Additional Notes About Networks

This document contains information about specific networks. For additional information about Windows for Workgroups that does not pertain to networks, see "Other Online Documents" at the end of this document.

Using Write to View This Document

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To move through the document, press PAGE UP or PAGE DOWN. Or click the arrows at the top and bottom of the scroll bar along the right side of the Write window.

To print the document, choose Print from the File menu.

For Help on using Write, press F1.

To read other online documents, choose Open from the File menu.

Contents

1.0 General Notes

- Many settings in the SYSTEM.INI file affect the way Windows for Workgroups works. You can change these settings to correct most problems you might have while you are using Windows for Workgroups and other networks. See the SYSINI.WRI online document for information about changing the following SYSTEM.INI settings:

  [Boot]
  Network.drv=
  SecondNet.drv=

  [386Enh]
  32BitAccess=
  AllVMsExclusive=
  EMMExclude=
  FileSysChange=
  InDOSPolling=
  Int28Critical=
  NetAsyncFallback=
  NetAsyncTimeout=
  NetCard=
  NetDMASize=
  NetHeapSize=
  NetMisc=
  Network=
  ReflectDOSInt2A=
  SecondNet=
  TimerCriticalSection=
  Transport=
  TokenRingSearch=
  V86ModeLANAs=
  UniqueDOSPSP=

  [network]
  EnableSharing=
  Exclude=
  FileSharing=
  LANAs=
  LogonValidated=
  Multinet=
  PrintSharing=
  Reshare=

- The Windows for Workgroups Setup program places the following lines in your SYSTEM.INI file that are required for Windows for Workgroups to run correctly. Do not remove any of the following entries:

[boot]
network.drv=wfwnet.drv

[386Enh]
network=*vnetbios,vnetsup.386,vredir.386,vserver.386,*vwc

If you have upgraded over a previous version of Windows 3.1 or Windows for Workgroups 3.1 with an installed network, Setup may leave unnecessary files, causing performance problems or incorrect network behavior. If you experience network problems and have any of these lines in your SYSTEM.INI file (or WIN.INI file), try removing the lines to see if the problem can be corrected.

In the SYSTEM.INI file:

[386Enh]
INDOSPolling=TRUE
EMMExclude=D800-DFFF (or other memory range)
TimerCriticalSection=5000 (or other value)
UniqueDOSPSP=TRUE
PSPIncrement=5
NetHeapSize=76 (or other value)
NetAsynchTimeout=50
NetAsynchFallback=true
PerVMFiles=0
OverlappedIO=off

In the WIN.INI file:

load=winpopup.exe
load=nwpopup.exe

[ports]
LPT1.DOS=
LPT2.DOS=
LPT3.DOS=

- Many protocols and other networks require the **TimerCriticalSection** line in the [386Enh] section of the SYSTEM.INI file to be set to a value of 10000 or greater. For more information, see the SYSINI.WRI online document.

- The default value for the **NetHeapSize** line in the [386Enh] section of the SYSTEM.INI file is 16K. Although some applications require this value, in most cases you can decrease the value to 4K in order to increase the amount of memory available to your applications. A few applications require the value to be 4K.

- If you want to change your network configuration, use Windows Setup to make the changes.

- Some network adapters require the **EMMExclude** line in the [386Enh] section of the SYSTEM.INI file to be set to the memory range used by the adapter. For more information, see your network-adapter documentation and the SYSINI.WRI online document.

  These cards may also require an **x=** option on the EMM386 command line in your CONFIG.SYS file. For more information, see Appendix C, "Troubleshooting," in the *Microsoft Workgroup Add-On User's Guide*. If you are using 386Max®, QEMM™, or another memory manager, see your memory-manager documentation to find out whether you need to exclude this area.

- The *Windows for Workgroups 3.11 Resource Kit* contains additional information about setting up and configuring Windows for Workgroups for use with other networks and information for system administrators. This kit provides complete technical information about Windows for Workgroups for the support professional. It includes a technical reference manual and a disk containing helpful utilities, drivers, and accessories.

  If you currently own the *Windows for Workgroups 3.1 Resource Kit*, an addendum is available. It provides information about the new features and enhancements available in Windows for Workgroups 3.11.

  To order the *Windows for Workgroups 3.11 Resource Kit* or the *Windows for Workgroups Resource Kit Addendum for Version 3.11* within the United States, dial:

    1-800-642-7676

  To order outside of the United States, dial the phone number for your area. You can find this number on the International Subsidiary card.

- If you are running a shared copy of Windows for Workgroups from a network drive, make sure both your personal Windows directory and the shared network directory are included on the **path** command line in your AUTOEXEC.BAT file. To run a shared copy of Windows for Workgroups, you must start the network before starting Windows for Workgroups. (When you start the network before you start Windows for Workgroups, about 100K less conventional memory is available.)

- If you used **setup /n** to set up a shared copy of Windows for Workgroups and you specified a network directory for your personal Windows directory, you cannot start the network (real-mode redirector) before you start Windows for Workgroups unless you first copy your SYSTEM.INI file to the directory on your hard disk where NET.EXE is located.

NET.EXE should be located in the root directory of your startup drive.

Also, if you used **setup /n** to set up your shared copy of Windows for Workgroups over a Windows NT or LAN Manager network, you will not be able to share your files or printers. This is because you need to Microsoft Windows Network by using the real-mode redirector, and you cannot share files or printers with the real-mode redirector. For more information, see the *Windows for Workgroups 3.11 Resource Kit*.

• If you receive sharing violations while running a shared copy of Windows for Workgroups, make sure that all of the files in the shared network directory are marked as read-only.

• The NetBEUI protocol is the only protocol included with Windows for Workgroups that can be used with the Microsoft Windows Network from the DOS prompt. All others can be used only while Windows for Workgroups is running. If you will be using the Microsoft Windows Network from the DOS prompt, make sure the NetBEUI protocol is one of the protocols you are using.

• Windows Print Manager spools print jobs to the location specified by the MS-DOS environment variable TEMP. If the TEMP variable is not set, Print Manager will use the root of drive C. The TEMP variable may be set by placing a **set temp=** statement in your AUTOEXEC.BAT file or network login script. For example, to spool to the network directory C:\ WINDOWS\TEMP, you would use the statement **set temp=c:\windows\ temp**. Each user must have a personal TEMP directory.

2.0 Using Novell® NetWare®

For information about setting up Novell NetWare support in Windows for Workgroups, see Chapter 9, "Using Other Networks," in the *Microsoft Workgroup Add-On User's Guide*.

