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What is Network Time?

The Network Time application allows you to set your PC clock from a remote machine running a time server. You can use Network Time to set your PC time zone, the time server from which you update your PC clock, and the frequency of those updates.

You can get a time stamp from one network time server at a time. Network Time uses this time stamp to set the time in the internal clock in your PC.

You may need to keep your PC clock synchronized with a remote time server if you

- Are concerned about the integrity of your PC clock.
- Are using Kerberos security, and you need to maintain synchronization with a Kerberos authentication server.
- Use NFS client software on your PC to access data on remote NFS server machines.
- Travel with your PC, between time zones.

The Network Time application performs its time stamp retrieval operations using the UNIX time protocol, as described in RFC 868.

Dialog Box Items

[Time Server](#)

[Get Time](#)

[Set Time](#)

[Options](#)

[Action Log](#)

Related Topics

[What is a Time Server?](#)

[What is a Time Stamp?](#)

[What is the Time Protocol?](#)

[Step-by-Step Instructions](#)

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Getting Started

Before you use the Network Time application, be sure that you know the hostname or IP address of at least one Internet host that runs a time server.

Related Topics

[What is Network Time?](#)

[Step-by-Step Instructions](#)

[Concepts](#)

Authorize a Network Time PC Clock Update

Use the Network Time Set Notification dialog box to update the time on your PC and to open Network Time.

To update the time on your PC, choose OK. This closes the Network Time Set Notification dialog box and exits Network Time.

To open Network Time, choose Cancel to close the Network Time Set Notification dialog box. Then, press Enter or double-click the Network Time icon.

Dialog Box Items

Would you like Network Time to update your local clock as shown below?

Time Server

Time On Server

Local Time

Time Difference

Related Topics

What is Network Time?

Set Network Time for Manual Clock Updates

Set Network Time for Periodic Clock Updates

Set Network Time to Automatically Change Your Clock

Set Network Time to Prompt You for All Clock Changes

Update Your Clock Periodically

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Set Your Time Zone

1. From the Time Zone Options box, select a time zone.
2. Choose the OK button to set your PC time zone to your selection.

In the Network Time dialog box, the time zone appears on the Time Zone line.

To display the Time Zone Configuration dialog box, choose Time Zone from the Settings menu.

Note: The Network Time application uses, in the order indicated, the following sources for time zone information on your PC:

1. The time-zone= entry in the [pctcp time] section of the PCTCP.INI configuration file
2. The time-zone= entry in the [pctcp general] section of the PCTCP.INI configuration file
3. The DOS TZ global variable

Dialog Box Items

[Current Setting](#)
[Time Zone Options](#)

Related Topics

[Set Your Time Server](#)
[Update Your Clock At Windows Startup](#)
[Update Your Clock Manually](#)
[Update Your Clock Periodically](#)

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Set Your Time Server

1. In the Network Time dialog box, in the Server box, enter the hostname or IP address of your time server.
2. Choose Set Time to accept this time server setting and to query that server.

Note: You can also configure your time server by using the Configure application in advanced mode and selecting the Internet Addresses Remote Servers screen to modify the time server section.

Related Topics

- [Set Network Time for Manual Clock Updates](#)
 - [Set Network Time for Periodic Clock Updates](#)
 - [Set Network Time to Automatically Change Your Clock](#)
 - [Set Network Time to Prompt You for All Clock Changes](#)
 - [Set Your Time Zone](#)
 - [Update Your Clock At Windows Startup](#)
 - [Update Your Clock Manually](#)
 - [Update Your Clock Periodically](#)
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Set Network Time for Manual Clock Updates

1. In the Network Time dialog box, choose the Options button.
2. In the Options dialog box, be sure that the Periodically Update checkbox is blank.
3. Choose the OK button to accept your settings.

Related Topics

[Set Network Time for Periodic Clock Updates](#)

[Set Network Time to Automatically Change Your Clock](#)

[Set Network Time to Prompt You for All Clock Changes](#)

[Set Your Time Server](#)

[Set Your Time Zone](#)

[Update Your Clock Periodically](#)

[Introduction](#)

[Step-by-Step Instructions](#)

[Concepts](#)

Set Network Time for Periodic Clock Updates

1. In the Network Time dialog box, choose the Options button.
2. In the Options dialog box, choose the Periodic Update checkbox so that it has an X in it.
3. In the Every Minutes box, enter the number of minutes you want between each PC clock update.
4. Choose the OK button to accept your settings.

