



Tech Info Library

DOS Compatibility Card: Using LAN WorkPlace for DOS (6/95)

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TOPIC -----

This article provides information on using LAN WorkPlace for DOS with the DOS Compatibility Card for the Power Macintosh.

DISCUSSION -----

This article focuses on aspects of network software installation that deviates from normal DOS/Windows installations and assumes a working knowledge of DOS and Windows. This article is not a substitute for and should be used in conjunction with product documentation!

Introduction

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Simultaneous Macintosh and DOS Networking

Your Power Macintosh 6100 DOS Compatible can have simultaneously active connections in both environments, provided different networking protocols are used. You cannot have two identical protocols running in both environments. If identical protocol support in both environments is needed, the only solution at this time is to encapsulate one protocol inside a different protocol, referred to as "tunneling". For example, there are various options to have TCP/IP active on both the Macintosh and the DOS side; they all require some form of gateway to either route IP encapsulated in AppleTalk, or IP encapsulated in IPX. One solution is to set MacTCP for EtherTalk and put an Apple IP Gateway on the network.

DOS Networking and Memory

If you will be using the Power Macintosh 6100 DOS Compatible networking functions, it is recommended that you maximize conventional memory by removing unnecessary device drivers and TSRs. Also, load the remaining device drivers and TSRs high if possible. Windows for Workgroups 3.11 requires greater than 540K of conventional memory for its Browser to function properly.

Windows for Workgroups: Installation Considerations

If you will be installing Windows for Workgroups 3.11, the Novell Netware client, AND TCP/IP support, install the NetWare client first, Windows for Workgroups 3.11 second, and the IP stack third.

ODI to NDIS Translation Issues

Novell provides an ODI to NDIS translator called ODINSUP.COM, which is copied to the same directory as the client software. This lets ODI drivers be used in an NDIS environment. When using ODINSUP.COM, you must specify an interrupt in the NET.CFG file. Use the statement in the Link Driver section of the NET.CFG file:
INT 6

Failure to do this results in the following error message:

"ERROR: "First Mac ODI MLID does not conform to the latest ODI MLID specification. Call adapter manufacturer and request a newer MLID that preserves the PIC mask bit."

For a complete discussion of ODINSUP.COM and configuration information for it, please contact Novell.

Windows for Workgroups 3.11

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If Windows for Workgroups 3.11 is to be installed, it is recommended that you become familiar with the protocol.ini file, which Windows for Workgroups 3.11 uses for setting up the networking environment. Without the proper entries in this file, Windows for Workgroups 3.11 networking does not function properly. The installer for Windows for Workgroups 3.11 does NOT modify the PROTOCOL.INI or NET.CFG file correctly, which means they must be manually edited. A suggested resource is the Windows for Workgroups 3.1 Resource Kit, available from Microsoft.

MACODI

MACODI.COM is located on the DOS Compatibility Card Installer Disk for DOS Environment. It is important to note that the Power Macintosh 6100 DOS Compatible does not require any special settings where networking is concerned. The DOS side functions as would any DOS machine using ODI drivers. The only special consideration is to be sure the same protocols are not running in both environments unless tunneling is used.

Binding TCP/IP protocols in NET.CFG

For any TCP/IP setup, you MUST bind IP and ARP in the NET.CFG file. The only notable exception to this that we know of is FTP Software's PC/TCP. If the IP protocol stack you use requires RARP, you MUST bind this also. The entries that bind IP, ARP, and RARP are ALWAYS the same, unless you are binding to a frame type other than Ethernet_II, which is unlikely. This is the standard IP, ARP, and RARP listing that MUST be in the NET.CFG file for IP support:

```
.   Link Driver MACODI
.   Frame Ethernet_II
```

```
. Protocol IP 800 Ethernet_II
. Protocol ARP 806 Ethernet_II
. Protocol RARP 8035 Ethernet_II
```

As a general rule, do not add PORT or INT statements to the NET.CFG file. ODI drivers do not necessarily require them, and MACODI does not use interrupts. If using odinsup.com for NDIS compatibility, set the INT value to 10.

