

Cisco CPE Commander User Guide

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Corporate Headquarters

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA

<http://www.cisco.com>

Tel: 408 526-4000
800 553-NETS (6387)

Fax: 408 526-4100

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Cisco CPE Commander User Guide

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About This Guide

This section explains the objectives, audience, and organization of the *Cisco CPE Commander User Guide*. It also defines the conventions used to convey instructions and information used throughout the guide.

Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM, a member of the Cisco Connection Family, is updated monthly. Therefore, it might be more current than printed documentation. To order additional copies of the Documentation CD-ROM, contact your local sales representative or call customer service. The CD-ROM package is available as a single package or as an annual subscription. You can also access Cisco documentation on the World Wide Web at <http://www.cisco.com>, <http://www-china.cisco.com>, or <http://www-europe.cisco.com>.

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Document Objective

The *Cisco CPE Commander User Guide* tells you how to install, launch, and use the Cisco CPE Commander. For additional information on companion publications, see “Related Documentation” later in this preface.

Audience

The *Cisco CPE Commander User Guide* is designed for end users, system managers, and network managers.

Document Organization

The *Cisco CPE Commander User Guide* is organized as follows:

- Chapter 1, “The Cisco CPE Commander,” details how to install, launch, and use the Cisco CPE Commander.
- Appendix A, “ADSL Technology Glossary,” provides a glossary of ADSL related terms and acronyms.

Document Conventions

This publication uses the document conventions as listed in Table 1, Table 2, and Table 3.

Table 1 Font Conventions

Convention	Definition	Sample
Times bold	Text body font used for arguments, commands, keywords, and punctuation that is part of a command that the user enters in text and command environments.	This is similar to the UNIX route command.
<i>Times italic</i>	Text body font used for publication names and for emphasis.	See the <i>Cisco 6100 User's Guide</i> for further details.
courier	Example font used for screen displays, prompts, and scripts.	Are you ready to continue? [Y]
courier bold	Example font used to indicate what the user enters in examples of command environments.	Login: root Password: <password>

Table 2 Command Syntax Conventions

Convention	Definition	Sample
vertical bars ()	Separate alternative, mutually exclusive elements	offset-list {in out} offset
square brackets ([])	indicate optional elements	[no] offset-list {in out} offset
braces ({ })	indicate a required choice	offset-list {in out} offset
braces within square brackets ([{ }])	indicate a required choice within an optional element.	[{letter\number} Enter]
boldface	indicates commands and keywords that are entered literally as shown	[no] offset-list {in out} offset
<i>italics</i>	indicate arguments for which you supply values Note In contexts that do not allow italics, arguments are enclosed in angle brackets (<>).	offset-list {in out} offset

Table 3 Note, Timesaver, Tip, Caution, and Warning Conventions

Convention	Description
Note	Means <i>reader take note</i> . Notes contain helpful suggestions or references to material not covered in the manual.
Timesaver	Means <i>the described action saves time</i> . You can save time by performing the action described in the paragraph.
Tip	Means <i>the following are useful tips</i> .
Caution	Means <i>reader be careful</i> . In this situation, you might do something that could result in equipment damage or loss of data.

Table 3 Note, Timesaver, Tip, Caution, and Warning Conventions

Convention	Description
Warning	Means <i>danger</i> . You are in a situation that could cause bodily injury. Before you work on any equipment, you must be aware of the hazards involved with electrical circuitry and familiar with standard practices for preventing accidents. To see translated versions of the warning, refer to the Regulatory Compliance and Safety document that accompanied the device.

Related Documentation

The following are the companion publications to the *Cisco CPE Commander User Guide*.

- *Cisco 675 Installation and Configuration Guide* provides step-by-step instructions for using and configuring the Cisco 675.
- *Cisco 675e Installation and Configuration Guide* provides step-by-step instructions for using and configuring the Cisco 675e.
- *Cisco 676 Installation and Configuration Guide* provides step-by-step instructions for using and configuring the Cisco 676.

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- WWW: <http://www-europe.cisco.com>
- WWW: <http://www-china.cisco.com>
- Telnet: cco.cisco.com
- Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and connection rates up to 28.8 kbps.

For a copy of CCO's Frequently Asked Questions (FAQ), contact cco-help@cisco.com. For additional information, contact cco-team@cisco.com.

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The Cisco CPE Commander

This chapter describes how to view and change Cisco 675 settings for the PPP and 1483 driver software on PC platforms (Windows NT, Windows 95, and Windows 98) and Macintosh platforms.

1.1 Installing the Cisco CPE Commander

See the following sections to install the Cisco CPE Commander software on either the PC or Macintosh platforms.

On PC Platforms

See the following instructions to install the Cisco CPE Commander software on a PC:

- Step 1** Load the Cisco CPE Commander CD-ROM into your CD-ROM drive.
- Step 2** Using Windows Explorer, navigate to the directory folder named `Commander`.
- Step 3** Double left-click on the `Commander` folder.
- Step 4** Locate the `setup.exe` file and double left-click.

This launches the InstallShield for the Cisco CPE Commander software. A series of Cisco CPE Commander dialog boxes appear. Some of these boxes prompt you for information.

- Step 5** Click **Next** after finishing with each screen.

The final InstallShield asks if you want to put a shortcut on the desktop or in the startup menu. If you answer yes to either of these, the InstallShield puts a shortcut to the Cisco CPE Commander on your desktop and in your startup menu. If a shortcut to the Commander resides in your startup menu, the Cisco CPE Commander launches each time you boot up.

Step 6 Click **Next** when you are finished.

Step 7 Once installation is complete, reboot your machine.

After you reboot, the Cisco CPE Commander automatically starts up if you checked this option at the final InstallShield. See “Accessing the Cisco CPE Commander” on page 3 for information on accessing and launching the Cisco CPE Commander.

On Macintosh Platforms

See the following instructions to install the Cisco CPE Commander software on a Macintosh platform:

Step 1 Load the Cisco CPE Commander CD-ROM into the CD drive on your computer.

The Cisco CPE Commander CD icon appears on the desktop.

Step 2 Double-click on the Cisco CPE Commander icon. This opens the Cisco CPE Commander volume.

Step 3 Double-click on the Cisco CPE Commander self-extracting archive. The filename has a `.sea` extension.

This opens the self-extracting archive and prompts you to select a folder for the Cisco CPE Commander software.