Windows for Workgroups 3.11 supports NDIS, IPX, and ODI network-adapter drivers.

If you are upgrading from Windows for Workgroups 3.1 and you were using the MSIPX drivers that were included with Windows for Workgroups 3.1, you should use either the IPX.COM driver or the IPXODI.COM driver supplied by Novell. We recommend that you use IPXODI.COM. To do this, see the following section, "Setting up Novell Netware to Work With Windows for Workgroups 3.11."

Once you have set up Novell NetWare to work with either the IPX.COM driver or the IPXODI.COM driver, remove NetWare support from Windows for Workgroups. Then reinstall NetWare support. This will give you the

option to choose either IPX.COM or IPXODI.COM.

2.1 Setting Up Novell NetWare to Work with Windows for Workgroups 3.11

We recommend that you set up Novell NetWare to work with the IPXODI.COM driver. However, the IPX.COM monolithic driver is also supported.

Note:
If you are using IPXODI.COM, you must make sure that your copies of IPXODI.COM and LSL.COM are versions 1.20 or higher. Otherwise, Windows for Workgroups will not be able to run.

To set up Novell NetWare on your computer:

1. If you are setting up Novell NetWare version 4.0 or higher, add the following line to your CONFIG.SYS file:

   lastdrive=z

   Otherwise, add the line **lastdrive=p**. This will make your login drive Q:

2. If you are installing Novell NetWare to work with IPXODI.COM, add the following lines to your AUTOEXEC.BAT file:

   cd c:*<NetWare directory>*
   lsl
   <appropriate ODI driver for your network card>
   ipxodi
   netx /ps=*<preferred server name>*
   q:login *<username>*

   If you are installing Novell NetWare to work with IPX.COM, add the following lines to your AUTOEXEC.BAT file.

   ipx
   netx /ps=*<preferred server name>*
   q:login *<username>*

3. Add the name of your NetWare directory to the PATH line in your AUTOEXEC.BAT file.

4. Create a NET.CFG file in your NetWare directory. See your NetWare documentation for information on how to do this.

   This is a sample NET.CFG file:

```
Link Driver EXP16ODI
    Frame Ethernet_802.3
    Frame Ethernet_II
    Frame Ethernet_802.2
    Frame Ethernet_SNAP
    port 300
    int 5
```

5. Restart your computer. Once you are able to log on to your preferred
   server successfully, you can set up Windows for Workgroups to work with
   NetWare. See the *Microsoft Workgroup Add-On User's Guide* for more
   information.

2.2 More Information about Using Novell NetWare with Windows for Workgroups 3.11

- When you set up NetWare support in Windows for Workgroups, the value
  of the **lastdrive** command in your CONFIG.SYS file is set to P. When you
  restart your computer, your login directory is drive Q. If you have any
  NetWare login scripts, make sure they reference the correct drive letter for
  your login directory.

  When the **lastdrive** command is set to P, you can use letters from A to P to
  connect to other Windows for Workgroups computers or Windows NT or
  Microsoft LAN Manager servers. Letters after P are reserved for
  connecting to Novell NetWare servers.

- Do not try to log in, log out, attach, or detach a Novell server from MS-
  DOS Prompt within Windows. You should log in before you start Windows
  for Workgroups, and attach or detach servers by using File Manager or
  Print Manager.

- When you set up NetWare support in Windows for Workgroups for
  IPXODI.COM and LSL.COM, Setup adds the **odihlp** command to your
  AUTOEXEC.BAT file. It inserts it on the line following the **ipxodi**
  command. Do not change the order of these lines.

- If you are using a token-ring network and the driver on your Novell server
  does not support source routing (for example, IBM token-ring drivers
  earlier than version 2.4), remove the ROUTE.COM statement from your
  AUTOEXEC.BAT file.

- If you have problems connecting to a Novell server, make sure the Adapter
  Media Type setting in Network Setup matches your Novell NetWare
  software configuration. For more information, see Appendix C,
  "Troubleshooting," in *The Microsoft Workgroup Add-On User's Guide*.

- By default, NetWare allows you access to only 40 files at a time. When you are running applications with Windows, you can exceed this limit rather quickly. If you do, you might see unexpected error messages. To increase the file access limit, add the following line to the beginning of your NET.CFG file:

  file handles=60

  You should also add the following to your CONFIG.SYS file:

  files=60

- If you get unusable output (such as incorrect fonts, garbled text, invalid page breaks, or blank lines) when you try to print to a NetWare server, you may need to edit your print-job configuration. Try using the NetWare PRINTCON utility to set the Auto Endcap and Enable Timeout options to No.

- Swapping to a drive on a NetWare 286 server might make starting Windows for Workgroups take up to a minute. For information about controlling the location of your swap file, see Chapter 11, "Managing Memory and Performance," in the *Microsoft Windows for Workgroups User's Guide*.

- A NetWare file server does not include the directory entries dot (.) and double dot (..) as MS-DOS does. However, the NetWare shell (version 3.01 or later) can emulate these entries when applications attempt to list the files in a directory. If you have problems listing files or deleting directories, turn on the Show Dots feature. To do this, add the following line to the beginning of your NET.CFG file:

  show dots=on

  Turning on Show Dots will cause problems with earlier versions of some 80286-based NetWare utilities, such as BINDFIX.EXE and MAKEUSER.EXE. Make sure you upgrade these utilities if you upgrade your NetWare shell. For more information, contact your Novell dealer.

- Redirected drives can look different in Windows for Workgroups than without Windows for Workgroups. For example, a device mapped as FileServerName/Volume:Directory will appear in Windows as FileServerName/Volume:\, showing the root of the file server's shared volume rather than the subdirectory. You can correct this with the MAP ROOT entry, as explained in the following information.

- In some cases, Windows-based applications may change the default directory on a drive. This might cause problems if, for example, your path

includes the current directory on a network drive (that is, your path includes a drive letter without a specific directory, such as z: instead of z:\system).

You can prevent this problem by using MAP.EXE and LOGIN.EXE versions 3.0 and later to set up false roots, or by choosing the MAP ROOT function when you are mapping a connection in File Manager. This feature simulates the MS-DOS **subst** command, which sets the root of a given drive to a directory designated by the user instead of to the true root of the volume.

