CHAPTER 10

CPP and PPP Commands

This chapter describes the commands you use to configure Combinet Packet Protocol (CPP) parameters and Point-to-Point Protocol (PPP) parameters, such as call negotiation and authentication.

Note The command syntax includes a combination of bold and regular uppercase and lowercase alphanumeric characters. You can enter commands in full or you can enter abbreviated forms of many commands. The abbreviated form consists of the first characters in each word of the syntax that appear in bold uppercase type in command syntax in this chapter. These characters represent the minimum you must enter for the command to be recognized and executed.

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set compression

To enable or disable data compression, use the **set compression** command.

SEt **CO**mpression **ST**ac | **OF**f

Syntax Description

stac Enables data compression.

off Disables data compression. If you are using High Level Data Link Control (HDLC) protocol, set compression to off.

Default

stac (enabled)

Command Mode

Profile mode

Example

The following example disables compression for the profile 2503 connection:

```
Host:2503> set compression off
```

set cpp negotiation abort

To configure the action taken if the negotiation process between the Cisco router and the remote router fails, use the **set cpp negotiation abort** command.

SEt **CP**p **NE**gotiation **AB**ort **<DIsconnect** | **PReset>**

Syntax Description

disconnect	If negotiation with the remote router fails, the Cisco router will disconnect the call.
preset	If negotiation with the remote router fails, the Cisco router will remain connected.

Default

disconnect

Command Mode

System level

Example

The following example configures the router to remain connected if negotiation with the remote router fails:

```
Host> set negotiation abort preset
```

set cpp or ppp negotiation count

To configure the number of times that the Cisco router will attempt a successful negotiation, use the **set cpp or ppp negotiation count** command.

SEt **CP**p | **PP**p **NE**gotiation **CO**unt <**attempts**>

Syntax Description

attempts Number of times the router will attempt a successful negotiation. Must be a number between 1 and 100.

Default

16 attempts for CPP

10 attempts for PPP

Command Mode

System level

Example

The following example configures the router to attempt negotiation 20 times:

```
Host> set ppp negotiation count 20
```

set cpp or ppp negotiation integrity

To configure the period of time between line integrity packets, use the **set cpp or ppp negotiation integrity** command.

SEt **CPP** | **PPP NE**gotiation **IN**tegrity <**seconds**> | **OF**f

Syntax Description

seconds The period of time between line integrity packets, in seconds. Must be between 1 and 60 seconds. If the router does not receive a line Integrity packet for three consecutive periods, the ISDN line disconnects.

off Disables link integrity packets.

Default

10 seconds

Command Mode

System level

Example

The following example sets the period of time between line integrity packets to 5 seconds.

```
Host> set cpp negotiation integrity 5
```

set cpp or ppp negotiation retry

To configure the amount of time (retry interval) between negotiation attempts, use the **set cpp or ppp negotiation retry** command.

SEt **CP**p | **PP**p **NE**gotiation **RE**try <**milliseconds**>

Syntax Description

milliseconds Amount of time (in milliseconds) between negotiation attempts. Must be between 200 and 6000 milliseconds.

Default

1000 milliseconds for CPP

3000 milliseconds for PPP

Command Mode

System level

Example

The following examples configure the router to attempt negotiation every 5 seconds:

```
Host> set negotiation retry 5000 for cpp
Host> set ppp negotiation retry 5000 for ppp
```

set ppp multilink

To configure the way that PPP links are aggregated, use the **set ppp multilink** command.

SEt **PPP MU**ltilink **ON** | **OF**f

Syntax Description

on Sets the router to negotiate the PPP multilink protocol. This protocol allows data to be sent over multiple channels.

off Disables the router from requesting PPP multilink negotiation. If the remote router requests PPP multilink, the router will accept it, regardless of this setting.

Default

on (enabled)

Command Mode

System level

Example

The following example configures the router to not initiate negotiation of PPP multilink:

```
Host> set ppp multilink off
```

set ppp terminate count

To configure the number of times the router will send a terminate request packet without an answer before disconnecting the ISDN line, use the **set ppp terminate count** command.

SEt **PPP TE**rmreq **CO**unt <**attempt**>

Syntax Description

attempt Number of times the router will send a terminate request packet without an answer before disconnecting the ISDN line. Must be between 1 and 100.

Default

2 tries

Command Mode

System level

Example

The following example configures the router to send terminate request packets five times before disconnecting the ISDN line:

```
Host> set ppp termreq count 5
```

set protocol

To configure how Ethernet packets are sent over the ISDN line, when using CPP, use the **set protocol** command.

SEt **PR**otocol **HD**lc | **OR**dered | **FR**agmented

Syntax Description

hdlc Packets are encapsulated in standard High Level Data Link Control (HDLC). This protocol cannot be used when data compression is enabled with the **set compression** command.

ordered Packets are arranged in the order they are received.

fragmented Packets are fragmented before being sent over both ISDN B channels simultaneously. The remote router reassembles the fragments and sends them onto the remote LAN.

Default

ordered

Command Mode

Profile mode

Example

The following example configures profile 2503 for packet fragmentation:

```
Host:2503> set protocol fragment
```

Related Command

set compression

show negotiation

To display all negotiation parameters, use the **show negotiation** command.

SHow **NE**gotiation **[AL**l**]**

Syntax Description

all (Optional) Use this keyword in profile mode to display system negotiation parameters and also profile negotiation parameters.

Command Mode

System level or profile mode

Usage Guidelines

In profile mode, this command displays only parameters that can be configured by the profile. Values are inherited from the profile template. Values that have been redefined from the template value are indicated with an asterisk.

At the system level this command displays all system parameters.

Sample Display

The following sample display shows output from the **show negotiation** command at the system level:

```
2865_66> sh negotiation
System Parameters
    CPP Negotiation Parameters
      Integrity Interval        10
      Negotiation Abort         DISCONNECT
      Retry Count               6
      Retry Interval            1000
    PPP Negotiation Parameters
      Integrity Interval        10
      Retry Count               10
      Retry Interval            3000
      Terminate Count           2
      Multilink                 ON
Profile Parameters
    Generic Negotiation Parameters
      Compression               STAC
    CPP Negotiation Parameters
      Protocol                  ORDERED
Negotiated Parameters
      Connection   1            Virtual
      Connection   2            Virtual
      Connection   3            Virtual
      Connection   4            Virtual
2865_66>
```