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What is Ping?

The Ping application lets you test your PC's connection to another host on the network, and lets you trace the network path to that host.

- Use Ping Statistics to test current host connections and to isolate faulty or erratic connections.
- Use Ping Traceroute to test and analyze router setup, availability, and performance.

Ping uses the Internet Control Message Protocol (ICMP) to send an echo request to a target host.

- If the connection succeeds, the target host returns the request.
- If the connection fails, Ping stops the request and displays a message that describes the failure.

You can use the information that Ping provides to better understand your host connections and to troubleshoot host connections if and when they fail.

Related Topics

Step-by-Step Instructions
Concepts

How do I Work with Ping?

Testing Connections

Use Ping Statistics to test the availability of remote hosts, and to display request and response statistics about the network connection to that host. Ping provides information about the following:

- The number of requests sent and replies received.
- The average round-trip time for requests.
- The success rate.
- The last error seen, if any.

Tracing Paths to Other Hosts

Use Ping Traceroute to follow the path of an echo request sent to a target host and to display information about the following:

- The IP address and hostname of each network device along the path.
- The domain of the target host.
- The number of hops needed to reach the target host.

To show only addresses on the Traceroute display, choose Options from the Traceroute window and clear the Show Hostnames box.

Setting Ping Options

You can change the data length of packets, the time interval between echo requests, and the display of hostnames when using the Statistics and Traceroute programs.

Creating Custom Sessions for Reaching Specific Hosts

Using Windows Program Manager, you can create one or more Ping icons for a specific target host. You can start a Windows session then set and save new values for data length, time interval, and startup command (Statistics or Traceroute).

Various Ping windows and menus let you set unique values for the session. If you set unique values and then choose the Save Settings on Exit command before exiting from the application, Ping saves the current settings in the PCTCP.INI file for you. Later, when you start a new session, Ping uses the values that you previously set and saved.

You may save the values of the following settings:

- Hostname
- Display Status Bar
- Display Toolbar
- Ping on Startup
- Data Length
- Show Hostname
- Time Interval

You can send an echo request to a specific host automatically when the application starts. Ping uses the most recent hostname that you last set in the session.

Changing the Main Ping Dialog Box

You can display or hide the toolbar   and the status bar.

Related Topics

Start a Ping Statistics Session

1. In the Host box, enter the hostname or the Internet address of the target host.

2. From the Ping window, choose Start.

   Ping continually sends echo requests to the target host, updating the statistics display each time it sends a request.

Dialog Box Items

Host
Start/Stop
Options
Statistics

Related Topics

Change the Data Length of Packets
Change the Time Interval Between Echo Requests
Show or Clear Hostnames on Traceroute Displays
Start a Ping Traceroute Session
Stop a Ping Statistics Session
Stop a Ping Traceroute Session

Introduction
Step-by-Step Instructions
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Stop a Ping Statistics Session

From the Ping window, choose Stop.

Related Topics

Start a Ping Traceroute Session

1. In the Host box, enter the hostname or the Internet address of the target host.

2. From the Ping window, choose the Start button.

   Ping sends an echo request to the target host, then traces and displays the route taken by the packet.

3. Use the scroll bars on the Traceroute box or resize the Ping window to view a long list of routing information.

Dialog Box Items

Host
Start/Stop
Options
Traceroute

Related Topics

Change the Data Length of Packets
Change the Time Interval Between Echo Requests
Show or Clear Hostnames on Traceroute Displays
Start a Ping Statistics Session
Stop a Ping Statistics Session
Stop a Ping Traceroute Session

Introduction
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Stop a Ping Traceroute Session

From the Ping window, choose Stop.

Related Topics

Contact a Host Immediately When Ping Starts

1. In the Statistics or Traceroute window, enter a hostname in the Host box.

2. From the Settings menu, choose Save Settings on Exit.

3. From the Settings menu, choose Start Ping on Startup.

4. Exit from the application.

When you next start the application, Ping will retrieve the saved hostname from the `[pctcp ping]` section of the PCTCP.INI file and will start sending echo requests to that host immediately.

Related Topics

Save Settings When You Exit Ping
Start a Ping Statistics Session
Start a Ping Traceroute Session
Stop a Ping Statistics Session
Stop a Ping Traceroute Session
View Saved Ping Settings

Introduction
Step-by-Step Instructions
Concepts

Set Ping Options

Use the Options dialog box to change the data length of packets, the time interval between echo requests for statistics commands, and the display of hostnames for the traceroute command.

