

Xerox NDPS Solution

For Novell NDPS

XEROX
NOVELL DISTRIBUTED
PRINT SERVICES
FOR DOCUPRINT NETWORK PRINTERS

User Guide

Version 2.3

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Introduction

Novell Distributed Print Services (NDPS) are products built on Novell's printing architecture that allows administrators to take advantage of built-in printer intelligence to centrally manage network printing resources from anywhere on the network, improve network printing performance, and reduce the hassles of network printing for end-users.

The Xerox NDPS Solution allows you to use Novell NDPS with many of the latest Xerox Printers. It includes administrative tools that snap-in to NWAdmin that enable users to easily configure and manage their network print services. It also has a set of NetWare Loadable Modules (NLM) that run on the NetWare server.

Document Purpose

This document describes how to install and use the Xerox NDPS Solution. It complements, but does not replace, Novell's documentation describing how to set up your Network Operating System and providing basic knowledge about NDPS. See Novell's documentation for these details.

Document Audience

This document is provided for the system administrator or equivalent, with in-depth knowledge of NetWare and NDPS.

About this Solution

The current release of the Xerox NDPS Solution for Novell NDPS supports both IP and IPX network protocols. It supports the LPR print protocol for job submission over IP as well as the Novell Print Server utility (PServer) that Xerox printers use for job submission over IPX.

The Xerox NDPS solution contains five distinct components:

- A **Xerox Install Wizard**, that provides simplified installation and configuration of your Xerox printers in the network
- **Xerox Printer Control Snap-in**, that enables status retrieval and remote management of NDPS supported Xerox printers over IP and IPX through NWAdmin. It also provides the ability to launch CentreWare Internet Services (CWIS) web pages for printer management of IP supported printers
- **Xerox Gateway NLM “Xgateway”**, that allows you to get status and feedback information from your Xerox printer and access many of the features available from your specific printers
- **Xerox Server Side Configuration Utility**, that allows you to create IP Public Access printers as well as convert IPX to IP printers
- **Xerox Plug and Print Utility** that will search automatically for non-configured devices and install them as Public Access printers. It can install multiple printers simultaneously using default names and settings.

Server Requirements

At least one of the following four types of Servers:

- NetWare 4.11 with at least Support Pack 6
- NetWare 4.2
- NetWare 5.1
- NetWare 6.X

All Novell required support packs for your Network Operating System should be loaded.

NOTE: Visit Novell's web site at www.novell.com for service pack information for your Network Operating system.

Depending on which NetWare Network Operating System you are running, there are different levels of Novell's NDPS (Novell Distributed Print Services) or NEPS (Novell Enterprise Print Services) available.

- Versions of NDPS greater than and including 2.0 will support the Xerox Solution.
- Versions of NEPS greater than and including 2.1.0 will support the Xerox Solution.

NOTE: For detailed explanations of the various Novell NDPS version and functionality distinctions, please consult the Novell Support Web Site at: www.novell.com Search for "ndps neps" (without the quotes).

Client Requirements

Win95/98, WinNT 4.0 Workstation with required service packs or Windows 2000 Workstation

- Novell Client Software compatible with your operating system in accordance with Novell specifications. Visit Novell's web site at www.novell.com for specific details.

Installing Your Xerox Printer

You must perform an installation of the Xerox NDPS Solution in accordance with the section titled [Xerox NDPS Solution Installation Procedure](#)

There are two methods to install and configure a Xerox NDPS Printer:

1. Use the **Server Side Configuration Utility** in accordance with the section titled: [Using The Server Side Configuration Utility](#).
2. Use the **NetWare Administrator** (NWAdmin) application in accordance with the section titled [Using the NetWare Administrator](#).

Xerox NDPS Solution Installation Procedure

NOTE: This procedure requires that the Novell NDPS 2.0 or greater be installed first as well as any Novell required service packs. Follow these instructions after the above conditions have been met.

NOTE: The install can be done from a CDROM mounted as a NetWare volume, as a server-to-server install, or from a workstation using RConsole. Refer to Novell documentation for details on these instructions. (The mode of install will determine the path to the source you provide during the following procedure.)

The Steps listed below will define how to get the Xerox NDPS Solution from the web if that is your resource:

1. Go to www.xerox.com and search for NDPS.
2. Click on the **free Download** link on the Xerox NDPS web site and follow the instructions.
3. Select the print drivers for the printers in your environment.
4. Click "Create" and your customized solution will be built.
5. Click "Download".
6. Save the file to a convenient location where you have sufficient free space.
7. This is a self-extracting archive file. Run the file. After the files are extracted, copy the file to the SYS volume. Approximately 335MB of free space is required for the full download with all drivers.

THEN

The Final steps listed below will define how to install the Xerox NDPS solution on your server from any of the listed resources

1. Go to the server console screen.
2. At the server console, type: **nwconfig** for a NetWare 5.x server OR **load install** for a NetWare 4.x server and press [ENTER]
3. Select **Product Options** and press [ENTER]
4. Select **Install a product not listed** and press [ENTER]
 - You will see a screen for selecting a **source path**.
5. Press the [F3] key to type in **source path**, then press [ENTER]. Press [ENTER] to continue. This will initiate a file copy. The file copying will take a few minutes.

If the server OS version is newer than Netware 5.1 Service Pack 3 additional steps are required to complete the installation. Otherwise the installation is complete.

