Linux ARCNET Driver Information

Compatibility Test Report

Version 3.91 of the Linux ARCNET driver, running on Linux 2.2.14, has been verified to behave as described below.

Hardware Drivers			
	ARCNET Card	*Notes*	
	PCX	Memory-mapped buffers	PASS[1]
	PCA66	Memory mapped buffers	PASS[1]
		I/O mapped buffers	PASS[1]
	PCX20	I/O mapped buffers	PASS[1]
	PCI20	I/O mapped buffers PCI Plug-and-play	PASS[1]
	PCM20	I/O mapped buffers PCMCIA Plug-and-play	PASS[1]
	PCI22	I/O mapped buffers PCI Up to 10 Mbit/sec	PASS[1]
	PCM22	I/O mapped buffers PCMCIA Up to 10 Mbit/sec	PASS[1]

Encapsulation Drivers (Linux-to-Linux tests)			
	Encapsulation	**Notes**	
	RFC1201	Auto-detected	PASS[2]
	RFC1051	Auto-detected	PASS[2]
	Ethernet-Encap	Feature will be restored before v4.00	Not Implemented
	Raw	Enabled automatically if other encapsulation types are not in use	PASS[2a]

Multi-Platform Communication Tests			
Target	**Driver Version**	**Protocol/Application**	
Linux	V3.02	RFC1201 TCP/IP	PASS[3]
		RFC1051 TCP/IP	PASS[3]
		Ethernet-Encap TCP/IP	Not Implemented
	V3.91 Beta	Raw packet test program	PASS[3]
Win9x	Contemporary Controls	RFC1201 TCP/IP	PASS[3a]
		RFC1201 IPX	Not Tested
NT4	Contemporary Controls	RFC1201 TCP/IP	Not Tested
		RFC1201 IPX	Not Tested
Win95	NDIS2 Driver	Ethernet-Encap TCP/IP	Not Tested
DOS	Novell trxnet.exe	RFC1201 IPX	Not Tested

Advanced Features		
	Encapsulation auto-detection	PASS[4]
	Load/unload encapsulation drivers without service interruption	PASS[4]
	Multiple cards of same/different types loaded at once	PASS[4]
	TCP/IP routing from one encapsulation type to another	PASS[4]
	TCP/IP routing from Ethernet to ARCNET	PASS[4]
	SMP (Symmetric Multi-processor) compatibility	Not Tested

CONTEMPORARY CONTROLS™

Notes:

(1) Hardware compatibility tests were executed between two Linux computers running the 3.91 driver, one of which contained the card type under test and the other contained a PCI20 or PCI22 card (depending whether the test ran at 2.5Mbit/sec or 10Mbit/sec). The test consisted of sending 100 megabytes of random data via UDP in packets up to 40 kbytes in size. The receiving station then echoed each packet back to the sender, where the contents were verified to ensure that no data was corrupted. The tests exercised both RFC1201 and IP fragmentation.

(2) The RFC1201 encapsulation clearly passes because it was used in all the tests of type (1). RFC1051 encapsulation was verified using the same test program between two computers with PCI20 cards installed. A smaller packet size was used (10 kbytes) because RFC1051 does not support ARCNET-level fragmentation. IP fragmentation was verified to work correctly.

(2a) Raw encapsulation does not directly support TCP/IP, so a separate test program was constructed using raw sockets to verify that data could be passed correctly.

(3) Tests (2) and (2a) were repeated with different Linux ARCNET driver versions.

(3a) The Contemporary Controls ARCNET driver for Windows does not support RFC1201 ARCNET-level fragmentation, so the echo test described in (1) runs only if the MTU of the Linux arc0 device is set to 500 or less using the following command:

```
ifconfig arc0 mtu 500
```

This causes the Linux IP layer to fragment the packets into smaller pieces, so the RFC1201 ARCNET-level fragmentation is never used.

(4) All of the tests in this section were performed manually using a variety of programs including ftp and the echo test program from (1).