

# .print Client Windows for ICA, RDP, and TCP/IP

(.print version 8.0)

## Manual

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#### Safety warning

All ThinPrint products are pure software solutions. Please note the safety warnings in the technical documentation from your hardware vendor and from the manufacturer of each device and component. Before beginning installation, we recommend closing all windows and applications and deactivating any virus scanner.

#### How to use this manual

The following conventions are used throughout this manual to represent recurring actions and text types.

## Conventions

Note!	Important tip, explanation, exception
Small Caps	Menu, command, dialog panel, option
Italic "Name"	Proper name, emphasis, variable
Courier	Keyboard input
$\rightarrow$	Consecutive menu or command
	Enumeration, head note
Example	Example
- 1. 2.	Procedural steps
Page 5 www.cortado.com	Links



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## What is ThinPrint .print?

#### Overview

Illus. 1

ThinPrint .print is a software solution and consists of a server and a client component (Illus. 1).



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

- Server component The **.print Engine** is the actual core of the ThinPrint .print framework. It provides complete printer driver management including Driver Free Printing. The .print Engine performs the following main functions:
  - Bandwidth control, encryption, and compression for print data
  - Virtual printer driver ThinPrint Output Gateway (replaces printer drivers on printing computers = Driver Free Printing).
- *Client component* A software component on the client side, **print Client** is generally responsible for receiving print data, decompressing and decrypting it, and sending it to the print device. Many .print Clients are available for different end devices and areas of deployment: for all Windows versions incl. Windows CE, for Linux, Solaris, Dos, Win OS/2, Java, as well as for internal and external print servers for network printers. The following .print Client types are available for Windows:
  - .print Client Windows for ICA
  - .print Client Windows for RDP
  - .print Client Windows for TCP/IP (as a Windows application)
  - .print Client Service Windows (as a Windows service)<sup>1</sup>

#### **ThinPrint Output Gateway**

Output Gateway is a virtual printer driver which enables print jobs to be rendered only on clients with Windows as the operating system; an optional print preview is also available on the client.

**Note!** When printing over Output Gateway, the fonts used in the document must also be installed on the client.

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1 Information on installing and configuring the .print Client Service Windows can be found in the relevant manual (<u>Page 22</u>).

#### Page setup

 Client-side printer properties such as paper sizes and sources, print quality, color, orientation and print on both sides will be displayed in Output Gateway's user interface (Illus. 2, left).



🚌 Lexmark T630 Docu	ment Properties	🚓 Lexmark T630#user1:7 Printing Preferences	<b>—</b>
Layout Paper/Quality	Output Options Watermark Profiles About	Page Setup Advanced	
Tray Selection		Paper size: 210 x 297 mm	
Paper Source:	🚳 Auto Select	A4 210 x 297 mm 🔹	
Media:	Automatically Select     Auto Select	Print quality: 600 dpi	
	Tray 1	Paper source:	
	📸 Tray 2	Auto Select	
	🙀 Tray 4	Auto Select Man. Envelope	
	🔞 Tray 5	Manual Feed MP Feeder	
	Multi-Purpose Feeder	Tray 3	
	Manual Paper	Tray 1	
	🙀 Envelope Feeder	Tray 4     O     Portrait	
		C Landscape	
		Print on both sides	
		○ None	
		Flip on long edge .print	$\checkmark$
		○ Flip on short edge	Ð
	Advanced		
	OK Cancel		And And



## **Installing .print Client Windows**

## Available .print Client Windows types

.print Client Windows for TCP/IP	A TCP/IP connection must exist between server and client machines. To run .print Client Windows for TCP/IP. It must also be possible to access the client machine's TCP port from the server. Connections with Network Address Translation (NAT) or with asynchronous connections require the .print Client Windows for ICA or RDP (below). In case of NAT .print Connection Service <sup>2</sup> can also be used. The .print Client is started by a shortcut that is automatically created in the Windows STARTUP folder during setup.
.print Client Service Windows	This client is suitable for <b>installation on local print servers</b> . In this case the client runs as a service. See the ".print Client Service Windows" user manual ( <u>Page 22</u> ).
print Client. Windows for ICA	This .print Client can be run as long as there is an ICA connection to a Citrix server (the ICA client version must be 10.0 or higher).

2 Additional licensing required (.print Connected Gateway)



For printing via ICA to .print Clients running x64, you can only use the 32-bit version of .print Client, because there are only 32-bit versions of Citrix ICA client. The .print Client starts automatically when an ICA session is opened.

