

WFWAGENT.WRI File

Documentation for the Installation of Novell's ODINSUP Driver for Backup Exec for NetWare
Version 4.1

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This document updates information provided in the Backup Exec documentation. The information in this document is more up-to-date than that in the manuals.

The documentation is updated at the time of reprinting, so some of the information in this file may already be included in your manuals.

For best results, view this file in Portrait mode (File menu, Print Setup command).

About This Document

The MSIPX NetWare Support included with Windows for Workgroups Version 3.1 is currently not reliable if used with the Backup Exec DOS Agent. Since it is desirable for a workstation to publish and view its own local drives, a work around procedure has been established. By using Novell's ODINSUP driver, which translates the ODI interface into Microsoft's NDIS interface used by Windows for Workgroups, full agent functionality can be obtained. Novell's ODINSUP driver and support utilities are accessible on bulletin boards such as CompuServe. On CompuServe they are located on Novell's NETWIRE forum (See Step 1) .

This document describes an installation procedure using Novell's ODINSUP drivers. The procedure involves the user modifying local copies of the CONFIG.SYS, AUTOEXEC.BAT, SYSTEM.INI, NET.CFG, and PROTOCOL.INI files and installation of a few Novell executables.

For large networks, it is suggested that the network administrator use this guide as a template to create a set of procedures tailored for you particular network configuration. By having one knowledgeable person develop this procedure, each user on the network will not have to go through the overhead of getting the updated Novell drivers and extracting the correct drivers from the archived files.

Contents

This file has broken up the installation procedure into the following steps:

- Step 1: Download and extract updated Novell drivers.
- Step 2: Create the MLID driver
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- Step 9: Final Modifications
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This file has the following appendices:

Appendix A:	Files needed to install Novell's ODI drivers
Appendix B:	Files need to install the Windows components of Novell's ODI drivers
Appendix C:	Sample MLID driver creation from a 4.01 server

Step 1: Download Novell drivers

The Novell ODI drivers version 1.20 or above are required. As of the date of this publication, these drivers can be obtained from Novell's NETWIRE forum on Compuserve as DOSUP9.EXE or WINUP9.EXE. As the ODI drivers are updated, the names of these files will change. If your workstation contains a third party network card (such as those from 3COM, Intel, SMC, etc.) you will also need to get the latest MLID driver for that network card from Novell or your network card manufacturer. If you have a 3.12 or 4.x server, the MLID driver for your network card may be available in SYS:\public\client\doswin\dos.

Appendix A shows a sample of the files used to perform the update.

Step 2: Create the MLID Driver

To create an MLID driver for your machine:

- First determine the network board type.
For example, you may have a 3COM EtherLink II board. This is a 3C503.

The term "*driver*" is the name of your network board driver.

- Copy the driver to your \[Windows Directory]\system*driver.com*. If you got the driver from a 3.12 or 4.x server, you will need to run NLUNPACK on the driver to uncompress it. (See the appendix C for an example on unpacking the 3c503 driver from a 4.01 server). If the driver came as part of the software provided by your board manufacturer, follow their instructions on installing the driver to your Windows system directory.

Step 3: Save Current Configuration

The following files on your machine should be backed up to save your current configuration:

- \CONFIG.SYS
- \AUTOEXEC.BAT
- \NET.CFG
- \[Windows Directory]\PROTOCOL.INI
- \[Windows Directory]\system\VIPX.386
- \[Windows Directory]\system\LSL.COM

- \[Windows Directory]\system\IPXODI.COM

It is recommended you create a separate directory and save these files in it. This will make it easy to recreate your current configuration.

Step 4: Modify CONFIG.SYS

In CONFIG.SYS references to the Microsoft's NDIS driver must be removed.

The term "*driver*" is the name of your network board driver.

Locate the following lines:

```
device=c:\Windows\driver.dos  where driver is the selected driver( i.e. NE2000, 3C503,.. )
device=c:\Windows\msipx.sys
```

Remove these lines or REM them out as follows:

```
REM device=c:\Windows\driver.dos
REM device=c:\Windows\msipx.sys
```

Step 5: Modify AUTOEXEC.BAT

In AUTOEXEC.BAT references to the Novell's ODI drivers must be run in a particular order.