NOTE: *The NDPS Broker must be running to proceed. If it is not running you will get errors and must re-start the install.*

6. The install script will prompt that a program XPRNDRV.NLM will install the print drivers. Press [ENTER]. This will start the program and switch to a new screen. **DO NOT** return to the NWCONFIG until the XPRNDRV.NLM instructs you to do so.
7. At the prompt enter a fully qualified name for an "Admin" user. Then press [ENTER].

8. At the prompt for a password type the password for the user in step 7, then press [ENTER].
9. The XPRNDRV.NLM will login to the server, it will now prompt for the Broker. Type the fully qualified Broker Name, then press [ENTER].
10. At the prompt for the tree name type the tree name, then press [ENTER].
11. The XPRNDRV.NLM will now update the drivers contained in the Resource Management Service (RMS). This process will take several minutes up to an hour depending on server type. When it completes it will display a message indicating the success of the install process. Press [ENTER] to exit XPRNDRV.NLM.
12. At the server prompt type [CTRL][ESC] to get a list of available screens on the server. Type the number for the NWCONFIG screen, then press [ENTER].
13. The install script is prompted to restart RMS. Press [ENTER]. This must be done so that the changes in RMS can be finalized.
14. As a check of the install move to the “View/Configure/Remove Installed Products” option in NWCONFIG and press [ENTER]. Look for an entry Gateway X.X.X.X. This is the utility for the Xerox NDPS Solution.

Installing/Configuring for Netware 5.1 Clustering

NOTE: *These instructions are for Netware 5.1 server with service pack 2a or older, not for service pack 3 and newer.*

Installing the solution on a NetWare 5.1 server does not configure it to run in a clustered environment. The user must change an INI file in the procedure below. Printer Agents can then be created. These new print agents will make references to the clustered volume instead of the sys volume. Any existing Xerox print agents should be re-created after the change so that they will also use the clustered volume.

At the server console:

1. install the solution as per the instructions in the User's Guide.

On a client workstation connected to the server:

2. Open the file `sys:/public/win32/xdpwiz.ini` in notepad.
3. Edit the line that contains `ndpsvolume`.
 - remove the `;` at the start of the line.
 - replace `other` with the name of the volume that the `resdir` is located.
4. Save changes.

Now the Xerox Installation Wizard INI files have been changed to install print agents that will reference the cluster volume. The next step is to move the print driver files and configuration files from the `sys` volume to the cluster volume. The three steps below detail copying the files.

Again on the client workstation:

5. Copy the files `sys:/ndps/redir/prndef` to `{cluster volume}:/ndps/resdir/prndef` . Copy the contained directories.
6. Copy the files `sys:/ndps/redir/prndrv` to `{cluster volume}:/ndps/resdir/prndrv` . Copy the contained directories.
7. Copy the files `sys:/ndps/xerox` to `{cluster volume}:/ndps/resdir/xerox` .

Installing/Configuring for Netware 5.1 SP3 or later Clustering

NOTE: *These instructions are for Netware 5.1 server with service pack 3 or newer.*

Installing the solution on a NetWare 5.1 server does not configure it to run in a clustered environment. The user must change an INI file in the procedure below. Printer Agents can then be created. These new print agents will make references to the clustered volume instead of the sys volume. Any existing Xerox print agents should be re-created after the change so that they will also use the clustered volume.

At the server console:

1. install the solution as per the instructions in the User's Guide.

On a client workstation connected to the server:

2. Open the file `sys:/public/win32/xdpwiz.ini` in notepad.
3. Edit the line that contains `ndpsvolume`.
 - remove the `;` at the start of the line.
 - replace `other` with the name of the volume that the `resdir` is located.
4. Save changes.

Now the Xerox Installation Wizard INI files have been changed to install print agents that will reference the cluster volume. The next step is to move the configuration files from the `sys` volume to the cluster volume.

Again on the client workstation:

5. Copy the files `sys:/ndps/xerox` to `{cluster volume}:/ndps/resdir/xerox` .

These steps should always be done after updating the solution.

Using the NetWare Administrator

1. Login as the “Admin” account or an account with administrator equivalent to the tree and context that the Novell NDPS is installed on.
2. On your NetWare client, start the NetWare Administrator (NWAdmin) application. For Windows NT, Windows 95/98 and Windows 2000; the NWAdmin application is located on the **SYS** volume of your NetWare server as follows:
 - SYS:Public\win32\Nwadmn32.exe

NOTE: *If this application is run from a Windows shortcut icon, make sure to fill in **Start In Field** with the path: <drive name>:\Public\win32.*

3. In NWAdmin, as the network administrator, you can install your Xerox printer(s) on the network as an IP or IPX Controlled Access printer, as well as an IP or IPX Public Access printer. See the appropriate section.
 - [Installation of your Xerox Printer as an IPX Controlled Access Printer via the Xerox Installation Wizard](#)
 - [Installation of your Xerox Printer as an IP Controlled Access Printer via the Xerox Installation Wizard](#)
 - [Installation of your Xerox Printer as an IPX Public Access Printer via the Xerox Installation Wizard](#)
 - [Installation of your Xerox Printer as an IP Public Access printer via the Xerox Installation Wizard](#)

Installation of your Xerox Printer as an IPX Controlled Access Printer via the Xerox Installation Wizard

The Xerox Installation Wizard allows you to install your Xerox printer as an IPX Controlled Access printer in your existing NDS tree structure. Follow the procedure below to install your printer as an IPX Controlled Access printer on your network.