**Note!** To successfully complete .print Client installation, the correct path to the **Citrix ICA Client** must be entered at the prompt (is usually automatically detected).

print Client. Windows for RDP This .print Client can be run as long as there is an RDP connection to a Microsoft terminal server (the Terminal Services client<sup>3</sup> version must be 5.00.x or higher; the terminal server must be running Windows 2003/2008).

The .print Client starts automatically when an RDP session is opened.

### Installation

Administrator permissions Administrator permissions are required for all installation and configuration procedures. It is therefore best to log on under Windows always with the same account – e.g. as ADMINISTRATOR.

Please first delete any previously installed .print Client Windows (see Page 24).

- Download of .print Client at <u>www.thinprint.com</u>→ SUPPORT→ CLIENTS & TOOLS as an .msi file. Under Windows XP/ Vista/2003/7/2008<sup>4</sup> start the relevant .msi file (Illus. 3)<sup>5</sup>. The abbreviations in the .msi file names have the following meanings:
  - TP = ThinPrint
  - ICA = for printing via the Citrix ICA protocol
  - RDP = for printing via the Microsoft RDP protocol
  - TCP or SRV = for session-independent printing via TCP/IP
    - (TCP = installation as an application; SRV = installation as a Windows service)
  - enu or deu = English or German
  - x86 or x64 = 32-bit or 64-bit machines

<sup>3</sup> Other Microsoft denominations are: Remote Desktop Client and Remote Desktop Connection

<sup>4</sup> For older operating systems install .print Client 7.0

<sup>5</sup> For the unattended installation see the "Preconfiguration and unattended installation of .print Client Windows" white paper.



Organize 🔻 Include in libr	ary     Share with	New folder	:=== '	· 🛄 🤇	
🚖 Favorites	Name	Date modified	Туре	Size	
	🛃 TPICA_x86_deu	1/28/2010 3:35 PM	Windows Installer	1,738 KB	
🥽 Libraries	🛃 TPICA_x86_enu	1/28/2010 3:46 PM	Windows Installer	1,774 KB	
	🛃 TPRDP_x64_deu	1/27/2010 11:48 AM	Windows Installer	1,377 KB	
👰 Computer	🛃 TPRDP_x64_enu	1/27/2010 12:38 PM	Windows Installer	1,413 KB	
🚢 Local Disk (C:)	🛃 TPRDP_x86_deu	1/27/2010 12:28 PM	Windows Installer	1,304 KB	
坖 thinprint (\\tpfs01) (O:)	🛃 TPRDP_x86_enu	1/27/2010 12:23 PM	Windows Installer	1,340 KB	
坖 w (\\hehem) (W:)	🛃 TPSRV_x64_deu	1/27/2010 11:58 AM	Windows Installer	1,594 KB	
	🛃 TPSRV_x64_enu	1/27/2010 11:36 AM	Windows Installer	1,630 KB	
辑 Network	🛃 TPSRV_x86_deu	1/27/2010 11:31 AM	Windows Installer	1,536 KB	
	🛃 TPSRV_x86_enu	1/27/2010 11:53 AM	Windows Installer	1,572 KB	
	🛃 TPTCP_x64_deu	1/27/2010 12:18 PM	Windows Installer	3,560 KB	
	🛃 TPTCP_x64_enu	1/27/2010 12:13 PM	Windows Installer	3,624 KB	
	🛃 TPTCP_x86_deu	1/27/2010 12:08 PM	Windows Installer	3,473 KB	
	🛃 TPTCP_x86_enu	1/27/2010 12:03 PM	Windows Installer	3,537 KB	

Illus. 3 Installing .print Client Windows

2. InstallShield Wizard opens. Click NEXT.

3. Read the license agreement and accept its terms with NEXT (Illus. 4). Illus. 4



Illus. 4 Read and accept the license agreement; click NEXT



4. Choose the installation path (Illus. 5) and click NEXT.

Illus. 5

<b>Destinati</b> Click Ne: differen	i <b>on Folder</b> xt to install to this folder, or click Change to install to a t folder.	.print 🖌
Ø	Install the .print Client Windows (TCP/IP) to: C:\Program Files\ThinPrint Client\	Change
stallShield -		

**Illus. 5** Changing installation path if necessary

5. With installation of .print Client for ICA specify the installation path of Citrix ICA Client (Illus. 6) and click NEXT.

