

Novell ZENworks® for Desktops Preboot Services

4

www.novell.com

PXE-ON-DISK USER GUIDE



Novell®

Legal Notices

Novell, Inc. makes no representations or warranties with respect to the contents or use of this documentation, and specifically disclaims any express or implied warranties of merchantability or fitness for any particular purpose. Further, Novell, Inc. reserves the right to revise this publication and to make changes to its content, at any time, without obligation to notify any person or entity of such revisions or changes.

Further, Novell, Inc. makes no representations or warranties with respect to any software, and specifically disclaims any express or implied warranties of merchantability or fitness for any particular purpose. Further, Novell, Inc. reserves the right to make changes to any and all parts of Novell software, at any time, without any obligation to notify any person or entity of such changes.

You may not export or re-export this product in violation of any applicable laws or regulations including, without limitation, U.S. export regulations or the laws of the country in which you reside.

Copyright © 1993-2002 Novell, Inc. All rights reserved. No part of this publication may be reproduced, photocopied, stored on a retrieval system, or transmitted without the express written consent of the publisher.

U.S. Patent Nos. 5,349,642; 5,594,863; 5,633,931; 5,692,129; 5,758,069; 5,761,499; 5,781,724; 5,781,733; 5,859,978; 5,893,118; 5,905,860; 6,023,586; 6,047,312; 6,061,743; 6,105,069; 6,115,549; 6,173,289; 6,144,959. Patents Pending.

Novell, Inc.
1800 South Novell Place
Provo, UT 84606
U.S.A.

www.novell.com

PXE-on-Disk User Guide
May 2002
103-000218-001

Online Documentation: To access the online documentation for this and other Novell products, and to get updates, see www.novell.com/documentation.

Novell Trademarks

ConsoleOne is a registered trademark of Novell, Inc., in the United States and other countries.

NetWare is a registered trademark of Novell, Inc., in the United States and other countries.

Novell is a registered trademark of Novell, Inc., in the United States and other countries.

ZENworks is a registered trademark of Novell, Inc., in the United States and other countries.

Third-Party Trademarks

All third-party trademarks are the property of their respective owners.

Contents

	About This Guide	7
	Documentation Conventions	7
1	PXE-on-Disk Setup	9
	About PXE	9
	What is PXE?	9
	What is PXE-on-Disk Setup?	10
	Creating a PXE-on-Disk Diskette	10
	Creating the Diskette in a Windows NT/2000 Server Environment.	10
	Creating the Diskette in a NetWare Server Environment.	12
	Booting with a PXE-on-Disk Diskette	14
	Troubleshooting	15

About This Guide

This guide contains information that will help you understand the Novell® ZENworks® for Desktops 4 Preboot Services PXE-on-Disk utility, prepare a workstation for it, and use it.

Documentation Conventions

In Novell documentation, a greater than symbol (>) is used to separate actions within a step and items in a cross-reference path.

A trademark symbol (®, ™, etc.) denotes a Novell trademark. An asterisk (*) denotes a third-party trademark.

1

PXE-on-Disk Setup

This section contains information about the Novell® ZENworks® for Desktops (ZfD) 4 Preboot Services utility known as PXE-on-Disk Setup. The information includes:

- ♦ “About PXE” on page 9
- ♦ “Creating a PXE-on-Disk Diskette” on page 10
- ♦ “Booting with a PXE-on-Disk Diskette” on page 14
- ♦ “Troubleshooting” on page 15

About PXE

This section contains the following information:

- ♦ “What is PXE?” on page 9
- ♦ “What is PXE-on-Disk Setup?” on page 10

What is PXE?

ZfD 4 Preboot Services utilizes the Preboot Execution Environment (PXE), an industry-standard protocol that allows a workstation to boot up and execute a program from the network before the workstation operating system starts. The PXE environment is loaded from either the Network Interface Card (NIC) in flash or ROM, or in the same memory as the system BIOS.

By using Preboot Services, you can put an image on a workstation even if the workstation's hard disk is blank. You do not need to use imaging boot diskettes or CDs, or install a ZfD Workstation Imaging (Linux*) partition on the workstation. In order to use Preboot Services, you need to install the

Workstation Imaging and Preboot Services components of ZfD 4 on your server and enable workstations for PXE.

PXE code is typically delivered with newer workstations (PC 99 compliant or later) on the NIC.

What is PXE-on-Disk Setup?

PXE-on-Disk Setup helps you create a 1.44 MB floppy diskette that contains all of the files needed to allow a PXE-compatible network adapter on a Windows* workstation to communicate with a ZfD 4 Preboot Services server. When you boot a workstation with a PXE-on-Disk diskette in the floppy drive, it is as if that workstation had a PXE-enabled network adapter.