Dialog Box Items

Data Length (bytes)
Time Interval (sec)
Show Hostnames

Related Topics

Change the Data Length of Packets
Change the Time Interval Between Echo Requests
Show or Clear Hostnames on Traceroute Displays

Introduction
Step-by-Step Instructions
Concepts

Change the Data Length of Packets

1. In the Options dialog box, choose the Data Length box.

2. Enter a value for the number of bytes in a packet.

    The minimum value you can use is 18. The maximum value depends on the Maximum Transmission Unit (MTU) supported by your network.

3. Choose OK to confirm the new value.
    or
    Choose Cancel to return to the previous value.

Related Topics

Change the Time Interval Between Echo Requests
Show or Clear Hostnames on Traceroute Displays
Start a Ping Statistics Session
Start a Ping Traceroute Session
Stop a Ping Statistics Session
Stop a Ping Traceroute Session

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Step-by-Step Instructions
Concepts

Change the Time Interval Between Echo Requests

1. In the Options dialog box, choose the Time Interval box.

2. Enter a value in the range 1 through 9999 to specify the number of seconds between each echo request.

3. Choose OK to confirm the new value.
   or
   Choose Cancel to return to the previous value.

Related Topics

Change the Data Length of Packets
Show or Clear Hostnames on Traceroute Displays
Start a Ping Statistics Session
Start a Ping Traceroute Session
Stop a Ping Statistics Session
Stop a Ping Traceroute Session

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Concepts

Show or Clear Hostnames on Traceroute Displays

In the Options dialog box, choose Show Hostnames.
or
Clear Show Hostnames to cancel the option.

Related Topics

Change the Data Length of Packets
Change the Time Interval Between Echo Requests
Start a Ping Statistics Session
Start a Ping Traceroute Session
Stop a Ping Statistics Session
Stop a Ping Traceroute Session

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Create a Customized Ping Icon for a Specific Host

1. From the WinApps group window, select the Ping icon.

2. From the Windows Program Manager File menu, choose Properties.

3. In the Description box, enter a name for the icon that describes its purpose.

   This name will appear below the new icon in the WinApps group window.

4. In the Command Line box, enter `wping.exe`.

5. In the Working Directory box, enter the full pathname of the executable file.

6. Choose Change Icon.

7. In the Change Icon window, select the icon from the Current Icon box.

8. Choose OK to confirm your choices and to close the open windows.

Related Topics

Change the Data Length of Packets
Change the Time Interval Between Echo Requests
Create Several Customized Ping Icons for Specific Hosts
Define and Save Settings for a Customized Ping Icon
Show or Clear Hostnames on Traceroute Displays

Introduction
Step-by-Step Instructions
Concepts

Define and Save Settings for a Customized Ping Icon

1. Choose the customized Ping icon from the WinApps group window.

2. From the customized Ping's main window, in the Host box, enter the hostname or the IP address of the target host.

3. Choose and set Options, if desired.

4. From the Settings menu, choose Save Settings on Exit.

5. From the File menu, choose Exit to close the application.

Related Topics

Change the Data Length of Packets
Change the Time Interval Between Echo Requests
Create a Customized Ping Icon for a Specific Host
Create Several Customized Ping Icons for Specific Hosts
Show or Clear Hostnames on Traceroute Displays

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Create Several Customized Ping Icons for Specific Hosts

1. From the Windows main window, choose the WinApps group window.

2. From the Windows Program Manager File menu, choose New.

3. In the New Program Object box, first select Program Item; then choose OK to display the Program Item Properties dialog box.

4. In the Description box, enter a name for the icon that describes its purpose.

   This name will appear below the new icon in the WinApps group window.

5. In the Command Line box, enter `wping.exe.`

6. In the Working Directory box, enter the full pathname of the executable file.

7. Choose Change Icon.

8. In the Change Icon window, select the icon from the Current Icon box.

9. Choose OK to confirm your choices and to close the open windows.

Related Topics

Change the Data Length of Packets
Change the Time Interval Between Echo Requests
Create a Customized Ping Icon for a Specific Host
Define and Save Settings for a Customized Ping Icon
Show or Clear Hostnames on Traceroute Displays

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The File Menu

From the File menu, use the Exit command to exit from the Ping application.

Related Topics

Introduction
Step-by-Step Instructions
Concepts

The Settings Menu

Use the Settings menu commands to customize the screen display of the Ping application.