Step 4 Choose the folder or drive where you want to install Cisco CPE Commander software.

Step 5 Click the **OK** button.

You have installed Cisco CPE Commander software. See the following section to access and the launch the Cisco CPE Commander application.

1.2 Accessing the Cisco CPE Commander

See the following instructions to access and launch the Cisco CPE Commander:

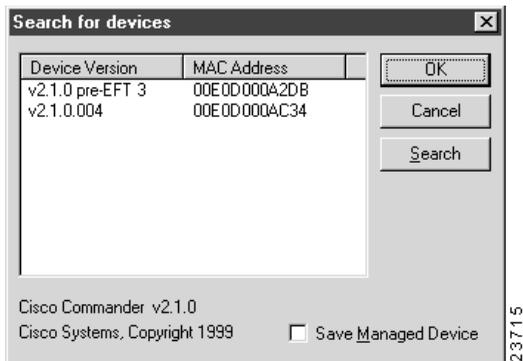
On PC Platforms

You can access the Cisco CPE Commander in one of three ways:

- If during installation you chose to put a shortcut of the Cisco CPE Commander in the `startUp` folder of your computer, the Cisco CPE Commander starts automatically upon boot-up.
- If during installation, you chose to put a shortcut of the Cisco CPE Commander on your desktop, locate the desktop icon and double left-click.
- If you did not put a shortcut into your `startUp` folder, locate the Cisco CPE Commander executable on your computer at `C:\Windows\` and double left-click.

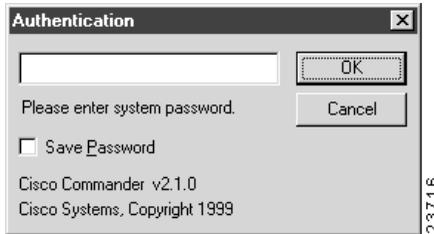
The following dialog appears:

Figure 1-1 Search for Devices Dialog



- Step 1** Highlight the name of the Cisco CPE device and click on the **OK** button. The Authentication dialog box appears:

Figure 1-2 Authentication Dialog



- Step 2** Enter the exec-level password and click on the **OK** button.

Note Cisco CPE Equipment have two types of passwords, exec and enable. In order to use the Cisco CPE Commander, you must enter the exec-level password.

- Step 3** Click on the save password option to avoid logging in each time.

You are now logged on to the Cisco CPE Commander. See “Using the Cisco CPE Commander Screens” on page 7 to use the Cisco CPE Commander functionality. The data displayed by the Cisco CPE Commander is automatically updated every two seconds.

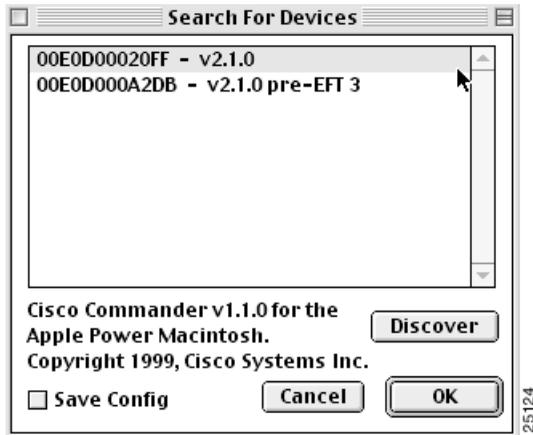
On Macintosh Platforms

To access the Cisco CPE Commander in on Macintosh platforms:

- Step 1** Go to the folder where you put the Cisco CPE Commander software.
- Step 2** Double-click on the Cisco CPE Commander icon.

The following dialog appears:

Figure 1-3 Search for Devices Dialog



- Step 1** Highlight the name of the Cisco CPE device and click on the **OK** button. The Authentication dialog box appears:

Figure 1-4 Authentication Dialog



- Step 2** Enter the exec-level password and click on the **OK** button.

Note Cisco CPE Equipment have two types of passwords, exec and enable. In order to use the Cisco CPE Commander, you must enter the exec-level password.

- Step 3** Click on the save password option to avoid logging in each time.

You are now logged on to the Cisco CPE Commander and the Cisco CPE Commander screens display. See the following section to use the Cisco CPE Commander functionality. The data displayed by the Cisco CPE Commander is automatically updated every two seconds.

1.3 Using the Cisco CPE Commander Screens

Once you have logged in to the Cisco CPE Commander, the Cisco CPE Commander screens display. The screens show Cisco CPE Commander fields and action buttons.

On PC Platforms

The Cisco CPE Commander on PC platforms has the following tabs:

- Call tab
- Link tab
- Settings tab
- Device tab
- About tab

The tabs are explained in the following sections.

On Macintosh Platforms

The Cisco CPE Commander on Macintosh platforms has the following tabs:

- Call tab
- Link tab
- About tab

The tabs are explained in the following sections.

1.3.1 Call Page

Use the Call page to view the receive and transmit statistics for a connection. Information such as bytes and packets received and transmitted are shown, in addition to the Virtual Path Identifier (VPI)/Virtual Circuit Identifier (VCI) numbers and connection state.

Note If you are using the 1483 driver software, the Call page also displays a Connect button. To establish a connection, click **Connect**. After a connection is established, the Cisco CPE Commander renews the IP address of the PC using Dynamic Host Configuration Protocol (DHCP) unless you have a static IP address assigned by your service provider (SP).

On PC Platforms

Figure 1-5 shows the Call page for PC platforms.

Figure 1-5 Call Page for PC platforms

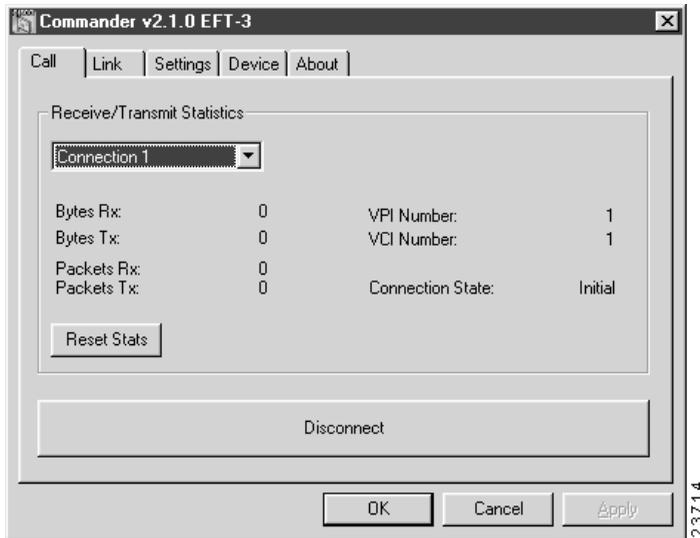


Table 1-1 lists definitions for the fields on the Call page.