For example, suppose you normally mapped drive F to the HOME\TERRI directory on the SERVER\SYS volume, and then included F: in your path. You would do this by including the following command in your AUTOEXEC.BAT file or by typing the command before you start Windows:

map f:=server\sys:home\terri

The default directory on drive F would then be HOME\TERRI. To prevent Windows from changing this, you would replace that command with the following:

map root f:=server\sys:home\terri

This command would make the directory HOME\TERRI appear to be the root of drive F.

• You can adjust the way Windows handles your network drive mappings by using the Network option in Control Panel.

Usually, when you quit Windows for Workgroups, all of your drive mappings are restored to the way they were before you started Windows for Workgroups, and all changes you made while running Windows are lost. If you clear the Restore Drives option in the settings dialog box for NetWare, the mappings you made in Windows for Workgroups will remain when you quit.

Typically, each instance of MS-DOS Prompt you start from Windows for Workgroups has its own set of drive mappings. Changes you make in one instance do not affect another. If you set the NWShareHandles option, drive mappings will instead be global, and changes to the mappings or the current drive made in one instance of MS-DOS Prompt will affect all other applications. If you are running a NetWare 286 server, setting NWShareHandles increases the number of workstations that can be connected to the server before the server runs out of available connections.

See the Help available in the Network dialog box in Control Panel for more

information on these options.

• If you have applications or files that use extended characters (ASCII characters above 128) and you have problems viewing or using them, try adding the following line to your NET.CFG file:

special uppercase = on

• When you connect or disconnect network resources from File Manager, Print Manager, or Control Panel, pay attention to the state of the Permanent check box. If this option is selected when you make a connection, the connection is automatically made each time you restart Windows for Workgroups. To stop reconnecting, disconnect from the network resource with the Permanent check box selected. If the option is not selected when you disconnect, the connection is removed for the current Windows session but is reconnected when you restart Windows for Workgroups.

• If you were running Novell NetBIOS before you set up Windows for Workgroups, the Setup program attempts to remove it. We do not recommend using the Novell NetBIOS protocol. Instead, use the IPX/SPX protocol that is compatible with NetBIOS.

   To install the IPX/SPX protocol that is compatible with NetBIOS:
1. In the Networks group, choose the Network Setup icon.

2. In the Network Setup dialog box, choose the Drivers button. The Network Drivers dialog box appears.

3. Choose the Add Protocol button. The Add Network Protocol dialog box appears.

4. Choose "IPX/SPX Compatible Transport with NetBIOS" from the drop down list box. Then choose OK.

2.3 Changes to System Files

The following sections describe the changes that Setup makes to your system files when you set up Windows for Workgroups 3.11 with these common configurations.

2.3.1 IPXODI.COM and LSL.COM support over Ethernet or Token Ring Networks

When you install Windows for Workgroups 3.11 with IPXODI.COM and LSL.COM support, the following lines are added to your SYSTEM.INI file:

[386Enh]

network=*vnetbios,*vwc,vnetsup.386,vredir.386,vserver.386
transport=nwlink.386,nwnblink.386,netbeui.386
secondnet=vnetware.386, vipx.386
netmisc=ndis.386,msodisup.386
netcard=
InDOSPolling=FALSE
netcard3=
OverlappedIO=Off

[network]
multinet=netware3
winnet=wfwnet/00025100

[NetWare]
NWShareHandles=FALSE
RestoreDrives=TRUE

[network drivers]
netcard=
transport=
devdir=C:\WINDOWS
LoadRMDrivers=No

[NWNBLINK]
LANABASE=1

The following sample PROTOCOL.INI file is for a computer that contains a
DEC Etherworks Turbo/TP Ethernet Network Adapter.

Bold lines designate lines specific to this network adapter and its
configuration.

NOTE: When using Novell's ODI drivers, the "BINDINGS=" should equal
the Novell MLID name.

[network.setup]
version=0x3110
netcard=ms$ewtrbtp,1,MS$EWTRBTP,4
transport=ms$nwlinknb,NWLINK
transport=ms$netbeui,NETBEUI
lana0=ms$ewtrbtp,1,ms$netbeui
lana1=ms$ewtrbtp,1,ms$nwlinknb

[net.cfg]
PATH=C:\NOVELL\net.cfg

[MS$EWTRBTP]

[Link Driver DEPCA]
Frame Ethernet_SNAP
Frame Ethernet_802.2
Frame Ethernet_II
Frame Ethernet_802.3

[NWLINK]

BINDINGS=DEPCA

[NETBEUI]
BINDINGS=DEPCA
LANABASE=0
SESSIONS=10
NCBS=12

The following sample PROTOCOL.INI file is for a computer that contains a IBM Token Ring 16/4 Network Adapter.

Bold lines designate lines specific to this network adapter and its configuration.

NOTE: When using Novell's ODI drivers, the "BINDINGS=" should equal the Novell MLID name.)

[network.setup]
version=0x3110
netcard=ms$ibmtr4,1,MS$IBMTR4,4
transport=ms$nwlinknb,NWLINK
transport=ms$netbeui,NETBEUI
lana0=ms$ibmtr4,1,ms$netbeui
lana1=ms$ibmtr4,1,ms$nwlinknb

[net.cfg]
PATH=C:\NOVELL\net.cfg

[MS$IBMTR4]

[Link Driver TOKEN]
Frame Token-Ring
Link Driver TOKEN

[NWLINK]

BINDINGS=TOKEN

[NETBEUI]
BINDINGS=TOKEN

LANABASE=0
SESSIONS=10
NCBS=12

The following sample NET.CFG is for a computer with a DEC Etherworks
Turbo/TP Ethernet Network Adapter. You may need additional entries in your
NET.CFG file, depending on the way your network is set up.

Lines shown here in bold type are added when you install Windows for
Workgroups 3.11.

SHOW DOTS=ON
FILE HANDLES=60
Link Driver DEPCA
  Frame Ethernet_802.3
  INT 5
  PORT 300
  MEM D8000
  Frame Ethernet_II
  Frame Ethernet_802.2
  Frame Ethernet_SNAP

The following NET.CFG is for a computer with a IBM Token Ring 16/4
Network Adapter. You may need additional entries in your NET.CFG file,
depending on the way your network is set up.

Lines shown here in bold type are added when you install Windows for
Workgroups 3.11.