Use this command	To do this
Display Toolbar	Display the toolbar, or hide the toolbar. Use the toolbar to gain quick access to the Ping commands.
Display Status Bar	Display status bar messages at the bottom of the Ping boxes, or hide the status bar. The status bar gives you information about the application.
Ping on Startup	Begin the connection test as soon as you invoke the Ping application.
Save Settings on Exit	Save the most recent settings for Ping when you exit from the application.

Related Topics

Introduction
Step-by-Step Instructions
Concepts

The Commands Menu

Use commands in the the Commands menu to start a Statistics or Traceroute session.

Use this command	To do this
Statistics	Test the availability of remote hosts, and to display request and response statistics about the network connection to that host.
Traceroute	Follow the path of an echo request sent to a target host.

Related Topics

Introduction
Step-by-Step Instructions
Concepts

Save Settings When You Exit

1. From the Settings menu, choose Save Settings on Exit.

    A check mark indicates that settings will be saved.

2. From the File menu, choose Exit.
    or
    Choose Exit from the toolbar.

Related Topics

Change the Data Length of Packets
Change the Time Interval Between Echo Requests
Show or Clear Hostnames on Traceroute Displays
View Saved Ping Settings

Introduction
Step-by-Step Instructions
Concepts

View Saved Ping Settings

Edit the PCTCP.INI file and view the `[pctcp ping]` section of the file.

Related Topics

[Change the Data Length of Packets](#)
[Change the Time Interval Between Echo Requests](#)
[Save Settings When You Exit Ping](#)
[Show or Clear Hostnames on Traceroute Displays](#)

[Introduction](#)
[Step-by-Step Instructions](#)
[Concepts](#)

Display the Toolbar

From the Settings menu, choose Display Toolbar if there is no check mark next to the command. In response to your action, a check mark appears. The check mark signifies that the command is now turned on.

Related Topics

Introduction
Step-by-Step Instructions
Concepts

Hide the Toolbar

From the Settings menu, choose Display Toolbar if a check mark appears next to the command. In response to your action, the check mark disappears. The absence of a check mark signifies that the command is now turned off.

Related Topics

Introduction
Step-by-Step Instructions
Concepts

Display the Status Bar

From the Settings menu, choose Display Status Bar if there is no check mark next to the command. In response to your action, a check mark appears. The check mark signifies that the command is now turned on.

Related Topics

Introduction
Step-by-Step Instructions
Concepts

Hide the Status Bar

From the Settings menu, choose Display Status Bar if there is a check mark next to the command. In response to your action, the check mark disappears. The absence of a check mark signifies that the command is now turned off.

Related Topics

[Introduction](#)
[Step-by-Step Instructions](#)
[Concepts](#)

What is ICMP?

IP host machines and gateways use the Internet Control Message Protocol (ICMP) to report errors in transmission of data between machines. ICMP also defines an echo request mechanism that IP hosts use to determine if a destination machine is reachable and responding.

Related Topics

What is a Traceroute?
When do I use Ping Statistics?
When do I use Ping Traceroute?

Introduction
Step-by-Step Instructions
Concepts

What is a Traceroute?

A Traceroute is a ping operation in which the IP packets have the Record Route option turned on. As the ICMP echo request reaches each IP gateway or router, the receiver adds its IP address to the Record Route List, indicating the ICMP packets route through the network to the destination host machine.

Related Topics

What is ICMP?
When do I use Ping Traceroute?

Introduction
Step-by-Step Instructions
Concepts

When do I use Ping Statistics?

Use the Ping Statistics command when you need to determine whether an IP host machine is reachable and still responding. You can also determine whether you have any network connectivity at all if you can reach any IP hosts, you have some connectivity. Use Ping to try to reach IP hosts on your own subnet and on other subnets.

Related Topics

What is a Traceroute?
What is ICMP?
When do I use Ping Traceroute?

Introduction
Step-by-Step Instructions
Concepts

When do I use Ping Traceroute?

If you cannot reach an IP host using the Ping Statistics command, use the Ping Traceroute command to determine which router or gateway on your route to that IP host is not responding.

Related Topics

What is ICMP?
What is a Traceroute?
When Do I Use Ping Statistics?

Introduction
Step-by-Step Instructions
Concepts

Starts a Statistics session.

Starts a Traceroute session.

Exits from Ping.

