Ping Dialog Box

Use the Ping dialog box to set up the Ping.

{button ,KL(`Ping dialog box')}   <u>Things you can do with the Ping dialog box</u>

Host Lookup Dialog Box

Use the Host Lookup dialog box to look up the name or IP address of a host.

{button ,KL(`Host Lookup dialog box')}   <u>Things you can do with the Host Lookup dialog box</u>

Click the Save As button, or choose Save As from the File menu, to save the host statistics in a file.   Ping displays a total of 25 kilobytes of information in the Host Statistics window.   Previous information is truncated from the start of the display.   Information saved to a file contains only the current 25 kilobytes.

Click the Help button to access online help.

Click the Print button, or choose Print from the File menu, to print Ping output.   Ping displays a total of 25 kilobytes of information in the Host Statistics window.   Previous information is truncated from the start of the display.   Printed information contains only the 25 kilobytes currently displayed in the Host Statistics window.

Click the Exit button, or choose Exit from the File menu, to end your Ping session and close the Ping application.

Click the Ping Host button, or choose Ping from the Host menu, to start a Ping session.

Click the OK button to close the dialog box and save your changes.

Click the Cancel (or Close) button to close the dialog box without saving your changes.

Click the Advanced button to specify the data portion of the ICMP echo request packets that are sent to the target host.   Specifying the packet contents is mainly useful if you are using a local area network protocol analyzer like the Network General Sniffer or the TCPDump application.   Protocol analyzers display the contents of packets as they traverse the network.

The Host List displays the recently accessed hosts.   Select multiple hosts by Ctrl-clicking each desired host, or by dragging your pointer over a series of host names.   You can then Ping the hosts, or delete them from the list. Add hosts by checking Save on OK, or by clicking the Save button after entering information for a host.   Hosts are stored with all specified options such as the number of packets, data length, and packet information options.

Enter the name or IP address of the host you want to Ping.   If the host is outside your domain, you must use the fully-qualified host name (for example, pyrus.yoydyne.com).

Check Save on OK to automatically save the host name and related Ping information to the host list when you start the Ping.   This allows you to quickly repeat the same Ping later if needed.

Enter the number of ICMP echo request packets you want to send to the other host in the Ping.   To Ping a host until you click the Stop button, enter 0 (zero).   Because the Ping application can only display 25KB of information, you may not be able to save the entire Ping if you send a large number of packets.   Also, long Pings can degrade network performance.

Enter the number of bytes of data to attach to the ICMP echo request packets.   Increase the data length to check for gateways that do not fragment IP packets correctly. The data length ranges from 0 to 16384 bytes.   If the data length is less than 8, Ping does not measure the elapsed time during the Ping session.

Click the Save button to save the host name in the host list.   All specified options are stored with the host name.

Click the Delete button to delete the selected hosts from the host list.   Use Ctrl-click to select several hosts, or drag the mouse over the desired hosts if they are together in the list.

The Packet Information group determines the contents of the data portion of ICMP echo request packets sent to the target host. These options are helpful if you are using a local area network protocol analyzer like the Network General Sniffer or the TCPDump application.   Protocol analyzers display the contents of packets as they traverse the network.   Packet data begins after the time stamp and sequencing information in the first 12 bytes of a packet.

Click Default to send the default packet data, which is sequential ASCII numbers starting with 1 and extending the length of the packet data area.

Click All Zeros to send packet data that contains only zeros, such as 00000000000.

Click All Ones to send packet data that contains only ones, such as 11111111111.

Click Alternating Ones and Zeros to send packet data that contains alternating ones and zeros, such as 010101010101.

Click User Defined to send packet data that contains the alphanumeric string you enter in the associated box.   If the packet is longer than the string you enter, the string is repeated until it fills the packet.   Add a trailing space to the string so that a space appears between each repetition of the string in the packet data.

Click the Stop button, or choose Stop from the Host menu, to stop the currently running Ping.

Click the Clear (Remove) button, or choose Clear from the Host menu, to stop the selected Ping session and clear its output from the host statistics window.   Select the Ping session from those listed in the Hosts window.

Choose Clear All to stop all active Ping sessions and clear all output from the Host Statistics window.

Click the Quick Connect button to Ping a host that you have saved to the host list.   Click the desired host name or IP address to start the Ping.

Click the Host Lookup button, or choose Host Lookup from the Host menu, to check whether a host exists, or to learn its IP address or host name.

Click the Lookup button to start the host lookup.

Enter the host name or IP address of the host you are looking up.

The Return Information list displays the results of the host lookup.

Check Toolbar to display the bar of shortcut buttons under the menu.

Check Bubble Help if you want the names of toolbar buttons displayed when you pass your cursor over the button.