Operating Systems

The PXE-on-Disk Setup program runs on the following operating systems:

- ♦ Windows 95/98/ME
- ♦ Windows NT* Server/Workstation 4
- ♦ Windows NT/2000/XP

Creating a PXE-on-Disk Diskette

This section contains the following information:

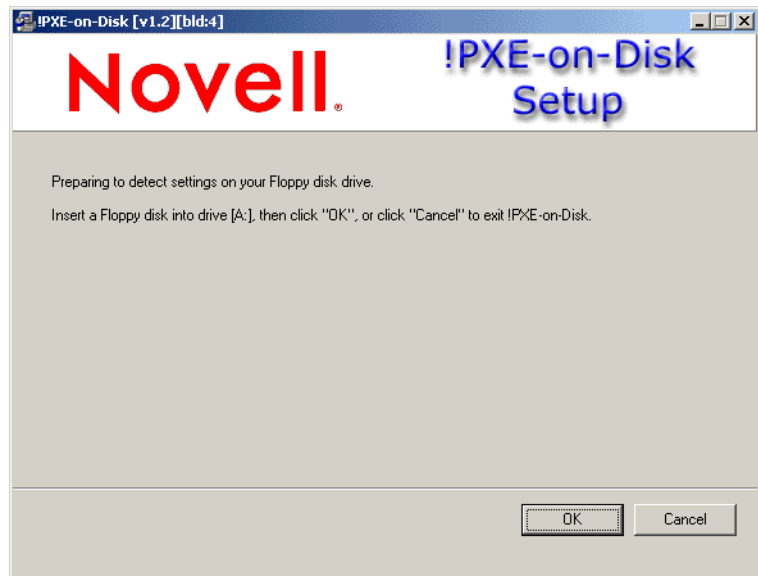
- ♦ [“Creating the Diskette in a Windows NT/2000 Server Environment” on page 10](#)
- ♦ [“Creating the Diskette in a NetWare Server Environment” on page 12](#)

Creating the Diskette in a Windows NT/2000 Server Environment

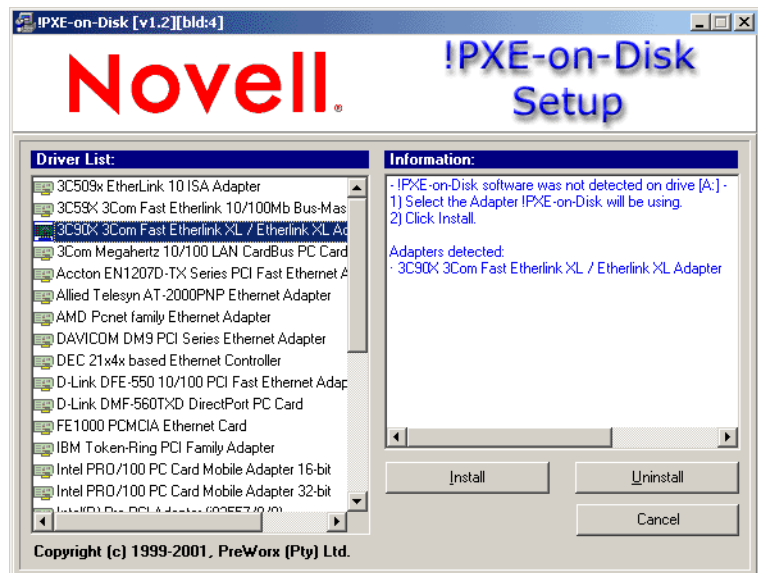
When you installed ZfD 4 Preboot Services component on a Windows server, the PXE-on-Disk creation program was also installed and registered. Use the following procedure to create a PXE-on-Disk diskette from your Windows NT or Windows 2000 server.

- 1** From the Windows desktop, click Start > Programs > ZEN Preboot Services > PXE-on-Disk to display the PXE-on-Disk Setup window.
- or

In ConsoleOne[®], click Tools > ZENworks Utilities > Imaging > Create or Modify Boot Diskette > Create PXE Disk.



- 2 Click OK to display the Driver and Information lists for PXE-compatible network adapters.



Note that the network adapter (or adapters) installed on your server is detected and the specifications are listed in the Information list box of the Setup window. Some driver types may be duplicated. For example, Accton En1207d is the same as SMC 1211TX.

- 3** From the Driver List, select the name of the network adapter driver (or its nearest equivalent) that is installed on the client workstation you want to connect to the Preboot Services server.
- 4** Insert an empty, formatted, high-density diskette in the disk drive > click Install to start creating a PXE-on-Disk diskette.

When the installation is complete, the diskette contains appropriate PXE-on-Disk information for the intended client workstation.

- 5** Click Close to complete the creation of the PXE-on-Disk diskette.