NOTE: *You must have a NDPS Broker object and a NDPS Manager object created and loaded before installing your NDPS printer.*

You can have an unlimited number of both NDPS Brokers and NDPS Managers created, but only one each can be loaded on any given server at a time. Also, the NDPS printer that you are creating can be associated with any of the presently created NDPS Managers/Brokers provided they are the ones that are loaded at the time of creation. For further details, see the Novell documentation on NDPS Broker/Manager-creation/management.

1. Launch **NWAdmin**.
2. Select the **NDS** container, under which you would like to create your IPX Controlled Access printer.
3. Select the **Object** menu, then the **Create** menu.
 - The **New Object** dialog box is displayed.
4. From the **Class of new object** window select **NDPS Printer**, and then select **OK**.
 - The **Create NDPS Printer** dialog box is displayed.

5. Enter the name that you wish to give the printer into the **NDPS Printer Name** list box, select the **Create a New Printer Agent** radio button for the **Printer Agent Source**, then select **Create**:
 - The **Create Printer Agent** dialog box is displayed with the name that you just specified in the **Printer Agent (PA) Name** list box of the **Create Printer Agent** dialog box.
6. In the **Create Printer Agent** dialog box, select the **Browse** button located directly to the right of the **NDPS Manager Name** list box.
 - The **Select Object** dialog box is displayed with a list of **Available NDPS Managers** on the left side of the dialog box.
7. Select the **NDPS Manager** object that you wish to associate with your NDPS printer and then select **OK**.
 - The **Create Printer Agent** dialog box is again displayed with the manager object that you just selected listed in the **NDPS Manager Name** list box.
8. In the **Gateway Types** list box of the **Create Printer Agent** dialog box, select the **Xerox Printer Gateway IP/IPX**, then select **OK**.
9. In the **Select a Network Protocol for the Printer Agent** dialog box make sure the radio button for **IPX Protocol** is selected and then select **OK**.
 - The **Xerox Setup Wizard** dialog box is displayed.

10. To begin installing your printer on the network, select **Next** within the **Xerox Setup Wizard** dialog box.

- The **Choose a Xerox Device** dialog box is displayed. A list box displays all the available NDPS supported Xerox printers connected to the Network at that time. The printer model is displayed in the left column and the right column contains the default print server name for each printer.

11. In the **Choose a Xerox Device** dialog box select your printer from the **LIST of Available Xerox Devices** list box. Also select/deselect the **Auto Create NDS Objects** feature.

If you select the Auto Create NDS Objects feature, skip to [Step 14. below.](#)

12. If you deselect the **Auto Create NDS Objects** feature you will see the **PRINT Server and Queue Name** dialog box displayed when you select **NEXT**.

- When the **Printer Server and Queue Name** dialog box opens, a default **New Print Server Name** and **New Queue Name** are listed in this dialog box.
- In the **Print Server and Queue Name** dialog box you have the ability to change the default names given to the **Print Server** and **Print Queue**.

13. Once the names have been assigned select **NEXT** in the **Print server and Print Queue** dialog box.

- The **Confirm Choices** dialog box is displayed listing the **New Print Server Name** and **New Queue Name** listed for your printer.
- Skip to [Step 15. below.](#)

14. If you select the **AUTO Create NDS Objects** feature, select the printer you desire from the list provided in the **Choose a Xerox Device** dialog box and then select **NEXT**
 - The **Confirm Choices** dialog is displayed listing the **New Print Server Name** and **New Queue Name** listed for your printer.
15. Select **Next** from the **Confirm Choices** dialog box.
 - The **Congratulations** dialog box is displayed telling you that you have provided all information necessary for the Xerox Printer Install wizard.
16. Select **Finish** from the **Congratulations** dialog box.

NOTE: *The Xerox Installation Wizard application will automatically create an Organizational Unit (OU) in the NDS tree along with three objects for each IPX Xerox printer agent that is created. These objects are necessary to support "Print Server" communication protocol (PServer) that Xerox printers use for job submission. See [Hints and Tips](#) for details.*

- Progress messages are displayed in the **Congratulations** dialog box as the installation continues. Finally a message is displayed: "Waiting for a printer agent to load. This may take up to 60 seconds." Then the **Select Printer Drivers** box is displayed.

17. From the list of **Printer Drivers** in the **Select Printer Drivers** dialog box, select the printer driver corresponding to your specific printer. Be sure to select a driver under the **Windows 2000 Driver** (Netware 5.1 & NetWare 5.0 with NDPS 2.0 only), **the Windows NT Driver, the Windows 95/98 Driver and the Windows 3.11 Driver** tabs (if you have users who will be using these operating systems). Default printer drivers will be auto selected in the driver list, but may be changed if necessary (i.e. Postscript to PCL). After driver selection, press **Continue**.
 - An **NDPS object creation** dialog box is briefly displayed, and then the main browser window will appear with your Controlled Access printer listed.