Illus. 6

,print Cli	ent Windows (ICA)		
Citrix ICA Please d	A Client Folder hoose the location of your Citrix ICA Client installation.	.print 🖌	
Þ	C:\Program Files (x86)\Citrix\ICA Client\	Change	
InstallShield -			
	< Back Ne	ext > Cancei	

Illus. 6 Entering path to the Citrix ICA Client



- 6. Then click INSTALL, to start installation. Please wait while the Install Shield Wizard installs .print Client Windows. This may take several minutes.
- 7. Following a successful installation you will see the screen shown in Illus. 7 with the message: "InstallShield Wizard Completed". Click FINISH (Illus. 7).
   Illus. 7

	InstallShield Wizard Completed
.print /	The InstallShield Wizard has successfully installed the .print Client Windows (TCP/IP). Click Finish to exit the wizard.
Client Windows	
Version 8.0	
ThinPrint*	
Copyright © 1999-2010	

Illus. 7 .print Client 8.0 successfully installed

*Completing* An icon is displayed in the task bar when .print Client Windows is running (Illus. 8). *installation* Illus. 8



## .print Client context menu

print Client

.print Client has a context menu, which can be opened by clicking the .print icon in the task bar. That offers quick access to important functions.

Right click the .print icon in the task bar. The context menu shown in Illus. 9 opens.

Illus. 9



4.01.2010

Illus. 9 .print Client context menu

The following options are available in context menu:



- CONFIGURE: Clicking CONFIGURE opens .print Client Manager (see also "Configuration with .print Client Manager", <u>Page 10</u>).
- RELOAD PRINTERS: This function is enabled by default and updates .print Client immediately when a new printer is created in the printers folder. However, the function does not update the session printers; a logon-/logoff is required for that. If you have disabled ENABLE SENDING PROPERTIES (see Page 13), the RELOAD PRINTERS function will also be disabled. In that case, you can update the printer manually here.
- **ABOUT:** This option displays version information on the installed .print Client (Illus. 10).



Illus. 10 Information about .print Client

CLOSE: Click CLOSE to close .print Client. This option is only available in TCP/IP versions (and not in the ICA and RDP version as well as in the .print Client Service Windows).

How to restart the .print Client? See the following chapter.

## **Configuration with .print Client Manager**

Remember, several changes only take effect after restarting the .print Client Windows. Please follow the steps described below to do so.

- Close .print Client Windows (TCP/IP version only; see above and Page 15).
- Restart .print Client Windows:
  - TCP/IP: Select Start  $\rightarrow$  All Programs  $\rightarrow$  .print Client Windows  $\rightarrow$  Start Client (IIIus. 11).
  - ICA/RDP: Disconnect and reconnect each terminal session (Client starts up automatically with the session).



		-	-	
- 111	IUS.			
		_	-	

Connect to a Projector	Documents
Sticky Notes	Pictures
Sucky Notes	Music
Snipping Tool	Computer
Calculator	Control Panel
Command Prompt	Devices and Brinters
🚮 Paint	
Start Client	Default Programs
	Help and Support
All Programs	Windows Security
Search programs and files	Log off 🕨
	/

Illus. 11 Start .print Client Windows for TCP/IP



.print Client Windows is configured with .print Client Manager. Open .print Client Manager

- either by double clicking its icon in the task bar (see illustration left)
- or with Start  $\rightarrow$  All Programs  $\rightarrow$  .print Client Windows  $\rightarrow$  Configure (see IIIus. 11)
- or by opening the context menu using the right mouse-button and selecting the CONFIGURE option.





- This opens the panel in Illus. 13.

Illus. 13





## Setup tab

*Current printer* Select CURRENT PRINTER here (Illus. 13). Print jobs are printed from the current printer if the printer *ID* can't be determined (e.g., no printer ID is given in the printer name at the server).

Should you want to specify that the *current printer* of ThinPrint .print is the same as the local Windows default printer, simply leave the default setting INHERIT CLIENT'S DEFAULT PRINTER. Or select the current printer manually with USE THIS PRINTER; in this case, the current printer can be different than the local Windows default printer.

Furthermore, the current printer can be set as default printer in a session for .print AutoConnect (see Illus. 13).

Take note that the default printer can also be determined by certain server settings. These settings might then take priority over the settings in .print Client. For assistance, read the corresponding .print Engine manual.

