Statistics Help Contents

Introducing Statistics

Related Topics

What is Statistics?

Statistics gathers and displays data about protocols, system configuration, and network performance. You can view and analyze

- Protocol traffic and statistics.
- ARP cache entries.
- TCP connections and packet information.
- Router table entries and packet routing data.
- System configuration data.

You can display information as text or as graphs.

Before You Start Displaying Information

Before you can display information, you must define a new session or open an existing session.

Related Topics

Getting Started
What is a Session?

Step-by-Step Instructions
Concepts

Getting Started

Before you can display information, you must define a session and specify the type of information and the format.

After you have defined a new session or opened an existing session, the next time you start the Statistics application, Statistics displays the session that was active when you last exited from the program.

If you have defined a session and you then deleted all of the sessions, the next time you start Statistics, the New Session dialog box does not appear, and the application window is blank. You must then define a new session.

Related Topics

Define a New Session
What is a Session?
What is Statistics?

Step-by-Step Instructions
Concepts

What is a Session?

A session is a definition of one or more Statistics information views. For example, you could define a session that displays the Statistics and TCP views as text, and the Large Buffers Used (%) and the Small Buffers Used (%) views as graphs.

Once you have defined and named a session, you can display the views in the session. Statistics automatically saves the session when you open or define another session, or when you exit from Statistics.

You can define various sessions, and you can open a session at any time.

You can modify a session to add or remove text or graph views.

When you restart the Statistics application, it displays the last active session.

Related Topics

What is Statistics?
Getting Started
Display Network Data as Text
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Step-by-Step Instructions

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Display Network Data as Text

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Related Topics

Introducing Statistics
Step-by-Step Instructions

The Session Menu

Use the Session menu commands to

- Define a new session.
- Open an existing session.
- Delete a session.
- Modify a session.
- Exit the application and save the active session.

To view a description of the action that a menu command initiates, move the pointer to the command. Press and hold down the left mouse button. The description appears in the Status bar at the bottom of the application window.

You can also define a new session or open an existing session from the toolbar.

Related Topics

Define a New Session
Delete a Session
Modify a Session
Open a Session
The Settings Menu
The Toolbar

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The Settings Menu

Use Settings menu commands to display or hide the toolbar or the status bar, or to set the polling interval.

To view a description of the action that a menu command initiates, move the pointer to the command. Press and hold down the left mouse button. The description appears in the status bar at the bottom of the application window.

The status bar also displays descriptions of the toolbar buttons, and the status of the application. The three panels to the right of the status bar indicate the status of the Caps Lock, Num Lock, and Scroll Lock keys. If a key is on, CAP, NUM, or SCRL appears in the panel.

Use the Set Polling Interval command to automatically update the display of Statistics data for an individual view. The default is five second intervals.

Related Topics

Set the Polling Interval
The Toolbar

Introducing Statistics
Step-by-Step Instructions
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kThe Toolbar

Use buttons on the toolbar to quickly define or open a session, customize a graph, set the polling interval, get help, or exit the application.

For the buttons that initiate mutually exclusive types of graph views, the current selection is indicated by a depressed button. You can select only one type of graph and only one type of data collection display. Since you can define all three types of color for graphs, those buttons do not stay depressed when you choose them.

To view a description of the action that a button initiates, move the pointer to the button. In a few seconds a ToolTip description appears under the button. A longer description also appears in the status bar at the bottom of the application window.

You can hide or display the toolbar by choosing the Toolbar command from the Settings menu.

Related Topics

Define a New Session
Display Network Events as Graphs
Open a Session
The Graph Menu
The Settings Menu

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The Graph Menu

Use the Graph menu commands to customize graphs. The commands are arranged in three groups. You can

- Define the colors for the graph.
- Specify the type of graph.
- Specify the data collection display.

A dot to the left of the command indicates the current selection for the second and third types of graphs. The choices in those groups are mutually exclusive. You can select one type of graph and one type of data collection display. In the first group, you can define all three types of color.

To view a description of the action that a menu command initiates, move the pointer to the command. Press and hold down the left mouse button. The description appears in the status bar at the bottom of the application window.

You can also customize a graph or set the polling interval from the toolbar.

