the command is entered, the DPE upgrade process starts. When the update is finished an Update successful prompt is displayed.

Examples

This is an example of how to use the **upgrade** command:

```
dpe# upgrade
Starting BPR upgrade process
+ Scanning for available updates...
+ Determining applicable updates...
+ Compiling list of updates...

Invalid update files:
- update-FOOBAR.bpr

Updates not applicable:
- update-invalid.bpr ... BPR version 2.5

Applicable updates:
1 update-valid.bpr ..... BACC version 2.6 FC-2

Select update [exit]: 1

Updating with BACC version 2.7 FC-2
+ Starting update executor...
[SNIP]
+ Update succesful!
```

uptime

Usage Guidelines

This command identifies how long the system has been operational. This information is useful when determining how frequently the device is rebooted. It is also helpful when checking the reliability of the DPE when it is in a stable condition.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **uptime** command, you simply enter the command as indicated below:

```
dpe# uptime
```

Once the command is entered, various DPE statistics are displayed.

Examples

This is an example of how to use the **uptime** command:

```
dpe# uptime  
11:54am up 2:07, 3users, load average: 0.27, 0.08, 0.02
```



Support and Troubleshooting Commands

This chapter contains detailed information about the command line interface (CLI) commands that you can use to provide troubleshooting support for the Broadband Access Center for Cable (BACC) device provisioning engine (DPE).

Commands

This section describes those CLI commands that assist in supporting and troubleshooting the operation of the DPE. These CLI commands include:

- [clear bundles](#), page 3-1
- [host \(host\)](#), page 3-2
- [host \(IP\)](#), page 3-2
- [ping \(host\)](#), page 3-3
- [ping \(IP\)](#), page 3-4
- [show bundles](#), page 3-4
- [support bundle cache](#), page 3-5
- [support bundle state](#), page 3-6
- [support daemon ftp enabled](#), page 3-6
- [support daemon telnet enabled](#), page 3-7
- [traceroute \(host\)](#), page 3-8
- [traceroute \(IP\)](#), page 3-8

clear bundles

Usage Guidelines

This command clears any existing archived bundles on the DPE. These bundles are created using the **support bundles** commands and normally contain archived logs and archived state information of use to the Cisco TAC. You must ensure that all bundles are retrieved before using this command because the archived state is lost.

**Note**

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **clear bundles** command, you simply enter the command as indicated below:

```
dpe# clear bundles
```

Once the command is entered, a prompt appears to indicate that the bundles are being cleared and, when this is complete, the amount of memory that was clear (in bytes) is displayed.

Examples

This is an example of how to use the **clear bundles** command:

```
dpe# clear bundles
Clearing Cisco support bundles...
+ 90112 bytes cleared.
```

host (host)

Usage Guidelines

The **host (host)** command looks up the IP address of a host using DNS. You can use this command to verify that the RDU's IP address can be successfully resolved. If a system domain name is specified, the host command will automatically attempt searching that domain as well when resolving host names.

**Note**

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **host (host)** command, you must use this syntax:

```
host <host>
```

Where the *<host>* identifies the host to resolve through DNS.

Examples

This is an example of how to use the **host (host)** command:

```
dpe# host dpe.cisco.com
dpe.cisco.com has address 10.10.10.5
```

host (IP)

Usage Guidelines

The **host (IP)** command looks up the host name for the specified IP address, and is used to verify that an IP address is correctly reverse-mapped in DNS. The IP address is reverse looked up on each of the configured name servers until the IP address is found.

**Note**

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **host (IP)** command, you must use this syntax:

```
host <x.x.x.x>
```

Where the <x.x.x.x> identifies the IP address being pinged.

Examples

This is an example of how to use the **host (IP)** command:

```
dpe# host 10.10.10.5
5.10.10.10 in-addr.arpa domain name pointer dpe.cisco.com
```

ping (host)

Usage Guidelines

The **ping (host)** command pings the specified host, using the host and domain name. Press **Enter** to stop the process. The **ping** command is useful in diagnosing network connectivity problems.

**Note**

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **ping (host)** command, you must use this syntax:

```
ping <host>
```

Where the <host> identifies the host being pinged.

Examples

This is an example of how to use the **ping (host)** command:

```
dpe# ping dpe.cisco.com

% Press <enter> to stop.

PING dpe.cisco.com (10.10.10.5) from 10.10.20.20 : 56(84) bytes of data.
 64 bytes from 10.10.20.5:                icmp_seq=0 ttl=241 time=105.113 msec
 64 bytes from 10.10.20.5:                icmp_seq=1 ttl=241 time=99.947 msec
 64 bytes from 10.10.20.5:                icmp_seq=2 ttl=241 time=99.951 msec

Stopped.
```

ping (IP)

Usage Guidelines

The **ping (IP)** command pings the specified host, using the hosts IP address. Press the **Enter** key to stop the process. Ping is useful in diagnosing network connectivity problems.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **ping (IP)** command, you must use this syntax:

```
ping <x.x.x.x>
```

Where the <x.x.x.x> identifies the IP addresss of the host.

Examples

This is an example of how to use the **ping (IP)** command:

```
dpe# ping 10.10.20.5

% Press <enter> to stop.

PING dpe.cisco.com (10.10.10.5) from 10.10.20.20 : 56(84) bytes of data.
64 bytes from 10.10.20.5:          icmp_seq=0 ttl=241 time=105.113 msec
64 bytes from 10.10.20.5:          icmp_seq=1 ttl=241 time=99.947 msec
64 bytes from 10.10.20.5:          icmp_seq=2 ttl=241 time=99.951 msec
64 bytes from 10.10.20.20:         icmp_seq=0 ttl=241 time=101.005 msec
64 bytes from 10.10.20.20:         icmp_seq=1 ttl=241 time=149.904 msec
64 bytes from 10.10.20.20:         icmp_seq=2 ttl=241 time=119.886 msec

Stopped.
```

show bundles

Usage Guidelines

This command shows all bundles currently available in the outgoing directory. These bundles are created using the **support bundle** commands and are accessible from the DPEs FTP server.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **show bundles** command, you simply enter the command as indicated below:

```
dpe# show bundles
```

Once the command is entered, results identify the bundles that are archived. However, if there are no bundles a prompt indicating that there are no bundles available is displayed.

Examples

This is an example of how to use the **show bundles** command:

Example 1

```
dpe# show bundles
/outgoing/state-20010817-113741.bpr
/outgoing/cache-20010817-113745.bpr
```

Results:

These results occur when there are bundles currently archived.

Example 2

```
dpe# show bundles
No bundles currently available.
```

Results:

These results occur when no bundles are currently archived.

support bundle cache

Usage Guidelines

This command bundles the current DPE cache. This is useful when archiving the cache for delivery to Cisco TAC. Once created, the bundle is available from the FTP server's outgoing directory.

**Note**

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **support bundle cache** command, you simply enter the command as indicated below:

```
dpe# support bundle cache
```

Once the command is entered, a cache bundle is created for use by the TAC. The command displays the bundle specifics including the compressed size of the bundle file.

Examples

This is an example of how to use the **support bundle cache** command:

```
dpe# support bundle cache

Creating cache bundle for Cisco support...
+ /outgoing/cache-20010817-113745.bpr
+ Adding DPE cache...
+ Adding supporting files...
+ Compressing cache bundle...
+ Size: 4045 bytes, 409600 uncompressed
```

support bundle state

Usage Guidelines

This command bundles the current DPE state. This is useful when archiving configuration and log files for the DPE for delivery to Cisco TAC. Once created, the bundle is available from the FTP server's outgoing directory.



Note

When sending information to the Cisco TAC, you should send the DPE bundle obtained with this command, and the state bundle obtained at the RDU. That state bundle is generated by running the `bundleState.sh` command from the `<BACC_HOME>/rdu/bin` directory.

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **support bundle state** command, you simply enter the command as indicated below:

```
dpe# support bundle state
```

Once the command is entered, the current state of the DPE is bundled together, the bundle file compressed, and identified for TAC use.

Examples

This is an example of how to use the **support bundle state** command:

```
dpe# support bundle state
```

```
Creating state bundle for Cisco support...
+ /outgoing/state-<date>-<time>.bpr
+ Adding a process listing to the support bundle...
+ Adding a network connection listing to the support bundle...
+ Adding and compressing files for support bundle...
+ Size: 1205782 bytes
```



Note

A script `<BACC_HOME>/rdu/bin/bundlestate` is available on the RDU. This script, is used to bundle the RDU system state, including logs, when sending information to the TAC.

support daemon ftp enabled

Usage Guidelines

This command is used to enable or disable FTP service on a hardware DPE. The FTP service is needed to upload upgrade bundles and to download support bundles. You can disable and enable it for short periods of time to perform these tasks.



Note

This command is only used in conjunction with a hardware DPE

Syntax Description

When entering the **support daemon ftp enabled** command, you must use this syntax:

```
support daemon ftp enabled <true/false>
```

Where:

- *<true>*—enables FTP service on a hardware DPE
- *<false>*—disables FTP service on a hardware DPE

When this command is used, you must follow it by running the **dpe reload** command to make the changes take effect. See the “[reload](#)” section on page 2-15 for additional information.

Examples

This is an example of how to use the **support daemon ftp enabled** command:

```
dpe# support daemon ftp enable true
%OK (Requires appliance restart "> reload")
```

support daemon telnet enabled

Usage Guidelines

This command is used to enable or disable the Telnet protocol on a hardware DPE. Since Telnet is a relatively insecure protocol, the system can be made slightly more secure by disabling Telnet; you can still access the system from the console mode.

**Note**

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **support daemon telnet enabled** command, you must use this syntax:

```
support daemon telnet enabled <true/false>
```

Where:

- *<true>*—enables the DPEs Telnet interface
- *<false>*—disables the DPEs Telnet interface

When this command is used, you must follow it by running the **dpe reload** command to make the changes take effect. See the “[reload](#)” section on page 2-15 for additional information.

Examples

This is an example of how to use the **support daemon telnet enabled** command:

```
dpe# support daemon telnet enable true
%OK (Requires appliance restart "> reload")
```

traceroute (host)

Usage Guidelines

This command identifies the route to a specified host including each hop between the DPE and the destination host. This command is useful when verifying communication and determining if gateways and routes are correctly configured.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **traceroute (host)** command, you must use this syntax:

```
traceroute <host>
```

Where the *<host>* identifies the host.