NOTE: *The Xerox Installation Wizard resets the printer after Printer Agent creation. To complete the installation for certain families of Xerox Document Centre printers, it will be necessary to go to the printer and cycle the power off and on after the Printer Agent is successfully created. Once the power on process for the printer is complete you must shutdown and restart the printer agent in the NDPS Manager (NDPSM) at the server console or using the RConsole utility.*

NOTE: *The Solution no longer provides Windows 3.1 Drivers for printers. If they are required they must be added through the Broker.*

Installation of your Xerox Printer as an IP Controlled Access Printer via the Xerox Installation Wizard

The Xerox Installation Wizard allows you to install your Xerox printer as an IP Controlled Access printer within your existing NDS tree structure. Follow the procedure below to install your printer as an IP Controlled Access printer on your network.

NOTE: *You must have a NDPS Broker object and a NDPS Manager object created and loaded before installing your NDPS printer.*

You can have an unlimited number of both NDPS Brokers and NDPS Managers created, but only one each can be loaded on any given server at a time. Also, the NDPS printer that you are creating can be associated with any of the presently created NDPS Managers/Brokers provided they are the ones that are loaded at the time of creation. For further details, see the Novell documentation on NDPS Broker/Manager-creation/management.

1. Launch **NWAdmin**.
2. Select the **NDS** container that you would like to create your IP Controlled Access printer in.
3. Select the **Object** menu, then the **Create** menu.
 - The **New Object** dialog box is displayed.
4. From the **Class of new object** window select **NDPS Printer**, and then select **OK**.
 - The **Create NDPS Printer** dialog box is displayed.

5. Enter the name that you wish to give the printer into the **NDPS Printer Name** list box, select the **Create a New Printer Agent** radio button for the **Printer Agent Source**, and then select **Create**.
 - The **Create Printer Agent** dialog box is displayed with the name that you just specified listed in the **Printer Agent (PA) Name** list box of the **Create Printer Agent** dialog box.
6. In the **Create Printer Agent** dialog box, select the **Browse** button located directly to the right of the **NDPS Manager Name** list box.
 - The **Select Object** dialog box is displayed with a list of **Available NDPS Managers** on the left side of the dialog box.
7. Select the **NDPS Manager** object that you wish to associate with your NDPS printer and then select **OK**.
 - The **Create Printer Agent** dialog box is again displayed with the manager object that you just selected listed in the **NDPS Manager Name** list box.
8. In the **Gateway Types** list box of the **Create Printer Agent** dialog box, select the **Xerox Printer Gateway IP/IPX**, then select **OK**.
9. In the **Select a Network Protocol for the Printer Agent** dialog box make sure the radio button for **IP Protocol** is selected and then select **OK**.
 - The **Xerox Setup Wizard** dialog box is displayed.

10. To begin installing your printer on the network, select **Next** in the **Xerox Setup Wizard** dialog box.

- The **Choose a Xerox Device** dialog box is displayed. A list box displays all the available IP NDPS supported Xerox printers on your local subnet. The **Printer Model** is listed in Column 1, with the **Given Name** in Column 2, and the **IP Address** in Column 3.

11. In the **Choose a Xerox Device** dialog box, select your printer from the **LIST of Available Xerox Devices** list box.

If the printer you want to host with the Xerox Gateway is not supported by the Solution then select the “Unsupported Printers” radio button. Go to [Step 12. below](#).

If the printer you are looking for is not listed in the List of Available Devices displayed, you can perform a search by **IP Address** or **Subnet**.

- Select the **Advanced** button from the **Choose a Xerox Device** dialog box. The **Advanced IP Discovery** dialog box appears.
- In the **Advanced IP Discovery** dialog box you will have two tabs, **IP Discovery** and **Subnet Discovery**.
- To search by IP Address select the **IP Discovery** Tab, enter the IP address of the printer you are searching for and click the **ADD** button. The address will appear in the **IP Addresses of Printers to be Discovered** window. Then select **OK**.
- At this point you will be returned to the **Choose a Xerox Device** dialog box and will you need to select **REFRESH**. Once the refresh is complete, you will see your printer displayed in the **List of Available Xerox Devices**.

OR

- To search by **Subnet**, select the **Subnet Discovery** tab and enter the subnet address and subnet mask, then select **ADD**. The address will appear in the **Broadcast Address** window. Then select **OK**.
- At this point you will be returned to the **Choose a Xerox Device** dialog box and need to select **REFRESH**. Once the refresh is complete, you will see your printer(s) displayed in the **List of Available Devices**.

NOTE: *When you return to the **Discovery** tab you will see the list of **Broadcast Addresses** that you have added previously. To determine the **Subnet Address** and **Subnet Mask** associated with a **Broadcast Address**, select the address.*

After selecting a printer go to [Step 13. below](#).

12. In the unknown or Generic Device Configuration dialog box, select the type of printer to install. Unknown devices will operate like Novell's gateway, print only, no status. Generic devices will support limited status on printing.

In the printer IP Address box enter the device's IP Address.

In the Printer LPR Queue Name box enter the LPR Queue name the default is provided, LP.

Once the choices have been made select the Next button to continue.

Go to [Step 14. below](#).