Related Topics

Define the Axes and Text Color
Define the Background Color
Define the Fill or Line Color
Display Network Events as Graphs
Set the Polling Interval
Specify a Change-Rate Graph
Specify a Filled Graph
Specify a Scrolling Graph
Specify a Sweeping Graph
Specify an Accumulative Graph
The Toolbar

Introducing Statistics
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The Window Menu

Use the Window menu commands to define the layout of text views and graphs or to make a view active. With Window menu commands you can

- Overlap the views (cascade).
- Size the views equally and set them in a grid side by side (tile).
- Arrange minimized views in a straight, horizontal line, left to right.
- Select a view and make it the active window.

To view a description of the action that a menu command initiates, move the pointer to the command. Press and hold down the left mouse button. The description appears in the status bar at the bottom of the application window.

Related Topics

Activate a View
Arrange Icons
Cascade Views
Define a New Session
Open a Session
Tile Views

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Concepts

Define a New Session

1. From the Session menu, choose New.
   --or--
   From the toolbar, choose 
2. In the Session name field, enter a name for the session.
3. Add the text views and graph views you want in the session.
4. Choose OK.

Related Topics

Add a Text or Graph View to a Session
Display Network Data as Text
Display Network Events as Graphs
Open a Session
Modify a Session
Remove a Text or Graph View from a Session
The Session Menu

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Save the Session As

1. In the Session name field, enter a name for the session.
2. Choose OK.

Related Topics

Introducing Statistics
Step-by-Step Instructions
Concepts

Add a Text or Graph View to a Session

1. From the Session menu, choose to define a new session or modify a current session.
2. From the Text Views Available selection list, double-click on each text view you want in the session. From the Graph Views Available selection list, double-click on each graph view you want in the session.
   --or--
   Choose the text and graph views you want in the session, and then choose Add.

You can add all of the text and graph views to a session at once by choosing Add all.

Related Topics

Define a New Session
Modify a Session
Remove a Text or Graph View from a Session

Introducing Statistics
Step-by-Step Instructions
Concepts

Remove a Text or Graph View from a Session

1. From the Session menu, choose to define a new session or to modify a current session.
2. From the Text Views in Session selection list, double-click on each text view you want in the session. From the Graph Views in Session selection list, double-click on each graph view you want in the session.
   --or--
   Choose the text and graph views you want to remove from the session, and then choose Remove.

You can remove all of the text and graph views from a session at once by choosing Remove all.

Related Topics

Add a Text or Graph View to a Session
Define a New Session
Modify a Session

Introducing Statistics
Step-by-Step Instructions
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Open a Session

1. From the Session menu, choose Open.
   --or--
   From the toolbar, choose 
2. From the Available Sessions selection list, choose a session.
4. Choose OK.

Related Topics

Define a New Session
Delete a Session
Modify a Session
The Session Menu

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Delete a Session

1. From the Session menu, choose Delete Session.
2. From the Available Sessions selection list, choose a session, then choose Delete.
   --or--
   From the Available Sessions selection list, double-click on each session you want to delete.
3. Choose OK.

Related Topics

Define a New Session
Modify a Session
Open a Session
The Session Menu

Introducing Statistics
Step-by-Step Instructions
Concepts

Modify a Session

1. From the Session menu, choose Modify Current Session.
2. Add text views and graph views to, or remove them from, the session.
3. Choose OK.

Related Topics

Add a Text or Graph View to a Session
Define a Session
Display Network Data as Text
Display Network Events as Graphs
Open a Session
Remove a Text or Graph View from a Session
The Session Menu

Introducing Statistics
Step-by-Step Instructions
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Exit from Statistics

From the Session menu, choose Exit.
--or--

From the toolbar, choose 

Related Topics

Introducing Statistics
Step-by-Step Instructions
Concepts

Display the Toolbar

From the Settings menu, choose Display Toolbar.

Related Topics

Display the Status Bar
The Settings Menu

Introducing Statistics
Step-by-Step Instructions
Concepts

Display the Status Bar

From the Settings menu, choose Display Status Bar.

Related Topics

Display the Toolbar
The Settings Menu

Introducing Statistics
Step-by-Step Instructions
Concepts

Define the Fill or Line Color

1. Select a graph in the session that is currently open.
2. From the Graph menu, choose Graph Color.
   --or--
   From the toolbar, choose 

3. Choose a color from the color chart and then choose OK.

You can also choose to define a custom color.