Examples

This is an example of how to use the **traceroute (host)** command:

```
dpe# traceroute BACC_host.cisco.com
Press <enter> to stop.
traceroute to BACC_host.cisco.com (10.10.10.5), 30 hops max, 38 byte packets
1 10.10.10.5 0.454 ms 0.239 ms 0.230 ms
Stopped.
```

traceroute (IP)

Usage Guidelines

This command identifies the route to a specified host including each hop between the DPE and the destination host. This command is useful when verifying communication and determining if gateways and routes are correctly configured.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **traceroute (IP)** command, you must use this syntax:

```
traceroute <x.x.x.x>
```

Where the *<x.x.x.x>* identifies the IP address of the host.

Examples

This is an example of how to use the **traceroute (IP)** command:

```
dpe# traceroute 10.10.10.5
Press <enter> to stop.
traceroute to 10.10.10.5 (10.10.10.5), 30 hops max, 38 byte packets
1 10.10.10.5 0.454 ms 0.239 ms 0.230 ms
Stopped.
```



Device Provisioning Engine Configuration Commands

This chapter contains detailed information about those command line interface (CLI) commands that you can run from both the hardware and software DPEs. These commands are used to manage and monitor the Broadband Access Center for Cable (BACC) device provisioning engine (DPE).



Note

Although some CLI commands run on both hardware and software DPEs, there are several that can only run on a specific DPE type. Refer to the [“Command Usage” section on page 1-2](#) and [Table 1-1](#) for a list of commands and applicable DPE use.

Commands

This section describes the configuration commands that affect the DPE, including:

- [aaa authentication, page 4-2](#)
- [clear cache, page 4-3](#)
- [docsis shared-secret, page 4-4](#)
- [no docsis shared-secret, page 4-5](#)
- [dpe port, page 4-5](#)
- [dpe provisioning-group primary, page 4-6](#)
- [no dpe provisioning-group primary, page 4-6](#)
- [dpe provisioning-group secondary, page 4-7](#)
- [no dpe provisioning-group secondary, page 4-8](#)
- [dpe rdu-server \(host\), page 4-8](#)
- [dpe rdu-server \(IP\), page 4-9](#)
- [dpe reload, page 4-9](#)
- [dpe shared-secret, page 4-10](#)
- [dpe start, page 4-11](#)
- [dpe stop, page 4-11](#)
- [interface ethernet 0...1 provisioning enabled, page 4-12](#)

- [interface ethernet 0...1 provisioning fqdn, page 4-12](#)
- [interface ethernet <intf0lintf1> provisioning enabled, page 4-13](#)
- [interface ethernet <intf0lintf1> provisioning fqdn <fqdn>, page 4-14](#)
- [show device-config, page 4-14](#)
- [show dpe, page 4-15](#)
- [show dpe config, page 4-16](#)
- [tftp allow-create-dirs, page 4-17](#)
- [no tftp allow-create-dirs, page 4-17](#)
- [tftp allow-override, page 4-18](#)
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- [tftp allow-read-access, page 4-18](#)
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- [tftp allow-write-access, page 4-19](#)
- [no tftp allow-write-access, page 4-20](#)
- [tftp verify-ip, page 4-20](#)
- [no tftp verify-ip, page 4-20](#)

**Note**

Output examples provided for DPE CLI commands in this appendix may differ slightly depending on whether you invoke the commands on a hardware DPE or the Solaris DPE.

aaa authentication

Usage Guidelines

You use this command to configure the CLI to perform local user (login) authentication or remote TACACS+ user authentication. This setting applies to all Telnet and console CLI interfaces.

Syntax Description

When entering the **aaa authentication** command, you simply enter the command as indicated below:

```
dpe# aaa authentication <mode>
```

Where <mode> specifies either:

- **local**—This default method of authentication has been used in all previous versions of BACC.
- **tacacs**— In this authentication method, the CLI attempts a TACACS+ exchange with each server found in the TACACS+ server list. The attempts continue for a specified number of retries. If the end of the server list is reached before a successful protocol exchange occurs, the local authentication mode is automatically entered. In this manner, you can gain access to the CLI even if the TACACS+ service is completely unavailable.

**Note**

Although TACACS+ authentication prompts you to enter your username and password, local authentication prompts you for your password only. This command is used with both the hardware and Solaris DPE. On the hardware DPE, it is used only in the console mode.

Examples

This is an example of how to use the **aaa authentication** command to set the authentication mode to TACACS:

```
dpe# aaa authentication tacacs
%OK
```

clear cache

Usage Guidelines

This command erases the entire DPE cache and resets the server back to a clean state. When the DPE is restarted, it will connect to the RDU and rebuild the cache from the information stored in the RDU's database. You should only clear the cache when the DPE encounters a major problem. Running this command forces the DPE to rebuild or repopulate its device cache. This process may take an extended amount of time to complete.

**Note**

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **clear cache** command, you simply enter the command as indicated below:

```
dpe# clear cache
```

Once the command is entered, the DPE cache is cleared and a prompt appears to indicate how much space was cleared as a result. If a situation exists whereby the cache could not be cleared, the reason for the failure is also displayed.

Examples

These are examples of how to use the **clear cache** command:

Example 1

```
dpe# clear cache
Clearing DPE cache...
+ 417792 bytes cleared.
```

Results:

These results occur when the cache is successfully cleared.

Example 2

```
dpe# clear cache
DPE must be stopped before clearing cache.
```

Results:

These results occur when the DPE has not yet been stopped.

Example 3

```
dpe# clear cache
Clearing DPE cache...
+ Cache already cleared.
```

Results:

These results occur when cache has already been cleared.

docsis shared-secret

Usage Guidelines

This command sets a DOCSIS shared secret (DSS) on the DPE, that is used to calculate the CMTS message integrity check (MIC).

**Note**

This command is used with both the hardware and Solaris DPE. On the hardware DPE, it is used only in the console mode.

Syntax Description

When entering the **docsis shared-secret** command, you simply enter the command as indicated below:

```
dpe# docsis shared-secret (format) (secret>)
```

Where:

- (*format*)—Identifies whether the shared secret string that follows is entered in clear text or as an encrypted text string. To specify the format, enter:
 - 0 if a clear text string is used. This is the default setting.
 - 7 if an IOS encrypted shared-secret text string is being used.
- (*secret*)—Identifies the actual secret string.

If, after running this command, you use the show running config command, a new line will appear to identify the shared-secret and its format.

Examples

This is an example of how to use the **docsis shared-secret** command:

```
dpe# docsis shared-secret 0 changeme
%OK (Warning: Current input accepted. Note a secure connection is recommended to set or
change the docsis shared secret
```

no docsis shared-secret

Usage Guidelines

This command is used to disable the DSS functionality on the DPE. Using this command does not imply that DSS use is completely disabled, rather disabling DSS at the DPE results in the RDU global DSS being used in stead of local functionality.

If you enter this command, DSS is disabled immediately.



Note

This command is used with both the hardware and Solaris DPE. On the hardware DPE, it is used only in the console mode.

Syntax Description

When entering the **no docsis shared-secret** command, you simply enter the command as indicated below:

```
dpe# no docsis shared-secret
```

Examples

This is an example of how to use the **no docsis shared-secret** command:

```
dpe# no docsis shared secret
%OK
```

dpe port

Usage Guidelines

This command sets the port number that the DPE will use to communicate with the Network Registrar extension points. Normally, you can leave this port number intact unless there is a need to change it for firewall reasons.



Note

You must stop the DPE prior to running this command. If you attempt to run this command on an operational DPE, the **ERROR: DPE must be stopped before changing the port number** error message appears. The changes you introduce through this command do not take effect until you restart the DPE.

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **dpe port** command, you must use this syntax:

```
dpe# dpe port <port>
```

Where the *(port)* identifies the port number assigned for connecting to the DPE.

Examples

This is an example of how to use the **dpe port** command:

```
dpe# dpe port 49186
%OK
```

dpe provisioning-group primary

Usage Guidelines

This command sets the primary provisioning group(s) that the DPE server will use. Most DPEs are configured with one primary provisioning group, however, selecting multiple provisioning groups might allow multiple DHCP servers to use this DPE.



Note

Whenever voice technology is enabled, a DPE can only belong to one provisioning group.

When assigning new provisioning groups that have a high number of devices, restarting the DPE can take an extensive amount of time. This is due to the fact that the cache for each provisioning group has to be synchronized or, for new provisioning groups, completely rebuilt.

Under normal situations, provisioning groups should only be changed when the DPE is first deployed on the network.



Note

Provisioning group changes do not take effect until you restart the DPE.

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **dpe provisioning-group primary** command, you must use this syntax:

```
dpe provisioning-group primary <name>*
```

Where:

- *(name)*—identifies the assigned primary provisioning group
- *—allows the entry of multiple provisioning groups

When this command is used, you must follow it by running the **dpe reload** command to make the changes take effect. See the “[dpe reload](#)” section on page 4-9 for additional information.

Examples

This is an example of how to use the **dpe provisioning-group primary** command:

```
dpe# dpe provisioning-group primary PrimaryProvGroup
%OK (Requires DPE restart "> dpe reload")
```

no dpe provisioning-group primary

Usage Guidelines

This command clears configured primary provisioning groups. If primary provisioning groups are not available, you can use the DPE as either a backup for other provisioning groups or as a TFTP file cache.



Note

Changes do not take effect until you restart the DPE.

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no dpe provisioning-group primary** command, you simply enter the command as indicated below:

```
dpe# no dpe provisioning-group primary
```

Once the command is entered, all configured primary provisioning groups are cleared. When this command is used, you must follow it by running the **dpe reload** command to restart the DPE and make the changes take effect. See the “[dpe reload](#)” section on page 4-9 for additional information.

Examples

This is an example of how to use the **no dpe provisioning-group primary** command:

```
dpe# no dpe provisioning-group primary
%OK (Requires DPE restart "> dpe reload")
```

dpe provisioning-group secondary

Usage Guidelines

This command sets the secondary provisioning group(s) for the DPE server to use. Most DPEs are configured with one primary provisioning group, however, selecting multiple provisioning groups might allow multiple DHCP servers to use this DPE. Secondary provisioning groups are used for provisioning only when the primary provisioning groups are not available or are overloaded.