The term "*driver*" is the name of your network board driver.

Locate the following line: NET START

Insert before NET START the following lines:

```
\[Windows Directory]\system\LSL
\[Windows Directory]\system\driver
\[Windows Directory]\system\IPXODI
\[Windows Directory]\system\ODINSUP
```

Locate the following line: MSIPX

Remove this line or REM it out as follows:

```
REM MSIPX
```

Your AUTOEXEC.BAT will now have the following lines in sequence:

```

...
\[\Windows Directory]\system\LSL
\[\Windows Directory]\system\3C503    ( Example of an MLID driver)
\[\Windows Directory]\system\IPXODI
\[\Windows Directory]\system\ODINSUP
NET START
REM MSIPX
NETX
...

```

Step 6: Modify NET.CFG

The NET.CFG file is a configuration file used by Novell to define the driver's protocols. This file must be located in the directory where the NetWare programs are executed.

For example, if the NetWare programs are located in C:\NETWARE, but IPXODI and NETX are executed in AUTOEXEC.BAT from C:\, then NET.CFG must be located in C:\, not C:\NETWARE.

The term "*driver*" is the name of your network board driver.

If NET.CFG does not exist, create it and add the following lines:

```

Protocol ODINSUP
  Bind driver

```

If you are using the DOS Requester for NetWare (supplied with NetWare 4.x ODI Drivers), add the line "Buffered" :

```

Protocol ODINSUP
  Bind Driver
  Buffered

```

Also in NET.CFG the network boards must be defined for all available frame types for the given physical network type under "Link Driver *driver* " section.

The **Port**, **Int**, and **Mem** settings are specific for each board.

For NetWare 3.x Networks add the following lines to NET.CFG

```

Link Driver driver
  Port 350
  Int 3
  Mem DC00
  Frame Ethernet_802.3
  Frame Ethernet_II

```

Frame Ethernet_802.2
Frame Ethernet_SNAP
Protocol IPX 0 Ethernet_802.3

For NetWare 4.0 networks, add the following lines:

Link Driver driver
Port 350
Int 3
Mem DC00
Frame Ethernet_802.2
Frame Ethernet_II
Frame Ethernet_802.3
Frame Ethernet_SNAP
Protocol IPX 0 Ethernet_802.2

In summary, if you are using NetWare 3.x network and a 3C503 network board, then NET.CFG would be the following:

Protocol ODINSUP
Bind 3C503
Buffered

Link Driver 3C503
Port 350
Int 3
Mem DC00
Frame Ethernet_802.3
Frame Ethernet_II
Frame Ethernet_802.2
Frame Ethernet_SNAP
Protocol IPX 0 Ethernet_802.3

Step 7: Modify PROTOCOL.INI for ODI Driver

The PROTOCOL.INI file is located in the Windows subdirectory.

For the new ODI driver, a new section must be created.

For example, for a NE2000 ODI driver the following lines must be added:

```
[NE2000]
drivername=NE2000$
interrupt=5
ioaddress=0x350
```

The drivename is the ODI *driver* followed by a dollar sign \$. The interrupt and io address settings may be copied from the equivalent NDIS driver section.

If your ODI *driver* begins with a digit (i.e. 3C503), prepend an 'x' to any reference you add to PROTOCOL.INI

For example, if the *driver* is 3C503, interrupt is 5, io address is 0x300, then the following lines would be add:

```
[x3C503]
drivename=x3C503$
interrupt=5
ioaddress=0x300
```

Step 8: Modify PROTOCOL.INI for ODI references

The PROTOCOL.INI file is located in the Windows subdirectory.

Change any references to the original NDIS driver in the file to the newly created driver section name.