SHOW DOTS=ON
FILE HANDLES=60
Link Driver TOKEN
  Frame Token-Ring

2.3.2 IPX.COM Support

When you install Windows for Workgroups 3.11 with IPX.COM support, the
following lines are added to your SYSTEM.INI file:

[386Enh]
network=*vnetbios,*vwc,vnetsup.386,vredir.386,vserver.386
transport=
secondnet=vnetware.386,vipx.386
netmisc=
netcard=

```
InDOSPolling=FALSE
netcard3=nwsup.386,nwnblink.386
OverlappedIO=Off

[network]
multinet=netware3
winnet=wfwnet/00025100
DirectHost=No

[NetWare]
NWShareHandles=FALSE
RestoreDrives=TRUE

[network drivers]
netcard=
transport=
devdir=C:\WINDOWS
LoadRMDrivers=No

[NWNBLINK]
LANABASE=0
```

The following lines are added to your PROTOCOL.INI file (example for a NE2000 network adapter):

```
[network.setup]
version=0x3110
netcard=ms$nwsupnb,1,MS$NWSUPNB,2
lana0=ms$nwsupnb,1,mono


[MS$NWSUPNB]

[NWSUP]
Adapters=MS$NWSUPNB
```

2.3.3 IPXODI.COM and LSL.COM support over an ArcNet Network

When you install Windows for Workgroups 3.11 with IPXODI.COM and LSL.COM support over an ArcNet network, the following lines are added to your SYSTEM.INI file:

```
[386Enh]
network=*vnetbios,*vwc,vnetsup.386,vredir.386,vserver.386
transport=
secondnet=vnetware.386,vipx.386
```

netmisc=
netcard=
InDOSPolling=FALSE
netcard3=nwsup.386,nwnblink.386
OverlappedIO=Off

[network]
multinet=netware3
winnet=wfwnet/00025100
directhost=no

[NetWare]
NWShareHandles=FALSE
RestoreDrives=TRUE

[network drivers]
netcard=
transport=
devdir=C:\WINDOWS
LoadRMDrivers=No

[NWNBLINK]
LANABASE=0

The following lines are added to your PROTOCOL.INI file:

[network.setup]
version=0x3110
netcard=ms$nwsupnb,1,MS$NWSUPNB,2
lana0=ms$nwsupnb,1,mono

[MS$NWSUPNB]

[NWSUP]
Adapters=MS$NWSUPNB

2.3.4 IPX.COM Support with an ArcNet Network

When you install Windows for Workgroups 3.11 with IPX/SPX support over
an ArcNet network, the following lines are added to your SYSTEM.INI file:

[386Enh]
network=*vnetbios,*vwc,vnetsup.386,vredir.386,vserver.386
transport=
secondnet=vnetware.386,vipx.386
netmisc=

netcard=
InDOSPolling=FALSE
netcard3=nwsup.386,nwnblink.386
OverlappedIO=Off

[network]
multinet=netware3
winnet=wfwnet/00025100
directhost=no

[NetWare]
NWShareHandles=FALSE
RestoreDrives=TRUE

[network drivers]
netcard=
transport=
devdir=C:\WINDOWS
LoadRMDrivers=No

[NWNBLINK]
LANABASE=0

The following lines are added to your PROTOCOL.INI file:

[network.setup]
version=0x3110
netcard=ms$nwsupnb,1,MS$NWSUPNB,2
lana0=ms$nwsupnb,1,mono

[MS$NWSUPNB]

[NWSUP]
Adapters=MS$NWSUPNB

2.3.5 MSIPX support
Although we recommend that you upgrade from the MSIPX protocol to
either the IPXODI or IPX/SPX protocol, you can keep your MSIPX support.
This section describes the changes that are made to your system files if you
choose to keep MSIPX support when you upgrade from Windows for
Workgroups 3.1 to Windows for Workgroups 3.11.

The following lines are removed from CONFIG.SYS:

C:\WINDOWS\PROTMAN.DOS /I:C:\WINDOWS
C:\WINDOWS\WORKGRP.SYS
C:\WINDOWS\<NDIS MAC driver>.DOS
C:\WINDOWS\MSIPX.SYS

The above lines are replaced by:

DEVICE=C:\WINDOWS\IFSHLP.SYS

The following is an example of a typical AUTOEXEC.BAT file once you
have upgraded to Windows for Workgroups 3.11

C:\WINDOWS\SMARTDRV.EXE /X
C:\WINDOWS\net start
C:\WINDOWS\msipx
C:\WINDOWS\netx
PROMPT pg
PATH C:\WINDOWS;C:\DOS
SET TEMP=C:\WINDOWS\TEMP

The following lines in SYSTEM.INI affect running Windows for
Workgroups 3.11 with MSIPX:

[386Enh]

network=*vnetbios,*vwc,vnetsup.386,vredir.386,vserver.386
transport=netbeui.386,nwlink.386,nwnblink.386
secondnet=vnetware.386
OverlappedIO=off
netmisc=ndis.386,ndis2sup.386,vipx.386
netcard=declan.386
InDOSPolling=FALSE

[network]

multinet=netware3
winnet=wfwnet/00025100
DirectHost=No

[NetWare]
NWShareHandles=FALSE
RestoreDrives=TRUE

[network drivers]
netcard=depca.dos
transport=*netbeui,msipx.sys,ndishlp.sys
devdir=C:\WINDOWS
LoadRMDrivers=Yes

[NWNBLINK]
LANABASE=1

This is a sample PROTOCOL.INI file for a computer using Windows for Workgroups 3.11 with MSIPX. The adapter is a DEC Etherworks Turbo/TP Network Adapter.

[network.setup]
version=0x3110
netcard=ms$ewtrbtp,1,MS$EWTRBTP,3
transport=ms$netbeui,NETBEUI
transport=msipx,MSIPX
transport=ms$nwlinknb,NWLINK
transport=ms$ndishlp,MS$NDISHLP
lana0=ms$ewtrbtp,1,ms$ipx
lana1=ms$ewtrbtp,1,ms$netbeui
lana2=ms$ewtrbtp,1,ms$nwlinknb
lana3=ms$ewtrbtp,1,ms$ndishlp

[protman]
DriverName=PROTMAN$
PRIORITY=MS$NDISHLP

[MS$EWTRBTP]
DriverName=DEPCA$
RamAddress=0xD800
Interrupt=5
MaxMulticast=8
MaxTransmits=16
IOAddress=0x300
AdapterName=DE200

[MS$IPX]
DriverName=IPX$
MediaType=Novell/Ethernet
BINDINGS=MS$EWTRBTP

[LANCE]
Adapters=MS$EWTRBTP

[NETBEUI]
DriverName=netbeui$
SESSIONS=10
NCBS=12
BINDINGS=MS$EWTRBTP
LANABASE=0

[NWLINK]

BINDINGS=MS$EWTRBTP
[MS$NDISHLP]
DriverName=ndishlp$
BINDINGS=MS$EWTRBTP

NOTE: Windows for Workgroups 3.11 Setup will detect MSIPX when
upgrading from Windows for Workgroups 3.1 and install support for it. If
you change your network configuration after upgrading to Windows for
Workgroups 3.11, however, Setup may remove MSIPX support, and you will
not be able to reinstall support for it. If this is the case, you will have to
upgrade to either IPX.COM, or IPXODI.COM and LSL.COM.

