



2time for DOS

User and Configuration Guide

Version 1.0

2net Limited

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2time User and Configuration Guide

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Description

2time uses the Simple Network Time Protocol (SNTP, RFC 1769) to obtain an accurate reading of the current time from a server running the NTP protocol, RFC 1305. A typical use is to add 2time to autoexec.bat so that the system clock is set from bootup.

System Requirements

- Intel x86 compatible CPU
- 128 KB free RAM
- MS-DOS 3.3 or later
- A network adapter and packet driver

Configuration

A connection over an Ethernet LAN requires a packet driver. Almost all network cards are supplied with one, usually in a directory named PKTDRV. In most cases the packet driver will auto-detect the network card. If not, consult the manufacturer's documentation. The packet driver must be loaded before 2time, usually in the AUTOEXEC.BAT file.

In addition, some network parameters must be written into the 2NET.CFG file

2NET.CFG

Here is a sample file:

```
[network]
my_ip=192.168.0.2
netmask=255.255.255.0
gateway=192.168.0.1
nameserver=208.67.222.222
```

The keywords have the following meanings:

nameserver – the IP address of a domain name server
my_ip – the IP address of the PC, usually allocated by a network administrator
netmask – obtained from a network administrator
gateway – the IP address of a network node that has a connection to other networks or the Internet

Command Reference

The simplest usage is just 2time with the address of a time server, for example

```
2time ntp2d.mcc.ac.uk
```

The address can be given as a domain name, as in the example, or as an IP address in the normal “dotted decimal” form.

There are three optional parameters

- l** Print the time relative to the local time zone rather than GMT. You will need to set the time zone by setting the TZ variable, for example for the east coast of the USA, you would use “SET TZ=GMT+5”
- q** Quiet mode: don't print anything except errors
- s** Set the system time

Here is an example the command you would add to autoexec.bat to set the system clock at start-up

```
2time -q -s ntp2d.mcc.ac.uk
```

Finding a time server

There are many public NTP servers around the world. For a comprehensive list look at this URL:

<http://support.ntp.org/bin/view/Servers/WebHome>

Typically you will want to choose a tier 2 server such as

ntp-2.ece.cmu.edu (USA)
bernina.ethz.ch (Switzerland)
ntp.cyber-fleet.net (Japan)

Exit codes

If 2time encounters an error it reports it using one of these termination codes

Code	Description
1	Error in the command line parameters, either an invalid option has been given or no host has been specified.
2	The network drivers have not been loaded.
4	The host cannot be found
5	Network error.
7	Network problem sending data to the server
9	Network problem receiving data from the server
10	General error

Standards Implemented

RFC 1769 Simple Network Time Protocol

File List

Here is a complete list of files supplied as part of the package:

2TIME.EXE	2time SNTP
2NET.CFG	Example configuration file
GETTIME.BAT	Example batch file
LICENSE.TXT	End User License Agreement
PING.EXE	For diagnosing communications problems
USER.PDF	This User Guide in pdf (Adobe Acrobat) format.