## Assignment tab

Printers and their IDs ASSIGNMENT lists all printers that are found in the client's printer folder with their IDs and their classes (Illus. 14).

Illus. 14

setup Assignment Advanced			
Printer assignment			
Printer	ID	Class	-
Lexmark T630	1		_
🗹 HP Deskjet	2		=
Ricoh Aficio MP C3000	3		
V\ps06\0KI C5510	4		-
	Enable sending	properties	<b>v</b>
	ОК	Ca	ncel

Illus. 14 Printers with assigned IDs

The ASSIGNMENT panel displays information about available printers. This is also where you find printer IDs, which are automatically assigned by the .print Client Windows and are necessary for manually assigned printer names on the .print Engine (without AutoConnect; for more information, see .print Engine manual; <u>Page 22</u>).

*Reload* You can immediately update the printer list if you click on RELOAD in the context menu*Printers* (right mouse button) of the printers listed in the window (Illus. 15).



🤨 .print	Client Manager		×
Setup	Assignment Advanced (	Connection Service	
Print	ter assignment		
Pr	inter	ID	Class
<b>V</b>	Lexmark T630	1	
<b>V</b>	HP Deskjet	Delevel d	
<b>V</b>	Ricoh Aficio MP C3000	Keload	
	\\ps06\0KI C5510	4	
		Enable sending p OK	oroperties 🔽



Enable sending properties

If this option is enabled and .print AutoConnect is used, the client printer's **paper trays** as well as **duplex settings**, **paper formats**, **color settings**, **location**, **comments** and **print quality** will be applied to the printer created on the server. Please also observe the server side option APPLY CLIENT PRINTER PROPERTIES of the .print Auto-Connect configuration (see manual of the respective .print Engine; <u>Page 22</u>). Default: enabled.

Take note: If ENABLE SENDING PROPERTIES is disabled, automatic updating of the printer list is also disabled (and vice versa).

#### .print AutoConnect

It's also possible to select different printers by checking the box next to them. .print AutoConnect will automatically map all selected printers on a server and connect them with a ThinPrint Port – provided templates exist and .print AutoConnect is running on the server (= auto-created printers). When starting a terminal session all marked printers are created automatically in the session. For more information refer to the .print AutoConnect chapter in the .print Engine manual (<u>Page 22</u>).

*Printer class* Double clicking a printer name opens an input box for specifying the printer class for .print AutoConnect (Illus. 16). The result is shown in Illus. 17.

IIIUS. 10	
Printer Class	<b>—</b>
Select printer class name for: HP Deskjet	
PCL5	
OK	Cancel

Illus. 16 Enter class name (see .print AutoConnect in the .print Engine manual; Page 22)

**Note!** Unlike printer names, class names may not be longer than 7 characters and may not included blank spaces.



, print Client Manager			
Setup Assignment Advanced			
Printer assignment			
Printer	ID	Class	-
📝 Lexmark T630	1		_
🜌 HP Deskjet	2	PCL5	=
Ricoh Aficio MP C3000	3		
Image: Market Ma Market Market M Market Market Ma Market Market Marke	4		-
	Enable sendi	ng properties	~
	ОК	Ca	ancel

Illus. 17 Printers with ID and class

## Advanced tab

The ADVANCED panel (Illus. 18) offers the following settings:

- Bandwidth Check this box and enter a bandwidth value. Note: If the value is larger or if
   CLIENT CONTROL is disabled at the server, server settings (see .print Engine manual; Page 22) are applied.
- TCP Port Enter here the port number where .print Client Windows should receive incoming connections. Be sure: Same TCP port number for both .print Client Windows and .print Engine printer port to which the client printer is connected.<sup>6</sup> Otherwise, communication between the two .print components is impossible.
   The TCP port number is only relevant for printing over TCP/IP. Default port number is 4000. Make certain that this port is open for both incoming and outgoing connections. If you want to avoid that condition, you can print via ICA/RDP, or use the .print Connection Service (outgoing connection only).
- Use Connection If you want to use the .print Connection Service, enable its check box. Once it has been activated, the additional tab card called CONNECTION SERVICE will be added. This tab offers settings for using the Connection Service (see "Connection Service tab", Page 16). Default: disabled

6 see also .print Engine manual (Page 22)



🤐 .print Client Manager		×
Setup Assignment Advanced	Connection Service	
🔲 Bandwidth (bit/s): 0	TCP port: 4000	
🔽 Use Connection Service		
Administrators only		
.print Client 8.0.861.30		
TPView.dll 8.0.623.13	Close	
	OK Cance	el 📄

Illus. 18 .print Client Manager for Windows: advanced options

Administrators only Checking this box prevents users from making changes to .print Client Windows settings. The users see the (grayed-out) settings, but can not make any changes.