When assigning new provisioning groups that have a high number of devices, restarting the DPE can take an extensive amount of time. This is due to the fact that the cache for each provisioning group has to be synchronized or, for new provisioning groups, completely rebuilt.

Under normal situations, provisioning groups should only be changed when the device is first deployed on the network.

**Note**

Provisioning group changes do not take effect until you restart the DPE.

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **dpe provisioning-group secondary** command, you must use this syntax:

```
dpe provisioning-group secondary <name>*
```

Where:

- *(name)*—identifies the assigned secondary provisioning group
- *—allows the entry of multiple provisioning groups

When this command is used, you must follow it by running the **dpe reload** command to make the changes take effect. See the “[dpe reload](#)” section on page 4-9 for additional information.

Examples

This is an example of how to use the **dpe provisioning-group secondary** command:

```
dpe# dpe provisioning-group secondary SecondaryProvGroup
%OK (Requires DPE restart "> dpe reload")
```

no dpe provisioning-group secondary

Usage Guidelines

This command clears configured secondary provisioning groups. If secondary provisioning groups are not available, the DPE can be used as a primary in other provisioning groups.



Note

Changes introduced through this command do not take effect until you restart the DPE.

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no dpe provisioning-group secondary** command, you simply enter the command as indicated below:

```
dpe# no dpe provisioning-group secondary
```

Once the command is entered, all configured secondary provisioning groups are cleared. When this command is used, you must follow it by running the **dpe reload** command to restart the DPE and make the changes take effect. See the “[dpe reload](#)” section on page 4-9 for additional information.

Examples

This is an example of how to use the **no dpe provisioning-group secondary** command:

```
dpe# no dpe provisioning-group secondary
%OK (Requires DPE restart "> dpe reload")
```

dpe rdu-server (host)

Usage Guidelines

This command identifies the RDU to connect this DPE to. Normally, you configure the RDU on the default port but, for security reasons, you could configure it to run on a nonstandard port.



Note

Changes do not take effect until you restart the DPE.

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **dpe rdu-server** command, you must use this syntax:

```
dpe rdu-server <host> <port>
```

Where:

- *<host>*—identifies the host on which the RDU is running
- *<port>*—identifies the port number on which RDU is listening for DPE connections (normally 49187)

When this command is used, you must follow it by running the **dpe reload** command to make the changes take effect. See the “[dpe reload](#)” section on page 4-9 for additional information.

Examples

This is an example of how to use the **dpe rdu-server** command:

```
dpe# dpe rdu-server rdu.cisco.com 49187
%OK (Requires DPE restart "> dpe reload")
```

dpe rdu-server (IP)

Usage Guidelines

This command assigns the RDU to connect this DPE to. Specify this as the IP address with the associated port. Normally, the RDU resides on the default port, but for security reasons the port might be configured to something non-standard.

**Note**

Changes do not take effect until you restart the DPE.

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **dpe rdu-server** command, you must use this syntax:

```
dpe rdu-server <x.x.x.x> <port>
```

Where:

- *<x.x.x.x>*—identifies the IP address of the RDU
- *<port>*—identifies the port on which RDU is listening for DPE connections (normally 49187)

When this command is used, you must follow it by running the **dpe reload** command to make the changes take effect. See the [“dpe reload” section on page 4-9](#) for additional information.

Examples

This is an example of how to use the **dpe rdu-server** command:

```
dpe# dpe rdu-server 10.10.20.1 49187
%OK (Requires DPE restart "> dpe reload")
```

dpe reload

Usage Guidelines

This command restarts the DPE, which must already be operating before performing the reload operation. If the DPE has not stopped within 60 seconds, the BACC agent forces the DPE to stop and an alert message, indicating this has occurred, is displayed. After that message appears, the DPE restarts.

**Note**

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **dpe reload** command, you simply enter the command as indicated below:

```
dpe# dpe reload
```

Once the command is entered, a prompt indicating that the DPE was restarted is displayed.

Examples

This is an example of how to use the **dpe reload** command:

```
dpe# dpe reload
dpe has been restarted
```

dpe shared-secret

Usage Guidelines

This command sets the shared secret used for communications with the RDU. Communications will fail if the shared secret, set on the two servers, is not the same. For security reasons, this command is only available through a console connection. It can not be accessed through a Telnet connection.

**Note**

This command is used with both the hardware and Solaris DPE. On the hardware DPE, it is used only in the console mode. Changes do not take effect until you restart the DPE

Syntax Description

When entering the **dpe shared-secret** command, you must use this syntax:

```
dpe shared-secret <secret>
```

Where the *<secret>* identifies the RDU shared secret. This may appear as encrypted text when the command is run through the console mode or, if being run through a Telnet session, may simply indicate that the shared secret has been set.

When this command is used, you must follow it by running the **dpe reload** command to make the changes take effect. See the “[dpe reload](#)” section on page 4-9 for additional information.

Examples

This is an example of how to use the **dpe shared-secret** command:

```
dpe# dpe shared-secret private
%OK (Requires DPE restart "> dpe reload")
```

dpe start

Usage Guidelines

This command starts the DPE, and you can only use it when the DPE is not running. Having the DPE start successfully does not guarantee that the DPE will run successfully. Check the DPE log to ensure that the DPE has started correctly. In addition, check the log again periodically to make sure no additional errors have occurred.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **dpe start** command, you simply enter the command as indicated below:

```
dpe# dpe start
```

Once the command is entered, the DPE is started.

Examples

This is an example of how to use the **dpe start** command:

```
dpe# dpe start  
dpe has been started
```

dpe stop

Usage Guidelines

This command stops the DPE and can only be performed when the DPE is running. If the DPE has not stopped within 60 seconds, the DPE agent forces the DPE to stop and an alert message, indicating this has occurred, is displayed.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **dpe stop** command, you simply enter the command as indicated below:

```
dpe# dpe stop
```

Once the command is entered, the DPE is stopped.

Examples

This is an example of how to use the **dpe stop** command:

```
dpe# dpe stop  
dpe has been stopped
```

interface ethernet 0...1 provisioning enabled

Usage Guidelines

This command controls whether or not the Ethernet interface(s) is used for provisioning operations. This command allows the use of split-networking techniques to isolate device facing communication from provisioning system side communications. Only ports that have provisioning enabled will be used for communication with the DHCP server.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **interface ethernet <0...1> provisioning enabled** command, you must use this syntax:

```
interface ethernet <0...1> provisioning enabled <true/false>
```

Where:

- *<0...1>*—identifies the Ethernet interface
- *<true/false>*—indicates whether or not provisioning has been enabled for this interface

When this command is used, you must follow it by running the **reload** command to make the changes take effect. See the “[dpe reload](#)” section on page 4-9 for additional information.

Examples

This is an example of how to use the **interface ethernet <0...1> provisioning enabled** command:

```
dpe# interface ethernet 0 provisioning enabled true
%OK (Requires DPE restart "> dpe reload")
```

interface ethernet 0...1 provisioning fqdn

Usage Guidelines

This command sets the fully qualified domain name for a specific interface. The provisioning FQDN is the FQDN that is given to devices in order to contact the specific DPE interface. It is only used when provisioning is enabled on that interface.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **interface ethernet <0...1> provisioning fqdn** command, you must use this syntax:

```
interface ethernet <0...1> provisioning fqdn <fqdn>
```

Where:

- *<0...1>*—identifies the Ethernet interface
- *<fqdn>*—identifies the fully qualified domain name being set on the specified interface

**Note**

Enabling both DPE appliance interface IPs, and setting the provisioning FQDNs to identical names has no effect on PacketCable since this voice technology always uses the IP address of the first interface.

When this command is used, you must follow it by running the **reload** command to make the changes take effect. See the “[dpe reload](#)” section on page 4-9 for additional information.

Examples

This is an example of how to use the **interface ethernet <0...1> provisioning fqdn** command:

```
dpe# interface ethernet 0 provisioning fqdn dpe.cisco.com
%OK (Requires DPE restart "> dpe reload")
```

interface ethernet <intf0|intf1> provisioning enabled

Usage Guidelines

This command performs the same functions as those described in the “[interface ethernet 0...1 provisioning enabled](#)” section on page 4-12 with the single exception that this command can only be invoked on a Solaris DPE. The provisioning FQDN is the FQDN that is given to devices in order to contact the specific DPE interface. It is only used when provisioning is enabled on that interface.

**Note**

This command is only used in conjunction with a Solaris DPE.

Syntax Description

When using the **interface ethernet [intf0/intf1] provisioning enabled** command, you must use this syntax:

```
interface ethernet <intf0/intf1> provisioning enabled <true/false>
```

Where:

- <intf0/intf1>—identifies the Ethernet interface
- <true>—indicates that provisioning has been enabled
- <false>—indicates that provisioning has been disabled

When this command is used, you must follow it by running the **reload** command to make the changes take effect. See the “[dpe reload](#)” section on page 4-9 for additional information.

Examples

This is an example of how to use the **interface ethernet [intf0/intf1] provisioning enabled** command:

```
dpe# interface ethernet hme0 provisioning enabled true
% OK (Requires DPE restart "> dpe reload")
```

```
interface ethernet <intf0|intf1> provisioning fqdn <fqdn>
```

interface ethernet <intf0|intf1> provisioning fqdn <fqdn>

Usage Guidelines

This command sets the fully qualified domain name for a specific interface. This is the FQDN that is sent as the SNMP Entity in DHCP option 177, sub-option -3.



Note

This command is only used in conjunction with a Solaris DPE.

Syntax Description

When entering the **interface ethernet [intf0/intf1] provisioning fqdn** command, you must use this syntax:

```
interface ethernet [intf0/intf1] provisioning fqdn <fqdn>
```

Where:

- *<intf0/intf1>*—identifies the Ethernet interface
- *<fqdn>*—identifies the fully qualified domain name being set on the specified interface

When this command is used, you must follow it by running the **reload** command to make the changes take effect. See the “[dpe reload](#)” section on page 4-9 for additional information.