Table 1-1 Call Page Field Descriptions for PC Platforms

Field Name	Description
Connection number	Connection number. Select the connection number (1) from the drop-down box. Note This area remains grayed out unless a connection exists.
Bytes Rx	Number of bytes received for a specified connection.
Bytes Tx	Number of bytes transmitted for a specified connection.
Packets Rx	Number of packets received for a specified connection.

Table 1-1 Call Page Field Descriptions for PC Platforms (continued)

Field Name	Description
Packets Tx	Number of packets transmitted for a specified connection.
VPI Number	VPI for a specific connection. The VPI is hard-coded to equal 1.
VCI Number	VCI for a specific connection. Usually hard-coded to equal one.
Connection State	The state of the connection. Options include: <ul style="list-style-type: none">• <i>Off-line</i>—The Cisco 675 is not connected.• <i>Proceeding</i>—The Cisco 675 is attempting to establish a connection.• <i>On-line</i>—The Cisco 675 has established a connection.
Reset Stats	Zeroes out all of the counters on this page.

On Macintosh Platforms

Figure 1-6 shows the Call page for Macintosh platforms.

Figure 1-6 Call Page for Macintosh platforms

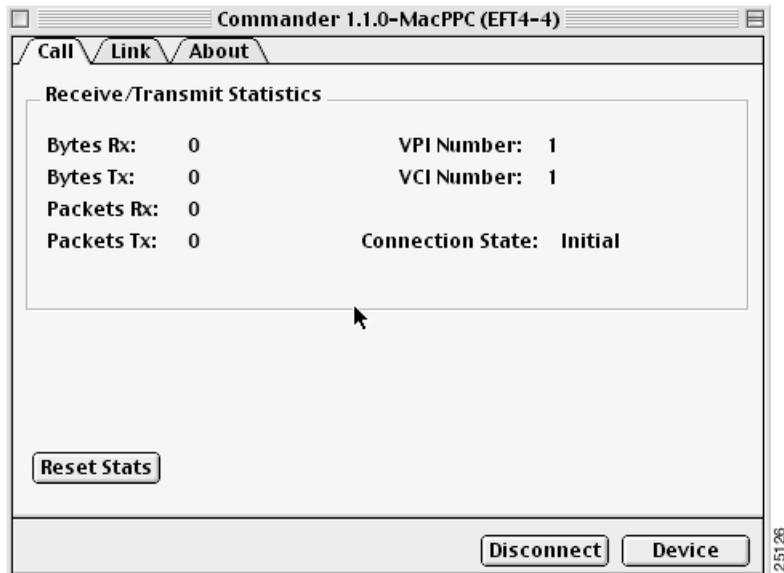


Table 1-2 lists definitions for the fields on the Call page.

Table 1-2 Call Page Field Descriptions for Macintosh Platforms

Field Name	Description
Connection number	Connection number. Select the connection number (1) from the drop-down box. Note This area remains grayed out unless a connection exists.
Bytes Rx	Number of bytes received for a specified connection.
Bytes Tx	Number of bytes transmitted for a specified connection.

Table 1-2 Call Page Field Descriptions for Macintosh Platforms

Field Name	Description
Packets Rx	Number of packets received for a specified connection.
Packets Tx	Number of packets transmitted for a specified connection.
VPI Number	VPI for a specific connection. The VPI is hard-coded to equal 1.
VCI Number	VCI for a specific connection. Usually hard-coded to equal one.
Connection State	The state of the connection. Options include: <ul style="list-style-type: none">• <i>Off-line</i>—The Cisco 675 is not connected.• <i>Proceeding</i>—The Cisco 675 is attempting to establish a connection.• <i>On-line</i>—The Cisco 675 has established a connection.
Reset Stats	Zeroes out all of the counters on this page.
Disconnect/ Connect	Connects or disconnects the ADSL link. When the ADSL link is trained, the Disconnect button appears. When it is not, the Connect button appears.
Device	Allows you to switch to another CPE device. When you click on this button, the Search for Devices dialog appears. Click on the device you want and click on the Discover button.

1.3.2 Link Page

Use the Link page to view the following information:

- Link statistics—Sum of all of the transmit and receive statistics collected for the duration of the connection.
- Error statistics—Number of errors received on the line.
- Upstream and downstream data rates

Note The SP can enforce time limits on connections. When running, the Cisco CPE Commander displays timeout messages. These messages warn you that the SP will terminate or is terminating your session. If the Timer Type, Elapsed Time and Timer Period fields on the Link page display Unknown, the SP is enforcing time limits on the session. In this case, the Cisco CPE Commander pops up dialog boxes when the link is about to drop or when the link drops. If the Timer Type, Elapsed Time and Timer Period fields display specific timeout values, the SP terminates the link according to these timeout values.

On PC Platforms

Figure 1-7 shows the Call page for PC platforms.

Figure 1-7 Link Page for PC Platforms

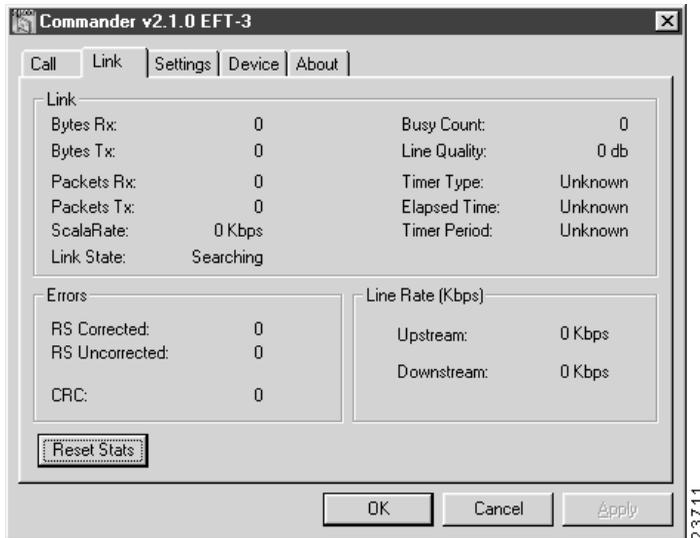


Table 1-3 lists definitions for the fields in the Link page.