Check Status Bar to display the status bar at the bottom of the screen, which displays a short description of a menu option or button that is selected, plus date and time.

Understanding the Hosts Window

The Hosts window displays information from the current and recent Ping sessions. Use the Ping button on the toolbar or the Ping... option on the Host menu to start a Ping session.   The Hosts window contains these columns (which you can resize using the mouse):

- **Host Name** displays the host names from recent (or the current) Ping sessions.
- **Status** shows the status of a Ping session.   Possible values are "Ping," when Ping sends requests to the host, "Finished," when a session completes, or "Error," when an error occurs during the Ping session. If "Error" appears, additional information appears in the Host Statistics window.
- **S/R/%Loss** displays the number of sent and received packets, and the percentage of packets lost during transmission.
- **RTT Min/Avg/Max** displays the minimum, average, and maximum round-trip times (RTT) calculated from ICMP packets sent between your host and the other host.
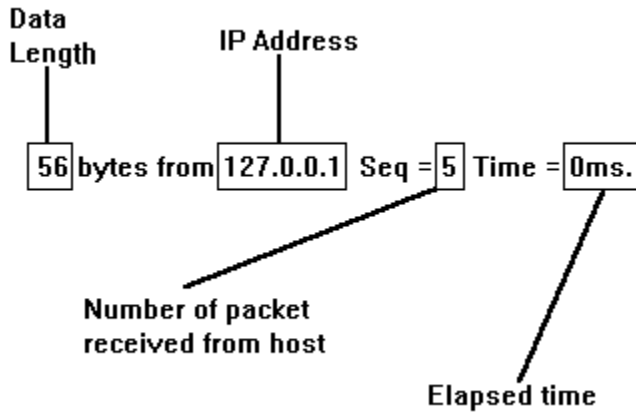
The Host Statistics window only shows the results of the Ping to the host selected in the Hosts window.

{button ,AL(`concepts')}   Related Topics

Reading the Host Statistics

The Host Statistics table displays host statistics generated during a Ping session. This example illustrates how information appears in the table:

Information is only shown for the Ping session selected in the Hosts window.

When Ping Fails

When Ping fails, it provides informational messages that start with:

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Unable to ping host.
Error return of [message].
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Common messages are:

Connection timed out	Low-level packet transmission cannot be accomplished between your host and the other host.
Host not found	The host name is misspelled; is not found in the DNS server or host tables; or the master server is not running.
No buffer space available	Restart Ping or close other network applications. Use the Cisco TCP/IP Suite Monitor application's Buffer Statistics information to determine how many memory buffers are in use.
Network is down	Two hosts on the same network are assigned IP addresses with different network numbers, or the default route in the Cisco TCP/IP Suite Configuration Utility is incorrectly set.

{button ,AL(`concepts')}   Related Topics

Understanding Ping

The Cisco TCP/IP Suite Ping application lets you determine if you can access a host.   Ping sends ICMP echo request packets to the specified host and measures the time that elapses from the time the packet is sent to the host until it is received back at your host.   The greater the time that elapses, the greater the possibility of a network problem.   If a host cannot be reached, a message appears indicating so.   Short elapsed times indicate that the destination is relatively few hops away.   Longer elapsed times can indicate a variety of conditions including: the network is congested, the destination is many hops away, or that the destination can only be reached by a satellite link or by transoceanic link.

Use Ping to determine if an application is working correctly. If a Ping session succeeds, but an application fails, the host may be having problems with its server or a problem may exist in the application itself.   If Ping fails, ensure that the Cisco TCP/IP Suite Master Server is running and that all hardware connections are correct. The messages that appear when a Ping session fails provide additional insight.

The Ping window is divided into two windows:

n **Hosts:** Lists the host that you have Pinged, and a summary of the results of the Ping.   You can resize the columns in this window by clicking and dragging the lines separating the column heads.

n **Host Statistics:**   Shows all the messages returned from the Ping (up to 25 KB of data).   The statistics shown are for the entry selected in the Hosts window.

{button ,AL(`concepts')}   Related Topics

{button ,AL(`start and stop')}   Using Ping

To Ping a host:

1 Click the Ping button or choose Ping... from the Host menu.

2 Enter the host name or IP address of the machine you want to Ping and click OK.

Tips:

- You can use the Quick Connect button to ping a host you have already added to the quick connect list.   Or, double-click an existing entry in the Host list in the Ping dialog box.
- To Ping your own host, use 127.0.0.1 as the IP address.
- Once a Ping starts, it terminates after sending the specified number of packets.   If you specify 0 packets, the Ping continues until you click the Stop button, or choose Stop from the Host menu.
- Unless you need to perform special tests with alternate packet counts, sizes, or data contents, use the initial Ping setup.
- You can Ping more than one host at a time by selecting several hosts from the host list.   Select multiple hosts by Ctrl-clicking each desired host, or by dragging your pointer over a series of host names.

