NOVELL TECHNICAL BULLETIN

TITLE: Novell's ECONFIG Statement for NetWare 386
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PRODUCT: NetWare 286/386
PRODUCT VERSION: 2.1x, 3.x
SUPERSEDES: NA

SYMPTOM: NA

ISSUE/PROBLEM

In NetWare 286, Novell gave customers the ability to configure
Ethernet drivers to communicate via Ethernet II or IEEE 802.3 packet
types. Ethernet II packets require a packet type number which is
assigned by Xerox Corp. Novell's IPX protocol was assigned the
Ethernet II packet type of 8137. However, some customers have the
desire to use Ethernet II packets with Novell's IPX, yet want to deviate
from the 8137 type identifier.

These customers have configurations such as a Xerox XNS network
connected to a Novell network. Under NetWare 286, customers were
able to change the Ethernet II type field through use of the ECONFIG
utility. XNS and IPX packets are similar enough that NetWare 286
customers could change the IPX Ethernet II protocol identifier from
8137 to 0600 (the XNS protocol identifier), and the packets would
route properly across an XNS internet most of the time. It is merely
coincidence that IPX and XNS packets are similar enough that they
could possibly be interchanged. It was never Novell's intent to allow
for IPX packets to be transmitted under any other Ethernet II protocol
identifier than 8137.

In NetWare 386, Novell has not allowed the Ethernet II protocol type
number for IPX packets to be changed from 8137. This was necessary
because of the open architecture of NetWare 386. The NetWare 386
Operating System has the capability of supporting protocols other than
IPX. This means that when an XNS protocol stack is written for
NetWare 386 that it is possible to have both the IPX and XNS protocol
stacks operating within the Operating System. In this case, changing
the Ethernet II type for IPX from 8137 would only lead to system
malfunction. It should be noted that the same open architecture has
been developed in the new DOS ODI (Open Datalink Interface)
workstation IPX and drivers that are currently shipping with NetWare
386 v3.1.

To further differentiate between IPX and XNS in NetWare 386, the IPX data type field within the IPX header (which happens to be equivalent in the XNS header) has been changed from type 4 (XNS defines 4 as a Packet exchange packet) to type 0 (XNS defines 0 as an Undefined packet).