Related Topics

[Set Network Time for Manual Clock Updates](#)

[Set Network Time to Automatically Change Your Clock](#)

[Set Network Time to Prompt You for All Clock Changes](#)

[Set Your Time Server](#)

[Set Your Time Zone](#)

[Update Your Clock Periodically](#)

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Set Network Time to Automatically Change Your Clock

1. In the Options dialog box, be sure that the Confirm Before Setting Local Time checkbox is blank.
2. Choose OK.

In this mode, when the Network Time application is going to update your PC clock, the application displays the Network Time Automatic Set Notification dialog box, giving you 10 seconds to cancel the update before updating your PC clock.

Related Topics

[Set Network Time for Manual Clock Updates](#)
[Set Network Time for Periodic Clock Updates](#)
[Set Network Time to Prompt You for All Clock Changes](#)
[Set Your Time Server](#)
[Set Your Time Zone](#)
[Update Your Clock Periodically](#)

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Set Network Time to Prompt You for All Clock Changes

1. In the Options dialog box, select the Confirm Before Setting Local Time checkbox so that it has an X in it.
2. Choose OK.

In this mode, when the Network Time application is going to update your PC clock, the application displays the Network Time Set Notification dialog box. You must choose OK in this dialog box for Network Time to update your PC clock.

Related Topics

[Set Network Time for Manual Clock Updates](#)

[Set Network Time for Periodic Clock Updates](#)

[Set Network Time to Automatically Change Your Clock](#)

[Set Your Time Server](#)

[Set Your Time Zone](#)

[Update Your Clock Periodically](#)

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Set Network Time to Prompt You In Case Of Errors

1. In the Options dialog box, select the Notify User On Error checkbox.
2. Choose OK.

Related Topics

[Set Network Time for Manual Clock Updates](#)
[Set Network Time for Periodic Clock Updates](#)
[Set Network Time to Log All Messages](#)

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Set Network Time to Log All Messages

1. In the Options dialog box, choose the Log All Events checkbox.
2. Choose OK.

Related Topics

[Set Network Time for Manual Clock Updates](#)

[Set Network Time for Periodic Clock Updates](#)

[Set Network Time to Prompt You in Case of Errors](#)

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[Concepts](#)

Set Your Time Server Response Timeout Interval

1. In the Options dialog box, in the Time to Wait for Server Reply box, enter the number of seconds you want Network Time to wait.
2. Choose OK.

Related Topics

[Set Network Time for Manual Clock Updates](#)

[Set Network Time for Periodic Clock Updates](#)

[Set Network Time to Log All Messages](#)

[Set Your Time Server](#)

[Set Your Time Zone](#)

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Display Your Time in 24-hour Mode

1. In the Options dialog box, select the 24-Hour Clock checkbox.
2. Choose OK.

Related Topics

[Set Network Time for Manual Clock Updates](#)

[Set Network Time for Periodic Clock Updates](#)

[Set Network Time to Log All Messages](#)

[Set Your Time Server](#)

[Set Your Time Zone](#)

[Introduction](#)

[Step-by-Step Instructions](#)

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Update Your Clock Manually

1. In the Network Time dialog box, choose the Get Time button.

The Network Time application obtains the current time stamp from the time server displayed in the Server box, and displays any difference between that server time and your local PC clock.

2. Choose the Set Time button.

The Network Time application sets your PC clock to the time obtained from your currently configured time server.

Related Topics

[Set Network Time for Manual Clock Updates](#)

[Set Network Time for Periodic Clock Updates](#)

[Set Your Time Server](#)

[Set Your Time Zone](#)

[Update Your Clock At Windows Startup](#)

[Update Your Clock Periodically](#)

[Introduction](#)

[Step-by-Step Instructions](#)

[Concepts](#)

Update Your Clock Periodically

1. Choose the Options button.
2. Choose the Periodically Update checkbox.
3. In the Every Minutes box, enter the interval between PC clock updates.
4. Ensure that the Confirm Before Setting Local Clock checkbox is blank.
5. Choose OK.
6. Minimize the Network Time dialog box.

Related Topics

[Set Network Time for Manual Clock Updates](#)

[Set Network Time for Periodic Clock Updates](#)

[Set Your Time Server](#)

[Set Your Time Zone](#)

[Stop the Network Time Application](#)

[Update Your Clock At Windows Startup](#)

[Update Your Clock Manually](#)

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Update Your Clock At Windows Startup

1. Copy the Network Time application icon into your Windows Startup group.
2. Choose the Network Time icon from the Windows Startup group.
3. Choose the Options button.
4. Ensure that the Periodically Update checkbox is blank.
5. Ensure that the Confirm Before Setting Local Clock checkbox is blank.
6. Choose OK.
7. Choose the Set Time button to close the Network Time dialog box.