Related Topics

Define a Custom Color
Define a New Session
Define the Axes and Text Color
Define the Background Color
Display Network Events as Graphs
Modify a Session
Open a Session
The Graph Menu

Introducing Statistics
Step-by-Step Instructions
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Define the Axes and Text Color

1. Select a graph in the session that is currently open.
2. From the Graph menu, choose Axes and Text Color.
   --or--
   From the toolbar, choose 

3. Choose a color from the color chart and then choose OK.

You can also choose to define a custom color.

Related Topics

Define a Custom Color
Define a New Session
Define the Background Color
Define the Fill or Line Color
Display Network Events as Graphs
Modify a Session
Open a Session
The Graph Menu

Introducing Statistics
Step-by-Step Instructions
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Define the Background Color

1. Select a graph in the session that is currently open.
2. From the Graph menu, choose Background color.
   --or--
   From the toolbar, choose 

3. Choose a color from the color chart and then choose OK.

You can also choose to define a custom color.

Related Topics

Define a Custom Color
Define a New Session
Define the Axes and Text Color
Define the Fill or Line Color
Display Network Events as Graphs
Modify a Session
Open a Session
The Graph Menu

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Define a Custom Color

For directions on how to create a custom color

1. Run the Microsoft Windows Control Panel Color application.
2. Choose Color Palette.
3. From the color palette, choose Define Custom Colors.
4. From the Custom Color Selector, choose Help.

Related Topics

Define the Axes and Text Color
Define the Background Color
Define the Fill or Line Color

Introducing Statistics
Step-by-Step Instructions
Concepts

Specify an Accumulative Graph

1. Select a graph in the session that is currently open.
2. From the Graph menu, choose Accumulative Graph.
   --or--
   From the toolbar, choose 

Related Topics

Display Network Events as Graphs
Specify a Change-Rate Graph
The Graph Menu

Introducing Statistics
Step-by-Step Instructions
Concepts

Specify a Change-Rate Graph

1. Select a graph in the session that is currently open.
2. From the Graph menu, choose Change-Rate Graph.
   --or--
   From the toolbar, choose 

Related Topics

Display Network Events as Graphs
The Graph Menu
Specify an Accumulative Graph

Introducing Statistics
Step-by-Step Instructions
Concepts

Specify a Filled Graph

1. Select a graph in the session that is currently open.
2. From the Graph menu, choose Filled Graph.
   --or--

   From the toolbar, choose 

Related Topics

Display Network Events as Graphs
Specify a Scrolling Graph
Specify a Sweeping Graph
The Graph Menu

Introducing Statistics
Step-by-Step Instructions
Concepts

Specify a Scroll Graph

1. Select a graph in the session that is currently open.
2. From the Graph menu, choose Scroll Graph.
   --or--
   From the toolbar, choose 

Related Topics

Display Network Events as Graphs
Specify a Filled Graph
Specify a Sweeping Graph
The Graph Menu

Introducing Statistics
Step-by-Step Instructions
Concepts

Specify a Sweep Graph

1. Select a graph in the session that is currently open.
2. From the Graph menu, choose Sweep Graph.
   --or--
   From the toolbar, choose 

Related Topics

Display Network Events as Graphs
Specify a Filled Graph
Specify a Scrolling Graph
The Graph Menu

Introducing Statistics
Step-by-Step Instructions
Concepts

Cascade Views

From the Window menu, choose Cascade.

Related Topics

Arrange Icons
Activate a View
The Window Menu
Tile Views

Introducing Statistics
Step-by-Step Instructions
Concepts

Tile Views

From the Window menu, choose Tile.

Related Topics

Arrange Icons
Activate a View
Cascade Views
The Window Menu

Introducing Statistics
Step-by-Step Instructions
Concepts

Arrange Icons

From the Window menu, choose Arrange Icons.

Related Topics

Activate a View
Cascade Views
The Window Menu
Tile Views

Introducing Statistics
Step-by-Step Instructions
Concepts

Activate a View

From the Window menu, choose one of the views listed below the Arrange Icons command.

Related Topics

Arrange Icons
Cascade Views
Define a New Session
Open a Session
The Window Menu
Tile Views

Introducing Statistics
Step-by-Step Instructions
Concepts

Display Network Data as Text

Text views in a session display, as text, data about your system configuration and about the network. You can use this data to analyze the current configuration and to isolate network problems. To display a text view you must define a new session, open an existing session, or modify the current session to include the text view.