- *OK* Changes are applied without quitting .print Client Windows changes could, however, first be functional after restarting .print Clients or the session (<u>Page 10</u>).
- *CANCEL* Previous settings remain intact, all changes are ignored.
- *CLOSE* Quits .print Client Windows for TCP/IP. The .print Client icon disappears from the task bar. The .print Client Windows must be restarted before .print printing resumes (<u>Page 10</u>).

**Tip!** The CLOSE button is only active for .print Client Windows for TCP/IP. The .print Clients for ICA and RDP automatically close when the session ends. The .print Client Service Windows is closed in the SERVICES folder.

Info line The info line displays the version numbers of the .print Client and of TPView.



## **Connection Service tab**

The CONNECTION SERVICE tab (Illus. 18) offers settings for using the .print Connection Service. Please also note the information about installing and configuring the .print Connection Service in your .print Engine manual and in the ".print Connected Gateway" manual (<u>Page 22</u>).

Illus. 19

🦳 .print Client Manager	×
Setup Assignment Advanced Connection Ser	vice
Connection server address: 192.168.128.15	5 TCP port: 4001
Client ID: 88 Auth	entication key: 222
Connection retry interval (s): 300	
Connected: 192.168.128.156:4001 88:222	
	DK Cancel

Illus. 19 .print Client Manager started; CONNECTION SERVICE tab

Connection server address	<ul> <li>Enter the IP address of the server on which the .print Connection Service has been installed.</li> </ul>
TCP port	<ul> <li>Enter the number of the TCP port via which the .print Client connects to the Connection Service. Default port number is 4001.</li> </ul>
Authentication key	- Enter the .print Client's authentication key for the Connection Service.
Client ID	<ul> <li>Here is where the client ID is entered. The Connection Service uses the client ID to forward print jobs to a client. Depending on the mode of communication, the client ID is given by the Connection Service (dynamic mode) or must be given by the client (static mode). In the latter case, the client ID must be saved in this box.</li> </ul>
Connection retry interval (s)	<ul> <li>Enter the wait time (in seconds) after which a new attempt should be made to establish a connection if the .print Connection Service is not reachable.</li> <li>Default: 0.</li> </ul>
Status line	After successful connection to the Connection Service, the status line will display the server IP address as well as the TCP port number, client ID, and authentication key. If no connection could be established to the Connection Service, the status line shows the message "Not connected" (see Illus. 19).

## **SSL** encryption

If you want a secure SSL connection between .print Engine and .print Client, you can encrypt print data with the SSL based TLS  $^7$  norm.



This print data encryption is based on client authentication. When using SSL encryption, two certificates are installed on the server (or on the virtual desktop) where .print Engine is running, and a certificate signed by the server is installed on the client. More information is found in the ".print Server Engine" manual.

We recommend creating certificates with an individual certificate server or requesting them from an official source<sup>8</sup>. Please note that the certificate must be a **x.509** certificate (file format **\*.cer** or **\*.p12**). See the "Creating SSL certificates for printing with .print" white paper.

#### Importing SSL certificates

If the USE ENCRYPTION option is enabled in the ThinPrint Port configuration<sup>9</sup> on the server, a relevant SSL certificate, which has been signed by the server, must be imported to the machines on which a .print Client is running.

**Note!** Client certificates have to be imported in the client machine's certificate store. **Either** you import the certificates **individually for each user** (at MY USER ACCOUNT) **or one time per machine** (at COMPUTER ACCOUNT). Did you choose the Computer Account you have to assign permissions to the certificate afterwards, if the computer user(s) are not members of the Administrators group (to do so see the "Creating SSL certificates for printing with .print" white paper). If the computer has its own certificate set the registry value "CertStore" to 1 (Page 26).