If your ODI *driver* begins with a digit (i.e. 3C503), prepend an 'x' to any reference you add to PROTOCOL.INI

An example for a NE2000 with original statements commented out with ";"

```
[network.setup]
version=0x3100
;netcard=ms$ne2000,1,MSS$NE2000
netcard=ne2000,1,ne2000
transport=ms$netbeui,MSS$NETBEUI
;transport-ms$ipx,MSS$IPX
;lana1=ms$ne2000,1,ms$netbeui
;lana0=ms$ne2000,1,ms$ipx
lana0=ne2000,1,ms$netbeui
```

```
[protman]
DriverName=PROTMAN$
PRIORITY=MSS$NETBEUI
```

```
[NE2000]
DriverName=ne2000$
Interrupt=3
ioaddress=0x300
```

```
;[MSSNE2000]  
;DriverName=MS2000$  
;IOBASE=0x300  
;INTERRUPT=3
```

```
[MSSNETBEUI]  
DriverName=netbeui$  
SESSIONS=10  
NCBS=32  
;BINDINGS=MSSNE2000  
;LANABASE=1  
bindings=ne2000  
lanabase=0
```

```
;[MSSIPX]  
;DriverName=IPX$  
;MediaType=Novell/Ethernet  
;BINDINGS=MSSNE2000
```

An example for a 3C503 with original statements commented out with ";"

```
[network.setup]  
version=0x3100  
;netcard=ms$elnkii1,MSSSELNKII  
netcard=x3c503,1,x3c503  
transport=ms$netbeui,MSSNETBEUI  
;transport-ms$ipx,MSSIPX  
;lanal=ms$elnkii,1,ms$netbeui  
;lana0=ms$elnkii,1,ms$ipx  
lana0=x3c503,1,ms$netbeui
```

```
[protman]  
DriverName=PROTMANS$  
PRIORITY=MSSNETBEUI
```

```
[X3c503]  
DriverName=X3c503$  
Interrupt=3  
ioaddress=0x300
```

```
;[MSSSELNKII]  
;DriverName=ELNKIIS$  
;IOBASE=0x300  
;INTERRUPT=3
```

```
[MSSNETBEUI]  
DriverName=netbeui$
```

```
SESSIONS=10
NCBS=32
;BINDINGS=MSSELNKII
;LANABASE=1
bindings=x3c503
lanabase=0

;[MSSIPX]
;DriverName=IPXS
;MediaType=Novell/Ethernet
;BINDINGS=MSSELNKII
```

Step 9: Final Modifications

This final step involves copying the needed files to use the ODI Driver.

Copy the following files from the Novell file directory to the \[Windows Directory]\system directory. These files are referenced by AUTOEXEC.BAT.

```
LSL
3C503   ( Example of an ODI driver)
IPXODI
ODINSUP
VIPX.386
```

Step 10: Reboot

Review Steps 1- 8 . After reviewing the modifications, reboot your machine. Follow the status reporting . If errors are reported, first correct errors in the CONFIG.SYS file and then in the AUTOEXEC.BAT file. It may take multiple tries to weed out typing errors.

Appendix A: Files needed to install Novell's ODI drivers.

The following is a sample listing of the files contained in Novell's self extracting maintenance file (as of the date of this publication this file was called DOSUP9.EXE):

TBMI2.COM	NE2.COM	NE2100.COM
NE2000.COM	NE3200.COM	TRXNET.COM
ROUTE.COM	NETBIOS.EXE	PCN2L.COM
NETX.EXE	BSD.TXT	LSL.COM
ODINSUP.COM	NE2_32.COM	EMSNETX.EXE

TOKODI.DOC	ODINSUP.DOC	HISTORY.DOC
TASKID.COM	TOKEN.COM	INT2F.COM
NTR2000.COM	NE1500T.COM	XMSNETX.EXE
LANSUP.COM	NE1000.COM	ODIINFO.DOC
DOSNP.EXE	RPLFIX.COM	RPLFIX.DOC
RPLODI.COM	IPXODI.COM	IPX.OBJ
DOSODIWS.DOC		

Appendix B: Files needed to install the Windows components of Novell's ODI drives.