3.0 Using Banyan® VINES®

Windows for Workgroups 3.11 works with Banyan VINES network versions
4.11(5), 5.00(5), and 5.52(5). It can work with both the Microsoft Windows
Network and the Banyan VINES network. Before you install your specific
version of VINES, see "Special Information about Specific Versions of
VINES," later in this document.

Before you set up Windows for Workgroups 3.11 to work with VINES, set up
VINES on your computer according to the directions in your VINES
documentation. Then run PCCONFIG to choose the appropriate drivers for
your network, and make sure you can connect to a VINES server from MS-
DOS. For more information on installing VINES support in Windows for
Workgroups, see Chapter 9, "Using Other Networks," in the *Microsoft
Workgroup Add-On User's Guide.*

3.1 Changes to System Files when You Install Support for
Banyan VINES

When you install Banyan VINES support in Windows for Workgroups, the
following lines are added to your AUTOEXEC.BAT file:

C:\<*Windows directory*>\NET INITIALIZE
CD <*VINES directory*>
BAN /NC
NDISBAN
REDIRALL
C:\<*Windows directory*>\NET START
ARSWAIT
Z:LOGIN

The following line is added to your CONFIG.SYS file:

LASTDRIVE=Y

The following lines are added to the PROTOCOL.INI file:

```
[network.setup]
 transport=ban$vines,BAN$VINES
 lana0=<network adapter>,1,ban$vines
[Ban$Vines]
 drivername=NDISBAN$
 bindings=<network adapter>
```

The following lines are added to the SYSTEM.INI file:

```
[boot]
 secondnet.drv=vines.drv       <-  z:vines.drv for VINES 4.11 and
                               <-  VINES 5.00; vines.drv for VINES 5.52


[386Enh]
 secondnet=vvinesd.386         <-  z:vvines.386 for VINES 4.11 and
                               <-  VINES 5.00; vvines.386 for VINES 5.52


[network]
 multinet=vines500             <- vines411 or vines550 for
                               <- different VINES versions
```

3.2 Special Information about Specific Versions of VINES

Vines 4.10
If your network runs VINES 4.10, you must upgrade to VINES 4.11 (5)
before you install support for Windows for Workgroups.

Vines 4.11
If your network runs VINES 4.11 (5), your network administrator must apply
the (5)-FW-1 and (5)-GN-1 software patches before you install support for
Windows for Workgroups.

Vines 5.00
If your network runs VINES 5.00 (5), your network administrator must apply
the (5)-EA-1 and (5)-ER-1 software patches before you install support for
Windows for Workgroups.

If your network runs VINES 5.00 (6), install VINES support for 5.00 (5)
according to the installation instructions. When you are prompted to restart
your workstation at the end of the installation procedure, do so.

After you restart your workstation:

1. Back up the PROTMAN.DOS and NDISBAN.COM files to another directory before you run NEWREV.

2. From the MS-DOS prompt, run the NEWREV command to upgrade to VINES 5.00 (6).

   Note: Make sure you back up the PROTMAN.DOS and NDISBAN.COM files, because as the NEWREV program overwrites the PROTMAN.DOS and NDISBAN.COM files located in the Windows for Workgroups directory.

3. Copy the PROTMAN.DOS and NDISBAN.COM files back to the Windows for Workgroups directory.

4. Restart your workstation.

This procedure ensures that you are using the correct versions of these two files.

VINES 5.52 (5) Networks
If your network runs VINES 5.52 (5), you must copy NDISBAN.COM to your local VINES directory that contains your VINES network software. Use the PCCOPY command to copy this file from your VINES 5.52 (5) server to your workstation.

3.3 Banyan VINES Troubleshooting Tips

This section provides solutions to some common problems you might encounter when you run Windows for Workgroups on a Banyan VINES network.

Cannot run VINES commands from AUTOEXEC.BAT
You may already have a line that says CD \<*Banyan directory*>, but it may not be in the correct place in the file. Open the AUTOEXEC.BAT file using a text editor and move the command to the line above the BAN /NC command.

Environment Variables Overwritten
When you install VINES support for Windows for Workgroups, the VINES LOGIN command is placed near the beginning of your AUTOEXEC.BAT file. PATH (and other environment variables) in your VINES user profile are overwritten by the environment variables in your AUTOEXEC.BAT file.

To work around this problem, carry out one of the following steps:

• Place all the environment variables, including PATH, only in your user profile

-or-

• Place all environment variables after the LOGIN command in your
  AUTOEXEC.BAT file.

If you want to add the user profile PATH environment variable to the PATH
environment variable in your AUTOEXEC.BAT file, type **%path%** after the
LOGIN command at the end of your AUTOEXEC.BAT file.

For example, the following statement appends the user profile PATH values
(%path%) to the existing PATH values (C:\C:\WINWG) in your
AUTOEXEC.BAT file:

PATH=c:\;c:\winwg;%path%

Cannot Access the VINES Network
If you cannot access the VINES network, make sure the SYSTEM.INI file
includes these lines:

  network.drv=wfwnet.drv
  secondnet.drv=VINES.DRV   <- z:vines.drv for VINES 4.11 and
                                 <- VINES 5.00; vines.drv for VINES 5.52

In a Windows for Workgroups environment, the NETWORK.DRV statement
specifies the Windows for Workgroups network driver (WFWNET.DRV).
The SECONDNET.DRV statement specifies the VINES network driver
VINES.DRV).

4.0 Using Windows for Workgroups 3.11 with DEC®
PATHWORKS™

If you want to use the DEC PATHWORKS network with Windows for
Workgroups, you can use it instead of the Microsoft Windows Network. You
can not use the two networks together unless you manually edit your files.

Before you begin, install the DEC PATHWORKS network software on your
computer according to the directions in your PATHWORKS documentation.
Then make sure you can connect to a PATHWORKS server from MS-DOS.
For more information on installing PATHWORKS support in Windows for
Workgroups, see Chapter 9, "Using Other Networks," in the *Microsoft
Workgroup Add-On User's Guide.*

Once you have installed PATHWORKS support, Windows for Workgroups
can be used to connect to PATHWORKS servers, but you will not be able to
useWindows for Workgroups to share resources on your local machine.