This view	Displays
Additional Configuration	Information about the network interface card (if present) and the names and version numbers of the dynamic-link libraries on your system.
ARP	The ARP cache. Each entry lists an IP address, its machine address resolution, and other details.
Configuration	The configuration of your network driver, IP and machine addresses, domain name servers and routers (if available), the number and type of active connections, and the maximum number of connections.
Debugging	The interface name and statistics about the kernel, ARP, packet buffers, and types of network errors.
PPP	Serial line statistics for PPP connections.
Routing	IP addresses for routers and remote hosts, if available. Router table entries describe which (if any) routers are used when you transmit or receive a packet on the network.
Serial	Serial line statistics for SLIP and PPP connections.
Statistics	Local system information and statistics for ICMP, TCP, UDP, and IP packets.
TCP	Current TCP connections. Select a connection to display packet information associated with that connection.

To update the data

From each view that displays data, choose Refresh.

You can set a polling interval for each individual view if you want the Statistics program to poll for data and update the display of network information automatically.

Related Topics

Activating and Deactivating Polling
Add a Text or Graph View to a Session
Display Additional Configuration Data
Display Debugging Information
Display Network Events as Graphs
Display Network Statistics
Display PPP Statistics
Display TCP Connections
Display the ARP Cache
Display the Configuration
Display the IP Routing Table
Display Serial Interface Statistics
Set the Polling Interval
The Session Menu

Introducing Statistics
Step-by-Step Instructions

Concepts

Display Network Events as Graphs

Graph views in a session display network events dynamically. You can use the graphs to analyze, detect, and isolate patterns in network activity. To display a graph view you must define a new session, open an existing session, or modify the current session to include the graph view.

By default, Statistics displays events as black and white, change-rate, filled graphs. If you prefer something different, you can customize each graph by using commands from the Graph menu and the Settings menu, or by selecting toolbar buttons.

To view a description of the action that a menu command or toolbar button initiates, move the pointer to the command or button. Press and hold down the left mouse button. The description appears in the status bar at the bottom of the application window.

You can customize the following aspects of an individual graph view:

- The colors for the line or fill area, the axes and text, and the background.
- The type of graph, either accumulative or change rate.
- The data collection display, either filled, scrolling, or sweeping.
- The polling interval.

Changes apply only to the selected graph (and not to any other graphs in the session).

Colors

You can customize the colors of each graph in the following ways:

Graph Color	Defines color for the line or fill for the graph.
Axes and Text Color	Defines color for the horizontal and vertical axes, as well as text on the graph.
Background Color	Defines color for the graph's background.

Type

You can display the network events in one of the following types of graphs:

Accumulative Graph	Displays events as they occur and shows the total number of events that occur within the polled interval.
	--or--
Change-Rate Graph	Displays events as they occur and shows the variance within the polled interval.

Format

You can display the events in one of the following ways for each graph:

Filled Graph	Displays data collection as a bar moving parallel to the horizontal axis.
	--or--
Scroll Graph	Displays data collection as a line moving parallel to the horizontal axis.
	--or--
Sweep Graph	Displays data collection as a line moving parallel to the vertical axis.

Related Topics

Activating and Deactivating Polling
Add a Text or Graph View to a Session
Define the Axes and Text Color
Define the Background Color
Define the Fill or Line Color
Display Network Data as Text
Set the Polling Interval
Specify an Accumulative Graph
Specify a Change-Rate Graph

Display the ARP Cache

The ARP view provides information about the ARP cache, which contains entries for each remote system that has sent an ARP request to the kernel or that has replied to an ARP request from the kernel.

Serial line connections do not display an ARP view. If you are using a serial connection, the ARP view displays a warning saying that the serial interface is on, and that no ARP is available.

The ARP cache contains a maximum of 40 entries that define

- The IP Address of each remote system.
- The Hardware Address associated with the IP address.
- The Expires In value for the hardware address entry.
- The Routing Information Field (RIF) entry.

The entries in the ARP cache provide the kernel with efficient routes for reaching an IP address. You can use the data to assess which hosts have successfully contacted your machine and which machines you have contacted with an ARP request.

To update the ARP data

Choose Refresh to update the data. Unless you deactivate polling, Statistics automatically refreshes the ARP data at configured intervals.