The following is a sample listing of the files contained in Novell's self extracting maintenance file (as of the date of this publication this file was called WINUP9.EXE):

NWPOPUP.EXE	NETWARE.DRV	NWPSERV.DLL
VNETWARE.386	WINUP8.TXT	NWIPXSPX.DLL
VPICDA.386	VIPX.DOC	NETAPI.DLL
TBMI2.COM	NWCALLS.DLL	BINDFIX.EXE
NETWARE.HLP	NWLOCALE.DLL	NWPSRV.DLL
NWNET.DLL	TASKID.COM	NWNETAPI.DLL
BSD.TXT	VIPX.386	

Appendix C: Sample MLID driver creation from a 4.01 server

The following describes the steps necessary to create an MLID driver from a 4.01 server. If your MLID driver was provided by Novell or your network board manufacturer, follow the installation directions provided with the driver.

To create a usable MLID driver from this directory

- Determine the driver need for your network card.
For example: A 3COM EtherLink II board uses the 3c503 driver.
- Copy the driver and NLUNPACK (from the SYS:\public\client\doswin directory) to \[Windows Directory]\system
For example: COPY ..\NLUNPACK.EXE C:\WINDOWS\SYSTEM
- Copy the appropriate driver files (from SYS:\public\client\doswin\dos) to \[Windows Directory]\system
For example: COPY 3C503.* C:\WINDOWS\SYSTEM
- Unpack the appropriate driver by entering NLUNPACK *driver* \[Windows Directory]\system. This will create and executable *driver.COM*.
For example: NLUNPACK 3C503.CO_ C:\WINDOWS\SYSTEM

The following is a sample listing of the Novell driver files available in the SYS:\public\client\

doswin\dos directory of a 4.01 server:

3C1100.CO_	3C1100.INS	3C501.CO_	
3C501.INS	3C503.CO_	3C503.INS	3C505.CO_
3C505.INS			
3C509.CO_	3C509.INS	3C523.CO_	
3C523.INS	DRIVERS.DOS	E21ODI.CO_	E21ODI.INS
E31ODI.CO_	NE1000.INS	NE1500T.CO_	NE1500T.INS
NE2.CO_			
NE2.INS	NE2000.CO_	NE2000.INS	NE2100.CO_
NE2100.INS	NE2_32.CO_	NE2_32.INS	NE3200.CO_
NE3200.INS	NI5210.CO_	NI5210.INS	TCE16MCW.INS
NTR2000.INS	NULL.CO_	NULL.INS	
OSH391R.CO_	OSH391R.INS	OSH392R.CO_	OSH392R.INS
OSH89XR.CO_	OSH89XR.INS	SH990R.CO_	OSH990R.INS
PCN2L.CO_			
NI6510.CO_	E31ODI.INS	ES3210.CO_	ES3210.INS
ILANAT.INS	INTEL593.CO_	INTEL593.INS	INTEL595.CO_
INTEL595.INS	INTEL596.CO_	INTEL596.INS	LANSUP.CO_
LANSUP.INS	LANZENET.CO_	LANZENET.INS	MADGEODI.CO_
MADGEODI.INS	NCRWL05.CO_	NCRWL05.INS	NE1000.CO_
EXOS.CO_	EXOS.INS	EXP16ODI.CO_	EXP16ODI.INS
HPISAODI.CO_	HPISAODI.INS	HPMCAODI.CO_	HPMCAODI.INS
IBMFDDIO.CO_	IBMFDDIO.INS	IBMODISH.CO_	IBMODISH.INS
ILANAT.CO_	PCN2L.INS	SMC8000.CO_	SMC8000.INS
TCE32MCW.CO_	TCE32MCW.INS	TCNSW.CO_	
TCNSW.INS	TCTOKSH.CO_	TCTOKSH.INS	TOKEN.CO_
TOKEN.INS		TRXNET.CO_	TRXNET.INS
UBODI.CO_		UBODI.INS	
NI6510.INS	NI9210.CO_	NI9210.INS	NTR2000.CO_
SMC8100.CO_	SMC8100.INS	SMCARCWS.CO_	SMCARCWS.INS
T20ODI.CO_	T20ODI.INS	T30ODI.CO_	T30ODI.INS
TCCARC.CO_	TCCARC.INS	TCE16ATW.CO_	
TCE16ATW.INS	TCE16MCW.CO_		