13. Select **Next** from the **Choose a Xerox Device** dialog box once you have selected the printer you want.
14. The **Confirm Choices** dialog box will appear with the **Printer Name, Printer IP Address** and **Printer Model** you have chosen. If the information is correct select **Next**.
 - The **Congratulations** dialog box is displayed telling you that you have provided all information necessary for the Xerox Printer Configuration wizard.
15. Select **Finish** from the **Congratulations** dialog.
 - A message is displayed: “Waiting for a printer agent to load. This may take up to 60 seconds.” Then the **Select Printer Drivers** box is displayed.
16. From the list of **Printer Drivers** in the **Select Printer Drivers** dialog box, select the printer driver corresponding to your specific printer. Be sure to select a driver under the **Windows 2000 Driver** (Netware 5.1 & NetWare 5.0 with NDPS 2.0 only), **Windows NT Driver, the Windows 95/98 Driver and the Windows 3.11 Driver** tabs (if you have users who will be using these operating systems). Default printer drivers will be auto selected in the driver list, but may be changed if necessary (i.e. Postscript to PCL). After driver selection, press **Continue**.
 - An **NDPS object creation** dialog box is briefly displayed, and then the main browser window will appear with your Controlled Access printer listed.

NOTE: *The Solution no longer provides Windows 3.1 Drivers for printers. If they are required they must be added through the Broker.*

Installation of your Xerox Printer as an IPX Public Access Printer via the Xerox Installation Wizard

The Xerox Installation Wizard also allows you to install your Xerox printer as an IPX Public Access printer. Follow the procedure below to install your printer as an IPX Public Access printer on your network.

NOTE: *You must have a NDPS Broker object and a NDPS Manager object created and loaded before installing your NDPS printer.*

You can have an unlimited number of both NDPS Brokers and NDPS Managers created, but only one each can be loaded on any given server at a time. Also, the NDPS printer that you are creating can be associated with any of the presently created NDPS Managers/Brokers provided they are the ones that are loaded at the time of creation. For further details, see the Novell documentation on NDPS Broker/Manager-creation/management.

1. Double click on the NDPS manager object that you wish to install the Public Access printer under.
 - The **NDPS Manager** dialog box is displayed.
2. Select the **Printer Agent List** button located on the top right side of the **NDPS Manager** dialog box.
 - The **NDPS Manager** dialog box now displays the **Printer Agent List** window along with a list of current Printer Agents.
3. Select the **New** button.
 - The **Create Printer Agent** dialog box is displayed.
4. Enter the name that you wish to give to the printer into the **Printer Agent Name** list box.

5. In the **Gateway Types** list box of the **Create Printer Agent** dialog box, select the **Xerox Printer Gateway IP/IPX**, then select **OK**.
6. In the **Select a Network Protocol for the Printer Agent dialog box** make sure the radio button for **IPX Protocol** is selected and then select **OK**.
 - The **Xerox Setup Wizard** dialog box is displayed.
7. To begin installing your printer on the network, select **Next** within the **Xerox Setup Wizard** dialog box.
 - The **Choose a Xerox Device** dialog box is displayed. The list box displays all the available NDPS supported Xerox printers connected to Network at that time. The printer model is displayed in the left column and the right column contains the default print server name for each printer.
8. In the **Choose a Xerox Device** dialog box, select your printer from the **LIST of Available Xerox Devices** list box. Also select/deselect the **Auto Create NDS Objects** feature.

If you select the **Auto Create NDS Object** feature, skip to [Step 11. below](#).

9. If you deselect the **Auto Create NDS Objects** feature you will see the **Print Server and Queue Name** dialog box displayed when you select **NEXT**.
 - When the **Printer Server and Queue Name** dialog box opens a default **New Print Server Name** and **New Queue Name** are listed in this dialog box.
 - In the **Print Server and Queue Name** dialog box you have the ability to change the default names given the **Print Server** and **Print Queue**.

10. Once the names have been assigned select **NEXT** in the **Print server and Print Queue** dialog box.
 - The **Confirm Choices** dialog box is displayed listing the **New Print Server Name** and **New Queue Name** listed for your printer.
 - Skip to [Step 12. below](#)
11. If you select the **AUTO Create NDS Objects** feature, select the printer you desire from the list provided in the **Choose a Xerox Device** dialog box and then select **NEXT**.
 - The **Confirm Choices** dialog box is displayed listing the **New Print Server Name** and **New Queue Name** listed for your printer.
12. Select **Next** from the **Confirm Choices** dialog box.
 - The **Congratulations** dialog box is displayed telling you that you have provided all information necessary for the Xerox Printer Install wizard.
13. Select **Finish** from the **Congratulations** dialog box.

NOTE: *The Xerox Installation Wizard application will automatically create an Organizational Unit (OU) in the NDS tree along with three objects for each IPX Xerox printer agent that is created. These objects are necessary to support "Print Server" utility (PServer) that Xerox printers use for job submission. Creation of the Xerox OU is only performed once. A separate OU is not created for each IPX printer agent. See [Hints and Tips](#) for details.*

- *Progress messages are displayed in the **Congratulations** dialog box as the installation continues. Finally a message is displayed: "Waiting for a printer agent to load. This may take up to 60 seconds." Then the **Select Printer Drivers** box is displayed.*

14. From the list of **Printer Drivers** in the **Select Printer Drivers** dialog box, select the printer driver corresponding to your specific printer. Be sure to select a driver under the **Windows 2000 Driver** (Netware 5.1 & NetWare 5.0 with NDPS 2.0 only), **Windows NT Driver**, the **Windows 95/98 Driver** and the **Windows 3.11 Driver** tabs (if you have users who will be using these operating systems). Default printer drivers will be auto selected in the driver list, but may be changed if necessary (i.e. Postscript to PCL). After driver selection, press **Continue**.
 - An **NDPS object creation** dialog box is briefly displayed. The new Printer Agent will now be listed in the Printer Agent list window.