- 1. To install a client certificate, open the Microsoft Management Console (MMC) with **mmc.exe** from the COMMAND PROMPT.
- Select either the following in MMC on the client PC per user:
   FILE→ ADD/REMOVE SNAP-IN→ ADD→ CERTIFICATES→ ADD→ MY USER
   ACCOUNT→ FINISH→ CLOSE→ OK
   Or select for the machine:

File  $\rightarrow$  Add/Remove Snap-In $\rightarrow$  Add $\rightarrow$  Certificates $\rightarrow$  Add $\rightarrow$  Computer Account $\rightarrow$  Finish $\rightarrow$  Close $\rightarrow$  OK

3. Now import the certificate by selecting ALL TASKS→ IMPORT in the context menu (Illus. 20) and then NEXT→ BROWSE→ OPEN→ NEXT→ PASSWORD→ NEXT→ PLACE ALL

9 see .print Engine manual (<u>Page 22</u>)

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<sup>7</sup> TLS = Transport Layer Security; SSL = Secure Socket Layer

<sup>8</sup> e.g., <u>www.verisign.com</u> or <u>www.trust-center.de</u>





Illus. 20 Starting import of an SSL certificate (example for MY USER ACCOUNT or CURRENT USER)

Illus. 21 and 22 show the results of import.











#### **Registry entry CertName**

Before sending encrypted print data, the server checks whether the name of the imported certificate is included in the CertName entry in the client machine's Registry and whether the stored certificate is present on the client. The CertName entry in the Registry can be entered manually as follows:

1. After the certificate has been imported, create the following Registry entry on the client machines with REGEDIT (Illus. 23; data type: reg\_sz):

hkey\_local\_machine\software\thinprint\client\CertName
Illus. 23



Illus. 23 Registry entry for SSL encryption on Windows clients (example for tpclient certificate)

- 2. Enter as value the name of the imported certificate as displayed in the column ISSUED TO of the MMC's certificate overview (tpclient as example in illus. 21 and 23).
- 3. Restart .print Client Windows (Page 10).

The CertName Registry entry is only needed for encrypting print data; receipt of unencrypted print data is still possible.

## **Remote client configuration**

Remote configuration is possible for .print Client Windows printing with TCP/IP protocol. The entry **RmtConf** is needed in the Windows registry of all client machines you want to configure (see Illus. 24 or <u>Page 26</u>).

 Open the Windows registry of the client machine you want to configure. Add the entry RmtConf (reg\_mulit\_sz) under hkey\_local\_machine\software\thinprint\client. Enter the IP addresses of all those machines from which the client should be configured (Illus. 24).



Registry Editor File Edit View Favorites Help			
File       Edit       View       Favorites       Help         Image: Computer       Image: Computer       Image: Computer       Image: Computer         Image: Computer       I	Name (Default) (ConnAuthKey ConnAuthKey ConnMode ConnPort ConnServer ConnUID ConnUID ConnWait PName_1 PName_2 PName_3 PName_3 PName_4 PName_5 PName_5 PName_5 PName_5 PName_4 PName_5 PName_5 PName_5 PName_4 PName_5 PName_4 PName_5 PName_4 PName_5 PName_4 PName_5 PName_4 PName_5 PName_4 PName_5 PName_5 PName_5 PName_4 PName_5 PName_6 Prype_1 Prype_1 Prype_3 Prype_4 Prype_5 Prype_5 PrypeMauthConstructure CondProperties CondProperties CondProperties Provention	Type REG_SZ REG_DWORD REG_DWORD REG_DWORD REG_DWORD REG_DWORD REG_DWORD REG_DWORD REG_DWORD REG_SZ REG_DWORD REG_DWORD REG_DWORD REG_DWORD	Data           0x00000000 (0)           0x0000002c (44)           0x0000002c (44)           0x0000001 (1)           0x0000001 (1)           0x0000001 (1)           0x0000001 (33)           0x0000001 (1)           Lexmark T630,1           HP Deskjet,1           Ricoh Aficio MP C3000,1           \\ps06\OKI C5510,1           PCL6 Driver for Universal Print,1           0x0000000 (4000)           PCL5,PS,TXT           0x0000000 (15)           ,Lexmark T630 (MS)           PCL5,HP Deskjet 450           ,Ricoh Aficio MP C3000 PCL6           ,PS Driver for Universal Print           ,PCL6 Driver for Universal Print           ,PC16 Driver for Universal Print           ,PC16 Driver for Universal Print           ,PC16 Driver for Universal Print
	RmtConf	REG_MULTI_SZ	195.164.13.16 195.164.13.17
Computer\HKEY_LOCAL_MACHINE\SOF	I WARE ( I ninPrint ( Ulle	nt	

Illus. 24 .print Client machine: Registry entry RMTCONF added for remote configuration of .print Client

- Restart .print Client.
- Go to the machine on which .print Engine is installed. Open the MMC, select .print Client snap-in and enter the address of the client machine to configure (Illus. 25).

