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Using Dan Lanciani's NDIS3PKT for NT and Windows 2000 with Datalight SOCKETS

WHITEPAPER SERIES

Ndis3pkt Overview

Ndis3pkt for NT consists of an NT kernel driver, a virtual device driver (VDD), and a real-mode stub driver. These three drivers combined together provide a packet driver interface on top of NDIS version 3.0 and allows packet driver applications to be used with Windows/NT.

To install NDIS3PKT, follow the instructions found in the distribution archive, which can be downloaded from <http://www.danlan.com>. After installation, restart Windows to load the NDIS3PKT drivers.

After Windows is restarted, the packet driver interface is available for use within DOS sessions. In order to utilize this interface, the real-mode stub driver, NDIS3PKT.COM, must be loaded. For information regarding the NDIS3PKT.COM command line options, please see the README file include in the NDIS3PKT archive.

Configuring SOCKETS

Once NDIS3PKT.COM is loaded, the SOCKETS configuration should be modified to use the interrupt allocated by NDIS3PKT.COM. It is not required to specify the Packet driver interrupt, nor the hardware interrupt if there is only one packet driver in the system, but it is recommended practice and can avoid potential pitfalls. By default, this interrupt is 0x69. Also, the address configuration of SOCKETS must match that of the local network. Here is an example SOCKET.CFG:

```
Ip address 192.168.0.7/24
iface pdr if0 dix 1500 5 0x69
route add default if0 192.168.0.1
domain server 192.168.0.2
ip address

# set TCP parameters
tcp mss 1460
tcp window 2920
tcp retry 6
tcp irtt 500ms
```

This configuration assumes that NDIS3PKT.COM was loaded with the default interrupt. The IP address used by SOCKETS should be different than the IP address used by NT. If NT currently uses a static IP address, SOCKETS can use DHCP to allocate an IP address. If NT currently uses DHCP, then the recommended option is to allocate a static IP address to SOCKETS as the DHCP server will allocate the same IP address to SOCKETS as assigned to NT.

Please keep in mind that if you have Sockets resident and you are not running a real-mode DOS program such as XPING or COMMAND.COM in the same DOS box, then your "NT DOS Emulator" will not be running and you will be unable to talk to SOCKETS.

The default "command interpreter" is CMD.EXE which is a 32 bit Console mode program. You could instruct NT to run COMMAND.COM which is a real-mode program. This is done in CONFIG.NT by removing the NTCMDPROMPT line.

The performance within this environment is not the typical SOCKETS performance due to the "virtual" DOS environment. This environment is adequate for testing and evaluation only.

For more information about SOCKETS configuration, please see the Datalight ROM-DOS User's Guide.