



# CHAPTER 4

## PacketCable Voice Technology Commands

This chapter describes the command-line interface (CLI) commands that you can use to manage and monitor the PacketCable voice technology on the Cisco Broadband Access Center (Cisco BAC) Device Provisioning Engine (DPE).

The commands described in this chapter are:

Command	Description	CLI Mode	
		Login	Privileged
<code>debug service packetcable netsnmp</code>	Enables the PacketCable NetSNMP category for debug messages.		✓
<code>debug service packetcable registration</code>	Enables the PacketCable registration category for debug messages.		✓
<code>debug service packetcable registration-detail</code>	Enables the PacketCable registration detail category for debug messages.		✓
<code>debug service packetcable snmp</code>	Enables the PacketCable SNMP service category for debug messages.		✓
<code>service packetcable enable</code>	Enables or disables the PacketCable services.		✓
<code>service packetcable registration encryption enable</code>	Enables encryption on MTA configuration files.		✓
<code>service packetcable registration kdc-service-key</code>	Sets the service key for KDC communications.		✓
<code>service packetcable registration policy-privacy</code>	Sets the customer policy regarding enforcement of SNMP privacy in MTA communications.		✓
<code>service packetcable snmp key-material</code>	Sets the key material for MTA SNMP communications.		✓
<code>service packetcable snmp timeout</code>	Sets the timeout value for SNMP SET operations.		✓
<code>service packetcable show snmp log</code>	Displays PacketCable SNMP log entries.		✓

# debug service packetcable

Use the **debug service packetcable** command to debug the PacketCable technology service on the DPE. Table 4-1 lists the keywords that you can use with this command. The PacketCable service on the DPE features one instance of the service, which you can configure to suit your requirements.