Table 1-3 Link Page Field Definitions for PC Platforms

Field Name	Description
Bytes Rx	Number of bytes received.
Bytes Tx	Number of bytes transmitted.
Packets Rx	Number of packets received.
Packets Tx	Number of packets transmitted.

Table 1-3 Link Page Field Definitions for PC Platforms (continued)

Field Name	Description
ScalaRate	ScalaRate. Your SP sets this rate. ScalaRate only applies to the upstream rate.
Link State	<p>Status of the link between the Cisco 675 and the far-end modem. Options include:</p> <ul style="list-style-type: none"> • <i>Searching</i>—The Cisco 675 is trying to locate a far-end modem with which to connect. • <i>Training</i>—The Cisco 675 has located a far-end modem and is training. • <i>Pending</i>—The Cisco 675 is completing the connection. • <i>Trained</i>—The Cisco 675 has established a connection with the far-end modem. • <i>Down</i>—The Cisco 675 is inactive. • <i>Busy</i>—The far-end equipment has no modems available. <p>Note When you train at high rates, the Cisco 675 flashes the Searching, Training, and Pending link states several times before connecting.</p>
Busy Count	Number of times the Cisco 675 attempted to connect to the far-end equipment but could not because the far-end equipment was busy.
Line Quality	Number between 12 and 45. This number describes the quality of the physical connection between the Cisco 675 and far-end equipment. The higher the number, the better the quality of the physical connection.

Table 1-3 Link Page Field Definitions for PC Platforms (continued)

Field Name	Description
Timer Type	<p>Type of timer. Options include:</p> <ul style="list-style-type: none"> • <i>None</i>—If the Timer Type is None, this means that the SP has not set a timer. • <i>Idle</i>—If the Timer Type is Idle, the Cisco 675 resets the Elapsed Time field when the link resumes activity. However, if the link remains inactive for the entire Timer Period, the Cisco 675 drops the link. • <i>Session</i>—If the Timer Type is Session, the Cisco 675 drops the link when Elapsed Time equals the Timer Period. • <i>Unknown</i>—If the Timer Type is Unknown, the SP is enforcing time limits on the session. In this case, the Cisco CPE Commander pops up dialog boxes when the link is about to drop or when the link drops. <p>Note Your SP defines these timer types.</p>
Elapsed Time	<p>Elapsed time of the timer type. Varies according to Timer Type:</p> <ul style="list-style-type: none"> • If the Timer Type is Idle, the Elapsed Time is the time elapsed since the last activity on the link. • If the Timer Type is Session, the Elapsed Time is the total time that the current session has been up and running. • If the Timer Type is Unknown, the SP is enforcing time limits on the session. In this case, the Cisco CPE Commander pops up dialog boxes when the link is about to drop or when the link drops.

Table 1-3 Link Page Field Definitions for PC Platforms (continued)

Field Name	Description
Timer Period	<p>Time period that, once elapsed, cues the Cisco 675 to drop the link. Varies according to Timer Type:</p> <ul style="list-style-type: none"> • If the Timer Type is Idle–Timer Period specifies the length of time the link can be inactive before the link is dropped. • If the Timer Type is Session–Timer Period specifies the maximum amount of time that a session can be active before the link is dropped. The maximum Timer Period for Session is 240 minutes. • If the Timer Type is Unknown, the SP is enforcing time limits on the session. In this case, the Cisco CPE Commander pops up dialog boxes when the link is about to drop or when the link drops.
RS Corrected	<p>Specifies the number of Reed-Solomon Corrected errors. Reed-Solomon is an Error Correction Code (ECC) that allows data that is being read or transmitted to be checked for errors and, when necessary, corrected immediately.</p>
RS Uncorrected	<p>Specifies the number of Reed-Solomon uncorrected errors.</p>
CRC Errors	<p>Cyclic Redundancy Check. Indicates that an error occurred during a transmission.</p> <p>Note It is normal to see a small number of CRC errors.</p>
Upstream	<p>Upstream line rate. You can set this rate on the Settings page of the Cisco CPE Commander, but your SP can override your settings.</p>
Downstream	<p>Downstream line rate. You can set this rate on the Settings page of the Cisco CPE Commander, but your SP can override your settings.</p>
Reset Stats	<p>Zeroes out all of the counters on this page.</p>

On Macintosh Platforms

Figure 1-8 shows the Call page for Macintosh platforms.

Figure 1-8 Link Page for Macintosh Platforms

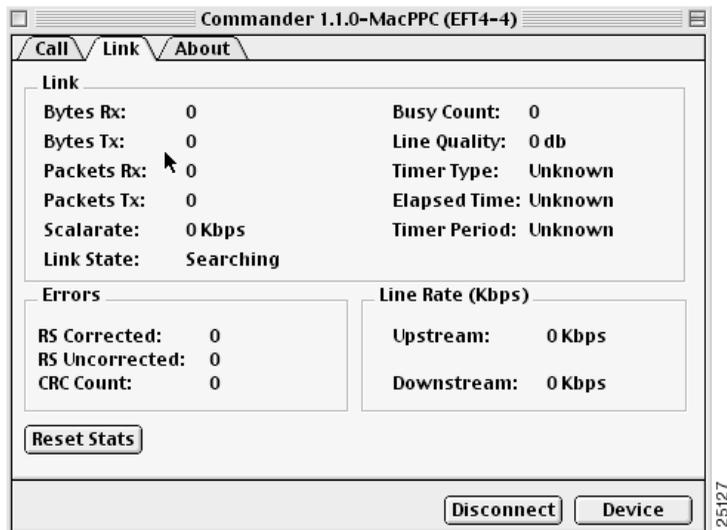


Table 1-4 lists definitions for the fields in the Link page.

Table 1-4 Link Page Field Definitions for Macintosh Platforms

Field Name	Description
Bytes Rx	Number of bytes received.
Bytes Tx	Number of bytes transmitted.
Packets Rx	Number of packets received.
Packets Tx	Number of packets transmitted.