4.1 Changes to System Files When You Install Support for DEC PATHWORKS Instead of the Microsoft Windows Network

When you install DEC PATHWORKS support in Windows for Workgroups, the following lines are added to your SYSTEM.INI file.

[boot]
network.drv=pcsa.drv

[boot.description]
network.drv=DEC PATHWORKS

[386Enh]
network=*dosnet, decnet.386, decnb.386
TimerCriticalSection=10000

4.2 DEC PATHWORKS Support to Work With the Microsoft Windows Network

Windows Setup does not set up DEC PATHWORKS to work along with the Microsoft Windows Network. If you want to use both networks together, you must edit your SYSTEM.INI, PROTOCOL.INI, STARTNET.BAT, and AUTOEXEC.BAT files by hand.

For information on setting up both networks to work together, see the *Windows for Workgroups 3.11 Resource Kit*.

5.0 Using Windows for Workgroups 3.11 with Artisoft® LANtastic®

You can use Windows for Workgroups with Artisoft LANtastic instead of the Microsoft Windows Network. However, you cannot use the two networks together.

5.1 Changes to System Files When You Install Artisoft LANtastic Drivers

Before you install LANtastic 5.0 for Windows, install the LANtastic MS-DOS–level drivers. Make sure that all connections between the machines are correctly set up.

The MS-DOS–level drivers will install into the following directory:

c:\lantasti

The installation will make the following changes to your CONFIG.SYS file:

```
files=75
buffers=32
lastdrive=z
fcbs=32,8
```

No changes will be made to your AUTOEXEC.BAT file.

The LANtastic network will be started by a file called STARTNET.BAT, which looks similar to the following:

```
@echo off
Set LAN_DIR=C:\LANTASTI.NET
SET LAN_CFG=C:\LANTASTI
PATH C:\LANTASTI;%PATH%
SHARE /L:200

3C503MM IRQ=3 IOBASE=300 TRANSCEIVER_TYPE=ON-BORAD
VERBOSE
AILANBIO
REDIR MACHINENAME LOGINS=3
SERVER

NET LOGIN/WAIT
NET LPT TIMEOUT 10
NET POSTBOX
```

5.2 Changes to System Files When You Install Support for Artisoft LANtastic

After you have installed the correct net card driver and can communicate with other LANtastic machines, you can install LANtastic for Windows.

To install LANtastic for Windows, go to Networks Setup and choose to install support for LANtastic 5*x*. Setup will prompt you for the following drivers:

```
LANTASTI.386
LANTNET.DRV
```

These drivers are provided by LANtastic and will either be in the LANTASTI subdirectory or on the vendor-provided disks.

The PROTOCOL.INI file will include the following changes:

```
[network.setup]
version=0x3110
```

The SYSTEM.INI file will include the following changes:

[boot]
network.drv=lantnet.drv

[boot description]
network.drv=Artisoft LANtastic (version 5.X)

[386Enh]
network=*vnetbios,lantasti.386
netmisc=
netcard=
transport=

[network]
winnet=LANtastic/xx050000

[LANtastic]
Network_IRQ=XX

After you have finished installing support for LANtastic 5*x*, run the
LANtastic 5*x* installation program. The program will install in a directory
named C:\LANI. The installation program will also create a LANtastic group
in Program Manager and add the following line to the WIN.INI file:

load=C:\LANI\WNET.EXE

5.3 More Information about Using Artisoft LANtastic with Windows for Workgroups 3.11

Do not use the **net use** command to redirect the name of the drive where
Windows for Workgroups is installed. If you do, Windows for Workgroups
will not be able to run.

6.0 Using Windows for Workgroups 3.11 with SunSelect PC-NFS

Windows for Workgroups 3.11 works with SunSelect™ PC-NFS® version
5.00.

If you are installing PC-NFS for use with Windows for Workgroups for the
first time, you should run both the installation and configuration programs
according to the directions in your PC-NFS documentation. Then install
Windows for Workgroups 3.11 without support for a secondary network
operating system.

Once Windows for Workgroups is installed, you will need to run the WINSTALL.EXE program from the PC-NFS disk number 3. Insert disk number 3 into a diskette drive and then from inside Windows for Workgroups select the File menu chose Run, and type A:WINSTALL.EXE (substitute B: if that is the drive being used). This will install the PC-NFS utilities for Windows as well as several Windows support files which are required for proper functionality.

Once you have finished this procedure you can set up Windows for Workgroups 3.11 to work with both the Microsoft Windows Network and PC-NFS. In the Network group, choose Network Setup. Choose the Networks button and then select "SunSelect PC-NFS (version 5.0)" from the list of Other additional Networks. Click on OK. Changes will be made to the PROTOCOL.INI and SYSTEM.INI files. Changes will also be required to your AUTOEXEC.BAT file. These changes should have been performed during the installation and configuration of the PC-NFS software. Restart the computer for these changes to take effect.

If you are upgrading Windows for Workgroups 3.11 over an existing Windows for Workgroups 3.1 you can select PC-NFS as the secondary network during the initial setup procedure.

For more information on installing PC-NFS support in Windows for Workgroups, see Chapter 9, "Using Other Networks," in the *Microsoft Workgroup Add-On User's Guide.*

6.1 Changes to System Files When You Install Support for PC-NFS

Once Windows for Workgroups is installed, you will need to run the WINSTALL.EXE program from the PC-NFS disks to install the PC-NFS utilities for Windows.

The PC-NFS installation process makes the following changes to your AUTOEXEC.BAT, PROTOCOL.INI, and SYSTEM.INI files:

It adds the following lines to your AUTOEXEC.BAT file:

```
 Set TZ=EST5EDT
 Set NFSDRIVE=C
 Set NFSPATH=C:\NFS
 NET INIT
 Set TN_DIR=C:\NFS\TELNET
 C:\NFS\PRT *
 C:\NFS\NET INIT
 C:\NFS\RTM
```

Note: The SET statements vary with each installation.