Related Topics

[Set Network Time for Manual Clock Updates](#)

[Set Network Time for Periodic Clock Updates](#)

[Set Your Time Server](#)

[Set Your Time Zone](#)

[Stop the Network Time Application](#)

[Update Your Clock Manually](#)

[Update Your Clock Periodically](#)

[Introduction](#)

[Step-by-Step Instructions](#)

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View the Action Log

From the Settings menu, choose Show Log.

The Action Log appears at the bottom of the Network Time dialog box.

Related Topics

[Hide the Action Log](#)

[Set Network Time for Manual Clock Updates](#)

[Set Network Time for Periodic Clock Updates](#)

[Set Network Time to Log All Messages](#)

[Set Your Time Server](#)

[Set Your Time Zone](#)

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Hide the Action Log

Choose the Show Log option from the Settings menu, and remove the check mark next to the option.

The Action Log disappears from the bottom of the Network Time dialog box.

Related Topics

[Set Network Time for Manual Clock Updates](#)

[Set Network Time for Periodic Clock Updates](#)

[Set Network Time to Log All Messages](#)

[Set Your Time Server](#)

[Set Your Time Zone](#)

[View the Action Log](#)

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[Concepts](#)

Stop the Network Time Application

1. In the Network Time dialog box, choose File.
2. Choose Exit.
--or--
Press ALT+F4.

After you choose Exit, the Network Time dialog box closes.

Related Topics

[Introduction](#)

[Step-by-Step Instructions](#)

[Concepts](#)

Save Settings

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

Related Topics

[Introduction](#)

[Step-by-Step Instructions](#)

[Concepts](#)

The Time Server Does Not Respond

If you attempt to set your PC clock and you receive the error message

```
Time server is not responding
```

it indicates that the time server that you query to update your PC clock may be malfunctioning. Try to reach the server using the Ping application.

Related Topics

[Introduction](#)

[Step-by-Step Instructions](#)

[Concepts](#)

You Run Out of Network Descriptors

If you attempt to set your PC clock and you receive the error message

```
Could not allocate network descriptors
```

increase the number of network descriptors defined in the `[pctcp kernel]` section of your PCTCP.INI file. Use the `udp-connections=` parameter to define the number of UDP descriptors .

Remember that other programs (such as the NFS servers) depend on the use of network descriptors.

Related Topics

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[Step-by-Step Instructions](#)

[Concepts](#)

You Have a Name Resolution Failure

If you attempt to set your PC clock and you receive the error message

```
Unable to resolve host name
```

it indicates that the kernel could not resolve the hostname for your time server. Verify that you have DNS service on your machine.

In the Time Server box, specify the IP address instead of the hostname for the time server.

Verify that the host is on your network and is running.

Related Topics

[Introduction](#)

[Step-by-Step Instructions](#)

[Concepts](#)

The File Menu

From the File menu, use the Exit command to exit from Network Time.

Related Topics

[Introduction](#)

[Step-by-Step Instructions](#)

[Concepts](#)

The Settings Menu

Use Settings menu commands to set your time zone, show the Action Log, and save your settings in the PCTCP.INI configuration file.

Use this command	To do this
Time Zones	Choose a time zone for your PC.
Show Log	Open the Action Log at the bottom of the Network Time dialog box to display messages about time service operations.
Save Settings on Exit	Save the most recent settings for Network Time when you exit from the application, including the time server, time zone, and all settings displayed in the Options dialog box.

Related Topics

[Introduction](#)

[Step-by-Step Instructions](#)

[Concepts](#)

What is a Time Server?

A time server is an Internet Protocol host that runs a time server program (usually called `timed`). A time server program provides Time Protocol services to Internet Protocol hosts. Most machines running a UNIX operating system provide a time server.

Related Topics

[What is a Time Stamp?](#)

[What is the Time Protocol?](#)

[Introduction](#)

[Step-by-Step Instructions](#)

[Concepts](#)

What is a Time Stamp?

A time stamp is the current time available from a time server. A time server sends a 32-bit number, representing the number of seconds since midnight on January first 1900, to the Network Time application.

Related Topics

[What is a Time Server?](#)

[What is the Time Protocol?](#)

[Introduction](#)

[Step-by-Step Instructions](#)

[Concepts](#)

What is the Time Protocol?