Table 1-4 Link Page Field Definitions for Macintosh Platforms

Field Name	Description
ScalaRate	ScalaRate. Your SP sets this rate. ScalaRate only applies to the upstream rate.
Link State	<p>Status of the link between the Cisco 675 and the far-end modem. Options include:</p> <ul style="list-style-type: none"> • <i>Searching</i>—The Cisco 675 is trying to locate a far-end modem with which to connect. • <i>Training</i>—The Cisco 675 has located a far-end modem and is training. • <i>Pending</i>—The Cisco 675 is completing the connection. • <i>Trained</i>—The Cisco 675 has established a connection with the far-end modem. • <i>Down</i>—The Cisco 675 is inactive. • <i>Busy</i>—The far-end equipment has no modems available. <p>Note When you train at high rates, the Cisco 675 flashes the Searching, Training, and Pending link states several times before connecting.</p>
Busy Count	Number of times the Cisco 675 attempted to connect to the far-end equipment but could not because the far-end equipment was busy.
Line Quality	Number between 12 and 45. This number describes the quality of the physical connection between the Cisco 675 and far-end equipment. The higher the number, the better the quality of the physical connection.

Table 1-4 Link Page Field Definitions for Macintosh Platforms

Field Name	Description
Timer Type	<p>Type of timer. Options include:</p> <ul style="list-style-type: none"> • <i>None</i>—If the Timer Type is None, this means that the SP has not set a timer. • <i>Idle</i>—If the Timer Type is Idle, the Cisco 675 resets the Elapsed Time field when the link resumes activity. However, if the link remains inactive for the entire Timer Period, the Cisco 675 drops the link. • <i>Session</i>—If the Timer Type is Session, the Cisco 675 drops the link when Elapsed Time equals the Timer Period. • <i>Unknown</i>—If the Timer Type is Unknown, the SP is enforcing time limits on the session. In this case, the Cisco CPE Commander pops up dialog boxes when the link is about to drop or when the link drops. <p>Note Your SP defines these timer types.</p>
Elapsed Time	<p>Elapsed time of the timer type. Varies according to Timer Type:</p> <ul style="list-style-type: none"> • If the Timer Type is Idle, the Elapsed Time is the time elapsed since the last activity on the link. • If the Timer Type is Session, the Elapsed Time is the total time that the current session has been up and running. • If the Timer Type is Unknown, the SP is enforcing time limits on the session. In this case, the Cisco CPE Commander pops up dialog boxes when the link is about to drop or when the link drops.

Table 1-4 Link Page Field Definitions for Macintosh Platforms

Field Name	Description
Timer Period	<p>Time period that, once elapsed, cues the Cisco 675 to drop the link. Varies according to Timer Type:</p> <ul style="list-style-type: none"> • If the Timer Type is Idle—Timer Period specifies the length of time the link can be inactive before the link is dropped. • If the Timer Type is Session—Timer Period specifies the maximum amount of time that a session can be active before the link is dropped. The maximum Timer Period for Session is 240 minutes. • If the Timer Type is Unknown, the SP is enforcing time limits on the session. In this case, the Cisco CPE Commander pops up dialog boxes when the link is about to drop or when the link drops.
RS Corrected	Specifies the number of Reed-Solomon Corrected errors. Reed-Solomon is an Error Correction Code (ECC) that allows data that is being read or transmitted to be checked for errors and, when necessary, corrected immediately.
RS Uncorrected	Specifies the number of Reed-Solomon uncorrected errors.
CRC Errors	<p>Cyclic Redundancy Check. Indicates that an error occurred during a transmission.</p> <p>Note It is normal to see a small number of CRC errors.</p>
Upstream	Upstream line rate. You can set this rate on the Settings page of the Cisco CPE Commander, but your SP can override your settings.
Downstream	Downstream line rate. You can set this rate on the Settings page of the Cisco CPE Commander, but your SP can override your settings.
Reset Stats	Zeroes out all of the counters on this page.
Disconnect/ Connect	Connects or disconnects the ADSL link. When the ADSL link is trained, the Disconnect button appears. When it is not, the Connect button appears.
Device	Allows you to switch to another CPE device. When you click on this button, the Search for Devices dialog appears. Click on the device you want and click on the Discover button.

1.3.3 Settings Page

Use the Settings page to view RADIUS settings. When the Cisco 675 connects with a far-end modem, the fields on the Settings page gray out.

The Cisco 675 supports dedicated service for the RFC 1483 driver. You have the option to have a dedicated modem at the SP, which provides for uninterrupted ADSL service. You must subscribe to this service by contacting your SP. Once you have subscribed to the service, check the Auto Connect check box on the Settings page to invoke the service.

Note If you check the Auto Connect check box and have not subscribed to a dedicated service, the Cisco 675 will train, but the SP equipment will immediately terminate the link. Once the SP terminates the link, you could be prevented from training again for up to 60 minutes even after you uncheck the Auto Connect check box.

Figure 1-9 shows the Settings page.

Figure 1-9 Settings Page



Note Change the ADSL parameters under the direction of your SP or Cisco support personnel.

Table 1-5 lists definitions for the fields in the Settings page.

Table 1-5 Settings Page Field Descriptions

Field Name	Description
Baud	Current baud rate
Upstream	Allows you to change the current upstream data transfer rate. Note Your SP can override the rate settings.

Table 1-5 Settings Page Field Descriptions (continued)

Field Name	Description
Downstream	Allows you to change the current downstream data transfer rate. Note Your SP can override the rate settings.
Transmit Power	Allows you to change the transmit power. Full is the default setting. Note Your SP can override the rate settings.
Reset Defaults	Reinstates defaults.
Animated Icon	When checked, causes the Cisco CPE Commander icon to change color when the Cisco 675 is training.
Auto Connect Mode	When checked, provides dedicated ADSL service for the 1483 driver. Note This option is grayed out if you are using the PPP driver.

To apply new parameters, click **Apply**.

1.3.4 Device Page

The Device page allows you to switch between one Cisco 675 device and another, to authenticate passwords and to verify the software version and copyright information.