Before using any debug command, you must enable debugging by running the **debug on** command. If you run the following commands 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.
```



## Caution

Enabling debug logging may have a severe impact on DPE performance. Do not leave the DPE running with debug turned on for an extended period of time.

**Table 4-1** List of debug service packetcable Commands for PacketCable Technology

Command	Description				
<b>debug service packetcable netsnmp</b>	Enables detailed debugging of the PacketCable NetSNMP service on the DPE.				
<b>no debug service packetcable netsnmp</b>	To disable detailed debugging of the PacketCable NetSNMP service, use the <b>no</b> form of this command.				
	<table border="1"> <thead> <tr> <th>Syntax Description</th> <th>Defaults</th> </tr> </thead> <tbody> <tr> <td> <b>debug service packetcable 1..1 netsnmp</b>  <i>1..1</i>—Identifies the instance of the PacketCable service. </td> <td>Debugging of the PacketCable NetSNMP service is by default disabled.</td> </tr> </tbody> </table>	Syntax Description	Defaults	<b>debug service packetcable 1..1 netsnmp</b> <i>1..1</i> —Identifies the instance of the PacketCable service.	Debugging of the PacketCable NetSNMP service is by default disabled.
Syntax Description	Defaults				
<b>debug service packetcable 1..1 netsnmp</b> <i>1..1</i> —Identifies the instance of the PacketCable service.	Debugging of the PacketCable NetSNMP service is by default disabled.				
	<p><b>Examples</b></p> <p>This result occurs when you enable debugging of the PacketCable NetSNMP service.</p> <pre>bac_dpe# debug service packetcable 1 netsnmp % OK</pre> <p>This result occurs when you disable debugging of the PacketCable NetSNMP service.</p> <pre>bac_dpe# no debug service packetcable 1 netsnmp % OK</pre>				

Table 4-1 List of debug service packetcable Commands for PacketCable Technology (continued)

Command	Description				
<b>debug service packetcable registration</b>	Enables debugging of the PacketCable secure registration service on the DPE.				
<b>no debug service packetcable registration</b>	To disable debugging of the PacketCable secure registration service, use the <b>no</b> form of this command.				
	<table border="1"> <thead> <tr> <th>Syntax Description</th> <th>Defaults</th> </tr> </thead> <tbody> <tr> <td> <b>debug service packetcable <i>1..1</i> registration</b>  <i>1..1</i>—Identifies the instance of the PacketCable service. </td> <td>Debugging of the PacketCable registration service is by default disabled.</td> </tr> </tbody> </table>	Syntax Description	Defaults	<b>debug service packetcable <i>1..1</i> registration</b> <i>1..1</i> —Identifies the instance of the PacketCable service.	Debugging of the PacketCable registration service is by default disabled.
Syntax Description	Defaults				
<b>debug service packetcable <i>1..1</i> registration</b> <i>1..1</i> —Identifies the instance of the PacketCable service.	Debugging of the PacketCable registration service is by default disabled.				
	<p><b>Examples</b></p> <p>This result occurs when you enable debugging of the PacketCable registration service.</p> <pre>bac_dpe# debug service packetcable 1 registration % OK</pre> <p>This result occurs when you disable debugging of the PacketCable registration service.</p> <pre>bac_dpe# no debug service packetcable 1 registration % OK</pre>				
<b>debug service packetcable registration-detail</b>	Enables the PacketCable registration detail category for debug messages.				
<b>no debug service packetcable registration-detail</b>	To disable debugging of the PacketCable secure registration service, use the <b>no</b> form of this command.				
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Syntax Description	Defaults				
<b>debug service packetcable <i>1..1</i> registration-detail</b> <i>1..1</i> —Identifies the instance of the PacketCable service.	Debugging of the PacketCable registration detail category is by default disabled.				
	<p><b>Examples</b></p> <p>This result occurs when you enable debugging of the PacketCable registration detail category.</p> <pre>bac_dpe# debug service packetcable 1 registration-detail % OK</pre> <p>This result occurs when you disable debugging of the PacketCable registration detail category.</p> <pre>bac_dpe# no debug service packetcable 1 registration-detail % OK</pre>				

Table 4-1 List of debug service packetcable Commands for PacketCable Technology (continued)

Command	Description				
<b>debug service packetcable snmp</b>	Enables detailed debugging of the PacketCable SNMP service on the DPE.				
<b>no debug service packetcable snmp</b>	To disable detailed debugging of the PacketCable SNMP service, use the <b>no</b> form of this command.				
	<table border="1"> <thead> <tr> <th>Syntax Description</th> <th>Defaults</th> </tr> </thead> <tbody> <tr> <td> <b>debug service packetcable 1..1 snmp</b>  <i>1..1</i>—Identifies the instance of the PacketCable service. </td> <td>Debugging of the PacketCable SNMP service is by default disabled.</td> </tr> </tbody> </table>	Syntax Description	Defaults	<b>debug service packetcable 1..1 snmp</b> <i>1..1</i> —Identifies the instance of the PacketCable service.	Debugging of the PacketCable SNMP service is by default disabled.
Syntax Description	Defaults				
<b>debug service packetcable 1..1 snmp</b> <i>1..1</i> —Identifies the instance of the PacketCable service.	Debugging of the PacketCable SNMP service is by default disabled.				
	<p><b>Examples</b></p> <p>This result occurs when you enable debugging of the PacketCable SNMP service.</p> <pre>bac_dpe# debug service packetcable 1 snmp % OK</pre> <p>This result occurs when you disable debugging of the PacketCable SNMP service.</p> <pre>bac_dpe# no debug service packetcable 1 snmp % OK</pre>				

## service packetcable enable

Use the **service packetcable enable** command to enable the PacketCable service on the DPE.

To enable PacketCable, you must:

- Configure at least one interface with a fully qualified domain name (FQDN) and enable provisioning. See [interface ip provisioning fqdn, page 3-17](#), and [interface ip provisioning, page 3-14](#).

If you do not configure an interface with an FQDN and enable provisioning on that interface, the following error appears:

```
Enabling packetcable requires at least one interface must have an FQDN configured and provisioning enabled
```

```
Error processing command
```

- Set the service key for the Key Distribution Center (KDC). See [service packetcable registration kdc-service-key, page 4-6](#).

If you do not set a service key for the KDC, the following error appears:

```
A KDC service key must be present in order to enable PacketCable
```

```
Error processing command
```

After you use this command, run the **dpe reload** command so that the changes take effect. See [dpe reload, page 3-11](#).

---

**Syntax Description**    **service packetcable *1..1* enable**  
*1..1*—Identifies the instance of the PacketCable service.

---

**Defaults**            The PacketCable service on the DPE is by default enabled.

---

**Examples**            `bac_dpe# service packetcable 1 enabled true`  
                          % OK (Requires DPE restart "> dpe reload")

## no service packetcable enable

Use the **no service packetcable enable** command to disable the PacketCable service on the DPE.

---

**Syntax Description**    **no service packetcable *1..1* enable**  
*1..1*—Identifies the instance of the PacketCable service.

---

**Defaults**            The PacketCable service on the DPE is by default enabled.

---

**Examples**            `bac_dpe# no service packetcable 1`  
                          % OK (Requires DPE restart "> dpe reload")

## service packetcable registration encryption enable

Use the **service packetcable registration encryption enable** command to enable encryption of MTA configuration files.

To disable encryption of MTA configuration files, use the **no** form of this command. See [no service packetcable registration encryption, page 4-6](#).

---

**Syntax Description**    **service packetcable *1..1* registration encryption enable**  
*1..1*—Identifies the instance of the PacketCable service.

---

**Defaults**            Encryption of MTA configuration files is by default disabled.

---

**Examples**            `bac_dpe# service packetcable 1 registration encryption enable`  
                          % OK

## no service packetcable registration encryption

Use the **no service packetcable registration encryption** command to disable encryption of MTA configuration files.

To enable encryption of MTA configuration files, see [service packetcable registration encryption enable](#), page 4-5.

### Syntax Description

**no service packetcable *1..1* registration encryption**

*1..1*—Identifies the instance of the PacketCable service.

### Defaults

Encryption of MTA configuration files is by default disabled.

### Examples

```
bac_dpe# no service packetcable 1 registration encryption
% OK
```

## service packetcable registration kdc-service-key

Use the **service packetcable registration kdc-service-key** command to generate and set a security key for communication between the KDC and a DPE.

After you use this command, run the **dpe reload** command so that the changes take effect. See [dpe reload](#), page 3-11.

### Syntax Description

**service packetcable *1..1* registration kdc-service-key *password***

- *1..1*—Identifies the instance of the PacketCable service.
- *password*—Identifies the password, which must be from 6 to 20 characters.



#### Note

The password that you enter must match the password that you enter while configuring the KDC using the KeyGen tool. See the *Cisco Broadband Access Center Administrator Guide 4.2* for information on how to use the KeyGen tool.

You can verify the service key that this command creates by viewing the *dpe.properties* file, which resides in the *BPR\_HOME/dpe/conf* directory. Look for the value of the following parameter:

```
/pktcbl/regsvr/KDCServiceKey.
```

For example:

```
# more dpe.properties
...
/pktcbl/regsvr/KDCServiceKey=2e:d5:ef:e9:5a:4e:d7:06:67:dc:65:ac:bb:89:e3:2c:bb:
71:5f:22:bf:94:cf:2c
...
```

The output of this example is trimmed.

---

**Defaults**

No default behavior or values.

---

**Examples**

```
bac_dpe# service packetcable 1 registration kdc-service-key password3
% OK (Requires DPE restart "> dpe reload")
```

## service packetcable registration policy-privacy

Use the **service packetcable registration policy-privacy** command to set the customer policy on enforcing SNMP privacy in MTA communications.

Entering a value of zero lets the MTA choose the SNMPv3 privacy option. Entering a nonzero value means that the provisioning server sets the privacy option in SNMPv3 to a specific protocol, which is currently limited to DES.

After you use this command, run the **dpe reload** command so that the changes take effect. See [dpe reload](#), page 3-11.

---

**Syntax Description**

**service packetcable *1..1* registration policy-privacy *value***

- *1..1*—Identifies the instance of the PacketCable service.
- *value*—Enter any zero or nonzero value to identify the customer policy. Values include:
  - 0—Indicates that the MTA selects the privacy option with Privacy being optional.
  - 1—Indicates that the policy is enforced, causing all MTAs to use Privacy. If Privacy is not used, the MTA does not start.
  - 32—Indicates that there is no Privacy.
  - 33—Indicates that Privacy is enabled for all devices.

---

**Defaults**

The default value for enforcing SNMP privacy is 1.

---

**Examples**

This result occurs when you enforce SNMP privacy, using the default value of 1, causing all MTAs to use Privacy.