It adds the following line to your CONFIG.SYS file:

  Device=C:\WINDOWS\IFSHLP.SYS

It removes the following line from your CONFIG.SYS file:

  Device=C:\NFS\SOCKDRV.SYS

<u>PROTOCOL.INI File</u>

  [network.setup]

  transport=nfs-ndis,NFS-NDIS

  [NFS-NDIS]
  DriverName=NFSLINK$
  Bindings=MS$ELNKII
  LanaBase=Lana*<number>*

<u>SYSTEM.INI File</u>

  [Boot]
  secondnet.drv=pcnfs.drv

  [boot.description]
  secondnet.drv=SunSelect PC-NFS (version 5.0)

  [386Enh]
  secondnet=pcnfs.386

  [Network]
  multinet=pcnfs

  [network drivers]
  netcard=elnkii.dos
  transport=ndishlp.sys,*netbeui,nfs-ndis.sys,pcnfs.sys, sockdrv.sys
  devdir=C:\WIN31
  LoadRMDrivers=Yes
  pcnfs.sys='/F30 /C^'

7.0 Using Windows for Workgroups 3.11 with Beame & Whiteside BW-NFS

Windows for Workgroups 3.11 works with Beame & Whiteside BW-NFS
version 3.0c.

Set up BW-NFS on your computer according to the directions in your BW-NFS documentation. Make sure you can connect to a BW-NFS server from MS-DOS before you set up Windows for Workgroups 3.11 to work with BW-NFS. For more information on installing BW-NFS support in Windows for Workgroups, see Chapter 9, "Using Other Networks," in the *Microsoft Workgroup Add-On User's Guide.*

7.1 Changes to System Files When You Install Support for BW-NFS

Setup makes the following changes to your SYSTEM.INI file:

[boot]
secondnet.drv=bwnet.drv

[boot description]
secondnet.drv=BW-NFS Network File System (version 3.0c)

[386Enh]
secondnet=bwdosnet.386, bwredir.386
TimerCriticalSection=1000
UniqueDOSPSP=True
PSPIncrement=5

8.0 Using Windows for Workgroups 3.11 with ArcNet®

If you are setting up an ArcNet network for use with Windows for Workgroups, follow the instructions in Appendix C, "Installing Network Hardware," in the *Microsoft Workgroup Add-On User's Guide* for setting up a network using Thin Ethernet, but with these exceptions:

• Instead of RG-58 cable, use RG-62U thin coaxial cable.

• You do not need to use BNC T-Connectors. You can plug RG-62U cable directly into ArcNet cards.

9.0 Using Windows for Workgroups 3.11 with TCP/IP

You can use the TCP/IP protocol with Microsoft Windows for Workgroups version 3.11. We recommend that you use the Microsoft TCP/IP for Windows for Workgroups protocol package.

Set up Microsoft TCP/IP for Windows for Workgroups according to the Microsoft TCP/IP for Windows for Workgroups Installation and Configuration Guide.

9.1 Changes to System Files When You Install TCP/IP

The TCP/IP installation process adds the following lines to the
AUTOEXEC.BAT file.

```
C:\WINDOWS\NET START
C:\WINDOWS\UMB
C:\WINDOWS\TCPTSR
C:\WINDOWS\TINYRFC
C:\WINDOWS\EMSBFR.EXE
C:\WINDOWS\NMTSR.EXE
```

The following lines are added to the SYSTEM.INI file.

```
[386ENH]
device=vsockets.386
device=vbapi.386
TimerCriticalSection=5000
UniqueDosPSP=TRUE
PSPIncrement=2

[Network Drivers]
devdir=C:\WINDOWS
LoadRMDrivers=Yes
netcard=<network adapter>
transport=ndishlp.sys,*netbeui,tcpdrv.dos,nemm.dos
```

The TCP/IP installation process also creates a TCPUTILS.INI file.

```
[tcpglobal]
username=<user name>
NetFiles=C:\WINDOWS
hostname=<host name>
drivername=GLOBAL$

[sockets]
drivername=SOCKETS$
bindings=TCPIP
numsockets=4
numthreads=32
poolsize=3200
maxsendsize=1024

[telnet]
drivername=TELNET$
bindings=TCPIP
nsessions=0
max_out_sends=0
```

9.2 Sample PROTOCOL.INI file

The following is a sample PROTOCOL.INI file. It is taken from a computer where Microsoft Windows for Workgroups version 3.11 is set up to use the Microsoft NetBEUI and Microsoft TCP/IP protocols with the same network adapter.

```
[network.setup]
version=0x3110
netcard=ms$ewtrbtp,1,MS$EWTRBTP,3
transport=ms$ndishlp,MS$NDISHLP
transport=ms$netbeui,NETBEUI
transport=tcpip,TCPIP
lana0=ms$ewtrbtp,1,tcpip
lana1=ms$ewtrbtp,1,ms$ndishlp
lana2=ms$ewtrbtp,1,ms$netbeui

[protman]
DriverName=PROTMAN$
PRIORITY=MS$NDISHLP

[MS$EWTRBTP]
DriverName=DEPCA$
Interrupt=15
IOAddress=0x300
RamAddress=0xD000
MaxMulticast=8
MaxTransmits=16
AdapterName=DE200

[LANCE]
Adapters=MS$EWTRBTP

[MS$NDISHLP]
DriverName=ndishlp$
BINDINGS=MS$EWTRBTP

[NETBEUI]
DriverName=netbeui$
SESSIONS=10
NCBS=12
BINDINGS=MS$EWTRBTP
LANABASE=2

[TCPIP]
DefaultGateway0=130 25 0 1
SubNetMask0=255 255 0 0
IPAddress0=130 25 8 144
```

NBSessions=12
NetFiles=C:\WINDOWS
DriverName=TCPIP$
BINDINGS=MS$EWTRBTP
LANABASE=0

The following parameters are optional entries in the [tcpip] section of the PROTOCOL.INI file.

ForcePushBit=<0-or-1>

Default: 0
Purpose: Determines how frequently the push bit is set. If this setting is set to 1, the stack sets the push bit on every outgoing packet. If this setting is set to 0, the stack sets the push bit only on packets as needed.

           If you are having trouble connecting to an IBM mainframe, try setting ForcePushBit=1..

MaxLmHosts=<number>

Default: 120
Purpose: Specifies the number of entries from the LMHOSTS file that should be loaded into the cache when the workstation is booted. The value for this setting must be a number between 0 and 120.

TcpRetries=<number>

Default: 10
Purpose: Specifies the length of time your workstation will continue attempting to send a packet. The default, 10, corresponds to approximately 50 seconds. Higher values allow more time for repeated attempts to send the packet, up to a maximum of about six minutes. The value for this setting must be a number between 1 and 17.

