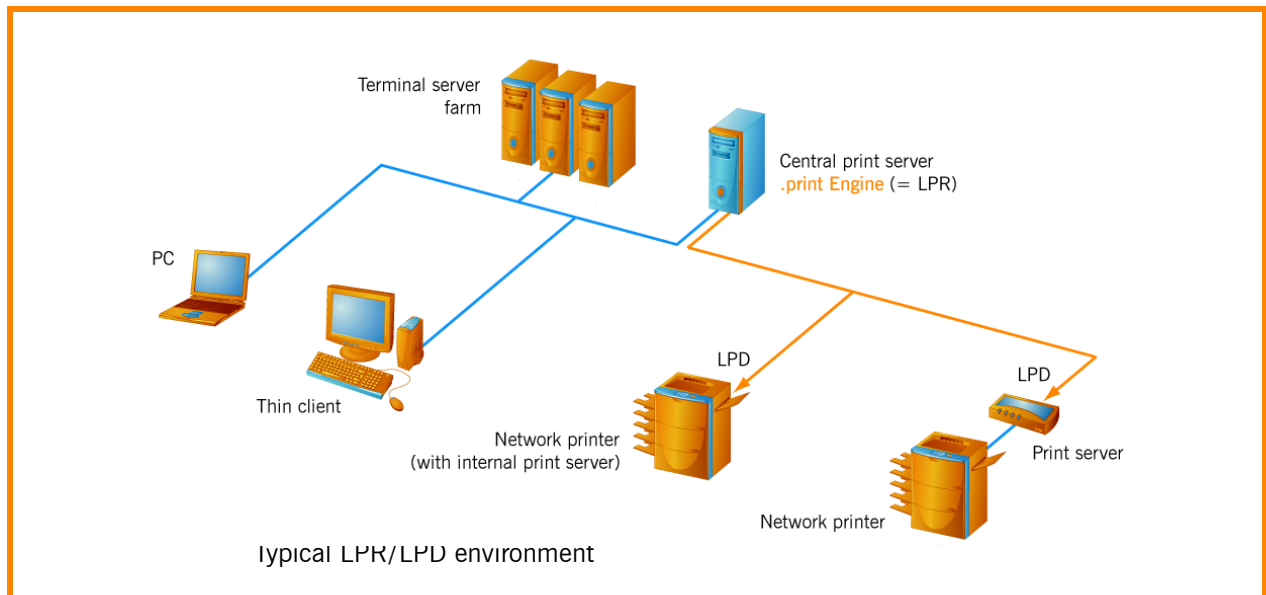


## ThinPrint Port configuration for bandwidth controlled printing via LPR/LPD (.print version 7.6)



ThinPrint .print enables print jobs to be sent directly and with limited bandwidth to all devices without a .print Client, but that support the Line Printer Daemon protocol (LPD) as per RFC 1179. Bandwidth can be limited on the server side at a freely defined value between 1.6 and 1000 kbit/s. No settings are necessary on the client side - that is, on internal or external print servers of network printers.

This White Paper will help you decide when this solution should be used and illustrate its implementation with an example.

### Introduction

- What is ThinPrint .print?
- When do I print with LPR/LPD?
  - .print Clients
  - Network printer

### Sample configuration

- Preparations on the server
- Name conventions for printers
- Creating ThinPrint Ports and printers
- Configuring ThinPrint Ports
- Test printout

### Appendix

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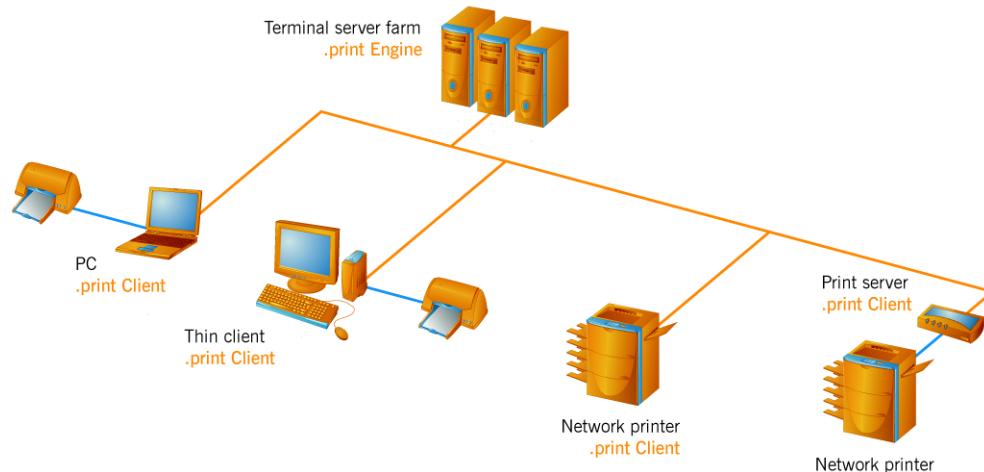
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## Introduction