Related Topics

Activating and Deactivating Polling
Display the IP Routing Table
Display Network Data as Text
Set the Polling Interval
The Session Menu

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Display the Configuration

The Configuration view provides information about your PC's setup and its connection to the network. You can use this information to verify that the displayed values correspond to the PCTCP.INI file entries on your PC, to verify that your PC is configured to make network connections, and to account for each active connection.

Use this item	To verify
IP broadcast address	That your PC broadcasts the correct address over the network.
Domain	The local network domain to which your PC belongs.
Host table file	If and where your PC stores its list of known hosts.
Domain Name Servers	The addresses of any Domain Name System (DNS) servers configured for your PC.
Routers	The addresses of any network routers configured for your PC.
Connections	The number and type of network connections for your PC.
Maximum Allowed	The maximum number of network connections.

To update the configuration data

From the Configuration view, choose Refresh. Unless you deactivate polling, Statistics automatically refreshes the configuration data at configured intervals.

Related Topics

Activating and Deactivating Polling
Display Additional Configuration Data
Display Network Data as Text
Set the Polling Interval
The Session Menu

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Display Additional Configuration Data

The Additional Configuration view provides information about the network interface card and dynamic-link libraries on your PC.

Related Topics

Activating and Deactivating Polling
Display the Configuration
Display Network Data as Text
Set the Polling Interval
The Session Menu

Introducing Statistics
Step-by-Step Instructions
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Display Debugging Information

The Debugging view provides information about the interactions between the kernel and the network interface driver. You can use this information to analyze the status of the kernel and the success or failure of its interaction with the driver for your connection.

View this	To identify
Interface Name	The name for your PC's network interface.
Kernel Activity	The machine address for the network interface card (if present), and the number of interrupts and packets transmitted and received. You can use these statistics to evaluate the status and stability of kernel activity.
ARP Statistics	The number of packets that used ARP, and to view the contents of the ARP cache. You can use this data to compare the statistics and the displayed values with expected values. Not available for a serial line interface.
Receive Errors	The number and type of data reception errors that have occurred on your PC. You can use this data to isolate a current configuration problem or a potential network problem.
Transmit Errors	The number and type of data transmission errors that have occurred on your PC. You can use this data to isolate a current configuration problem or to isolate a potential network problem.
Packet Buffers	The current configuration and use of packet buffers for huge, large, and small packets. You can use this information in conjunction with the receive errors data (if an out-of-buffers error was reported) to isolate a buffer configuration problem.

To update the Debugging data

From the Debugging view, choose Refresh. Unless you deactivate polling, Statistics automatically refreshes the debugging data at configured intervals.

Related Topics

Activating and Deactivating Polling
Display the ARP Cache
Display Network Data as Text
Set the Polling Interval
The Session Menu

Introducing Statistics
Step-by-Step Instructions
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Display the IP Routing Table

Typically, the router that the kernel uses is a configured router, that is one you have set during the installation of the product, in the Configure program, or by editing the configuration file, typically PCTCP.INI. You can configure as many as three routers; if a path through one router becomes inaccessible, the kernel automatically switches to one that can provide a path.

However, the kernel can build list of routers that it discovers if you set the Router discovery parameter to yes, either in the Configure program or by editing the configuration file.

The redirect (routing) table is an internal table that the kernel builds, maintains, and uses to determine the first hop in the path to a specific remote host.

The Routing view displays

Configured Routers	The routers that you have set.
Discovered Routers	The list of routers that the kernel has detected.
Redirect Table	The routing table. Each entry in the routing table consists of a pair of IP addresses: the IP address of a specific remote host and the IP address of the first hop on the path to that host. The IP routing table holds a maximum of 16 entries. When the table is full, the next entry overwrites the first entry. Each entry consists of two IP addresses: • The address under Host identifies the remote host reached. • The address under Via identifies the first hop on the path to the remote host.

To update the Routing data

From the Routing view, choose Refresh. Unless you deactivate polling, Statistics automatically refreshes the routing data at configured intervals.

Related Topics

Activating and Deactivating Polling
Display the Configuration
Display Network Data as Text
Set the Polling Interval
The Session Menu

Introducing Statistics
Step-by-Step Instructions
Concepts

Display Network Statistics

The Statistics view provides data about your system and about the configured network protocols. You can use the data to analyze the status of the protocols and to get an overview of network traffic handled by each protocol.