NOTE: *The Xerox Installation Wizard resets the printer after Printer Agent creation. To complete the installation for certain families of Xerox Document Centre printers, it will be necessary to go to the printer and cycle the power off and on after the Printer Agent is successfully created. Once the power on process for the printer is complete you must shutdown and restart the printer agent in the NDPS Manager (NDPSM) at the server console or using the RConsole utility.*

NOTE: *The Solution no longer provides Windows 3.1 Drivers for printers. If they are required they must be added through the Broker.*

Installation of your Xerox Printer as an IP Public Access printer via the Xerox Installation Wizard

The Xerox Installation Wizard allows you to also install your Xerox printer as a Public Access printer. Follow the procedure below to install your printer as a Public Access printer on your network.

NOTE: *You must have a NDPS Broker object and a NDPS Manager object created and loaded before installing your NDPS printer.*

You can have an unlimited number of both NDPS Brokers and NDPS Managers created, but only one can be loaded on any given server at a time. Also, the NDPS printer that you are creating can be associated with any of the presently created NDPS Managers/Brokers provided they are the ones that are loaded at the time of creation. For further details, see the Novell documentation on NDPS Broker/Manager-creation/management.

1. Double click the NDPS manager object that you wish to install the Public Access printer under.
 - The **NDPS Manager** dialog box is displayed.
2. Select the **Printer Agent List** button located on the top right side of the **NDPS Manager** dialog box.
 - The **NDPS Manager** dialog box now displays the **Printer Agent List** window with a list of current Printer Agents.
3. Select the **New** button in the lower left portion of the dialog box.
 - The **Create Printer Agent** dialog box is displayed.
4. Enter the name that you wish to give the printer into the **NDPS Printer Agent (PA) Name** list box.

5. In the **Gateway Types** list box of the **Create Printer Agent** dialog box, select the **Xerox Printer Gateway IP/IPX**, then select **OK**.
6. In the **Select a Network Protocol for the Printer Agent** dialog box make sure the radio button for **IP Protocol** is selected and then select **OK**.
 - The **Xerox Setup Wizard** dialog box is displayed.
7. To begin installing your printer on the network, select **Next** in the **Xerox Setup Wizard** dialog box.
 - The **Choose a Xerox Device** dialog box is displayed. A list box displays all the available IP NDPS supported Xerox printers on your local subnet. The **Printer Model** is listed in Column 1, with the **Given Name** in Column 2, and the **IP Address** in Column 3.
8. In the **Choose a Xerox Device** dialog box select your printer from the **Available Xerox Devices** list.

If the printer you want to host with the Xerox Gateway is not supported by the Solution then select the “Unsupported Printers” Radio button. Go to [Step 9. below](#).

If the printer you are looking for is not listed in the **List of Available Devices** displayed, you can perform a search by **IP Address** or **Subnet**.

- Select **Advanced** button from the **Choose a Xerox Device** dialog box. The **Advanced IP Discovery** dialog box appears.
- In the **Advanced IP Discovery** dialog box you will have two tabs, **IP Discovery** and **Subnet Discovery**.
- To search by **IP Address** select the **IP Discovery** Tab, enter the IP address of the printer you are searching for and click the **ADD** button. The address will appear in the **IP Addresses of Printers to be discovered** window. Then select **OK**.

- At this point you will be returned to the **IP Discovery** dialog box and need to select **REFRESH**. Once refresh is complete, you will see your printer displayed in the **Available Xerox Devices** list.

OR

- To search by **Subnet**, select the **Subnet Discovery** tab and enter the subnet address and subnet mask, then select **ADD**. The address will appear in the **Broadcast Addresses** window of this tab. Then select **OK**.
- At this point you will be returned to the **Choose a Xerox Device** dialog box and you will need to select **REFRESH**. Once the refresh is complete, you will see your printer in the **List of Available Xerox Devices**.

After selecting a printer go to [Step 10. below](#).

9. In the unknown or Generic Device Configuration dialog box, select the type of printer to install. Unknown devices will operate like Novell's gateway, print only no status. Generic devices will support limited status on printing.

In the printer IP Address box enter the device's IP Address.

In the Printer LPR Queue Name box enter the LPR Queue name the default is provided, LP.

Once the choices have been made select the Next button to continue.

Go to [Step 11. below](#).

10. Select **Next** from the **Choose a Xerox Device** dialog box once you have selected the printer you wanted.

11. The **Confirm** Choices dialog box will appear with the **Printer Name, Printer IP Address** and **Printer Model** you have chosen. If the information is correct select **Next**.
 - The **Congratulations** dialog box is displayed telling you that you have provided all information necessary for the Xerox Printer Configuration Wizard.
12. Select **Finish** from the **Congratulations** dialog box.
 - A message is displayed: "Waiting for a printer agent to load." This may take up to 60 seconds." Then the **Select Printer Drivers** box is displayed.
13. From the list of **Printer Drivers** in the **Select Printer Drivers** dialog box, select the printer driver corresponding to your specific printer. Be sure to select a driver under the **Windows 2000 Driver** (Netware 5.1 & NetWare 5.0 with NDPS 2.0 only), **Windows NT Driver, the Windows 95/98 Driver and the Windows 3.11 Driver** tabs (if you have users who will be using these operating systems). Default printer drivers will be auto selected in the driver list, but may be changed if necessary (i.e. Postscript to PCL). After driver selection, press **Continue**.
 - The new **Printer Agent** can be seen by selecting **Tools->NDPS Public Access Printers** from the main menu.