{button ,AL(`start and stop')}   Related Topics

To stop a Ping:

1 Select the Ping you want to stop in the Hosts window, if it is not already selected.

2 Click the Stop button, or choose Stop from the Host menu.

Tips:

▫ To stop a Ping and clear its output, select the Ping and click the Clear (Remove) button.

▫ To stop all active Pings and clear all Ping output, choose Clear All from the Hosts menu.

{button ,AL(`start and stop')}   Related Topics

To clear Ping output from the Host Statistics window:

1 In the Hosts window, select the Ping whose output you want to clear.
2 Click the Clear (Remove) button, or choose Clear from the Host menu.

Tips:

n To clear the output for all Pings, choose Clear All from the Host menu.

{button ,AL(`start and stop')}   <u>Related Topics</u>

To look up a host to ensure it exists, or to find out its host name or IP address:

1 Click the Host Lookup button or choose Host Lookup... from the Host menu.
2 Enter the name or IP address of the host.
3 Click the Lookup button.

Tips:

n If you enter a host name, Cisco TCP/IP Suite uses DNS servers and the host table according to your settings made through the Configuration Utility.

n If you primarily use the host table, and Cisco TCP/IP Suite cannot find the host, check the table to ensure you do not have a bad entry for the host name.

To change Ping parameters:

1 Click the Ping button or choose Ping... from the Host menu.

2 Enter the number of packets you want sent in Number of Packets.

3 Enter the length of the packets in Data Length.

4 Click the Advanced button.

5 Choose the contents to be sent as the data portion of the packets.

Tips:

n   Modifying these parameters is mainly of use if you are trying to determine why a host is dropping connections even though it appears to be correctly connected to the network.

n   To Ping a host until you click the Stop button, enter 0 (zero) for number of packets.

n   Because the Ping application can only display 25KB of information, you may not be able to save the entire Ping if you send a large number of packets.

n   To emulate a Telnet session, enter a data length of 1000, and 0 for number of packets.   Allow the Ping to run as long as a typical Telnet session (this could be several hours).

n   To emulate an FTP session, enter a data length of 1500, and a number of packets that is typical for the files being transferred at your site.

n   Increase the data length of the packet to check for gateways that do not fragment IP packets correctly.   The data length ranges from 0 to 16384 bytes.   If the data length is less than 8, Ping does not measure the elapsed time during the Ping session.

n   Choosing the contents of the data portion of ICMP echo request packets is helpful if you are using a local area network protocol analyzer like the Network General Sniffer or the TCPDump application.   Protocol analyzers display the contents of packets as they traverse the network.   Packet data begins after the time stamp and sequencing information in the first 12 bytes of a packet.

n   Long Pings can degrade network performance.

{button ,AL(`start and stop')}   <u>Related Topics</u>

To save Ping output in a file:

1 In the Hosts window, select the Ping session whose output you want to save.
2 Click the Save button or choose Save As... from the File menu.
3 Enter a name and location for the file.

Tip:

n Only the output for the selected Ping is saved to the file.
n The output is saved as plain ASCII text.

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{button ,AL(`output')}   Related Topics

To print Ping output:

1 In the Hosts window, select the Ping session whose output you want to print.
2 Click the Print button or choose Print... from the File menu.
3 Select the printer you want to use.

Tip:

n Only the output for the selected Ping is printed.

{button ,AL(`output')}   <u>Related Topics</u>

To add a host name to the Host List window:

1 Click the Ping button or choose Ping... from the Host menu.
2 Enter the host name or IP address, and if desired, change the Ping parameters for this host.
3 If you are going to Ping this host immediately, check Save on Ok and click OK.
4 If you are not going to Ping this host immediately, click the Save button.

Tip:

n To delete an entry from the host list, select the entry and click the Delete button.   Select multiple hosts by Ctrl-clicking each desired host, or by dragging your pointer over a series of host names.

{button ,AL(`start and stop')}   Related Topics

To exit Ping:

▶ Click the Exit button or choose Exit from the File menu.

For More Information About Ping

For an conceptual overview of Ping and a complete discussion of TCP/IP networking concepts, we recommend the following books:

Comer, Douglas E., ***Internetworking with TCP/IP***, Volumes I and II, Prentice Hall

Black, Uyless D., ***TCP/IP and Related Protocols***, McGraw-Hill

Stevens, W. Richard, ***TCP/IP Illustrated***, Volume 1

{button ,JI(`GLOSSARY.HLP',`Recommended_Books_on_TCP_IP_Connectivity')}   <u>List of recommended books for users of all levels</u>