Examples

This is an example of how to use the **interface ethernet [intf0/intf1] provisioning fqdn** command:

```
dpe# interface ethernet hme0 provisioning fqdn cisco.com
% OK (Requires DPE restart "> dpe reload")
```

show device-config

Usage Guidelines

This command shows the configuration of the device configuration

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **show device-config** command, you must use this syntax:

```
show device-config <mac>
```

Where *<mac>* specifies the MAC address of any device. The accepted MAC address formats are: type,len,addr. For example:

- 1,6,00:01:02:03:04:05, or
- 9,10,43:43:31:32:33:34:35:36:2d:41

Also, the exact size octets, such as 000102030405 or 00:01:02:03:04:05 (assuming that the mac address header is 1,6) could be used.

Examples

This is an example of how to use the **show device-config** command. For the purpose of this example assume that the DPE MAC address is 1,6,00:00:00:00:00:03.

```
dpe# dpe show device-config 00:00:00:00:00:03
```

Retrieved the following configuration from DPE.

```
DHCP Configuration for device 1,6,00:00:00:00:00:03 in default provisioning-group
. . . . .
```



Note

The output of this command has been trimmed for demonstration purposes.

show dpe

Usage Guidelines

This command checks to see if the DPE is running and displays the state of the process and, if running, its operational statistics. It does not indicate if the DPE is running successfully, only that the process itself is currently executing. However, DPE statistics that this command prints when the DPE is running, can be used to determine if the DPE is successfully servicing requests.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **show dpe** command, you simply enter the command as indicated below:

```
dpe# show dpe
```

Once the command is entered, operating information for the selected DPE is displayed.

Examples

These examples show how to use the **show dpe** command:

Example 1

```
dpe# show dpe
CSRC BPR Device Provisioning Engine is not running
```

Results:

These results occur when the DPE is not running.

Example 2

```
dpe# show dpe
BPR Agent is running
dpe is running

Version BPR 2.7 (cbpr_27_L_000000000000).
Caching 0 device configs and 0 external files.
Received 0 cache hits and 0 misses.
Received 0 lease updates.
Connection status is Disconnected.
Sent 0 SNMP informs and 0 SNMP sets.
Received 0 MTA provisioning successful SNMP informs.
Received 0 MTA provisioning failed SNMP informs.
Running for 6 days 41 mins 35 secs.
```

Results:

These results occur when the DPE is running.

show dpe config

Usage Guidelines

This command shows the current DPE settings.

**Note**

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **show dpe config** command, you simply enter the command as indicated below:

```
dpe# show dpe config
```

Once the command is entered, the DPE configuration is displayed.

Examples

This is an example of how to use the **show dpe config** command:

```
dpe# show dpe config
dpe port = 49186
rdu host = host.cisco.com
rdu port = 49187
primary groups = Default
secondary groups = [no value]
```

tftp allow-create-dirs

Usage Guidelines

This command allows a TFTP write request to create directories.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering this command, you simply enter the command as indicated below:

```
dpe# tftp allow-create-dirs
```

Examples

This is an example of how to use the **tftp allow-create-dirs** command:

```
dpe# tftp allow-create-dirs
%OK
```



Note

During a TFTP read operation, the TFTP server only looks in its cache although, if the [tftp allow-read-access](#) CLI command has been run, the TFTP server first looks at the local file system before looking in the cache. If the required file exists in the local file system, it is read from there. Otherwise, the TFTP server looks in the cache and, if the file is there it uses it. Should the file not exist in the cache, the TFTP server sends a request to the RDU for the file.

TFTP writes are not made to the DPE cache; only to the local file system. When the [tftp allow-write-access](#) DPE CLI command, you can write to the TFTP home directory. By default you are not allowed to create directories or override files, but this can be changed using either the [tftp allow-create-dirs](#) or the [tftp allow-override](#) commands.

no tftp allow-create-dirs

Usage Guidelines

This command is used to disable the creation of directories by TFTP write requests.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering this command, you simply enter the command as indicated below:

```
dpe# no tftp allow-create-dirs
```

Examples

This is an example of how to use the **no tftp allow-create-dir** command:

```
dpe# no tftp allow-create-dirs
%OK
```

tftp allow-override

Usage Guidelines

This command allows the override of existing files using a TFTP write request.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering this command, you simply enter the command as indicated below:

```
dpe# tftp allow-override
```

Examples

This is an example of how to use the **tftp allow-override** command:

```
dpe# tftp allow-override
%OK
```

no tftp allow-override

Usage Guidelines

This command disables the overriding of existing files by TFTP write requests.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering this command, you simply enter the command as indicated below:

```
dpe# no tftp allow-override
```

Examples

This is an example of how to use the **no tftp allow-override** command:

```
dpe# no tftp allow-override
%OK
```

tftp allow-read-access

Usage Guidelines

This command enables TFTP read requests from the file system. When this command is enabled, and a DPE does not find the required file in the local directory, the DPE cache is searched.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering this command, you simply enter the command as indicated below:

```
dpe# tftp allow-read-access
```

Examples

This is an example of how to use the **tftp allow-read-access** command:

```
dpe# tftp allow-read-access
%OK
```

no tftp allow-read-access

Usage Guidelines

This command disables TFTP read requests from the file system.

**Note**

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering this command, you simply enter the command as indicated below:

```
dpe# no tftp allow-read-access
```

Examples

This is an example of how to use the **no tftp read-access** command:

```
dpe# no tftp allow-read-access
%OK
```

tftp allow-write-access

Usage Guidelines

This command is used to support of TFTP write requests to the local file system.

**Note**

This command is used with both the hardware and Solaris DPEs.

Examples

This is an example of how to use the **tftp write-access** command:

```
dpe# tftp allow-write-access
%OK
```

no tftp allow-write-access

Usage Guidelines

This command disables TFTP write requests to the file system.



Note

This command is used with both the hardware and Solaris DPEs.

Examples

This is an example of how to use the **no tftp write-access** command:

```
dpe# no tftp allow-write-access
%OK
```

tftp verify-ip

Usage Guidelines

This command enables the verification of requestor IP addresses on dynamic configuration TFTP requests.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **tftp verify-ip** command, you simply enter the command as indicated below:

```
dpe# tftp verify-ip
```

Examples

This is an example of how to use the **tftp verify-ip** command:

```
dpe# tftp verify-ip
%OK
```

no tftp verify-ip

Usage Guidelines

This command disables the verification of requestor IP addresses on dynamic configuration TFTP requests.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no tftp verify-ip** command, you must use this syntax:

```
dpe# no tftp verify-ip
```

Examples

This is an example of how to use the **no tftp verify-ip** command:

```
dpe# no tftp verify-ip
%OK
```

■ no tftp verify-ip



Log System Management Commands

This chapter contains detailed information about the command line interface (CLI) commands that you can use to manage and monitor the log system for the Broadband Access Center for Cable (BACC) device provisioning engine (DPE).

Commands

This section describes the system commands that affect how you can manage DPE logs. These commands include:

- [clear logs, page 5-2](#)
- [debug dpe cache, page 5-3](#)
- [no debug dpe cache, page 5-3](#)
- [debug dpe connection, page 5-4](#)
- [no debug dpe connection, page 5-4](#)
- [debug dpe dpe-server, page 5-5](#)
- [no debug dpe dpe-server, page 5-5](#)
- [debug dpe event-manager, page 5-6](#)
- [no debug dpe event-manager, page 5-6](#)
- [debug dpe exceptions, page 5-7](#)
- [no debug dpe exceptions, page 5-7](#)
- [debug dpe framework, page 5-8](#)
- [no debug dpe framework, page 5-8](#)
- [debug dpe messaging, page 5-9](#)
- [no debug dpe messaging, page 5-9](#)
- [debug dpe tftp, page 5-10](#)
- [no debug dpe tftp, page 5-10](#)
- [debug on, page 5-11](#)
- [no debug, page 5-11](#)
- [log level, page 5-12](#)
- [show log, page 5-13](#)

- [show log last <1..999>](#), page 5-13
- [show log run](#), page 5-14
- [show syslog](#), page 5-14
- [show syslog last](#), page 5-15
- [show syslog run](#), page 5-15
- [syslog log-server](#), page 5-16
- [no syslog log-server](#), page 5-16
- [syslog mode both](#), page 5-17
- [syslog mode local](#), page 5-17
- [syslog mode remote](#), page 5-18

**Note**

Prior to using any debug command, you must ensure that DPE debugging is enabled. Run the **debug on** command to enable this function.

clear logs

Usage Guidelines

This command removes historic (out of date) log files that exist on the system. These files include:

- DPE log files
- hardware log files
- syslog files

Over time, historic log files accumulate within the DPE. The **support bundle state** command is used to bundle these logs. Cisco recommends that you create a bundle before clearing logs. This ensures that no necessary files are accidentally lost.

**Note**

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **clear logs** command, you must use this syntax:

```
dpe# clear logs
```

Once this command is used prompts appear to indicate that logs are being cleared. The number of log files that are cleared is also identified.