Displays the results of the Traceroute operation.

For both traceroute and statistics commands, sets the number of bytes in each packet sent to the target host. The minimum value you can use is 18. The maximum value depends on the Maximum Transmission Unit (MTU) supported by your network.

For a traceroute command, sets the number of seconds between each echo request. Enter a value in the range 1 through 9999.

If selected, Traceroute results include hostnames. Clear to cancel the option.

Copies selected text from the Traceroute display box to the clipboard. Select all the text at once using the Edit/Select All command.

Clears selected text from the Traceroute display box.

Selects all text in the Traceroute display box. Once the text is selected, you can copy the text to the clipboard using the Edit/Copy command.

Starts contacting the target host when the application starts. This command uses the name of the host that was saved when you exited from your last session. The hostname is one of several settings saved with the Save Settings on Exit command.

Displays the icon bar (if checked) or hides the Icon bar (if unchecked). You can use the Statistics and Trace icons to quickly start a new Ping session.

Displays the status bar (if checked) or hides the status bar (if unchecked). The status bar contains brief help messages about menu items that you select or bring into focus.

Automatically saves your most recent settings when you exit the application (if checked).

Verifies the availability of another host on the network and displays statistics about the network connection to that host. Statistics include the number and percentage of test packets that reach the remote host, the average round-trip time, and transmission errors if any.

After you choose Start, the Traceroute box displays the path of an echo request sent to a target host including information about intermediate devices along that path. It also displays the number of hops required to reach the target host, the IP address and

hostname of each network device along the path, and the round-trip time. Use the scroll bar to see earlier results from the current session.

Displays the introductory topic in the Ping online Help file.

Displays the keyboard shortcuts topic in the Ping online Help file.

After you choose Start, the Statistics box displays the results of the most recent Ping operation, including:
- The total number of echo requests sent to the target host.
- The total number of responses received from the target host.
- The percentage of requests to which the target host successfully responds. This percentage is affected by timeouts.
- The elapsed time (in milliseconds) between sending an echo request to a target host and receiving a response from that host.
- The last transmission error Ping encountered while sending an echo request to a target host or while receiving a response from that host. Timeouts are not displayed in this field.

The total number of echo requests sent to the target host.

The total number of responses received from the target host.

The elapsed time (in milliseconds) between sending an echo request to a target host and receiving a response from that host.

The percentage of requests to which the target host successfully responds. This percentage is affected by timeouts.

The last transmission error Ping encountered while sending an echo request to a target host or while receiving a response from that host. Timeouts are not displayed in this field.

Maximum Transmission Unit (MTU): The maximum amount of data (or size of a packet) that can be transmitted over a given network. The MTU varies with the type of network hardware and software. The kernel handles fragmentation of packets, letting you specify the most efficient size suitable for your average message.

timeouts: The number of times a target host did not receive or respond to a Ping echo request. The target host may not respond because it is not operational or because the network path to the target host failed. The number of timeouts is reflected in the Success Rate (%) column of the Ping Statistics display.

hops: The number and sequence of network devices along the network path to the target host.

hostname: The Internet domain name of a network device and the network path to the target host (or of the target host). By default, Traceroute displays hostnames.

Displays or hides additional elements of this dialog box.

Returns to the previous dialog box.

Displays the Open dialog box so that you can search for a specific file.

Cancels your selection(s) and close the dialog box without taking any action.

Closes the dialog box.

Exits the application.

Displays Help about the contents of this dialog box.

Does not proceed as indicated.

Proceeds to the next dialog box.

Confirms your selection(s) and close the dialog box.

Opens the Options dialog box.

Enter a word or string of characters to log in to another system, workgroup, or domain on a network.

Protects the contents of the file from modification.

Starts the operation.

Stops the operation.

Starts or stops the operation.

Enter the hostname or IP address of the remote host that you are trying to reach.

Enter the name that you use to log in to a computer on a network.

Proceeds as indicated.

Proceeds as indicated and avoids further prompts for confirmation.

Click this to set up options,

Saves all the changes you have made without closing the dialog box.

Context-sensitive help for this item is not yet implemented.

Help for this dialog box is not yet implemented.

account name: The name or word that identifes who is billed for this session on a computer system.

case sensitivity: The ability of a program to evalutate the difference between the capitalized and non-capitalized versions of a character. Case sensitive programs treat for example, *cat* and *Cat*, as distinct items.