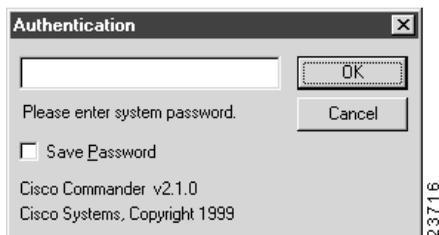
Figure 1-10 Device Page for PC Platforms



The Device page has two action buttons:

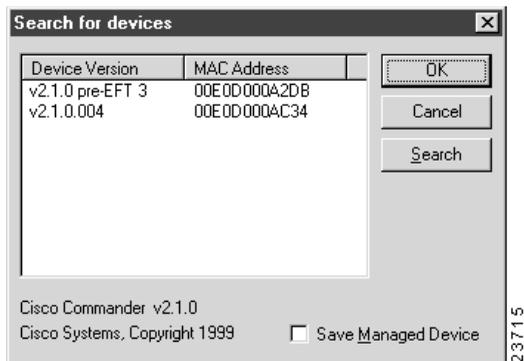
- **Authenticate** - Allows you to change the password stored locally in the PC after you click on the Save Password check box. When you click the **Authenticate** button, the following dialog appears:

Figure 1-11 Authentication Dialog



- **Change** - Click to switch to a different Cisco 675 device. When you click the **Change** button, the following dialog appears:

Figure 1-12 Search for Devices Dialog



1.3.5 About Page

Use the About page to view the software type and version and other attributes. The Media Access Control (MAC) address field is associated with the 675 hardware and is always shown.

On PC Platforms

Figure 1-13 shows the Call page for Macintosh platforms.

Figure 1-13 About Page for PC Platforms



On Macintosh Platforms

Figure 1-14 shows the Call page for Macintosh platforms.

Figure 1-14 About Page for Macintosh Platforms

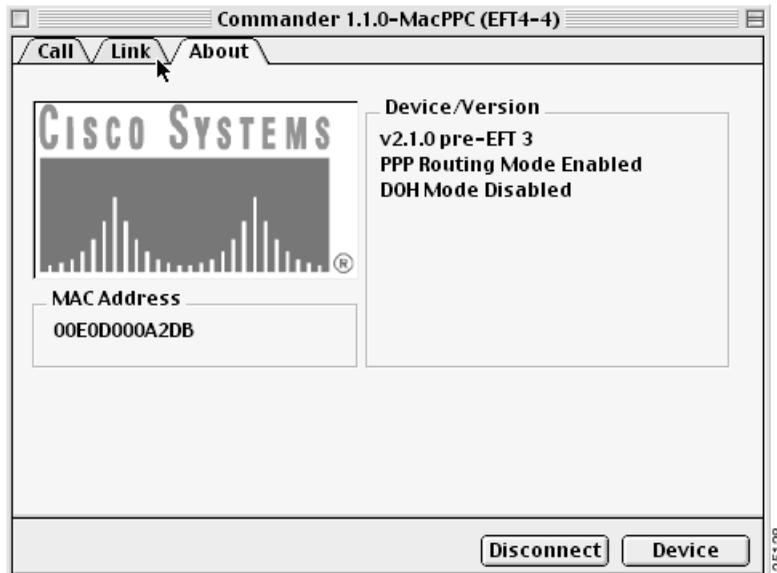


Table 1-6 provides definitions for the buttons at the bottom of the About page.

Table 1-6 About Page Button Descriptions for Macintosh Platforms

Disconnect/ Connect	Connects or disconnects the ADSL link. When the ADSL link is trained, the Disconnect button appears. When it is not, the Connect button appears.
Device	Allows you to switch to another CPE device. When you click on this button, the Search for Devices dialog appears. Click on the device you want and click on the Discover button.

ADSL Technology Glossary

address mask

A bit mask used to select bits from an Internet address for subnet addressing. The mask is 32 bits in length and selects the network portion of the Internet address and one or more bits of the local portion. Sometimes called subnet mask.

AAL5

ATM Adaption Layer. This layer maps higher layer user data into ATM cells, making the data suitable for transport through the ATM network.

ADSL

Asymmetric Digital Subscriber Line. A digital subscriber line (DSL) technology in which the transmission of data from server to client is much faster than the transmission from the client to the server.

ADSLAM

Advanced Digital Subscriber Line Access Multiplexer. Concentrates and multiplexes signals at the telephone service provider location to the broader wide area network.

ATM

Asynchronous Transfer Mode. A cell-based data transfer technique in which channel demand determines packet allocation. ATM offers fast packet technology, real time, demand led switching for efficient use of network resources.

authentication

A security feature that allows access to information to be granted on an individual basis.

auto-negotiation

Procedure for adjusting line speeds and other communication parameters automatically between two computers during data transfer.

AWG

American Wire Gauge. The measurement of thickness of a wire.

bandwidth

The range of frequencies a transmission line or channel can carry: the greater the bandwidth, the greater the information-carrying capacity of a channel. For a digital channel this is defined in bits. For an analog channel it is dependent on the type and method of modulation used to encode the data.

bandwidth on demand

The ability of a user to dynamically set upstream and downstream line speeds to a particular rate of speed.

bps

Bits per second. A standard measurement of digital transmission speeds.

bridge

A device that connects two or more physical networks and forwards packets between them. Bridges can usually be made to filter packets, that is, to forward only certain traffic. Related devices are: repeaters which simply forward electrical signals from one cable to the other, and full-fledged routers which make routing decisions based on several criteria. See repeater and router.

broadband

Characteristic of any network that multiplexes independent network carriers onto a single cable. This is usually done using frequency division multiplexing (FDM). Broadband technology allows several networks to coexist on one single cable; traffic from one network does not interfere with traffic from another since the “conversations” happen on different frequencies in the “ether” rather like the commercial radio system.

Broadband Remote Access Server

Device that terminates remote users at the corporate network or Internet users at the Internet Service Provider (ISP) network, such as the Cisco FireRunner product that provides firewall, authentication, and routing services for remote users.

broadcast

A packet delivery system where a copy of a given packet is given to all hosts attached to the network. Example: Ethernet.

CAP encoding

Carrierless Amplitude Modulation and Phase. A modulation technology for ADSL.

central office

Refers to equipment located at a Telco or service provider's office.

customer premise

Refers to equipment located in a user's premises.

downstream rate

The line rate for return messages or data transfers from the network machine to the user's customer's premise machine.

DRAM

Dynamic Random Access Memory. A type of semiconductor memory in which the information is stored in capacitors on a metal oxide semiconductor integrated circuit.

DSLAM

Digital Subscriber Line Access Multiplexer.

encapsulation

The technique used by layered protocols in which a layer adds header information to the protocol data unit (PDU) from the layer above. As an example, in Internet terminology, a packet would contain a header from the physical layer, followed by a header from the network layer (IP), followed by a header from the transport layer (TCP), followed by the application protocol data.

