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Product Overview

This document describes how to install, configure and use NDPS Gateway.

Features Summary

NDPS Gateway can do the following:

- Provide NDPS (Novell Distributed Print Services) printing to the supported printer models.
- Discover supported printers on the network over IP.
- Handle queries from a print client about a print job or document, or about attributes of the printer devices.
- Detect events and generate messages and send to the users.
- Launch SmartDeviceMonitor via Printer Control Snap-In to check detail status of printers.

Note:

- If printers are discovered and displayed on NDPS Gateway Configuration Screen, then those discovered printers are defined as “supported printers”. All other printers that are not discovered during Printer Agent Configuration process are defined as “unsupported printers”.

Supported Platforms

NetWare

NetWare 5.1 with Support Pack 7 installed, NetWare 6.0 with Support Pack 4 installed and NetWare6.5.

Operating System

Windows 95 / Windows 95 with Service Pack 1

Windows 98 / Windows 98 Second Edition

Windows 2000 / Windows 2000 with Service Pack2

Windows NT4.0 with Service Pack 6

Note:

- The client machines must be upgraded to NetWare Client v3.32 or later for Windows 95/98, NetWare Client v4.83 or later for Windows NT 4.0/2000/XP.

Installation

This section describes how to install the NDPS Gateway product. The gateway component is the backend that provides NDPS service to NDPS clients for non-NDPS printers. The Printer Control Snap-In is a utility to manage the printer agents.

Installing NDPS

This product adds on to the Novell NDPS product. Therefore, the first step is to install NDPS.

Preparation

- Make sure that NetWare is installed correctly with NDPS services. If the server is installed without NDPS service, you can add the service by loading NWCONFIG.NLM, selecting “Product Options”, and then adding NDPS to the server.
- For more information about installing NetWare and NDPS service, refer to the NetWare operating instructions.

1 Launch NWAdmin32, and then select NDPS Broker. Create NDPS Brokers when necessary.

Note:

- To run NWAdmin32, double click the file name called “NWADMN32” displayed using Windows Explore on your client computer or you can create an ICON of NWADMN32 on your client computer
- NWADMN32.EXE is located under the SYS:\PUBLIC\WIN32 directory.

2 Add printer drivers, banners, and fonts to NDPS via NDPS Resource Service Manager.

Note:

- The NDPS Printer Manager for Windows 95, 98, NT and 2000 client is NWPMW32.EXE under the SYS:\PUBLIC\WIN32 directory. The NDPS Printer Managers for other platforms are located in their respective directory.

Adding printer drivers, banners and font

1 Launch NWAdmin32.

Note:

- To run NWAdmin32, double click the file name called “NWADMN32” displayed using Window's Explore on your client computer or you can create an ICON of NWADMN32 on your client computer
- NWADMN32.EXE is located under the SYS:\PUBLIC\WIN32 directory.

2 Double-click NDPS Broker.

3 Click the [Resource Management (RMS)].

4 Click [Add Resources...] in the Resources group.

5 Select resource from [Resource Types], and then select [Add].

6 Select the directory in [Resource Location]

7 Confirm the file you want to add in [Resources to be added], and then click [OK].

Gateway Installation

The installation of NDPS (Novell Distributed Print Services) Gateway is available in two ways: by using compressed files or by using NIS (NetWare Installation Services).

When using NIS

- 1 Decompress the NetWare installation files into the NetWare server.**
- 2 Click the [Novell] button at the left corner of the GUI Console, and then select [Install].**
- 3 Select [New Product], and then enter the file path including the file name “Product.ni”.**

When using NW config

- 1 Decompress the file in any directory on the computer.**
- 2 Enter [NWConfig] at Server Console.**
- 3 Select [New Product], and then enter the file path including the name of an .ips file.**

Printer Agent Configuration

Each NetWare printer is represented by NDPS (Novell Distributed Printing Services) Printer Agent. The NDPS client submits a print job to the NDPS Printer Agent. The NDPS PSM (Print Service Manager) passes the job to the gateway, which submits the job to the NetWare printer for printing.