View this data	To examine
System Information	The interface name, the IP address for your PC, the subnet mask, and the total number of packets sent and received since the kernel started.
ICMP	Number of packets sent, packets received, errors, and error types.
TCP	Number of packets sent, packets received, errors, error types, bytes received, and bytes sent.
IP	Number of packets sent, packets received, packet fragments, errors, and error types.
UDP	Number of packets sent, packets received, errors, and error types.

To update the Statistics data

From the Statistics view, choose Refresh. Unless you deactivate polling, Statistics automatically refreshes the statistics data at configured intervals.

Related Topics

Activating and Deactivating Polling
Display Debugging Information
Display Network Data as Text
Set the Polling Interval
The Session Menu

Introducing Statistics
Step-by-Step Instructions
Concepts

Display TCP Connections

The TCP view provides information about current TCP connections configured and used by your system. You can use the information to solve a TCP networking problem.

To display statistics for a specific TCP connection

From the TCP connections selection list, select an entry.

The TCP Connections selection list shows the currently active TCP connections. Statistics related to an entry appear in the fields next to the TCP Connections box.

To update the TCP data

From the TCP view, choose Refresh. Unless you deactivate polling, Statistics automatically refreshes the TCP data at configured intervals.

Related Topics

Activating and Deactivating Polling
Display Network Data as Text
Display Statistics for a TCP Connection
Interpret TCP Connection Messages
Set the Polling Interval
The Session Menu

Introducing Statistics
Step-by-Step Instructions
Concepts

Interpret TCP Connection Messages

The TCP view displays network messages about the transmission of network data in the Messages message box. Each TCP connection might display one or several of the following messages:

This message	Indicates
Unsent data	The local output queue for the connection holds data that has not been sent across the network.
Ahead-of-seq data	The kernel has received a packet on the connection, but its sequence number is ahead of what was expected (because a router dropped the intermediate packet, for example). TCP retains the packet for a limited period, in case the missing packet (the intermediate packet, for example) is received before timeout.
Probing	The kernel has more data to send and is waiting for the recipient to reopen a window. Until the window reopens, the kernel sends one byte of data (a zero window probe) every 4 seconds.
Unacked data	The kernel has sent data, but has not received an acknowledgment from the recipient.

To update the TCP messages

From the TCP view, choose Refresh. Unless you deactivate polling, Statistics automatically refreshes the TCP data at configured intervals.

Related Topics

Activating and Deactivating Polling
Display Network Data as Text
Display Statistics for a TCP Connection
Display TCP Connections
Set the Polling Interval
The Session Menu

Introducing Statistics
Step-by-Step Instructions
Concepts

Display Statistics for a TCP Connection

The Statistics view displays the following information for the highlighted TCP connection:

View this field	To identify
Port	The source TCP port.
->	The destination TCP port (21 for FTP, 23 for Telnet).
Queue	The functional condition for operations on that port.
State	The current condition for the connection (established or closed).
Output flags	Any output flags included by the kernel in the TCP header of the next packet sent.
Ack	The acknowledgment value (in hexadecimal notation) showing that data has been received and acknowledged up to the value indicated.
Retry time	The time (in milliseconds) that the kernel waits to receive acknowledgment of transmitted data. When the retry time expires, the kernel retransmits the unacknowledged data.
Seq	The sequence number (in hexadecimal notation) showing that data has been sent out, up to the value indicated.
Xmit MSS	The maximum segment size for transmissions in this connection.
Connected to	The IP address of the remote host if the connection is established.
Offered win	The size (in bytes) of the TCP window currently offered by the kernel.
Last ack	The time elapsed (in milliseconds) between kernel startup and its most recent acknowledgment.
Foreign win	The size (in bytes) of the TCP window currently offered by the remote host.
Last pkt	The time elapsed (in milliseconds) between kernel startup and its most recent reception of a packet.
Kernel up	The time elapsed (in milliseconds) since the kernel started.

To update the TCP statistics

From the Statistics view, choose Refresh. Unless you deactivate polling, Statistics automatically refreshes the routing data at configured intervals.

Related Topics

Activating and Deactivating Polling
Display Network Data as Text
Display TCP Connections
Interpret TCP Connection Messages
Set the Polling Interval
The Session Menu

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Concepts

Display Serial Interface Statistics

The Serial view provides information about the SLIP or PPP serial interface. You can use the information to solve a serial line problem. This view is appropriate only for a serial interface. If a serial interface is not running, a notice appears.