NOTE: *The Solution no longer provides Windows 3.1 Drivers for printers. If they are required they must be added through the Broker.*

Using The Server Side Configuration Utility

Installing a printer using the Server Side Configuration Utility

NOTE: *With this utility you will be able to create an IP Public Access printer, and/or convert any IPX printer to an IP printer.*

1. At the server console go to the **NDPS Manager** screen with the list of printer agents displayed, press **[Insert]**.
2. Type in the name of the printer agent and press **[Enter]**.
3. Select **Configuration Utilities** from the **Printer Configuration** screen and press **[Enter]**.
4. Select **Xerox IP Printer Gateway** from the list and press **[Enter]**.

5. Enter in the **IP address** of the printer and then press **[Enter]** to accept and move on to the next field.
6. Press **[Enter]** at the **Printer Model** field.

NOTE: *Some Document Centre devices allow the SNMP Community string name to be changed. If you have changed the SNMP Community string name, then do the following:*

Press **[F4]**.

Press **[Enter]** and enter in the Get SNMP Community string name you put in the printer.

Select **OK**.

7. Select the model of the printer from the list of supported printers.
8. Change the polling time if desired.
 - The polling time is the time interval between calls to the printer that the gateway makes to retrieve the status of the printer.
9. Select **OK**.

Converting an IPX printer agent into an IP printer agent

NOTE: *This will not affect any printers installed on the user's desktop and does not require the user to reinstall the printer on their desktop.*

NOTE: *Converting a Printer Agent from IPX to IP does not change or affect any of the other printer configuration settings. This includes both Public Access as well as Controlled Access Printers.*

1. At the **NDPS manager** on the server console select the IPX printer agent to be changed into an IP printer agent. Press **[Enter]**.
2. Select **Configuration** and press **[Enter]**.
3. On the **Printer Configuration** screen select **Configuration Utilities**.
4. Select **Xerox IP Printer Gateway** from the list.
5. Enter in the IP address of the printer and then press **[Enter]** to accept and move on to the next field.
6. Press **[Enter]** at the **Printer Model** field.
7. Select the model of the printer from the list of supported printers.
8. Change the polling time if desired.
 - The polling time is the time interval between calls to the printer that the gateway makes to retrieve the status of the printer.
9. Select **OK**.
10. Shut down and restart the printer agent.

Using the Xerox Plug and Print Utility

NOTE: *This utility runs only on NetWare 5.x and above.*

Features

- Allows user to install multiple printers at the same time using default names and settings
- Allows user to schedule searches to automatically install non-configured devices.

Minimal Setup

1. At the server console command prompt type **Xeroxnpn** and press **[Enter]**.
2. Select the **Start/Stop** Option and press **[Enter]**
3. Press **[Enter]** again. A message will appear that the polling loop is currently searching for non-configured devices.
4. The first time the **Plug and Print** runs in **Automatic Mode**, it will find all non-configured devices and install them as Public Access printers on the server. As Public Access printers they are now available to install on the workstation via the Novell Printer Manager or Microsoft Add a Printer.

Configuring Xerox Plug and Print

There are several configuration options available for the Plug and Print Utility

1. From the main menu select **Config**
2. Enter in the desired polling time. This is the time delay between network searches when in automatic mode.
3. Select whether a configuration page is printed when a device is installed. If **YES** is selected then the **Xerox Plug and Print** application will submit a configuration sheet to the printer with the printer agent name on it.
4. Add or remove any subnets from the search. The application will default to searching the local subnet.
5. Select the installation type desired.

Automatic searching

- Installation type on the configuration screen should be set to Auto.
- At the main menu select the start/stop option. The information box at the top of the screen will change.

Manual Searching

- Installation type on the configuration screen should be set to **Manual**.
- At the main menu select the **Search Now** option. The system will display a “**Please Wait**” box. The selected subnets will be searched for non-configured devices.
- A list of non-configured devices will display. Highlight the devices you wish to install and press [F5]. When all desired devices have been selected press [ENTER]. The application will install all devices selected and then return you to the main menu

Xerox Printer Control Snap-in Features

The Xerox Printer Control Snap-in provides the user with a visual representation of the physical printer and ties in the functionality and features of the generic Novell printer control software. To find information on the Novell features and how to use them, see the Novell documentation at www.novell.com.

The Xerox Printer Control Snap-in also provides additional functionality unique to the Xerox Gateway that enhances the centralized management concept.

A window will open for the Xerox Printer Control Snap-in when you double click on the **Printer Agent**. The Xerox Printer Control Snap-in will display a Xerox supplied bitmap for the printer. The following additional features are provided in the Manage Printer dropdown menu:

PRINTER HOME PAGE

This menu item will launch your Browser and display your printer's CentreWare Internet Services homepage. This page contains links to a number of printer management tools and aids. This item is grayed out if the printer was installed as in an IPX print Agent.

NOTE: *If the printer does not support web services or they have been disabled you will get an error in the Browser window that was launched.*

FULL SCREEN

This menu item allows you to examine the Printer configuration information for your printer that is stored on your server. It provides general information and information about the input and output options that are presently installed on your printer.