It matters how you enter file and variable names on a case sensitive operating system (such as the UNIX operating system). If you want to view a file named *Cat*, and you enter the characters *cat*,   the system displays the file named *cat* if one exists, or gives you an error message. It does not display a file named *Cat*. Case sensitivity also effects the way that files are listed when sorted in alphabetical order.
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filename conventions: A TCP/IP network usually contains computers that run different operating systems. Each operating system has different conventions for naming files. For example, both the number and kinds of characters that can be used in a name are often subject to limits.

When you use some TCP/IP supported services such as telnet and ftp, use the filenaming conventions in effect on the host system to work with files that are on the host.

hostname: The name of a networked computer.

The hostname is one form of the computers TCP/IP network address; the other is its complete numeric network address.You can access a computer by its hostname or its numeric network address.

toolbar: A group of buttons that appears below the menu bar. These buttons let you gain access quickly to the application's features.

IP address: A number (in the form *n.n.n.n*   where each *n* is a value in the range 0 to 255) that uniquely identifies a networked computer that uses the TCP/IP communication protocol. (The Internet Protocol is defined in RFC 791.)

MIB-II: The Management Information Base (MIB) database used by an SNMP MIB agent to store information about the network operations of your PC. MIB-II (or MIB version 2) is the second version of the Internet-standard MIB. RFC 1213 defines the format of MIB-II.

packet: A single network message with its associated header, addressing information, data, and optional trailer. Also known as a "frame" or "datagram".

password: A word or string of characters that you supply in order to login to another system on a network. Systems that accept the username "anonymous" often require you to provide your e-mail address as the password.

permissions: On UNIX systems, settings that control who has access to a file and what rights (read, write, or execute) are given. NFS uses UNIX-style permissions to control access to network files.

protocol window: Some OnNet applications support a window dedicated to displaying the interactions between your PC and the remote host (the protocol). You can display the window usually from a View, Settings, or Options menu.

remote host: A networked computer that makes a service available to other computers on the network. Typical host services include transferring files, printing files, and managing logins from remote users.

SNMP community: A relationship between an SNMP agent and one or more SNMP management stations.

SNMP community name: A unique name shared by the members of an SNMP community.

SNMP message: A packet of data, consisting of an SNMP community name and SNMP commands and operands.

status bar: A message area, typically at the bottom of the application window, that provides information about the component that is currently selected, or the state of the application.

session: A session comprises the interactions between your PC and a remote host   beginning with the initial connection and ending when you or the host explicitly disconnect.

Some OnNet applications allow you to configure sessions, that is, automatically send parameters such as your username and password to the remote host..

session definition: The configuration settings for a particular session or host connection. A session definition might include such settings as the hostname of a computer on the network and your login name for that computer, as well as other values that you specify. The set of session parameters you can specify differs with each program.

TCP (Transmission Control Protocol): A Transport layer, connection-oriented, end-to-end protocol that provides reliable, sequenced, and nonduplicated delivery of bytes to a remote or a local user. TCP provides reliable byte stream communication between pairs of processes in hosts attached to interconnected networks.

time out: A period of time when a connection between a PC and a host computer is allowed to be idle or unused, or when a PC can attempt to make a connection to a networked host..

When the time period elapses, the host closes the idle connection, or the PC reports that it failed to connect to a host.

UDP (User Datagram Protocol): A Transport layer, connection-less mode protocol providing a (potentially unreliable, unsequenced, and/or duplicated) datagram communication for delivery of packets to a remote or a local user. UDP provides a procedure for a process to send messages to other processes with a minimum of protocol mechanism.

username: A name required for login to a remote system.

wildcard: A character such as * or ? that represents one or more characters in a filename. In a network, each operating system supports

its own wildcard characters and syntax. When you use wildcards on a remote host, follow the conventions that apply to that host.

Technical assistance

Users in the U.S. and Canada, and worldwide resellers, contact FTP Software®:

Telephone:	**(800) 382-4387**
	(508) 685-3600
E-mail:	**support@ftp.com**
Fax:	**(508) 794-4484**

 or

Users outside of the U.S. and Canada, contact your local reseller.

Tip

For FREE online technical services, see:

World Wide Web:	**http://www.ftp.com**
Anonymous Ftp Server:	**ftp.ftp.com**
Bulletin Board System:	**(508) 684-6240** (settings 8,N,1)
CompuServe:	**GO FTPSOFT** (PCVENJ Section 8)