In an NDPS environment, you can configure a printer as a public access printer or as a controlled access printer. The relation between the NDPS printer agent and the NetWare printer can be established via the configuration utility. The configuration utility is a Windows based application. This section describes using the configuration utility.

Procedures of Invoking the Configuration Utility

The procedures for creating a public access printer agent and controlled access printer agent are very similar. Refer to the steps of "Creating a Public Access Printer" and "Creating a Controlled Access Printer Agent".

Public Access Printer

A public access printer is available to all users as soon as a printer agent for that printer appears on the network. Public access printers are not represented by NDS (Novell Directory Services) objects. They simply exist on the network for all clients to locate and use. In order to use the public access printers, clients must attach to the network, but they do not need to be authenticated to the NDS tree. However, users do not have the rights to set the configuration options that users using the controlled access printers do.

Controlled Access Printer

A controlled access printer enables you to assign NDS rights to control which users can see, use, and manage the printer. To configure a controlled access printer, you can simply create an NDPS Printer Object to represent that printer. The newly created NDPS printer Object will appear in the NWADMIN utility's NDS browser. As an NDS object, a controlled access printer offers a full range of security options. The users can also configure the default properties which are unavailable for public access.

Before creating a printer agent, make sure that:

- NDPS NLM is loaded. If it is not, type "load ndpsm" in the server console prompt, and then select the NDPS Manager that you want to start up.
- Launch NWADMN32.exe by double clicking the ICON located under the SYS:\PUBLIC\WIN32\ directory.

Creating a Public Access Printer

- 1 Double-click the NDPS Manager Object in the NDS tree.
- 2 Select [Printer Agent List] in the column on the right hand side, and then select [New].
The [Create Printer Agent] dialog box appears.
- 3 Enter the Printer Agent name (e.g. PA_NDPS).
- 4 Select the NDPS Manager, which is selected in server console from the list provided.

Note:

- It should have the following syntax "NDPS_Manager_Name.Context_Name" .

- 5 Select the appropriate Gateway from the Gateway Types, and then click [OK].

The [NDPS Gateway Configuration] dialog box appears.

- 6 Select the port handler type.

Here is the available option:

- LPR
Select this option when the target printer uses LPR printing with TCP/IP protocol.

LPR

If you select [LPR] on [NDPS Gateway Configuration] dialog box, the [LPR Printing Setup] dialog box appears. Follow the steps described below.

- 1 Select a printer you want to be represented by a printer agent.

Note:

- If the printer you want to select is not displayed on the list, it cannot be detected automatically. You can add it by entering its IP address. Select [Add Device] to add a printer.
- You can configure the SNMP Community Setting and IP Discovery Setting if necessary. Select [Advanced] to configure them.

- 2 Click [Finish].

A printer agent representing the selected printer is created.

- 3 Click [OK] to complete the configuration.

Note:

- If you want to select another printer, click [Cancel].

Creating a Controlled Access Printer Agent

- 1 Select the container in which the printer agent is created under this NDS container in the Netware Administrator dialog box.
- 2 Select [Create] from the [Object] drop down list.
- 3 Select [NDPS Printer] in the [New Object] dialog box.
- 4 Enter a Printer Agent name, and then click [Create] in the [Create NDPS Printer] dialog box.
- 5 Enter the Printer Agent name (e.g. PA_NDPS) in the [Create Printer Agent] dialog box.
- 6 Select the NDPS Manager, which is selected in server console from the list provided.

Note:

- It should have the following syntax "NDPS_Manager_Name.Context_Name".

- 7 Select the appropriate Gateway from the Gateway Types, and then click [OK].

The [NDPS Gateway Configuration] dialog box appears.

- 8 Select the port handler type.

Here is the available option:

- LPR

Select this option when the target printer uses LPR printing with TCP/IP protocol.