9.3 More Information about using Windows for Workgroups 3.11 with TCP/IP

- In order to run the ping utility, you must first run NMTSR.EXE.
  NMTSR.EXE is a terminate-and-stay-resident (TSR) program that is
  loaded before the Windows operating system is started. It is started by a
  line in the AUTOEXEC.BAT file.

  If you will not run the ping utility, you can remove NMTSR.EXE. To do
  this, remove or comment out (add REM to the beginning of the line) the
  line in your AUTOEXEC.BAT file that loads NMTSR.EXE. Then reboot
  your computer.

- If you need to remove the Microsoft TCP/IP for Windows for Workgroups
  protocol package for troubleshooting purposes:

  1. In the Network program group, select the Network Setup icon.
     The Network Setup dialog box appears.

  2. In the Network Setup dialog box, choose the Drivers button.
     The Network Drivers dialog box appears.

  3. Select on the protocol Microsoft TCP/IP. Then choose the Remove
     button.

  You should not need to edit any files. However, if you receive errors when
  you restart your computer is booting, use a text editor to view the system
  files and make sure that all of the entries have been successfully removed.

10.0 Using Windows for Workgroups 3.11 with Data Link Control (DLC) Protocol

You can use the Data Link Control (DLC) protocol with Microsoft Windows
for Workgroups version 3.11. We recommend that you use the Microsoft
MS-DLC for Windows for Workgroups protocol package. You can use the
MS-DLC protocol along with other protocols. However, the MS-DLC
protocol must be set as the default protocol.

Use the Network Setup icon to set up Windows for Workgroups to work with
MS-DLC. See the *Microsoft Workgroup Add-On User's Guide* for more
information.

NOTE:
Do <u>not</u> use the Setup program included with MS-DLC. If you do, you will
be unable to run Windows Setup or Network Setup. Instead, use the Network
Setup icon to set up Windows for Workgroups to work with MS-DLC
as you would in adding an Unlisted or Updated Protocol. See the *Microsoft
Workgroup Add-On User's Guide* for more information.

If you run the Setup program included with MS-DLC, the Setup program creates a file called WFWSETUP.CPL and copies a new WFWSETUP.DLL file to your C:\WINDOWS\SYSTEM directory. This prevents Network Setup from working. To fix this, delete the WFWSETUP.CPL file. Then copy and expand WFWSETUP.DLL from your Windows for Workgroups 3.11 disks. For information on how to expand files, see your Windows documentation.

10.1 Changes to System Files When You Install MS-DLC

The MS-DLC installation process adds the following lines to the AUTOEXEC.BAT file:

```
C:\WINDOWS\NET INITIALIZE
C:\WINDOWS\MSDLC.EXE
C:\WINDOWS\NET START
```

The MS-DLC installation process adds the following lines to the SYSTEM.INI file:

```
[Network Drivers]
LoadRMDrivers=Yes
```

10.2 Sample PROTOCOL.INI file

The following is a sample PROTOCOL.INI file. It is taken from a computer where Microsoft Windows for Workgroups version 3.11 is set up to use the Microsoft NetBEUI and MS-DLC protocols with the same network adapter.

```
[network.setup]
version=0x3110
netcard=ms$ewtrbtp,1,MS$EWTRBTP,3
transport=ms$ndishlp,MS$NDISHLP
transport=ms$netbeui,NETBEUI
transport=msdlc,MSDLC
lana0=ms$ewtrbtp,1,msdlc
lana1=ms$ewtrbtp,1,ms$ndishlp
lana2=ms$ewtrbtp,1,ms$netbeui

[protman]
DriverName=PROTMAN$
PRIORITY=MS$NDISHLP

[MS$EWTRBTP]
DriverName=DEPCA$
Interrupt=15
```

```
IOAddress=0x300
RamAddress=0xD000
MaxMulticast=8
MaxTransmits=16
AdapterName=DE200

[LANCE]
Adapters=MS$EWTRBTP

[MS$NDISHLP]
DriverName=ndishlp$
BINDINGS=MS$EWTRBTP

[NETBEUI]
DriverName=netbeui$
SESSIONS=10
NCBS=12
BINDINGS=MS$EWTRBTP
LANABASE=2

[MSDLC]
xstations1=0
xstations0=0
stations=20
saps=3
xsaps1=0
xsaps0=0
swap=1
usedix=0
DriverName=MSDLC$
BINDINGS=MS$EWTRBTP
```

11.0 Using Windows for Workgroups 3.11 with MS-Net–Compatible Networks

You can use Windows for Workgroups 3.11 with any network that is MS-Net (Microsoft Network) Compatible instead of the Microsoft Windows Network. These networks include:

3Com 3+Share®
TCS® 10-Net
Ungermann-Bass® Net/One®

12.0 Using an Unlisted Network Adapter with No OEMSETUP.INF File

If you have a network adapter that is not included in the list of available network adapters in Network Setup, and if you don't have an OEMSETUP.INF file for it, you can still use it with Windows for Workgroups. This section tells you how to modify your PROTOCOL.INI, SYSTEM.INI, and CONFIG.SYS files to use your network adapter.

1. Open your PROTOCOL.INI with a text editor, such as the MS-DOS EDIT command. Find the section that configures your network adapter driver. Select that section, including the header, and cut it.

2. Find the section that begins with the [ms$genndis2] header. Select that section, including the header, and replace it with the section that configures your network adapter driver, that you cut in step 1.

3. Replace all the occurrences of "ms$genndis2" with the name of your network adapter driver
section. Then save and close the file.

4. Open your SYSTEM.INI file with a text editor. In the [Network Drivers] section, add the name of your network adapter driver at the end of the netcard= line, and remove the "genndis2.dos" entry from that line. Then save and close the SYSTEM.INI file.

5. Open your CONFIG.SYS with a text editor, and remove the line that loads the network adapter driver.

13.0 Other Online Documents

The following table describes other online documents that contain important information about Windows for Workgroups that is not included in the *Microsoft Workgroup Add-On User's Guide* or in Help.

Document	Contains
SETUP.TXT	Information about problems that may occur when you set up Windows for Workgroups.
README.WRI	Information about using Windows for Workgroups with the Multimedia Extensions version 1.0, specific display-adapter and system configurations, and MS-DOS–based applications, and

information that was unavailable when the *Microsoft Workgroup Add-On User's Guide* was printed.

PRINTERS.WRI   Information about specific printers and fonts.

SYSINI.WRI   Information about the settings in the SYSTEM.INI file.

WININI.WRI   Information about the settings in the WIN.INI file.

MAIL.WRI   Information about using Microsoft Mail with Windows for Workgroups.