Examples

This is an example of how to use the **clear logs** command:

```
dpe# clear logs
Clearing historic log files...
+ Removing 1 DPE log files...
+ No more historic logs.
```

debug dpe cache

Usage Guidelines

This command enables the DPE cache debug logging, which involves messages pertaining to the DPE cache including:

- logging requests for cache entries
- updates to the cache
- other interactions by DPE subsystems

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.  
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **debug dpe cache** command, you must use this syntax:

```
dpe# debug dpe cache
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# debug dpe cache  
%OK
```

no debug dpe cache

Usage Guidelines

This command disables DPE cache debug logging.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.  
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no debug dpe cache** command, you must use this syntax:

```
dpe# no debug dpe cache
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# no debug dpe cache  
%OK
```

debug dpe connection

Usage Guidelines

This command enables the debugging of the DPE connection, which logs communication subsystem status and error messages. This is useful for finding communication problems between the DPE and the RDU.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **debug dpe connection** command, you must use this syntax:

```
dpe# debug dpe connection
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# debug dpe connection
%OK
```

no debug dpe connection

Usage Guidelines

This command disables the debugging of the DPE connection.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no debug dpe connection** command, you must use this syntax:

```
dpe# no debug dpe connection
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# no debug dpe connection
%OK
```

debug dpe dpe-server

Usage Guidelines

This command enables debugging of the DPE server, which involves logging messages about the overall status and issues of the DPE server.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.  
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **debug dpe dpe-server** command, you must use this syntax:

```
dpe# debug dpe dpe-server
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# debug dpe dpe-server  
%OK
```

no debug dpe dpe-server

Usage Guidelines

This command disables debugging of the DPE server.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.  
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no debug dpe dpe-server** command, you must use this syntax:

```
dpe# no debug dpe dpe-server
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# no debug dpe dpe-server  
%OK
```

debug dpe event-manager

Usage Guidelines

This command enables debugging of the DPE event manager, which involves logging messages and conditions showing the state of the event manager.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **debug dpe event-manager** command, you must use this syntax:

```
dpe# debug dpe event-manager
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# debug dpe event-manager
%OK
```

no debug dpe event-manager

Usage Guidelines

This command disables debugging of the DPE event manager.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no debug dpe event-manager** command, you must use this syntax:

```
dpe# no debug dpe event-manager
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# no debug dpe event-manager
%OK
```

debug dpe exceptions

Usage Guidelines

This command enables or disables the debugging of DPE exceptions, which involves logging full stack traces for exceptions occurring during system operation. When unusual situations occur, where the system is apparently corrupt or behaving very badly, running this command can reveal very valuable information for Cisco TAC support.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.  
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **debug dpe exceptions** command, you must use this syntax:

```
dpe# debug dpe exceptions
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# debug dpe exceptions  
%OK
```

no debug dpe exceptions

Usage Guidelines

This command disables the debugging of DPE exceptions.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.  
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no debug dpe exceptions** command, you must use this syntax:

```
dpe# no debug dpe exceptions
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# no debug dpe exceptions  
%OK
```

debug dpe framework

Usage Guidelines

This command enables the debugging of the DPE framework, which involves logging information about the DPE server's underlying framework. This underlying infrastructure provides for all of the various servers in BACC.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **debug dpe framework** command, you must use this syntax:

```
dpe# debug dpe framework
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# debug dpe framework
%OK
```

no debug dpe framework

Usage Guidelines

This command disables the debugging of the DPE framework.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no debug dpe framework** command, you must use this syntax:

```
dpe# no debug dpe framework
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# no debug dpe framework
& OK
```


debug dpe messaging

Usage Guidelines

This command enables the debugging of DPE messaging, which involves logging details about the DPEs messaging subsystem. This subsystem is used primarily for communication between the DPE and the RDU.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.  
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **debug dpe messaging** command, you must use this syntax:

```
dpe# debug dpe messaging
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# debug dpe messaging  
%OK
```

no debug dpe messaging

Usage Guidelines

This command disables the debugging of DPE messaging.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.  
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no debug dpe messaging** command, you must use this syntax:

```
dpe# no debug dpe connection
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# no debug dpe messaging  
%OK
```

debug dpe tftp

Usage Guidelines

This command enables the debugging of TFTP transfers.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **debug dpe tftp** command, you must use this syntax:

```
dpe# debug dpe tftp
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# debug dpe tftp
%OK
```

no debug dpe tftp

Usage Guidelines

This command disables the debugging of TFTP messages.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no debug dpe tftp** command, you must use this syntax:

```
dpe# no debug dpe tftp
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# no debug dpe tftp
%OK
```

debug on

Usage Guidelines

This command enables the debug logging which can be helpful when troubleshooting possible system problems. Additionally, specific debugging categories must be enabled separately with commands like **debug dpe cache**.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.  
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **debug dpe cache** command, you must use this syntax:

```
dpe# debug on
```

Examples

This command requires no special syntax, and you enter it as shown in this example:

```
dpe# debug on  
%OK
```



Caution

Enabling debug logging may have a server impact on DPE performance. The DPE should never be left running, with debug turned on, for long periods of time.

no debug

Usage Guidelines

This command disables all debug logging.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.  
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no debug** command, you must use this syntax:

```
dpe# no debug
```

Examples

This command requires no special syntax, and you enter it as shown here:

```
dpe# no debug  
%OK
```

log level

Usage Guidelines

This command lets you set the level of minimum DPE log messages that will be saved, as described in the Cisco Broadband Access Center for Cable Administrator's Guide.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering this DPE CLI command you must use this syntax:

```
log level <number>
```

Where:

- *<number>*—Identifies the logging level, by number, to be saved. These DPE log levels include:
 - 0-emergency—Sets the logging service to save all urgent messages.
 - 1-alert—Sets the logging service to save all activities that need immediate action and those of a more severe nature.
 - 2-critical—Sets the logging service to save all unusual conditions and those of a more severe nature.
 - 3-error—Sets the logging service to save all error messages and those of a more severe nature.
 - 4-warning—Sets the logging service to save all warning messages and those of a more severe nature.
 - 5-notification—Sets the logging service to save all notification messages and those of a more severe nature.
 - 6-info—Sets the logging service to save all logging messages available.
 - 7-debug—Sets the logging service to save all messages used for debugging activities.

Examples

This is an example of how to use the **log level** command to save informational messages:

```
dpe# log level 6
% OK
```

show log

Usage Guidelines

This command shows all recent log entries for the DPE. These logs contain general DPE process information, including logging all system errors or severe problems. Check this log, when the system is experiencing difficulties. If the log contains insufficient information, enable the debug logging function and experiment with the different categories related to the problem.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **show log** command, you must use this syntax:

```
show log
```

Examples

This is an example of how to use the **show log** command:

```
dpe# show log
2001 12 21 11:22:20 CDT: %BPR-5: Notification DPE: Device Provisioning Engine starting up
```

show log last <1..999>

Usage Guidelines

This command shows the specified number of recent log entries for the DPE. Check this log, when the system is experiencing difficulties and, if the log contains insufficient information, enable the debug logging function and experiment with the different categories related to the problem.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **show log last** command, you must use this syntax:

```
show log last <1..999>
```

Where the *<1..999>* identifies the number of log entries that you want displayed.

Examples

This is an example of how to use the **show log last** command:

```
dpe# show log last 1
2001 12 21 11:28:17 CDT: %BPR-5: Notification DPE: Device Provisioning Engine starting up
```

show log run

Usage Guidelines

This command displays the running DPE log, which starts showing all messages logged to the DPE log. The command continues to run until you press **Enter**. Check this log when the system is experiencing difficulties. If the log contains insufficient information, enable the debug logging function and experiment with the different categories related to the problem.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **show log run** command, you must use this syntax:

```
dpe# show log run
```

Examples

This is an example of how to use the **show log run** command:

```
dpe# show log run
Press <enter> to stop.
2001 12 21 11:43:43 CDT: %BPR-5: Notification DPE: Device Provisioning Engine starting up
2001 12 21 11:43:44 CDT: %BPR-6: Info DPE: Attempt to connect to RDU
BPR_host.cisco.com:49187 failed;
2001 12 21 11:43:44 CDT: %BPR-6: Info TFTP: Ready to service requests

Stopped.
```

show syslog

Usage Guidelines

This command shows all recent DPE syslog entries. The syslog file contains information about the general DPE system, including alerts from various processes related to the DPE. Check this log when the system is experiencing difficulties.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **show syslog** command, you must use this syntax:

```
dpe# show syslog
```

Examples

This is an example of how to use the **show syslog** command:

```
dpe# show syslog
Jan 2 12:27:37 test-dpe-2 BPR: %DPE-1-109: Failed to connect to RDU
```



Note

The output presented in this example is trimmed.

show syslog last

Usage Guidelines

This command shows the specified number of recent DPE syslog entries, including information about the general DPE system including alerts from various processes related to the DPE. Check this log when the system is experiencing difficulties.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering this command, you must use this syntax:

```
show syslog last <1..999>
```

Where the <1..999> identifies the number of syslog entries that you want displayed.

Examples

This is an example of how to use the **show syslog last** command:

```
dpe# show syslog last 1
Jan 2 12:27:37 test-dpe-2 BPR: %DPE-1-109: Failed to connect to RDU
```

show syslog run

Usage Guidelines

This command shows the running syslog, which starts showing all messages logged to the syslog. The command continues to run until you press **Enter**. The syslog contains information about the general DPE system including alerts from various processes related to the DPE. Check this log when the system is experiencing difficulties.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **show syslog run** command, you must use this syntax:

```
dpe# show syslog run
```

Examples

This is an example of how to use the **show syslog run** command:

```
dpe# show syslog run
Press <enter> to stop.
Jan 2 12:27:37 test-dpe-2 BPR: %DPE-1-109: Failed to connect to RDU
Stopped.
```

syslog log-server

Usage Guidelines

This command configures the log-server to send syslog messages whenever the syslog mode is set to either both or remote. When the mode is set to local changing this setting has no effect.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **syslog log-server** command, you must use this syntax:

```
syslog log-server <x.x.x.x>
```

Where the <x.x.x.x> identifies the log servers IP address.

When this command is used, you must follow it by running the **reload** command to make the changes take effect. See the “[reload](#)” section on page 2-15 for additional information.

Examples

This is an example of how to use the **syslog log-server** command:

```
dpe# syslog log-server 10.10.10.15
%OK (Requires appliance restart "> reload")
```

no syslog log-server

Usage Guidelines

This command clears the settings assigned to the syslog server. When the syslog mode is set to either both or remote, clearing the syslog log server results in the log mode being automatically set back to local until a new log server is configured.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **no syslog log-server** command, you must use this syntax:

```
dpe# no syslog log-server
```

When this command is used, you must follow it by running the **reload** command to make the changes take effect. See the “[reload](#)” section on page 2-15 for additional information.

Examples

This is an example of how to use the **no syslog log-server** command:

```
dpe# no syslog log-server
%OK (Requires appliance restart "> reload")
```


syslog mode both

Usage Guidelines

Configures the syslog subsystem to send messages to a remote server and also logs them locally. The remote system must be configured to accept syslog messages.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **syslog mode both** command, you simply enter the command as indicated below:

```
dpe# syslog mode both
```

When this command is used, you must follow it by running the **reload** command to make the changes take effect. See the “[reload](#)” section on page 2-15 for additional information.