### What is ThinPrint .print?

ThinPrint .print is a software solution and consists of a server and a client component, the **.print Engine** and the **.print Client** (Illus. 1).



**Illus. 1** Using ThinPrint .print with server and client components

The .print Engine enables limitation of the transfer rate of print data so that other applications, like terminal sessions, can continue to function without problem (= "bandwidth control"). Furthermore, the print data is compressed with no loss of quality and sent to the .print Client in small packets (= streaming).

On the client side, .print Client is generally responsible for receiving print data, decompressing it, and sending it to the printer. Most .print Clients support the following features or components:

.print AutoConnect	Automatically creates printers on servers
.print Connection Service	Prints to .print Clients in masked networks (NAT)
SSL/TLS encryption	Encrypts print data streams

.print Clients are available for different end devices and areas of deployment: for Linux, Solaris, and Java; for all Windows versions including Windows CE, Windows Mobile (PocketPC and Smartphone); for MS-DOS and ActiveX; as well as for internal and external print servers of network printers.

## When do I print with LPR/LPD?

### .print Clients

In your print environment, usually you will be able to use a .print Client for each printer on the client side (Illus. 1).

1. .print Clients can be installed onto PCs, terminals (thin clients), and local print servers (download: [www.thinprint.com](http://www.thinprint.com) → SUPPORT & SERVICES → SOFTWARE DOWNLOAD → CONTINUE → .PRINT CLIENT COMPONENTS)<sup>1</sup>.
2. A wide range of terminals (thin clients), internal print servers (network cards for printers), and external print servers have already an integrated .print Client. (overview: [www.thinprint.com](http://www.thinprint.com) → INFORMATION → SUPPORTED DEVICES)

### Network printers

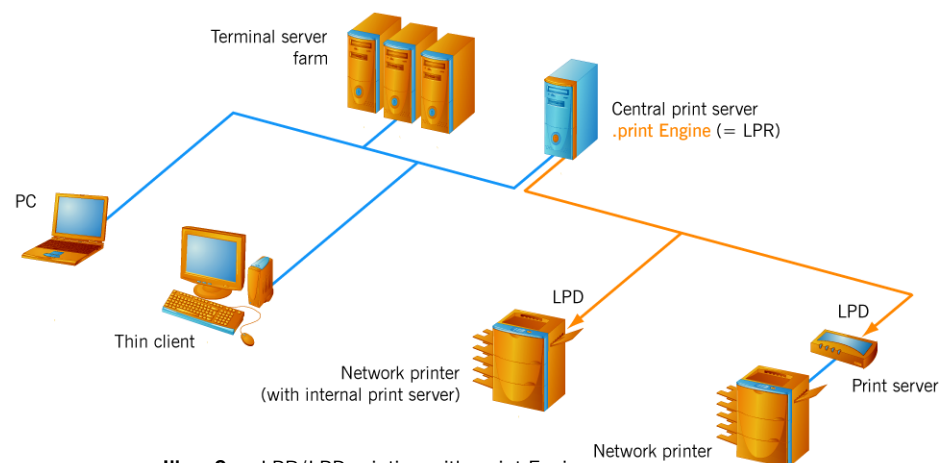
If you want to print directly to a network printer (Illus. 1, [Page 4](#)), the best choice is to purchase a network card with an embedded .print Client (= internal print server) at the same time as you purchase the printer; see also:

[www.thinprint.com](http://www.thinprint.com) → INFORMATION → SUPPORTED DEVICES → INTERNAL SOLUTIONS FOR NETWORK PRINTERS

If that is not possible, you can also run an external print server; see also:

[www.thinprint.com](http://www.thinprint.com) → INFORMATION → SUPPORTED DEVICES → EXTERNAL PRINT SERVERS

If none of these options are possible for you, you have the last option of sending print jobs from the .print Engine to an LPD device on which no .print Client is installed (Illus. 2). Because the .print Client is responsible for decompressing print data, compression will not be available for LPR/LPD printing with the .print Engine. However, it is still possible to use bandwidth control for print data transmission.



**Illus. 2** LPR/LPD printing with .print Engine  
(example for printing with a central print server)

<sup>1</sup> Should you require a .print Client that is not listed on the website, please send an email to [info@thinprint.com](mailto:info@thinprint.com).

## Sample configuration

Below is a description of the options of printing as per RFC 1179 (LPR/LPD) using the .print Engine.

### Preparations on the server

- Either: The following folder requires at least write permission for *Users*:

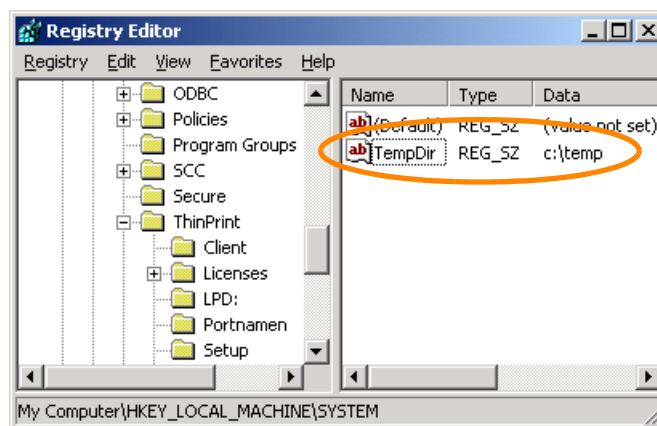
```
%windir%\system32\spool\printers
```

- Or: The following value in the Windows registry must name a directory for which the *Users* also have at least write permission (Illus. 3; data type: reg\_sz):

```
hkey_local_machine\software\thinprint\TempDir
```

Individual spool directories are sometime created for specific printers. In such cases, the *Users* must here, too, have at least write permission. If the server's spool directory has been changed, the *Users* must also be given write access to the new spool directory.

**Tip!** The TempDir value is only needed for LPR/LPD printing.



**Illus. 3** Directory for temporary LPR/LPD files in the Windows registry (example)

### Name conventions for printers

A printer with the following name convention must be created on the server for each LPD device (e.g., internal or external print servers):

```
printer_name#lpd_device_name
```

If a name resolution is impossible, an alternative would be:

```
printer_name#IP_address_of_lpd_device
```

The *printer\_name* can be anything you like. For simplicity's sake, only standard addressing is discussed here (example 1). (Reversed addressing can be found in the ".print Server Engine" manual; [Page 10](#).)

**Example 1: 2 printers on  
2 printer queues of the same print server**

Port name	Printer name	Queue name
LPD_A:	printer1#192.168.20.10	lp0
LPD_B:	printer2#192.168.20.10	lp1

## Creating ThinPrint Ports

A separate ThinPrint Port must be configured for each LPD device (example 1) on the server(s). Printers for devices using the same queue name can also be associated with a single ThinPrint Port.