Illus. 25



Illus. 25 .print Engine machine: Open the MMC, select .print Client snap-in and enter the address of the client machine to configure

- Now, the selected machine is ready for remote configuration (Illus. 26).



👥 .print Engine		
👥 File Action View Window Hel	p	- 8 ×
🗢 🤿 🗾 🖬 🚺		
🧮 Console Root		Actions
⊿ 😵 ThinPrint	Setup Assignment Advanced	.print Clien 🔺
<ul> <li>Print Engine (TS01)</li> <li>Witual Channel Gateway</li> <li>AutoConnect</li> <li>V-Layer</li> <li>Port Manager</li> <li>.print Client (192.168.128.183)</li> </ul>	Current printer Current printer Use this printer: Current at server Default at server .print Client on 192.168.128.183	More >

Illus. 26 .print Engine machine: Remote configuration of a .print Client

#### .print Client Gateways and .print Connected Gateways

The .print Client Gateway can greatly simplify the introduction of ThinPrint .print because it can receive .print print jobs for an entire group of clients and printers, decompress and decrypt them, and then distribute them conventionally in a local network – like a local print server (Illus. 27). Then the .print Client is only necessary on the Client Gateway for this remote LAN. Otherwise, the .print client must be installed on each end device: rich clients, printers, print servers, thin clients, etc. This could mean that with thin clients, for example, a BIOS update is necessary. Even mixed environments pose no problem: The .print client is installed onto all devices where simple installation is possible, and all others are served by a Client gateway.

More information can be found in the "Windows computer as a .print Client Gateway" white paper.



Illus. 27 Windows computer as a .print Client Gateway (example)

The .print Connected Gateway is a variation of the .print Client Gateway. The .print Client installed on the Client Gateway can connect to the .print Connection Service installed on the server. Print jobs can then be sent via TCP/IP, even where the Client Gateways are found in a masked network (e.g., behind a router with Network Address Translation; Illus. 28).



More information can be found in the ".print Connected Gateway" manual and in the "SEH TPG60/120 as a .print Client Gateway" white paper. Illus. 28



Illus. 28 Windows machine and SEH TPG60 as .print Connected Gateways (example)

## Appendix

## **Customer service and technical support**

Customer Service <u>www.thinprint.com</u>→ SUPPORT <u>support@thinprint.com</u>

## **Additional sources**

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

*Manuals* The following manuals (amongst others) are available at <u>www.thinprint.com/</u>→ PRODUCTS→ OVERVIEW→ <product name>.

- .print Client Service Windows
- .print Application Server Engine
- .print RDP Engine
- .print Desktop Engine
- .print Tracking Service
- .print Server Engine
- .print Engine for VMware View
- .print Engine AS/400



- .print Queue Manager
- .print Connected Gateway

White papersThe following white papers (amongst others) are available at <a href="www.thinprint.com/">www.thinprint.com/</a> $\rightarrow$  PRODUCTS $\rightarrow$  OVERVIEW $\rightarrow$  <product name> or  $\rightarrow$  SUPPORT $\rightarrow$  WHITE PAPERDOWNLOAD.

- Preconfiguration and unattended installation of .print Client Windows
- Creating SSL certificates for printing with .print
- Tips for configuring ThinPrint .print
- .print addressing
- .print AutoConnect and .print Virtual Channel Gateway
- Windows computer 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

## **Repairing .print Client Windows**

Should .print Client Windows ever quit functioning, you do not have to reinstall it – you can repair it. To repair .print Clients Windows select the respective .msi file and select REPAIR (Illus. 27).



Illus. 29 Repairing .print Client Windows



## **Updating .print Client Windows**

Please note that previous settings are still valid when updating or installing .print Client on a machine where it was installed before.

- 1. Uninstall the present .print Client (see next chapter).
- 2. Install the new one (Page 5).