Examples

This is an example of how to use the **syslog mode** command:

```
dpe# syslog mode both  
%OK (Requires appliance restart "> reload")
```

syslog mode local

Usage Guidelines

Configures the syslog subsystem to log messages locally only.



Note

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **syslog mode local** command, you simply enter the command as indicated below:

```
dpe# syslog mode local
```

When this command is used, you must follow it by running the **reload** command to make the changes take effect. See the “[reload](#)” section on page 2-15 for additional information.

Examples

This is an example of how to use the **syslog mode** command:

```
dpe# syslog mode local  
%OK (Requires appliance restart "> reload")
```

syslog mode remote

Usage Guidelines

Configures the syslog subsystem to send messages remotely and not log them locally. The remote system must be configured to accept syslog messages.

**Note**

This command is only used in conjunction with a hardware DPE.

Syntax Description

When entering the **syslog mode remote** command, you simply enter the command as indicated below:

```
dpe# syslog mode remote
```

When this command is used, you must follow it by running the **reload** command to make the changes take effect. See the [“reload” section on page 2-15](#) for additional information.

Examples

This is an example of how to use the **syslog mode** command:

```
dpe# syslog mode remote  
%OK (Requires appliance restart "> reload")
```



PacketCable Voice Technology Commands

This chapter contains detailed information about the command line interface (CLI) commands that you can use to manage and monitor the PacketCable voice technology on Broadband Access Center for Cable (BACC) device provisioning engines (DPE).

Commands

This section describes the commands that affect the PacketCable (voice technology) features found in the DPE. These commands include:

- [debug dpe netsnmp](#), page 6-2
- [no debug dpe netsnmp](#), page 6-2
- [debug dpe registration](#), page 6-3
- [debug dpe registration-detail](#), page 6-3
- [no debug dpe registration](#), page 6-4
- [no debug dpe registration-detail](#), page 6-4
- [debug dpe snmp](#), page 6-5
- [no debug dpe snmp](#), page 6-5
- [no packetcable](#), page 6-6
- [packetcable enable](#), page 6-6
- [packetcable registration encryption](#), page 6-7
- [no packetcable registration encryption](#), page 6-7
- [packetcable registration kdc-service-key](#), page 6-8
- [packetcable registration policy-privacy](#), page 6-8
- [packetcable snmp key-material](#), page 6-9
- [no packetcable snmp key-material](#), page 6-10
- [packetcable snmp timeout](#), page 6-10
- [show packetcable snmp log](#), page 6-11
- [show packetcable snmp log last <1..9999>](#), page 6-11
- [show packetcable snmp log run](#), page 6-12

**Note**

Prior to using any debug command, you must ensure that DPE debugging is enabled. Run the **debug on** command to enable this function.

debug dpe netsnmp

Usage Guidelines

This command enables detailed debugging for the PacketCable SNMP service running on the DPE.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.
Please check with your system administrator for DPE licenses.
```

**Note**

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **debug dpe netsnmp** command, you simply enter the command as indicated below:

```
dpe# debug dpe netsnmp
```

Examples

This is an example of how to use the **debug dpe netsnmp** command:

```
dpe# debug dpe netsnmp
%OK
```

no debug dpe netsnmp

This command disables detailed debugging for the PacketCable SNMP service running on the DPE.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.
Please check with your system administrator for DPE licenses.
```

**Note**

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no debug dpe snmp** command, you simply enter the command as indicated below:

```
dpe# no debug dpe snmp
```

Examples

This is an example of how to use the **no debug dpe netsnmp** command:

```
dpe# no debug dpe netsnmp
%OK
```

debug dpe registration

Usage Guidelines

This command enables debugging for the PacketCable secure registration service running on the DPE.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.  
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **debug dpe registration** command, you simply enter the command as indicated below:

```
dpe# debug dpe registration
```

Examples

This is an example of how to use the **debug dpe registration** command:

```
dpe# debug dpe registration  
%OK
```

debug dpe registration-detail

Usage Guidelines

This command enables the PacketCable registration detail category for debug messages.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.  
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **debug dpe registration-detail** command, you simply enter the command as indicated below:

```
dpe# debug dpe registration-detail
```

Examples

This is an example of how to use the **debug dpe registration-detail** command:

```
dpe# debug dpe registration-detail  
%OK
```

no debug dpe registration

Usage Guidelines

This command disables debugging for the PacketCable secure registration service running on the DPE.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no debug dpe registration** command, you simply enter the command as indicated below:

```
dpe# no debug dpe registration
```

Examples

This is an example of how to use the **no debug dpe registration** command:

```
dpe# no debug dpe registration
%OK
```

no debug dpe registration-detail

Usage Guidelines

This command disables the PacketCable registration detail category for debug messages.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no debug dpe registration-detail** command, you simply enter the command as indicated below:

```
dpe# no debug dpe registration-detail
```

Examples

This is an example of how to use the **debug dpe registration-detail** command:

```
dpe# no debug dpe registration-detail
%OK
```

debug dpe snmp

Usage Guidelines

This command enables detailed debugging for the PacketCable SNMP service running on the DPE.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.  
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **debug dpe snmp** command, you simply enter the command as indicated below:

```
dpe# debug dpe snmp
```

Examples

This is an example of how to use the **debug dpe snmp** command:

```
dpe# debug dpe snmp  
%OK
```

no debug dpe snmp

Usage Guidelines

This command disables detailed debugging for the PacketCable SNMP service running on the DPE.

If you run this command on an unlicensed DPE, a message similar to this one appears:

```
This DPE is not licensed. Your request cannot be serviced.  
Please check with your system administrator for DPE licenses.
```



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no debug dpe snmp** command, you simply enter the command as indicated below:

```
dpe# no debug dpe snmp
```

Examples

This is an example of how to use the **no debug dpe snmp** command:

```
dpe# no debug dpe snmp  
%OK
```

no packetcable

Usage Guidelines

This command is used to disable PacketCable services.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no packetcable** command, you simply enter the command as indicated below:

```
dpe# no packetcable
```

Once the command is entered, PacketCable voice technology support is disabled on the DPE. When this command is used, you must follow it by running the **dpe reload** command to restart the DPE and make the changes take effect. See the “[dpe reload](#)” section on page 4-9 for additional information.

Examples

This is an example of how to use the **no packetcable** command:

```
dpe# no packetcable
%OK (Requires DPE restart "> dpe reload")
```

packetcable enable

Usage Guidelines

This command enables PacketCable services. To enable PacketCable, you must:

- Configure at least one interface with an FQDN and have provisioning enabled.
- Set the KDC service key. See the “[packetcable registration kdc-service-key](#)” section on page 6-8 for additional information.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **packetcable enable** command, you simply enter the command as indicated below:

```
dpe# packetcable enable
```

Once the command is entered, the PacketCable voice technology is enabled on the DPE. When this command is used, you must follow it by running the **dpe reload** command to restart the DPE and make the changes take effect. See the “[dpe reload](#)” section on page 4-9 for additional information.

Examples

This is an example of how to use the **packetcable enable** command:

```
dpe# packetcable enable
%OK (Requires DPE restart "> dpe reload")
```


packetcable registration encryption

Usage Guidelines

This command enables encryption of MTA configuration files.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **packetcable registration encryption** command, you simply enter the command as indicated below:

```
dpe# packetcable registration encryption
```

Examples

This is an example of how to use the **packetcable registration encryption** command:

```
dpe# packetcable registration encryption
%OK
```

no packetcable registration encryption

Usage Guidelines

This command disables encryption on a MTA configuration file.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no packetcable registration encryption** command, you simply enter the command as indicated below:

```
dpe# no packetcable registration encryption
```

Syntax Description

When entering the **no packetcable registration encryption** command, you must use this syntax:

```
dpe# no packetcable registration encryption
%OK
```

packetcable registration kdc-service-key

Usage Guidelines

This command is used to generate and set a security key used for communication between KDC and DPE.



Note

This command is used with both the hardware and Solaris DPE. On the hardware DPE, it is used only in the console mode.

Syntax Description

When entering the **packetcable registration kdc-service-key** command, you must use this syntax:

```
dpe# packetcable registration kdc-service-key <password>
```

Where the *<password>* is any password, 6 to 20 characters in length, that you create.



Note

The password that you enter for this command must match the password that is entered into the keygen tool when configuring the KDC. See the *Cisco Broadband Access Center for Cable Administrators Guide* for information on the use of the KeyGen tool.

Once the command is entered, the security key is generated. When this command is used, you must follow it by running the **dpe reload** command to restart the DPE and make the changes take effect. See the “[dpe reload](#)” section on page 4-9 for additional information.

Examples

This is an example of how to use the **packetcable registration kdc-service-key** command:

```
dpe# packetcable registration kdc-service-key ciscosystems101
%OK (Requires DPE restart "> dpe reload")
```

packetcable registration policy-privacy

This CLI command sets the customer policy regarding enforcement of SNMP privacy in MTA communications. Entering a zero value lets the MTA choose the SNMP-v3 privacy option. Entering a non zero value means that the provisioning server sets the privacy option in SNMPv3 to a specific protocol; currently limited to DES.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **packetcable registration policy-privacy** command, you must use this syntax:

```
dpe# packetcable registration policy-privacy <value>
```

where:

- *<value>*—Enter any zero, or non zero, value to identify the customer policy. Values include:
 - 0—This indicates that the MTA selects the privacy option with Privacy being optional.
 - 1—This default value indicates that the policy is enforced causing all MTA's to use Privacy. If privacy is not used the MTA will not start.
 - 32—This indicates that there is no privacy.
 - 33—This indicates that privacy is enabled for all devices.

When this command is used, you must follow it by running the **dpe reload** command to restart the DPE and make the changes take effect. See the “[dpe reload](#)” section on page 4-9 for additional information.

Examples

This is an example of how to use the **packetcable registration policy-privacy** command:

```
dpe# packetcable registration policy-privacy 1
%OK (Requires DPE restart "> dpe reload">
```

packetcable snmp key-material

Usage Guidelines

You use this command, from the console mode, to generate and set a security key on the DPE to permit secure communication with the RDU. The secure communication channel with the RDU is only used for PacketCable SNMPv3 cloning support.