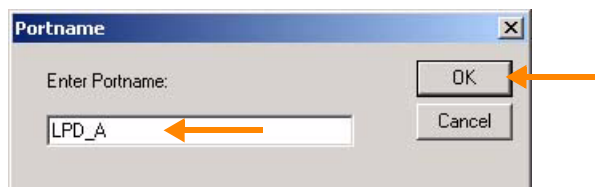
Creating a new ThinPrint Port

### Process

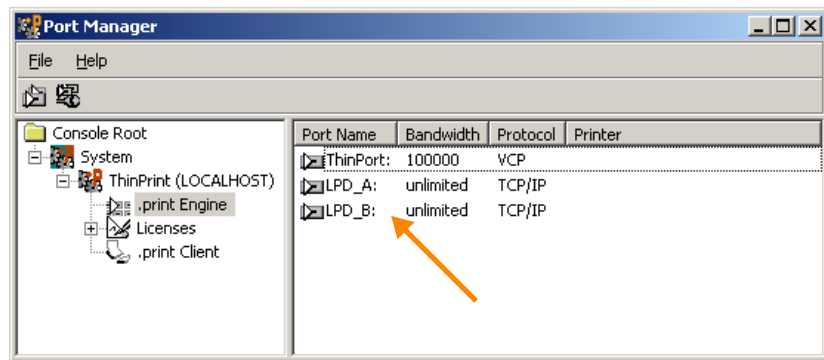
- Open the (MMC) port configuration with START → PROGRAMS → .PRINT ENGINE → PORT MANAGER.
- Click NEW THINPRINT PORT (illus. left) and enter the port name (Illus. 4).  
Entries for example 1:

```
LPD_A: for printer1  
LPD_B: for printer2
```

- Click OK to confirm. The result shows Illus. 5.



Illus. 4 Port name for printer1 (example)

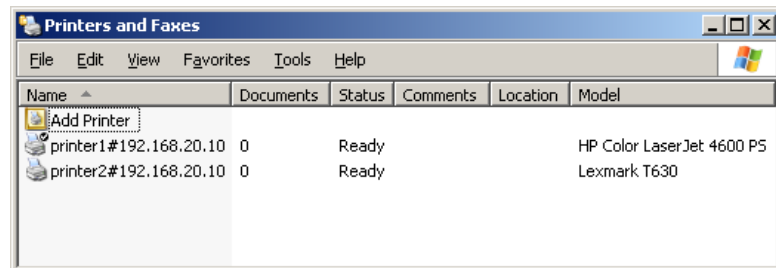


Illus. 5 LPD\_A: and LPD\_B: in ThinPrint Port Manager

## Creating printers

- Open the Printers and Faxes folder on the server and click ADD PRINTER. During printer creation assign the – newly configured – ports LPD\_A: and/or LPD\_B: to the printers (Illus. 6). Entries for the example 1:

```
printer1#192.168.20.10 and LPD_A: for printer1
printer2#192.168.20.10 and LPD_B: for printer2
```

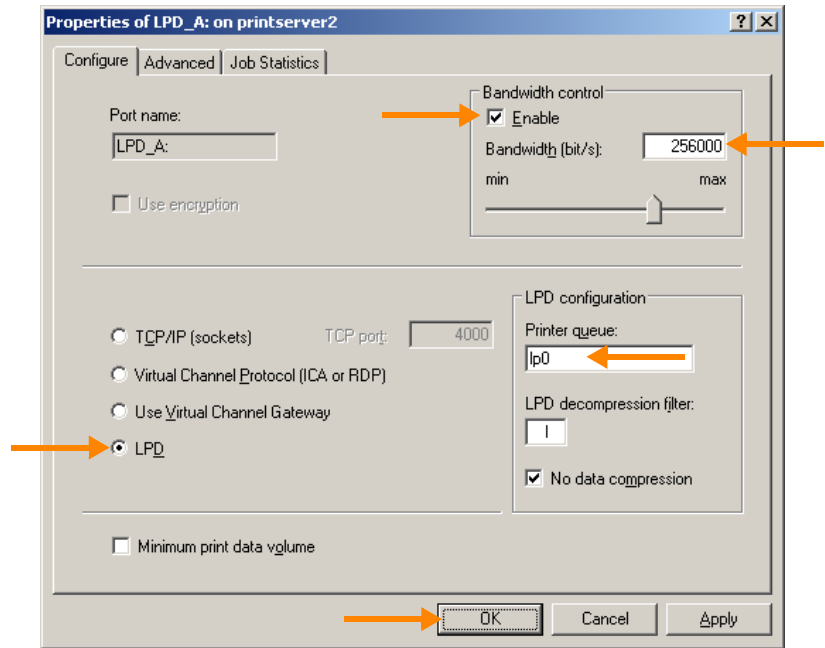


Illus. 6 printer1 and printer2 in PRINTERS AND FAXES folder

## Configuring ThinPrint Ports

Change back to the port configuration (START→ PROGRAMS→ .PRINT ENGINE → PORT MANAGER).