The Serial view displays the following information for the current SLIP or PPP connection:

View this field	To identify
Type of connection	The type of serial interface, SLIP or PPP.
Connection status	The status of the serial connection, either ON or OFF.
Port	The communications port used for the serial interface.
Packets in	The number of packets received by the local host machine.
Packets out	The number of packets sent by the local host machine.
Packets bytes in	The total number of bytes received in packets.
Packets bytes out	The total number of bytes sent in packets.
Raw bytes total	The total number of bytes received.
Packets received greater than MTU/MRU	The number of packets received that are larger than the Maximum Transmission Unit (MTU) or the Maximum Receive Unit (MRU) for the interface.
Receive FCS errors	For PPP connections only, the number of packets received with check sum errors.
Largest packet received	The number of bytes in the largest packet received.
Protocol rejects sent	Packets received for a protocol not supported by the local host.

To update the Serial interface data

From the Serial view, choose Refresh. Unless you deactivate polling, Statistics automatically refreshes the serial interface data at configured intervals.

Related Topics

Activating and Deactivating Polling
Display Network Data as Text
Display PPP Statistics
Set the Polling Interval
The Session Menu

Introducing Statistics
Step-by-Step Instructions
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Display PPP Statistics

The PPP view provides information about the PPP serial interface. You can use the information to solve a serial line problem. This view is appropriate only for a PPP serial interface. If a PPP interface is not running, a notice appears.

The PPP view displays the following information for the current PPP connection:

View this data	To examine
Link Control Protocol Configuration	Data-link connection information such as the MRU (Maximum Receive Unit), the magic number (a hexadecimal number used during protocol negotiations to eliminate packets echoed back to the sender), and ACCM, which specifies the control characters that must be preceded by escape characters.
IPCP Configuration	The local and remote IP address, and whether VJ compression is in use or not on the local and remote hosts.
Authentication	The authentication protocol type, and authentication packet, PAP protocol, and CHAP protocol statistics.

To update the PPP interface data

From the PPP view, choose Refresh. Unless you deactivate polling, Statistics automatically refreshes the PPP interface data at configured intervals.

Related Topics

Activating and Deactivating Polling
Display Network Data as Text
Display Serial Interface Statistics
Set the Polling Interval
The Session Menu

Introducing Statistics
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Set the Polling Interval

1. From the Settings menu, choose the Set Polling Interval command.
   --or--
   From the toolbar, choose 
2. In the Set Polling Interval dialog box, in the Seconds spin button entry field, enter the number of seconds you want the application to wait before refreshing the display.
   --or--
   Click the up and down arrows of the spin button to specify the interval (in seconds).
3. Choose OK to save your changes.

Related Topics

Display Network Data as Text
Display Network Events as Graphs
The Session Menu The Settings Menu
Activating and Deactivating Polling

Introducing Statistics
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Activate and Deactivate Polling

1. From the Settings menu, choose the Set Polling Interval command.
   --or--
   From the toolbar, choose 
2. In the Set Polling Interval dialog box, clear the Activate box to stop polling.
3. Choose OK to save your changes and close the dialog box.

Related Topics

Display Network Data as Text
Display Network Events as Graphs
Set the Polling Interval
The Session Menu
The Settings Menu

Introducing Statistics
Step-by-Step Instructions
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Display Receive Addresses

The receive address view lists valid IP address(es) for the TCP/IP kernel. If the destination address (which might be a multicast or broadcast address) of an incoming packet is in the local address list, the kernel accepts the packet and processes it.

If the kernel is sending an IP multicast or subnet broadcast packet, the kernel uses the receive address list to ascertain the hardware address for the packet.

This view is not ordinarily helpful in troubleshooting network connectivity; but FTP Software might request the information from this view if you are experiencing unexpected problems with your TCP/IP installation.

Protocol

A set of rules and standards. A network protocol defines how data is transmitted and received on the network.

Protocol Traffic

Protocol activity. When your PC sends and receives data transmissions on the Internet using more than one protocol, the Statistics application reports on the activity for each protocol. For instance, Statistics might report on ARP, TCP, UDP, and other protocol activity.

Network Traffic

Network activity. The volume of data being transmitted, acknowledged, and received across the network.

System Configuration

A set of definitions that determine how your PC and its network connection are set up. The PCTCP.INI configuration file contains these definitions via a list of parameters and their values.