LPR

If you select [LPR] on [NDPS Gateway Configuration] dialog box, the [LPR Printing Setup] dialog box appears. Follow the steps described below.

- 1 Select a printer you want to be represented by a printer agent.

Note:

- If the printer you want to select is not displayed on the list, it cannot be detected automatically. You can add it by entering its IP address. Select [Add Device] to add a printer.
- You can configure the SNMP Community Setting and IP Discovery Setting if necessary. Select [Advanced] to configure them.

- 2 Click [Finish].

A printer agent representing the selected printer is created.

- 3 Click [OK] to complete the configuration.

Note:

- If you want to select another printer, click [Cancel].

Installing the printer driver for the client computer

1 Launch NWPMW32 by double clicking the icon.

Note:

- The NDPS Printer Manager for Windows 95, 98, NT and 2000 client is NWPMW32.EXE under the SYS:\PUBLIC\WIN32 directory.

Novell Printer Manager opens.

2 Select [New] from the [Printer] drop down menu.

3 Click [Add].

4 Select the printer from [Available Printers], and then click [Install].

5 Click [OK].

The printer driver is installed on the client computer.

6 Click [Close].

NDPS Printer Control Snap-In Operation

For a Controlled Access Printer

1 Launch NWADMN32.

Note:

- To run NWAdmin32, double click the file name called "NWADMN32" displayed using Windows Explore on your client computer or you can create an ICON of NWADMN32 on your client computer
- NWADMN32.EXE is located under the SYS:\PUBLIC\WIN32 directory.

2 Double-click the printer in the NDS tree.

The Printer Control Snap-In dialog box appears.

For a Public Access Printer

1 Launch NWADMN32.

Note:

- To run NWAdmin32, double click the file name called "NWADMN32" displayed using Windows Explore on your client computer or you can create an ICON of NWADMN32 on your client computer
- NWADMN32.EXE is located under the SYS:\PUBLIC\WIN32 directory.

2 Select [NDPS Public Printers] from the [Tools] drop down menu.

3 Select the printer from the list, and double-click the object.

The Printer Control Snap-In dialog box appears.

Printer Control Snap-In Dialog Box

[Printer Details]

Opens a pull down list box. The available options are as follows:

[Identification]

Opens the [Identification] dialog box which displays identification such as NDPS Manager, printer manufacturer, and the printer control DLL name.

[Features]

Opens the [Features] dialog box which displays information for the printer such as the document formats supported, maximum printing speed, and memory.

[Status]

Opens the [Printer Status] dialog box which displays printer error information.

[Set Default]

Opens the [Printer defaults] dialog box. You can change the default settings if necessary.

[About]

Displays the version and copyright information.

[I/O Info]

Opens a pull down list box. The available options are as follows:

[Input]

Opens the [Input:] dialog box which displays the input tray names, maximum capacity, current level, paper size, and orientation.

Note:

- Some of information may not be available depending on the types of printers.

[Output]

Opens the [Output:] dialog box which displays the output tray names, tray type, unit, and maximum capacity.

Note:

- Some of information may not be available depending on the types of printers.

[Job Info]

Opens a pull down list box. The available options are as follows:

[Job List]

Opens the [Job List] dialog box which displays the information about the print jobs.

[Spooling]

Opens [Spooling Configuration] dialog box for configuring the spooling settings of the print jobs.

[SmartDeviceMonitor]

Launches SmartDeviceMonitor.

SmartDeviceMonitor for Admin must have been installed in advance.

[Disable Input] / [Enable Input]

Disables and enables job input to the Printer Agent.

[Pause Output] / [Resume Output]

Pauses and resumes print output from the Printer Agent.

[Polling Setting]

Opens the [Polling Setting] dialog box for polling interval setting. Gateway Polling interval determines how often gateway monitors printer status and Polling Time Interval determines how often the printer status is refreshed with what gateway gets in printer control snap-in. The smaller the value is, the more frequently the activity takes place.

Operation Panel Display

Displays the printer status. This information is updated according to the time interval set in the [Polling Setting] dialog box.