NOTE: *Not all printers support all of the features. Therefore, some items may not appear for a particular printer even when the printer has those options.*

Basic Printer Installation through Novell Printer Manager

This section describes how to install a network printer on a workstation via the Novell Printer Manager. The user uses this utility after the system administrator has made a network printer available on the network via the NWAdmin utility.

On your NetWare client, start the **Novell Printer Manager (NWPM)** application. The NWPM application is located on the **SYS** volume of your NetWare server as follows.

- **SYS:Public\win32\NWPMw32.exe**

When this application is executed, the **Novell Printer Manager** dialog box is displayed.

1. Select **New** from the **Printer** menu in the **Novell Printer Manager** dialog box.
 - The **Novell Printers** dialog box is displayed.
2. Select **Add>>** from the **Novell Printers** dialog box.
 - A list of **Available Printers** is displayed at the bottom of the **Novell Printers** dialog box.

NOTE: *For Windows 2000 clients, NWPM may not work for adding printers to the desktop. This is caused by the print driver signing file not being copied. It is recommended that prints be added using the Microsoft Add/Create print utility.*

NOTE: *The Novell Printer Manager is not available in Netware 6. Please use Microsoft Add/Create a Printer to install and configure your Xerox NDPS Printer. For details on how to do this, see Microsoft online documentation at www.microsoft.com.*

3. Select the printer that you would like to install from this list and then select **Install** (You may need to use the **Browse** button to locate the printer you wish to install).
 - The **Novell Printer Install** dialog box is displayed listing the name of your printer along with a text box allowing you to change this name.
4. At this time the drivers for the selected printer are downloaded. After successfully downloading the drivers, the control is brought back to the Novell Printers dialog box.
 - The **Novell Printers** dialog box is displayed again.
5. Select Close.

The **Novell Printer Manager** dialog box is displayed along with an icon including the name of your printer. The printer is now installed and available for use on your workstation. You can print from an application or, for a .txt file only, perform a drag and drop operation and the file will print to your printer. To see the jobs in the queue of your printer, double click the printer icon. This will bring up the **Novell Job Manager**, which lists the jobs in the printers queue along with their status. For further information see the Novell documentation at www.novell.com.

NOTE: You can also use Microsoft Add/Create a Printer to install and configure your Xerox NDPS Printer. For details on how to do this, see Microsoft online documentation at www.microsoft.com.

Delete Xerox NDPS Printers

There are two ways to remove a NDPS printer.

From the Server Console

1. From the server console, select the **NDPS manager** screen.
2. Select the printer to be deleted from the printer agent list.
3. Press: [**Delete**].

NOTE: *Some objects are not automatically deleted. See [Hints and Tips](#) for more information.*

From NWAdmin

1. Start NWAdmin and double click on the **NDPS Manager**.
2. Select **Printer Agent List** on the right of the screen.
3. Select the printer to be deleted from the list of printers.
4. Select **delete**.

NOTE: *Some objects are not automatically deleted. See [Hints and Tips](#) for more information.*

Hints and Tips

This section is designed to assist you with some common situations that may occur in the NDPS environment. It provides you with information on situations that may be difficult to interpret, and information about where to go if you have a problem and need further assistance.

1. The Xerox Installation Wizard application will automatically create an Organizational Unit (OU) in the NDS tree along with three objects for each IPX Xerox printer that is created. These objects are necessary to support “Print Server” communication protocol (PServer) that Xerox printers use for job submission. The three created objects are “Printer”, “Printserver” and “Print Queue”. They are located in the Organizational Unit created by the Xerox Installation Wizard that is located in the NDS tree under the container that the manager it is to be associated with exists. It will have a name that is derived from the name of the NDPS manager and having a prefix of “X_”. Creation of the Xerox OU is only performed once. A separate OU is not created for each IPX printer agent.
2. Under normal conditions these objects should NOT be modified or used to manage the Xerox NDPS gateway in any way. During normal job processing, the “Print Queue” object may temporarily contain 1 or 2 print jobs. These jobs will be visible and controllable (e.g. job delete) via the normal NDPS user interfaces, and should NOT be modified directly at this Queue.

3. If an NDPS printer is removed, these objects are not automatically deleted. When re-installing an NDPS printer, either manually remove these objects or chose a different name (from the default) in the Xerox Wizard dialog box. To delete these objects, the Admin user can simply go to the Organizational Unit and delete the three contained objects associated with a particular Xerox printer.
4. The configuration display in the NetWare Printer Manager (NWPM) and the NWAdmin software may not match. They will not necessarily be the same, as the Xerox Print Control software of NWAdmin displays the network-wide configuration while NWPM software displays the configuration specified by the individual user. Examples of areas that may differ are the Notification and the Printer Driver selections.
5. On installation of a printer agent the Xerox Installation Wizard may come back with an SNMP Communications error. This could be due to a difference in frame types. Check the properties under Microsoft's Network Neighborhood and make sure the IPX frame type is set to the same frame type as the network it is running on.
6. Install wizard: If Printer Discovery for IP fails resulting in COM related error message, try launching the Install Wizard again. Re-running the Wizard will cause it to re-register the COM files on the Novell server. This will resolve the error and allow you to proceed.

Also, ensure that the path to NWADMIN is directly through the server \\server\sys\public, as opposed to through the tree \\tree\server_sys\public.

Check the World Wide Web for further information at the following sites:

www.xerox.com

www.novell.com

