

## WinQVT/Net Initial Setup

Node Name

IP Address

Packet Vector

## **Node Name**

Each machine in a TCP/IP network must have a name. This name, which is usually assigned by the network administrator, is the name by which the machine is known to other machines on the net.

TCP/IP machine names must begin and end with a letter or digit, and may contain only letters, digits, or the '-' character. The maximum length of a name is 63 characters.

## IP Address

All machines in a TCP/IP network must have an IP address. These addresses are of the form:

`nnn.nnn.nnn.nnn`

where each 'nnn' is a decimal integer not exceeding 255.

There are three 'classes' of IP addresses, Class A, B, and C. These three classes differ primarily in the portion of the address space which is allocated to network numbers, as compared to the portion allocated for node numbers. This basic three-tiered system can be, and often is, extended by the use of 'subnet masks'.

Because of the potential complexity of the local addressing scheme, and because the consequences of an addressing error could be serious, IP addresses are usually managed and assigned by the network administrator.

It is not necessary for each node to store its own IP address locally. In fact, it is quite common for only a few machines on a network to contain databases which list the IP addresses for the machines on the net. The protocol by which a machine can acquire its IP address over the network, at boot time, is called the Reverse Address Resolution Protocol, or RARP. Using this protocol, a machine that needs to obtain its own address will broadcast a RARP request, and wait for a RARP server somewhere on the net to respond. The RARP reply packet will contain the requesting machine's IP address, as found in the server's database.

With WinQVT/Net you have the option of storing your IP address locally, in QVTNET.INI, or using RARP to pick up the IP address at startup time. If you choose the second option, your QVTNET.INI 'ip' entry will look like this:

`ip=RARP`

## **Packet Vector**

WinQVT/Net does not contain built-in support for any network interface hardware. Instead, it uses the Packet Driver Specification to communicate with a packet driver (a small DOS TSR which is loaded at boot time), and the packet driver in turn communicates with the hardware. Communication with the packet driver is effected by means of a software interrupt.

In the Intel 86 architecture, software interrupts are dispatched through a vector table, which occupies the lowest region of memory. Each entry in the table is therefore called an 'interrupt vector', and each one points to a piece of code which is called when that interrupt occurs. This piece of code is called an 'interrupt service routine'. The packet driver installs its own address at a point in the table which you select when you load the driver. According to the Packet Driver Specification, packet driver interrupt vectors must be within the range 0x60 to 0x80.

Under WinQVT/Net you cannot use vector 0x80; this vector is pre-empted by the packet driver protected-mode interface program, PKTINT.COM. WinQVT/Net will communicate with PKTINT using this interrupt, and PKTINT will in turn communicate with the packet driver using its designated interrupt.