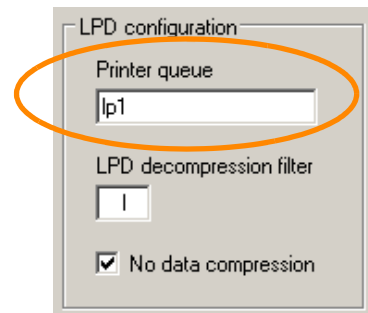
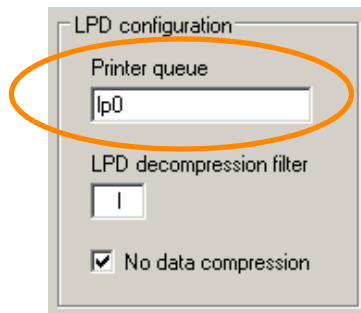
- Double click the port name LPD\_A: or LPD\_B: (Illus. 5) and configure the following settings:
  - Select **LPD** as port type (Illus. 7).
  - Enable bandwidth control and enter a bandwidth for printing.
  - Enter **lp0** or **lp1** as printer queue name (as specified in the user manual of the network printer or print server; Illus. 8).
  - Leave LPD filter **I** and the NO DATA COMPRESSION option unchanged.
- Click OK to confirm. The result shows Illus. 9.



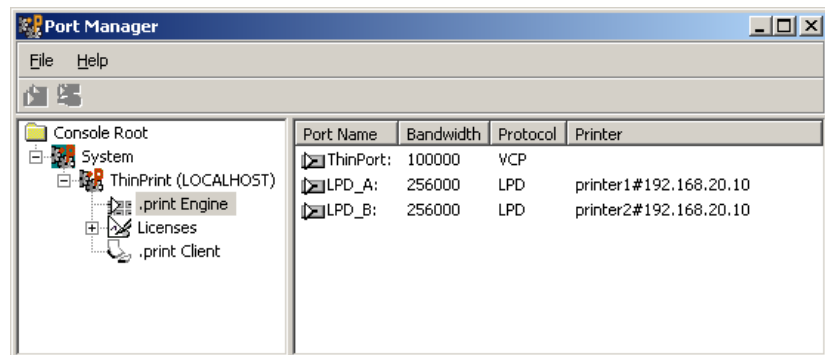
**Illus. 7** Select LPD as print protocol and enter a bandwidth and a printer queue name (example for the LPD\_A: printer port)

printer1 at LPD\_A:

printer2 at LPD\_B:



**Illus. 8** Names of the printer queues



**Illus. 9** LPD\_A: and LPD\_B: with printer1 and printer2 in ThinPrint Port Manager

## Printing

- Make a test print to both printers in Illus. 6.

## Appendix

### Customer service and technical support

[www.thinprint.com/](http://www.thinprint.com/) → SUPPORT & SERVICES  
[support@thinprint.com](mailto:support@thinprint.com)

### Additional sources

Further information about ThinPrint .print can be downloaded from our website.

*Manuals* The following manuals are available at [www.thinprint.com/](http://www.thinprint.com/) → FIND PRODUCT  
→ <product name> → MANUAL(S):

- .print Application Server Engine
- .print Server Engine
- .print Desktop Engine
- .print Engine Unix
- .print Connected Gateway
- .print Client user manuals

*White papers* The following white papers can be downloaded at [www.thinprint.com/](http://www.thinprint.com/) → FIND PRODUCT → <product name> → WHITE PAPERS or [www.thinprint.com/](http://www.thinprint.com/) → SUPPORT & SERVICES → WHITE PAPER DOWNLOAD:

- ThinPrint Ports
- Tips for configuring ThinPrint .print
- .print addressing
- .print Clients (overview)
- Windows machine as a .print Client Gateway
- Intermate IAPS ThinPrint as a .print Client Gateway
- SEH ISD200/300 as a .print Client Gateway
- SEH TPG60/120 as a .print Client Gateway
- Intermate 10x as a .print Client Gateway