Ethernet

One of the most common local area network (LAN) wiring schemes, Ethernet has a transmission rate of 10 Mbps; a newer standard called Fast Ethernet will carry 100 Mbps.

FCC

Federal Communications Commission. A U.S. government agency that regulates interstate and foreign communications. The FCC sets rates for communication services, determines standards for equipment, and controls broadcast licensing.

finger daemon

A software tool that allows a client to query a server for information on users.

FTP

File Transfer Protocol. The Internet protocol (and program) used to transfer files between hosts.

gateway

A system which does translation from some native format to another. Examples include X.400 to/from RFC 822 electronic mail gateways. See router.

hop count

A measure of distance between two points on the Internet. It is equivalent to the number of gateways that separate the source and destination.

HTML

Hypertext Markup Language. The page-coding language for the World Wide Web.

HTML browser

A browser used to traverse the Internet, such as Netscape or Microsoft Internet Explorer.

http

Hypertext Transfer Protocol. The protocol used to carry world-wide web (www) traffic between a www browser computer and the www server being accessed.

ICMP

Internet Control Message Protocol. The protocol used to handle errors and control messages at the IP layer. ICMP is actually part of the IP protocol.

Internet address

An IP address assigned in blocks of numbers to user organizations accessing the Internet. These addresses are established by the United States Department of Defense's Network Information Center. Duplicate addresses can cause major problems on the

network, but the NIC trusts organizations to use individual addresses responsibly. Each address is a 32-bit address in the form of x.x.x.x where *x* is an eight-bit number from 0 to 255. There are three classes: A, B and C, depending on how many computers on the site are likely to be connected.

Internet

A collection of networks interconnected by a set of routers which allow them to function as a single, large virtual network. When written in upper case, Internet refers specifically to the DARPA (Defense Advanced Research Projects Agency) Internet and the TCP/IP protocols it uses.

Internet Protocol (IP)

The network layer protocol for the Internet protocol suite.

inverse multiplexing

Allows individually-dialed channels across the network to be combined into a single, higher-speed data stream. Using this service, a user can dial multiple calls and combine them together into a single high-speed data stream.

IP

See Internet Protocol.

IP address

The 32-bit address assigned to hosts that want to participate in a TCP/IP Internet.

IP datagram

The fundamental unit of information passed across the Internet. It contains source and destination addresses along with data and a number of fields that define such things as the length of the datagram, the header checksum, and flags to say whether the datagram can be or has been fragmented.

IPX

Internet Packet Exchange. The network layer (OSI layer 3) datagram-based protocol usually used by Novell's NetWare network operating system. Supports any window size and packet sizes up to 64kbytes.

IPXCP

Internetwork Packet Exchange Control Protocol. A protocol defined in RFC 1552.

ISO

International Standards Organization. A voluntary, non-treaty organization founded in 1946, responsible for creating international standards in many areas, including computers and communications.

ISP

Internet Service Provider. A company that allows home and corporate users to connect to the Internet.

ITU-T

International Telecommunications Union, Standardization Sector. ITU-T is the telecommunication standardization sector of ITU and is responsible for making technical recommendations about telephone and data (including fax) communications systems for service providers and suppliers.

LAN

Local Area Network. A limited distance (typically under a few kilometers or a couple of miles) high-speed network (typically 4 to 100 Mbps) that supports many computers (typical two to thousands).

LED

Light Emitting Diode. The lights indicating status or activity on electronic equipment.

line rate

The speed by which data is transferred over a particular line type, express in bits per second (bps).

logical port

A logical entry to a server machine. These ports are mostly invisible to the user, though you may occasionally see a URL with a port number included in it. These ports do not refer to physical locations; they are set up by server administrators for network trafficking.

loopback

A diagnostic test that returns the transmitted signal back to the sending device after it has passed through a network or across a particular link. The returned signal can then be compared to the transmitted one. The discrepancy between the two help to trace the fault. When trying to locate a faulty piece of equipment, loopbacks will be repeated, eliminating satisfactory machines until the problem is found.

MAC

Media Access Control Layer. A sub-layer of the Data Link Layer (Level Two) of the ISO OSI Model responsible for media control.

MIB

Management Information Base. A collection of objects that can be accessed via a network management protocol, such as SNMP and CMIP (Common Management Information Protocol).

modem pooling

The ability of a service provider to dynamically switch users' messages between modems, rather than requiring a modem to be dedicated to a particular user on a network.

modem redundancy

When backup modems are immediately available should a modem facilitating communication fail.

multicast

A special form of broadcast where copies of the packet are delivered to only a subset of all possible destinations. See broadcast.

multiplexer

A device that can send several signals over a single line. They are then separated by a similar device at the other end of the link. This can be done in a variety of ways: time division multiplexing, frequency division multiplexing and statistical multiplexing. Multiplexers are also becoming increasingly efficient in terms of data compression, error correction, transmission speed and multi-drop capabilities.

NAT

Network Address Translation.

NetSpeed Operating System (NSOS)

Operating System that users access to configure and operate the Cisco products.

network layer

The OSI layer that is responsible for routing, switching, and subnetwork access across the entire OSI environment.

node

A general term used to refer to a computer or related device; often used to refer to a networked computer or device.

NVT

Network Virtual Terminal.

octet

A networking term that identifies 8 bits. In TCP/IP, it is used instead of *byte*, because some systems have bytes that are not 8 bits.

OSI

Open Systems Interconnection. An international standardization program to facilitate communications among computers from different manufacturers. See ISO.

packet

The unit of data sent across a packet switching network.

PAP

Password Authentication Protocol.

PCI

Peripheral Component Interconnect. An industry local bus standard. Supports up to 16 physical slots but is electrically limited to typically three or four plug-in PCI cards in a PC. Has a typical sustained burst transfer rate of 80 Mbs, which is enough to handle 24-bit color at 30 frames per second (full-color, full-motion video).

Permanent Virtual Connection (PVC)

A fixed virtual circuit between two users: the public data network equivalent of a leased line. No call setup or clearing procedures are needed.

physical layer

Handles transmission of raw bits over a communication channel. The physical layer deals with mechanical, electrical, and procedural interfaces.

physical port

A physical connection to a computer through which data flows. An “Ethernet port”, for example, is where Ethernet network cabling plugs into a computer.

port

The abstraction used by Internet transport protocols to distinguish among multiple simultaneous connections to a single destination host. See selector.