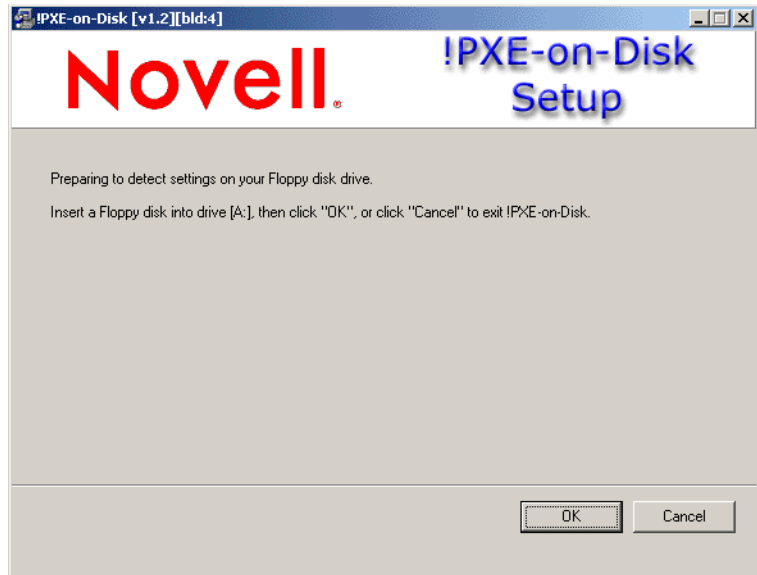
Creating the Diskette in a NetWare Server Environment

The ZfD 4 installation program does not copy PXE-on-Disk files to a NetWare[®] server. Use the following the following procedure to create a PXE-on-Disk diskette.

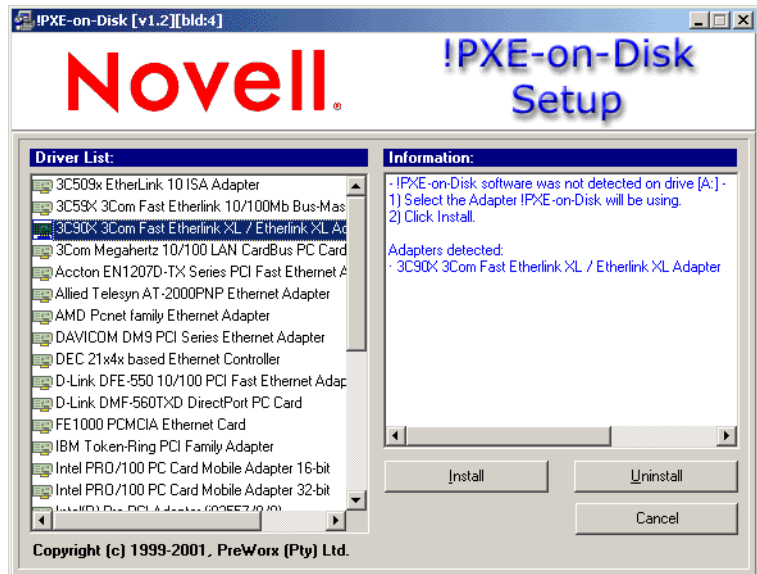
- 1** Copy the PXE-on-Disk folder from the *ZENworks 4 Program* CD to the hard disk of a Windows workstation.

Because the PXE-on-Disk program depends on the definition of a specific NIC driver, it will be to your advantage to create the diskette on a workstation with the same network adapter driver as the workstation(s) where you plan to use PXE-on-Disk.

- 2** From the new PXE-on-Disk folder of the Windows workstation, run PXEBUILDER.EXE to display the PXE-on-Disk Setup window.



- 3 Click OK to display the Driver and Information lists for PXE-compatible network adapters.



Note that the network adapter of machine you are using is detected and its specifications listed in the Information list box of the Setup window.

- 4 From the Driver List, select the name of the network adapter driver (or its nearest equivalent) that is installed on the client workstation you want to connect to the Preboot Services server.

Note that some driver types may be duplicated. For example, Accton En1207d is the same as SMC 1211TX.

- 5 Insert an empty, formatted, high-density diskette in the disk drive > click Install to start creating a PXE-on-Disk diskette.

When the installation is complete, the diskette contains appropriate PXE-on-Disk information for the intended client workstation.

- 6 Click Close to complete the creation of the PXE-on-Disk diskette.

Booting with a PXE-on-Disk Diskette

Before you boot a client workstation with a PXE-on-Disk diskette, you should make sure that ZfD 4 Preboot Services has been installed on a network server. This is the server that will communicate with the client workstation and give it workstation imaging tasks to perform. For more information about installing ZfD 4 Preboot Services on a server, see [Setting Up ZENworks for Desktops Preboot Services](#) in ZENworks for Desktops 4 Preboot Services *Installation and Deployment*.

When you know that ZfD 4 Preboot Services is installed on the server, you can reboot the client workstation with a PXE-on-Disk diskette. During the reboot cycle, the client workstation will:

1. Establish a connection with the ZfD 4 Preboot Services server.
2. Execute any imaging work to be performed.
3. Continue its boot cycle.

Troubleshooting

This section lists common problems and the methods you can use to deal with them.

[“PXE-on-Disk Fails to Operate Correctly” on page 15](#)

PXE-on-Disk Fails to Operate Correctly

Problem: PXE-on-Disk is not working.

Possible Cause: An incorrect network adapter is installed, or PXE-on-Disk is not installed on the diskette that you are using to boot the workstation.

Action: Install a PXE-enabled network adapter.

Action: Reinstall PXE files on a diskette using the PXE-on-Disk setup utility. For more information, see [“Creating a PXE-on-Disk Diskette” on page 10](#).