Note

The same key has to be set on the RDU with a command line tool **generateSharedSecret.sh** located in the *<BACC_HOME>/rdu/bin* directory. This command is used with both the hardware and Solaris DPE. On the hardware DPE, it is used only in the console mode.

Syntax Description

When entering the **packetcable snmp key-material** command, you must use this syntax:

```
dpe# packetcable snmp key-material <password>
```

Where the *<password>* is any password, 6 to 20 characters in length, that you create.



Note

Once you run this CLI command, you must reload the DPE for the change to take affect.

When this command is used, you must follow it by running the **dpe reload** command to restart the DPE and make the changes take effect. See the “[dpe reload](#)” section on page 4-9 for additional information.

Examples

This is an example of how to use the **packetcable snmp key-material** command:

```
dpe# packetcable snmp key-material ciscosystems101
%OK (Requires DPE restart "> dpe reload")
```

no packetcable snmp key-material

Usage Guidelines

This command is used to clear the SNMPv3 service key and turn off the SNMPv3 cloning support. For security reasons, this command is not available when a Telnet session is used and can only be set from the console mode.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no packetcable snmp key-material** command, you simply enter the command as indicated below:

```
dpe# no packetcable snmp key-material
```

Once the command is entered, no SNMP key material is available. When this command is used, you must follow it by running the **dpe reload** command to restart the DPE and make the changes take effect. See the “[dpe reload](#)” section on [page 4-9](#) for additional information.

Examples

This is an example of how to use the **no packetcable snmp key-material** command:

```
dpe# no packetcable snmp key-material
%OK (Requires DPE restart "> dpe reload")
```

packetcable snmp timeout

Usage Guidelines

This command dynamically sets the time (in seconds) that the PacketCable SNMP service will wait for a response to any SNMP SET operation.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **packetcable snmp timeout** command, you must use this syntax:

```
packetcable snmp timeout <time>
```

Where the *<time>* indicates the time the PacketCable SNMP service will wait, in seconds. The default value is 10 seconds.

Examples

This is an example of how to use the **packetcable snmp timeout** command:

```
dpe# packetcable snmp timeout 15
%OK
```

show packetcable snmp log

Usage Guidelines

This command shows recent log entries for the PacketCable SNMP provisioning service, which includes information about the general PacketCable SNMP provisioning service and the logging any MTA provisioning errors or severe problems.



Note

This command is used with both the hardware and Solaris DPEs.

Examples

This is an example of how to use the **show packetcable snmp log** command:

```
dpe# show packetcable snmp log
Error [SS_MSG] 2003-03-18 14:30:44,000 - SNMP Service Tracing Set To 400
...
```



Note

The output presented in this example is trimmed.

show packetcable snmp log last <1..9999>

Usage Guidelines

This command displays a specified number of lines from the PacketCable SNMP log file.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When using this command you must use this syntax:

```
show packetcable snmp log last <1..9999>
```

Where the **<1..9999>** identifies the number of lines from the log file that you want to see.

Examples

This is an example of how to use the **show packetcable snmp log last** command:

```
dpe# show packetcable snmp log last 1
Error [SS_MSG] 2003-03-18 14:35:44,000 - SNMP Service Tracing Set To 800
```

show packetcable snmp log run

Usage Guidelines

This command displays the recent PacketCable SNMP service log file, and all new log messages, until the command is interrupted.

**Note**

This command is used with both the hardware and Solaris DPEs.

Examples

This is an example of how to use the **show packetcable snmp log run** command:

```
dpe # show packetcable snmp log run  
Press <enter> to stop.
```

```
2003 12 17 11:43:43 CDT: %CSRC-5: Notification DPE: Device Provisioning Engine starting up  
2003 12 17 11:43:44 CDT: %CSRC-6: Info DPE: Attempt to connect to RDU dpe failed;  
2003 12 17 11:43:44 CDT: %CSRC-6: Info TFTP: Ready to service requests
```

```
Stopped.
```



SNMP Agent Commands

This chapter contains detailed information about the command line interface (CLI) commands that you can use to manage and monitor the SNMP agent found in the Broadband Access Center for Cable (BACC) device provisioning engine (DPE).

Commands

This section describes the commands that affect the DPE SNMP agent, including:

- [snmp-server community string \[rolrw\]](#), page 7-2
- [no snmp-server community string](#), page 7-2
- [snmp-server host](#), page 7-3
- [no snmp-server host](#), page 7-3
- [snmp-server reload](#), page 7-4
- [snmp-server start](#), page 7-5
- [snmp-server stop](#), page 7-5
- [snmp-server contact](#), page 7-6
- [no snmp-server contact](#), page 7-6
- [snmp-server location](#), page 7-6
- [no snmp-server location](#), page 7-7
- [snmp-server inform](#), page 7-7
- [no snmp-server inform](#), page 7-8
- [snmp-server udp-port](#), page 7-9
- [no snmp-server udp-port](#), page 7-9

snmp-server community *string* [ro|rw]

Usage Guidelines

This command sets up the community access string to allow access for external SNMP managers to the DPE SNMP agent.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **snmp-server community** command, you must use this syntax:

```
snmp-server community string [ro | rw]
```

Where:

- *<string>*—Identifies the SNMP community.
- *<ro>*—Assigns a read only (ro) community string. Only Get requests (queries) can be performed. The NMS and the managed device must reference the same community string.
- *<rw>*—Assigns a read write (rw) community string. SNMP applications require rw access for Set operations. The rw community string enables write access to OID values.

When this command is used, you must follow it by running the **snmp-server reload** command to restart the SNMP agent. See the “[snmp-server reload](#)” section on page 7-4 for additional information.

Examples

This is an example of how to use the **snmp-server community** command:

```
dpe# snmp-server community test_community ro
%OK (Requires SNMP restart "> snmp-server reload")
```

no snmp-server community string

Usage Guidelines

This command deletes the specified community string.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **no snmp-server community string** command, you must use this syntax:

```
no snmp-server community string
```

Where:

- *<string>*—Identifies the SNMP community.

Examples

This is an example of how to use the **no snmp-server community** command:

```
dpe# no snmp-server community test_community
%OK (Requires SNMP restart "> snmp-server reload")
```

snmp-server host

Usage Guidelines

This command specifies the recipient of all SNMP notifications and is used to configure the SNMP agent to send either traps or informs to multiple hosts. It is possible to use multiple instances of this command to specify more than one notification recipient.

**Note**

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering the **snmp-server host** command, you must use this syntax:

```
snmp-server host <host-addr> notification [community <community>] [udp-port <port>]
```

Where:

- <host-addr>—Specifies the IP address of the host to which notifications are sent.
- <community>—Specifies the community string to use while sending SNMP notifications.
- <port>—Identifies the UDP port used to send SNMP notifications. The default UDP port number is 162.

When this command is used, you must follow it by running the **snmp-server reload** command to restart the SNMP agent. See the [“snmp-server reload” section on page 7-4](#) for additional information.

Examples

This is an example of how to use the **snmp-server host** command:

```
dpe# snmp-server host 10.10.10.5 notification community public udp-port 162
%OK (Requires SNMP server restart "> snmp-server reload")
```

no snmp-server host

Usage Guidelines

This command is used to remove the specified notification recipient..

**Note**

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When using this command, you must use this syntax:

```
no snmp-server host <host-add> notification
```

Where:

- *<host-add>*—identifies the hosts IP address

When this command is used, you must follow it by running the **snmp-server reload** command to restart the SNMP agent. See the “[snmp-server reload](#)” section on page 7-4 for additional information.

Examples

This is an example of how to use this command:

```
dpe# no snmp-server host 10.10.10.5 notification
%OK (Requires SNMP server restart "> snmp-server reload")
```

snmp-server reload

Usage Guidelines

This command reloads the SNMP agent process on the DPE.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering this command, you must use this syntax:

```
snmp-server reload
```

Once this command is entered the SNMP agent processes that are reload are displayed.

Examples

This is an example of how to use the **snmp-server reload** command on a hardware DPE:

```
dpe# snmp-server reload
nativeSnmpAgent has been restarted
%OK
```

This is an example of how to use the **snmp-server reload** command on a Solaris DPE:

```
dpe# snmp-server reload
nativeSnmpAgent has been restarted
dpeSnmpAgent has been restarted
%OK
```

snmp-server start

Usage Guidelines

This command starts the SNMP agent process on the DPE.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering this command, you must use this syntax:

```
snmp-server start
```

Examples

This is an example of how to use the **snmp-server start** command on a hardware DPE:

```
dpe# snmp-server start
nativeSnmpAgent has been started
%OK
```

This is an example of how to use the **snmp-server start** command on a Solaris DPE:

```
dpe# snmp-server start
nativeSnmpAgent has been started
dpeSnmpAgent has been started
%OK
```

snmp-server stop

Usage Guidelines

This command stops the SNMP agent process on the DPE.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering this command, you must use this syntax:

```
snmp-server stop
```

Examples

This is an example of how to use the **snmp-server stop** command on a hardware DPE:

```
dpe# snmp-server stop
nativeSnmpAgent has been stopped
%OK
```

This is an example of how to use the **snmp-server stop** command on a Solaris DPE:

```
dpe# snmp-server stop
nativeSnmpAgent has been stopped
dpeSnmpAgent has been stopped
%OK
```

snmp-server contact

Usage Guidelines

This command is used to enter a string of characters that identify the system contact (sysContact) as defined in the MIB II.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering this command, you must use this syntax:

```
snmp-server contact <text>
```

Where:

- *<text>*—identifies the contact name of whomever is responsible for the DPE

Examples

This is an example of how to use the **snmp-server contact** command:

```
dpe# snmp-server contact joe
%OK (Requires SNMP server restart "> snmp-server reload")
```

no snmp-server contact

Usage Guidelines

This command is used to remove the system contact that was responsible for the DPE.

Syntax Description

When entering this command, you must use this syntax:

```
no snmp-server contact
```

Examples

This is an example of how to use the **no snmp-server contact** command:

```
dpe# no snmp-server contact
%OK (Requires SNMP server restart "> snmp-server reload")
```

snmp-server location

Usage Guidelines

This command is used to enter a string of characters that identify the system location (sysLocation) as defined in the MIB II.