POTS

Plain Old Telephone Service.

PPP

Point-To-Point-Protocol. The successor to SLIP, PPP provides router-to-router and host-to-network connections over both synchronous and asynchronous circuits. See SLIP.

protocol

A formal description of messages to be exchanged and rules to be followed for two or more systems to exchange information.

PVC

See Permanent Virtual Connection.

QoS

Quality of Service, a characteristic of data transmission that measures how accurately and how quickly a message or data is transferred from a source computer to a destination computer over a network.

RADIUS

Remote Authentication Dial-In User Service (RADIUS). A client/server security protocol created by Livingston Enterprises. Security information is stored in a central location, known as the RADIUS server.

RADIUS Accounting Client

Permits system administrators to track dial-in use.

RADIUS Security Client

Controls access to specific services on the network.

RADSL

Rate Adaptive Digital Subscriber Line (RADSL). A technique for keeping the quality of transmissions within specified parameters.

remote address

The IP address of a remote server.

remote server

A network computer that allows a user to log onto the network from a distant location.

RFC

Request for Comment. The document series, begun in 1969, which describes the Internet suite of protocols and related experiments. Not all RFCs describe Internet standards, but all Internet standards are written up as RFCs.

route

The path that network traffic takes from its source to its destination. The route a datagram may follow can include many gateways and many physical networks. In the Internet, each datagram is routed separately.

router

A system responsible for making decisions about which of several paths network (or Internet) traffic will follow. To do this, it uses a routing protocol to gain information about the network and algorithms to choose the best route based on several criteria known as “routing metrics.” See bridge and repeater.

routing table

Information stored within a router that contains network path and status information. It is used to select the most appropriate route to forward information along.

RS-232

An EIA standard which is the most common way of linking data devices together.

secret

It is the encryption key used by RADIUS to send authentication information over a network.

serial line

A serial line is used to refer to data transmission over a telephone line via a modem or when data goes from a computer to a printer or other device.

shared secret

RADIUS uses the shared secret to encrypt the passwords in the authentication packets, so outside parties do not have access to the passwords on your network.

SIMM

Single In-line Memory Module. A small circuit board or substrate, typically about 10cm x 2cm, with RAM integrated circuits or die on one or both sides and a single row of pins along one long edge.

SNMP

Simple Network Management Protocol. The network management protocol of choice for TCP/IP-based internets.

socket

- (1) The Berkeley Unix mechanism for creating a virtual connection between processes.
- (2) IBM term for software interfaces that allow two Unix application programs to talk via TCP/IP protocols.

Spanning-Tree Bridge Protocol (STP)

Spanning-Tree Bridge Protocol (STP). Part of an IEEE standard. A mechanism for detecting and preventing loops from occurring in a multi-bridged environment. When three or more LAN segments are connected by bridges, a loop can occur. Because a bridge forwards all packets which are not recognized as being local, some packets can circulate for long periods of time, eventually degrading system performance. This algorithm ensures only one path connects any pair of stations, selecting one bridge as the 'root' bridge, with the highest priority one as identifier, from which all paths should radiate.

spoofing

A method of fooling network end stations into believing that keep-alive signals have come from and return to the host. Polls are received and returned locally at either end of the network and are transmitted only over the open network if there is a condition change.

STP

See Spanning-Tree Bridge Protocol.

subnet

For routing purposes, IP networks can be divided into logical sub nets by using a subnet mask. Values below those of the mask are valid addresses on the subnet.

subnet mask

See address mask.

SVC

See Switched Virtual Connection.

switch

Equipment used to connect and distribute communications between a trunk line or backbone and individual nodes.

Switched Virtual Connection (SVC)

A temporary virtual circuit between two users.

synchronous connection

During synchronous communications, data is not sent in individual bytes, but as frames of large data blocks.

SYSLOG

SYSLOG allows you to log significant system information to a remote server.

TCP

Transmission Control Protocol. The major transport protocol in the Internet suite of protocols providing reliable, connection-oriented full-duplex streams.

TFTP

Trivial File Transfer Protocol. A simple file transfer protocol (a simplified version of FTP) that is often used to boot diskless workstations and other network devices such as routers over a network (typically a LAN). Has no password security.

Telnet

The virtual terminal protocol in the Internet suite of protocols. Allows users of one host to log into a remote host and act as normal terminal users of that host.

training mode

Characteristic of a router that allows it to use RASL technology to adjust its line speed according to noise conditions on the transmission line.

transparent bridging

So named because the intelligence necessary to make relaying decisions exists in the bridge itself and is thus transparent to the communicating workstations. It involves frame forwarding, learning workstation addresses and ensuring no topology loops exist (in conjunction with the Spanning-Tree algorithm).

Trivial File Transfer Protocol (TFTP)

See TFTP.

twisted pair

Two insulated copper wires twisted together with the twists or lays varied in length to reduce potential signal interference between the pairs.

UDP

User Datagram Protocol. A connectionless transport protocol that runs on top of TCP/IP's IP. UDP, like TCP, uses IP for delivery; however, unlike TCP, UDP provides for exchange of datagrams without acknowledgments or guaranteed delivery. Best suited for small, independent requests, such as requesting a MIB value from an SNMP agent, in which first setting up a connection would take more time than sending the data.

UL

Underwriters Laboratories. A private organization that tests and certifies electrical components and devices against rigorous safety standards. A UL Listing Mark on a product means that representative samples of the product have been tested and evaluated to nationally recognized safety standards with regard to fire, electric shock, and other related safety hazards.

UNI signaling

User Network Interface signaling for ATM communications.

upstream rate

The line rate for message or data transfer from the source machine to a destination machine on the network. Also see downstream rate.

VC

See Virtual Connection.

Virtual Connection (VC)

A link that seems and behaves like a dedicated point to point line or a system that delivers packets in sequence, as happens on an actual point to point network. In reality, the data is delivered across a network via the most appropriate route. The sending and receiving devices do not have to be aware of the options and the route is chosen only when a message is sent. There is no pre-arrangement, so each virtual connection exists only for the duration of that one transmission.

WAN

Wide Area Network. A data communications network that spans any distance and is usually provided by a public carrier (such as a telephone company or service provider).

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