

LAN2LAN Installations on 486-based Machines

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Introduction

An intermittent problem has been found when LAN²LAN software v3.02, or earlier, is run on Intel 80486-based computers.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on these software and hardware versions:

- LAN²LAN software v3.02 or earlier
- Intel 80486-based computers

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Symptom

LAN²LAN operates normally for a period of time, then suddenly stops communicating. The link remains "In Service". However, data flow completely stops. When the L2LSTAT utility is used, one end of the link appears to transmit frames and characters to the other side, but does not receive anything back except Receiver Readys (RRs). At the other end of the link, the L2LSTAT utility shows that the frames and characters are received, but nothing is transmitted in response except RRs. If the LAN2LAN.LAN driver is unloaded and reloaded at the end that receives frames and characters but only transmits RRs, proper communication is restored until the problem occurs again.

Reason

LAN²LAN v3.02 writes a two-byte control value to the WNIC adapter as a single word. In a 486 environment, this can cause a problem if the WNIC happens to read the value at the same time that the host PC is writing it. This is because, unlike the 386 and earlier Intel CPUs, the 486 does not guarantee that it will write the low-order byte first when writing a word that crosses a double-word boundary in memory. If the high-order byte gets written first at the same time that the WNIC reads the value, the WNIC will read an improper value and communications will cease.

Solution

Upgrade to LAN²LAN v3.02a or later software. This version of LAN²LAN writes the control value to the WNIC's memory using two-byte writes as opposed to a single-word write.

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