Note

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering this command, you must use this syntax:

```
snmp-server location <text>
```

Where:

- *<text>*—identifies the physical location of the DPE

Examples

This is an example of how to use the **snmp-server location** command:

```
dpe# snmp-server location st_louis
%OK
```

no snmp-server location

Usage Guidelines

This command is used to remove a system location.

Syntax Description

When entering this command, you must use this syntax:

```
no snmp-server location
```

Examples

This is an example of how to use the **no snmp-server location** command:

```
dpe# no snmp-server location
%OK
```

snmp-server inform

Usage Guidelines

This command is used to specify the type of SNMP notification sent, from the SNMP agent, to the SNMP manager. This command may be used to send SNMP informs rather than traps, although traps are sent by default.

**Note**

This command is used with both the hardware and Solaris DPEs.

Syntax Description

When entering this command, you must use this syntax:

```
snmp-server inform [retries <count> timeout <time>]
```

Where:

- *<count>*—identifies the number of times an inform can be sent from the SNMP agent to the manager. If the timeout period expires before the the configured number of retries is reached, the SNMP server will cease sending informs.
- *<time>*—Identifies the length of time (msec) that the SNMP server will continue sending informs. If the maximum number of retries is reached before the timeout expires, the SNMP server will cease sending informs.

**Note**

Specification of both the retry count and timeout, while configuring SNMP informs, is optional and, if not specified, the default values of 1 retry and 5000 milliseconds are used.

Examples

This is an example of how to use the **snmp-server inform** command:

```
dpe# snmp-server inform retries 5 timeout 500
%OK
```

From this example, an SNMP inform will be sent up to a maximum of 5 times, before the retries stop. If the timeout of 500 msec expires before the 5 retries takes place, the inform is not sent again.

no snmp-server inform

Usage Guidelines

This command is used to switch the SNMP notifications that are sent to the SNMP manager, back to the default setting of traps.

Syntax Description

When entering this command, you must use this syntax:

```
dpe# no snmp-server inform
```

Examples

This is an example of how to use the **no snmp-server inform** command:

```
dpe# no snmp-server inform
%OK
```

snmp-server udp-port

Usage Guidelines

This command is used to identify the UDP port number that the SNMP agent listens to.



Note

This command is only used in conjunction with a Solaris DPE.

This command is required by the Solaris DPE to prevent potential sharing violations between ports used by other applications. The changing of port numbers is used to resolve potential port conflict.

The SNMP agents default port number, 8001, is different from the standard well known SNMP agent port to eliminate potential port conflicts with other SNMP agents on the Solaris computer.



Note

It is recommended that you change the UDP port to the well known port, number 161, for SNMP agents.

Syntax Description

When entering this command, you must use this syntax:

```
snmp-server udp-port <port>
```

Examples

This is an example of how to use the **snmp-server udp-port** command:

```
dpe# snmp-server udp-port 161
%OK
```

no snmp-server udp-port

Usage Guidelines

This Solaris DPE only command is used to change the port that the SNMP agent listens to, back to the default UDP port number (8001).



Note

Using a port number other than the standard well known SNMP agent port number of 161, may increase the likelihood of potential port conflicts with other SNMP agents running on the same Solaris computer.

Syntax Description

When entering this command, you must use this syntax:

```
no snmp-server udp-port
```

Examples

This is an example of how to use the **no snmp-server udp-port** command:

```
dpe# no snmp-server udp-port
%OK
```

no snmp-server udp-port



A

- active logs** These database log files contain data that has not yet been written into the database. It is important to keep active log files until they become redundant. *See also* redundant logs and removable logs.
- agent** A watchdog agent is a daemon process that is used to monitor, stop, start and restart BACC component processes such as the RDU, JRun, and the SNMP agent.
- alert** A syslog or SNMP message notifying an operator or administrator of a network problem.
- API** Application programming interface. Specification of function-call conventions that defines an interface to a service.
- audit logs** A log file containing a summary of major changes in the RDU database. This includes changes to system defaults, technology defaults, DHCP criteria, and classes of service.

B

- bandwidth** Difference between the highest and lowest frequencies available for network signals. The term is also used to describe the rated throughput capacity of a given network medium or protocol.
- BACC** An integrated solution for data-over-cable service providers to configure and manage broadband modems, and enable and administer subscriber self-registration and activation. BACC is a scalable product capable of supporting millions of devices.
- broadband** Transmission system that multiplexes multiple independent signals onto one cable. In Telecommunications terminology; any channel having a bandwidth greater than a voice-grade channel (4 kHz). In LAN terminology; a co-axial cable on which analog signaling is used.
- Broadband Access Center for Cable** *See* BACC.

C

- cable modem termination system** *See* CMTS.
- CableHome** CableHome is a CableLabs initiative to develop a standardized infrastructure to let cable operators extend high-quality, value added services into the home local area network.
- caching** Form of replication in which information learned during a previous transaction is used to process later transactions.

client-class	A Network Registrar feature that provides differentiated services to users that are connected to a common network. The client-class is used in the BACC DHCP criteria to provide differentiated DHCP services to devices.
CMTS	Cable modem termination system. A CMTS is a component that exchanges digital signals with cable modems on a cable network. The CMTS is usually located in the cable provider's local office.
CMTS shared secret	<i>See</i> shared secret.
configuration file	A file containing configuration parameters for the device to be provisioned.
configuration generation	The process of combining a set of attributes to be delivered to a device using either DHCP, TFTP, or SNMP.
CPE	Customer premises equipment. Terminating equipment, such as telephones, computers, and modems, supplied and installed at a customer location.
customer premises equipment	<i>See</i> CPE.

D

device provisioning engine	<i>See</i> DPE.
DPE	Device Provisioning Engine. The DPE caches device information to ensure BACC scalability and handles configuration requests including downloading configuration files to devices.
DSTB	Digital set-top box. A device that enables a television to become a user interface to the Internet and to receive and decode digital television signals.
Dynamic Configuration File	A dynamically created configuration file that uses template files to provide greater flexibility and security in the provisioning process.

F

FQDN	Fully qualified domain name. FQDN is the full name of a system, rather than just its hostname. For example, cisco is a hostname and www.cisco.com is an FQDN.
fully qualified domain name	<i>See</i> FQDN.

I

IP address	An IP address is a 32-bit number that identifies each sender or receiver of information that is sent in packets across the Internet.
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K

KDC Key Distribution Center. The KDC implements limited Kerberos functionality. Used in the provisioning of PacketCable MTAs.

M

MAC address Standardized data link layer address that is required for every port or device that connects to a LAN. Other devices in the network use these addresses to locate specific ports in the network and to create and update routing tables and data structures. MAC addresses are 6 bytes long and are controlled by IEEE. Also known as hardware address, MAC-layer address, or physical address. Compare with *network address*.

Media Terminal Adapter *See* MTA.

MSO Multiple system operator. A company that operates more than one cable TV or broadband system.

MTA Equipment at the customer end of a broadband (packetcable) network.

multiple service operator *See* MSO.

N

NAT Network address translation. Mechanism for reducing the need for globally unique IP addresses. NAT allows an organization with addresses that are not globally unique to connect to the Internet by translating those addresses into globally routeable address space. This is also known as Network Address Translation.

network address translation *See* NAT.

network administrator Person responsible for operation, maintenance, and management of a network. *See also* network operator.

network operator Person who routinely monitors and controls a network, performing such tasks as reviewing and responding to alarms, monitoring throughput, configuring new circuits, and resolving problems. *See also* network administrator.

Network Time Protocol *See* NTP.

NR Cisco Network Registrar. A software product that provides IP addresses, configuration parameters, and DNS names to DOCSIS cable modems and PCs, based on network and service policies.

NTP Network Time Protocol. A protocol designed to synchronize server clocks over a network.

P

- provisioning API** A series of BACC functions that programs can use to make the operating system perform various functions.
- provisioning groups** Groupings of DPE and DHCP servers, based on either network topology or geography.
- publishing** Publishing provisioning information to an external datastore in real time. Publishing plug-ins must be developed to write data to a datastore.

R

- RDU** Regional Distribution Unit. The RDU is the primary server in the BACC provisioning system. It manages generation of device configurations, processes all API requests, and manages the BACC system.
- realm** The logical network served by a single Kerberos database and a set of Key Distribution Centers.
- realm names** By convention, realm names are generally all uppercase letters, to differentiate the realm from the Internet domain. *See* realm.
- redundancy** In internetworking, the duplication of devices, services, or connections so that, in the event of a failure, the redundant devices, services, or connections can perform the work of those that failed.
- redundant logs** Database log files become redundant once its data has been written into the database. *See also* active logs and removable logs.
- removable logs** Database log files become removable after either being backed up, or when the complete database that contains data for this log file has been backed up. *See also* active logs and redundant logs.

S

- selection tags** Selection tags associated with Network Registrar scopes. These define the clients and client-classes associated with a scope.
- shared secret** A character string used to provide secure communication between two servers or devices.
- static configuration files** These files are used as a configuration file for a device. For example, a static configuration file called gold.cm would identify the gold DOCSIS class of service. BACC treats this file type like any other binary file.

T

- template files** Text files that contain DOCSIS or PacketCable MTA options and values that, when used in conjunction with a DOCSIS or PacketCable MTA class of service, provide dynamic file generation.

TFTP	Trivial File Transfer Protocol. Simplified version of file transfer protocol (FTP) that allows files to be transferred from one computer to another over a network.
TLV	Type-Length-Value. A tuple within a DOCSIS or PacketCable configuration file.
trivial file transfer protocol	<i>See</i> TFTP.
tuple	In programming languages, a tuple is an ordered set of values. Common uses for the tuple as a data type are: for passing a string of parameters from one program to another, or to represent a set of value attributes in a relational database.
Type Length Value	<i>See</i> TLV.

U

uBr	Universal Broadband Router (such as the Cisco 7246 or 7223), which is the Cisco router implementation of a DOCSIS CMTS.
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V

Voice over IP	<i>See</i> VoIP.
VoIP	Voice over IP. VoIP is the ability to make telephone calls and send faxes over IP-based data networks with a suitable quality of service (QoS) and superior cost/benefit.

X

XGCP	A Gateway Control Protocol used to pass data between networks. This includes that M (for Media) GCP and S (Simple) GCP.
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