

WINDOWS NT PING

By Mark E. Donaldson

PING is used to test TCP/IP connectivity with another host and gives information about the length of time test data takes to be sent to the host and a reply received. Its most basic use is as follows:

```
C:\>ping <IP address or hostname>
```

```
Pinging 160.82.52.11 with 32 bytes of data:
```

```
Reply from 160.82.52.11: bytes=32 time=10ms TTL=252
Reply from 160.82.52.11: bytes=32 time<10ms TTL=252
Reply from 160.82.52.11: bytes=32 time<10ms TTL=252
Reply from 160.82.52.11: bytes=32 time<10ms TTL=252
```

From the above you can see it send 32 bytes to host 160.82.52.11 and each time a reply was received in 10ms or less, this shows a good connection.

PING does have a number of option parameters to accomplish different objectives.

ping [-t] [-a] [-n count] [-l size] [-f] [-i TTL] [-v TOS] [-r count] [-s count] [[-j host-list] | [-k host-list]] [-w timeout] destination-list

- t Ping the specified host until interrupted.**
- a Resolve addresses to hostnames.**
- n count Number of echo requests to send.**
- l size Send buffer size.**
- f Set Don't Fragment flag in packet.**
- i TTL Time To Live.**
- v TOS Type Of Service.**
- r count Record route for count hops.**
- s count Timestamp for count hops.**
- j host-list Loose source route along host-list.**
- k host-list Strict source route along host-list.**
- w timeout Timeout in milliseconds to wait for each reply.**

In Windows 2000 you can press Ctrl-Break when running the **-t** option for a list of statistics. Press Ctrl-C to actually stop the ping.

It can be useful to have a small batch file ping various hosts and terminal servers at regular intervals to ensure all are still present (although there are commercial software packages that do this). A simple command like:

```
C:\>ping -f -n 1 -l 1 148.32.43.23
```

```
Pinging 148.32.43.23 with 1 bytes of data:
Reply from 148.32.43.23: bytes=1 time<10ms TTL=128
```

pings a host once with one byte of data. You should be aware that PING works by sending ICMP echo packets and some routers may filter these out meaning a PING will not work.