Network Performance

A qualitative judgment of how efficiently and robustly the network handles multiple host, application, and user transactions. Superior network performance is directly correlated with resource allocation and network traffic.

ARP

Address Resolution Protocol. The Internet protocol used to associate an IP address to a physical hardware address. ARP is defined in RFC 826.

ARP Cache

The ARP (Address Resolution Protocol) Cache displays entries for each network device that has sent an ARP request to the kernel, or that has replied to an ARP request from the kernel.

Hardware Address

The address associated with an IP address. The ARP looks for this address in a host table that maps IP addresses to hardware addresses, then enters the value in the ARP cache.

Expires In

The Expires In value indicates how long the hardware address remains a valid entry. The maximum term is 900 seconds after the last connection activity. Expired entries are unusable, but they provide a history of previous successful connections. When the ARP cache is full, the next cache entry overwrites the first expired entry.

ICMP

Internet Control Message Protocol. The Internet protocol used for error and control messages. For example, Ping uses ICMP to send an echo request to a remote host, to test the availability of that host. ICMP is defined in RFC 792.

Interrupts

Request-for-attention signals. When requesting a service, both hardware and software pass interrupt signals to your PC's microprocessor.

Packet

A frame or datagram; that is, a single network message with its associated header, addressing information, data, and optional trailer.

Subnet Mask

The number used to conceal the host number of an IP address, yet reveal the network and subnet bytes when routing packets on the network. For example, 255.255.255.0 is an 8-bit mask for a Class B address.

Packet Buffers

The blocks of system memory used to hold data packets. You can configure huge, large, and small data packet buffers. The Statistics application reports on the number of buffers configured, the number currently available, and the minimum number of free buffers required.

Packet Fragment

An incomplete frame or datagram; that is, a network message that is missing a portion of its contents.

Router

A hardware device that forwards packets of a particular protocol type (IP, for example) from one network to another on the Internet.

Routing

The decision-making process that determines what path a packet takes as it transverses the network to its destination.

Router Table Entries

The description of available routers on the network that your PC can use to forward a packet to its destination across the network.

IP

The Internet Protocol. This protocol provides for the transmission of blocks of data between hosts identified by fixed-length addresses. The protocol is defined in RFC 791.

IP Address

The Internet Protocol number that uniquely identifies a computer on a network. The form of an IP address is four groups of numbers separated by periods, for example, 128.127.55.55. The Internet Protocol is defined in RFC 791.

TCP

Transmission Control Protocol. An Internet service transport layer protocol that provides reliable, connection-oriented, acknowledged data transmission. TCP is defined in RFC 793.

UDP

User Datagram Protocol. An Internet service transport layer protocol that provides connectionless, unacknowledged data transmission. UDP is defined in RFC 768.

IEEE

Institute of Electrical and Electronic Engineers. This group is responsible for many standards used in local area networks, notably the 802 series.

Machine Address Resolution

The act of correlating a host's physical media access card (MAC) address with its IP address.

Machine Address

The address of the media access card (MAC). The MAC address is assigned by the card manufacturer, and is specific to the card.

RIF

The Routing Information Field (RIF) entry. *Present* indicates a hardware address on an IEEE 802.5 Token Ring network, or provides routing information about remote hosts within its Routing Information Field. This field is blank if no RIF information is present.

Polling Interval

The time interval set for gathering statistics about a network event. The default value for the polling interval is five seconds.

Interface Name

The name (assigned by the software) that identifies the type of interface that your PC uses. By convention, FTP uses ifcust (for interface customization) and ipcust (for IP customization) appended with a number, ifcust0, for example.

Driver

The software that your PC uses as the interface to a specific input/output device.

Kernel

A program that passes information between connected hosts, and manages such things as system resources, network hardware drivers, and memory.

PPP

PPP (Point-to-Point Protocol) is a data-link protocol used to connect nodes over telephone lines. PPP negotiates protocol options and encapsulates IP packets for transmission over a serial line. PPP is defined in RFC 1661.

SLIP

SLIP (Serial Line Internet Protocol) is a data-link protocol used to connect nodes over telephone lines. SLIP allows IP packets to go across a serial line with a very simple packet structure. Instead of negotiating with the remote host, as PPP does, SLIP uses parameters the user provides, thus simplifying setup and troubleshooting. SLIP is described in RFC 1055.

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)