Example Installation and Settings Files

The following are some examples of networking configurations on the Power Macintosh 6100 DOS Compatible. Note that for all of these installations, Novell Netware was loaded. Also note that defaults were selected in all of these scenarios, which may not be valid for your environment. These are included as examples only. In some situations, the installer may not respond as outlined due to differences in files loaded into memory at the time of the installation. If that occurs, proceed per the software's documentation for using the software with ODI drivers. For the sake of brevity, only portions of files specific to the discussion will be listed. For further help in setting up the various networking environments, please contact the vendor of your network operating system.

LAN WorkPlace for DOS Setup

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You must have successfully installed the NetWare client software before performing this step. "Successfully" means LSL.COM and MACODI.COM are loading without errors. Make sure you do not have networking software loaded on the Macintosh that would cause a conflict, such as MacTCP. If you are going to install Windows for Workgroups 3.11, do so before performing this step. Follow these steps to load LAN WorkPlace for DOS. Again, only the steps that deviate from standard installations will be thoroughly outlined.

Step 1

Before beginning the installation, you need to have the following information:

- IP ADDRESS:
- SUB-NET MASK:
- DEFAULT ROUTER IP ADDRESS:
- DOMAIN NAME:
- DOMAIN NAME SERVER IP ADDRESS (If DNS services will be used):

Step 2

Run the Lan WorkPlace for DOS installer, and follow the prompts. Enter the information as it is asked. Let it modify the files for you, although you will have to modify them again.

Step 3

Edit the NET.CFG file. The version of LAN WorkPlace for DOS used in this example did not enter the proper values into the Link Driver MACODI heading of the net.cfg file, meaning you must enter them in manually. This is what it should read after editing it manually. Note that the addresses listed are for

illustrative purposes ONLY. LAN WorkPlace for DOS enters the proper information under the Protocol TCPIP heading. The main concern is the Link Driver MACODI heading:

```
. * NET.CFG (without Windows for Workgroups 3.11 installed)
.
.   Link Driver MACODI
.
.   FRAME ETHERNET 802.2
.   FRAME ETHERNET II
.   PROTOCOL IPX E0 ETHERNET 802.2
.   PROTOCOL IP 800 ETHERNET II
.   PROTOCOL ARP 806 ETHERNET II
.
.   Link Support
.
.   Buffers 8 1500
.   MemPool 4096
.
.   Protocol TCPIP
.
.   PATH SCRIPT      C:\NET\SCRIPT
.   PATH PROFILE     C:\NET\PROFILE
.   PATH LWP_CFG     C:\NET\HSTACC
.   PATH TCP_CFG     C:\NET\TCP
.   ip_router       130.43.4.1
.   ip_netmask      255.255.255.0
.   ip_address      130.43.4.45
.
. * NET.CFG (with Windows for Workgroups 3.11 installed)
.
.   Link Driver MACODI
.
.   FRAME ETHERNET_II
.   FRAME ETHERNET_802.2
.   FRAME ETHERNET_802.3
.   FRAME ETHERNET_SNAP
.
.   PROTOCOL IPX E0 ETHERNET_802.2
.   PROTOCOL IP 800 ETHERNET_II
.   PROTOCOL ARP 806 ETHERNET_II
.
.   Link Support
.
.   Buffers 8 1500
.   MemPool 4096
.
.   Protocol TCPIP
.
.   PATH SCRIPT      C:\NET\SCRIPT
.   PATH PROFILE     C:\NET\PROFILE
.   PATH LWP_CFG     C:\NET\HSTACC
.   PATH TCP_CFG     C:\NET\TCP
```

```
.      ip_router      130.43.4.1
.      ip_netmask     255.255.255.0
.      ip_address     130.43.4.45
```

Step 4

Save the NET.CFG file, restart the computer, and answer yes when it asks you if you want to load the TCP/IP software. Ping a known good address by typing:

ping address (where address is a known good IP address)

LAN WorkPlace for DOS modifies the autoexec.bat file by adding the following line:

```
CALL C:\LANWP.BAT
```

LANWP.BAT simply asks you if you want to load the TCP/IP transport, then loads it if you answer yes. The transport file is called TCPIP.EXE and is located in:

```
C:\NET\BIN
```

For further help with installing LAN WorkPlace for DOS, please call Novell. The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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