Troubleshooting

The programs should work by following the procedures described in the previous chapters. Nevertheless, something unexpected could cause them to fail to operate normally. This chapter explains how to diagnose problems.

Troubleshooting for the NDPS Printer Configuration Module

Why does an authentication fail message appear?

This happens for the QMS (Queue Management Services) port handler only. The configuration utility is required to have a licensed connection with sufficient privilege in order for it to add and link objects together. For a Windows based configuration, the program does not login. Instead, it will request you to login first. If you do not have sufficient privilege, then the authentication failure message will appear.

For a server-based configuration, the program will login for you. You have to provide the login name and the password. If they are not valid or do not have sufficient rights, the authentication failure message may appear.

Troubleshooting for the NDPS Printer Gateway Module

Why is an NDPS printer agent in the “Not Bound” state?

The NDPS printer agent cannot be initialized for some reason. Press the ENTER key, and then select “Shutdown Printer”. Press ENTER again, and then select “Startup Printer”. Read the message on the server console screen. Usually, a message that explains why the printer agent cannot be initialized is displayed. The gateway screen may contain additional information too.

The printer agent can be reconfigured by selecting it, and then pressing ENTER in the configuration field. You don't need to worry if the resource is duplicated or not. The configuration program will reuse the existing resource.

Why is an NDPS printer agent in the “Needs Attention” state?

The printer has problems. Press ENTER to look at the printer's details screen. Press ENTER on the status field to list all the problems that are outstanding with the printer. The state will be reset to idle after all those problems are cleared.

If the Printer Agent is stuck in the “Need Attentions” state for a long time, you should investigate the error message. For example, if the PA displays “Printer Not Connected”, you should check the power connection or the network connection of the printer. If you cannot find the cause of the problem, take the following steps:

- 1 Select the Printer Agent that you want to investigate**
- 2 Press <Enter> to display the detail information**
- 3 Go to the “Status and Control” section, and then press <Enter>**
- 4 Select “Shutdown Printer”, and then press <Enter>**
- 5 The PA will change to “Shutdown” state**
- 6 Go back to the “Status and Control” menu, and then select “Restart Printer”**
- 7 Press <Enter> to proceed. The Printer Agent will return to the “Idle” state.**

Why is an NDPS printer agent stuck in the “Printing” state?

This state indicates that a job has been opened by the gateway but has never been closed. This rarely happens to QMS because it writes the job to its local hard disk. This may happen to a remote printer or parallel port printer. Make sure that the printer is in good condition and is not stopping the job flow.

Troubleshooting for the NDPS Printer Control Snap-In Module

Why can't a screen be opened?

It usually comes with a message box that contains a number in it.

Why is there no data or bad data in the screen?

The printer may be in an error state. Hence, the gateway cannot get up to date information from the printer. Open the printer status screen to look at the details.

Another possibility is that the gateway cannot communicate with the printer. Look at the discovery screen to see if any time out messages are displayed.

Troubleshooting for the NDPS Module

Why doesn't an event generate a pop up or log message in the client machine?

First make sure that the events are checked. To set up the notification function, the events notification process must be set up through Admin of NWADMIN. Double Click admin> Click NDPS Printer Access Control button> Click NDPS Printer Agent> Click Notification> then the Notification screen is displayed. There are two tabs in the notification screen, which are the Log and Pop-up notification. In the Log notification, you need to supply Directory and file name and select Volume Object name for the log file to be created. The mark “X” indicates that you selected full notification options. The mark “/” means partial notification is selected.

There are two kinds of events. They are print job events and printer events. For a public access printer, printer events will not be reported outside a print job session. For instance, if the printer runs out of paper in the middle of printing, the event will be reported. If the client is not printing a document, even though a printer may be out of paper, the event will not be reported to the client.

For a controlled access printer, make sure that the NDPS Broker object has the right to write to the client. Otherwise, the message cannot be reported to the client because of the access control in NDS.

Trademarks

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