```
bac_dpe# service packetcable 1 registration policy-privacy 1
% OK (Requires DPE restart "> dpe reload">
```

## service packetcable snmp key-material

Use the **service packetcable snmp key-material** command 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 used for PacketCable SNMPv3 cloning support only.

**Note**

You must set the same security key on both the DPE and the RDU. Use the **generateSharedSecret.sh** command-line tool, located in the *BPR\_HOME/rdu/bin* directory.

After you use this command, run the **dpe reload** command so that the changes take effect. See [dpe reload, page 3-11](#).

To clear the SNMPv3 service key and turn off the SNMPv3 cloning support, use the **no** form of this command. See [no service packetcable snmp key-material, page 4-8](#).

---

**Syntax Description**

**service packetcable *1..1* snmp key-material *password***

- *1..1*—Identifies the instance of the PacketCable service.
- *password*—Identifies the password that you create, which must be from 6 to 20 characters.

---

**Defaults**

Generating a security key for secure communication with the RDU is by default disabled.

---

**Examples**

```
bac_dpe# service packetcable 1 snmp key-material password4
% OK (Requires DPE restart "> dpe reload")
```

## no service packetcable snmp key-material

Use the **no service packetcable snmp key-material** command to clear the SNMPv3 service key and turn off SNMPv3 cloning support.

After you use this command, run the **dpe reload** command so that the changes take effect. See [dpe reload, page 3-11](#).

To generate and set a security key on the DPE for secure communication with the RDU, see [service packetcable snmp key-material, page 4-7](#).

---

**Syntax Description**

**no service packetcable *1..1* snmp key-material**

*1..1*—Identifies the instance of the PacketCable service.

---

**Defaults**

Generating a security key for secure communication with the RDU is by default disabled.

---

**Examples**

```
bac_dpe# no service packetcable 1 snmp key-material
% OK (Requires DPE restart "> dpe reload")
```



## service packetcable snmp timeout

Use the **service packetcable snmp timeout** command to dynamically set the length of time that the PacketCable SNMP service waits for a response to any SNMP ‘Set’ operation.

### Syntax Description

**service packetcable *1..1* snmp timeout *time***

- *1..1*—Identifies the instance of the PacketCable service.
- *time*—Indicates the length of time that the PacketCable SNMP service waits, in seconds.

### Defaults

The default maximum length of time that the PacketCable SNMP service waits for a response to an SNMP ‘Set’ operation is 10 seconds.

### Examples

```
bac_dpe# service packetcable 1 snmp timeout 15
% OK
```

## service packetcable show snmp log

Use the **service packetcable show snmp log** command to show recent log entries for the PacketCable SNMP provisioning service, which includes information about the general PacketCable SNMP provisioning service and the logging of any MTA provisioning errors or severe problems.

### Syntax Description

**service packetcable *1..1* show snmp log [*last 1..9999* | *run*]**

- *1..1*—Identifies the instance of the PacketCable service.
- **last *1..9999***—Identifies the specified number of recent log entries from the PacketCable SNMP log file that you want to display. This keyword is optional.
- **run**—Displays all log messages from the PacketCable SNMP log file. This keyword is optional.

### Defaults

No default behavior or values.

### Examples

This result occurs when you use the **service packetcable show snmp log** command to display all log entries for the PacketCable SNMP service.

```
bac_dpe# service packetcable 1 show snmp log
Error [SS_MSG] 2007-12-18 14:30:44,000 - SNMP Service Tracing Set To 400
...
```



**Note** The output presented in this example is trimmed.

This result occurs when you use the **service packetcable show snmp log last** command to display a specific number of recent log entries; in this example, the last 5 entries.

```
bac_dpe# service packetcable 1 show snmp log last 5
Error [SS_MSG] 2007-12-18 14:35:44,000 - SNMP Service Tracing Set To 800
```

This result occurs when you use the **service packetcable show snmp log run** command to display a running PacketCable SNMP log. The command continues to run until you press **Enter**.

```
bac_dpe # service packetcable 1 show snmp log run
Press <enter> to stop.

2007 12 17 11:43:43 CDT: %CSRC-5: Notification DPE: Device Provisioning Engine starting up
2007 12 17 11:43:44 CDT: %CSRC-6: Info DPE: Attempt to connect to RDU dpe failed;
2007 12 17 11:43:44 CDT: %CSRC-6: Info TFTP: Ready to service requests

Stopped.
```