The Time Protocol provides a site-independent, machine-readable date and time to time server clients. A time server responds to time protocol queries from clients by sending back a time stamp.

Time Protocol service can be transported over either UDP or TCP.

Time servers usually operate over port 37.

The Time Protocol is described in RFC 868.

Related Topics

[What is a Time Server?](#)

[What is a Time Stamp?](#)

[Introduction](#)

[Step-by-Step Instructions](#)

[Concepts](#)

How Do I Work with Network Time?

You use the Server box on the Network Time dialog box to set the time server that Network Time queries when it updates your PC clock.

You use the Time Zone Configuration dialog box to set the time zone. If you have previously set a time zone, the Current Setting box displays the time zone you set.

You use the Options dialog box to set the following configuration options for Network Time:

- How frequently Network Time runs.
- Whether Network Time prompts you for PC clock updates.
- Whether Network Time prompts you online with time server errors.
- Whether Network Time keeps full-time server message logs.
- How long to wait for the updates that you request from your time server.
- Whether to display your PC clock in standard or 24-hour mode.

You can configure the Network Time application to update your PC clock

- Only once. This is the default setting.
- At a set time interval.

If you want to update your PC clock from a network time server, use the Network Time application in manual mode.

If you want the Network Time application to run automatically in the background and keep your PC in time-synchronization with your time server, set Network Time to run in background mode.

You can have the Network Time application update your PC clock when you start Windows.

You can configure the Network Time application to

- Change your PC clock automatically. This is the default setting.
- Prompt you when Network Time tries to change your PC clock.

The Network Time application displays error messages in the Action Log. You can choose whether Network Time also displays an Error dialog box on the screen when an error condition occurs, requiring you to acknowledge those errors.

The Network Time application displays messages about its operations in the Action Log. You can choose whether the Network Time application displays

- Only Network Time operation errors, such as time server response timeouts and failures to update your PC clock. This is the default setting.
- All Network Time and time-server-related responses and messages, including routine messages about successful PC clock updates.

You can set the amount of time that the Network Time application waits for a response to an update query sent to your time server. The default period is 5 seconds.

The Network Time application displays your time in standard mode (a.m. or p.m.) by default. You can configure Network Time to display your time in 24-hour mode.

You can open the Action Log and view the contents in the Network Time dialog box.

You can save the most recent settings that you make on the Settings menu when you exit from Network Time.

Related Topics

[Introduction](#)

[Step-by-Step Instructions](#)

[Concepts](#)

Set Options

You can set a number of display and update options here.

Dialog Box Items

[Periodically Update
every ... minutes](#)

[Confirm Before Setting Local Time](#)

[Notify User on Error](#)

[Log All Events](#)

[Display Time In 24 Hour Format](#)

[Time to wait for server reply](#)

Related Topics

[Introduction](#)

[Step-by-Step Instructions](#)

[Concepts](#)

time stamp: The current time available from a time server.

Time Protocol: Provides a site-independent, machine-readable date and time to time server clients. A time server responds to time protocol queries from clients by sending back a time stamp.

Time Protocol service can be transported over either UDP or TCP. Time servers usually operate over port 37. The Time Protocol is described in RFC 868.

time server: An Internet Protocol host that runs a time server program (usually called `timed`). A time server program provides Time Protocol services to IP hosts. Most computers running a UNIX operating system provide a time server.

Network Time Notification dialog box

Displays the IP address of the current time server. If this field is empty, you need to enter the IP address of the remote server you wish to use as your time server.

Displays the server's time.

Displays the time on your PC.

Displays the time difference.

Enter the time server timeout interval (in seconds).

Updates the clock periodically.

Enter the interval between updates.

Prompts you for clock updates.

Notifies you when errors occur. If not selected, errors are saved only in the log.

Saves all actions in the log. If not selected, only errors are saved in the log.

Displays time in 24-hour format.

Displays the local hostname. Network Time gets the local hostname from the host-name entry in the [pctcp general] section of the PCTCP.INI configuration file.

Displays the currently configured time server.

Gets the current time stamp from your currently configured time server.

Sets your PC clock to the current time stamp from your currently configured time server.

Goes to the Options menu to let you set configuration options.

Displays information about Network Time operations.

The currently configured time zone.

Displays the current time zone setting.

Select a time zone from this list box to reconfigure the time zone.

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

case sensitivity: The ability of a program to evaluate 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.

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 filename 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 computer's 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)