## **Uninstalling .print Client Windows**

 Select CONTROL PANEL→PROGRAMS →UNINSTALL A PROGRAM select .PRINT CLIENT WINDOWS, and click UNINSTALL (IIIus. 30).
 IIIus. 30

6	🔍 🗢 🔯 🕨 Control Panel 🕨	• Programs • Programs and Feature	15 👻 🍕	Search Programs	and Features	• • • • • • • • • • • • • • • • • • •
	Control Panel Home View installed updates Turn Windows features on or	Uninstall or change a p To uninstall a program, select i	rogram t from the list and then click Uninst	tall, Change, or R	epair.	
	off	Organize 🕶 Uninstall Repair	<b>.</b>		800	• 🕡
		Name	Publisher	Installed On	Size	Version
		Uninstall Repair	ThinPrint AG	1/18/2010	2.08 MB	8.0.82
		ThinPrint AG Product	III eversion: 8.0.82 Help link: http://www.thinprint.c	Support link: ht Size: 2.0	tp://www.thinp 08 MB	▶ print.com

Illus. 30 Removing .print Client Windows (Example for Windows XP)

2. Confirm the following windows with REMOVE and FINISH.

## **Relevant entries in Windows Registry**

#### **Registry entries of .print Client Windows**

The .print Client creates the following Registry entries under: hkey\_local\_machine\software\thinprint\client

Name	Menu item (.print Client Manager)	Description	Туре	Default value
AdminOnly	Administrators Only	Restricts client configuration to admin- istrators only	reg_dword	0
Bandwidth	Bandwidth	Client-side bandwidth setting (bit/s or bps)	reg_dword	none

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Name	Menu item (.print Client Manager)	Description	Туре	Default value
ConnAuthKey	AUTHENTICATION KEY	Value can be defined by the admin on the connection server; otherwise it's irrelevant for the first logon, but may <b>not</b> be changed thereafter	reg_dword	0
ConnKeep- Alive	_	Interval for refreshing the connection; has to be lower or equal than .print Connection Service's "KeepAliveTO" (server side); (in seconds)	reg_dword	60
ConnMode	USE CONNECTION SERVICE	0 = Receiving print jobs without .print Connection Service (Listen Mode) 3 = Using .print Connection Service Static Mode 1 = both modes at the same time (0 + 3)	reg_dword	0
ConnPort	TCP PORT (CONNECTION SERVICE)	TCP port for communication with the .print Connection Service; be sure: same TCP port number as .print Connection Service's "ClientPort"	reg_dword	4001
ConnServer	Connection Server address	IP address of the computer on which .print Connection Service is running	reg_sz	127.0. 0.1
ConnUID	Client ID	Client ID for the static mode – an unam- biguous ID must be assigned for all cli- ents (TPUID)	reg_dword	0
ConnWait	Connection RETRY INTERVAL	Wait time for connection retries if .print Connection Service is not reachable (in seconds)	reg_dword	300
DefaultState	Default at server	AutoConnect defines current printer as default printer at server; Page 12	reg_dword	1
PName_n	Printer (Assignment)	Name(s) of client printer(s) as read from the system settings	reg_sz	none
Port	TCP port (Advanced)	TCP-Port for communication with the .print Engine; must be the same as .print Engine "port" with a normal ThinPrint port	reg_dword	4000
PrinterClasses	CHOOSE CLASS NAME	Names of the created printer classes	reg_sz	PCL5, PS, TXT



Name	Menu item (.print Client Manager)	Description	Туре	Default value
PType_n	Class (Assignment)	Assigned printer class ( <i>n</i> corresponds to <i>n</i> from PName_ <i>n</i> ) plus printer driver name	reg_sz	none
Selected- Printer	CURRENT PRINTER	.print Client's default printer	reg_sz	UseWD efault
Send- Properties	Enable sending properties	AutoConnect option for sending printer properties	reg_dword	1
UseWDefault	INHERIT CLIENT'S DEFAULT PRINTER	Set to use local Windows default printer as CURRENT PRINTER	reg_dword	1

#### Additional Registry entries of .print Client Windows

The following Registry entries can be created manually under: hkey\_local\_machine\software\thinprint\client

Name	Description	Туре	Default value
CertName	Name of the imported SSL/TLS certificate; Page 19	reg_sz	none
CertStore	<ul> <li>0 = use the user's certificate store</li> <li>1 = use the computer's certificate store</li> <li>Note: Permissions has to be assigned to the certificate (see the "Creating SSL certificates for printing with .print" white paper).</li> </ul>	reg_dword	0
HKCU	1 = .print Client configuration is user specific saved under: hkey_current_user\software\thinprint\client	reg_dword	0
NewID	Specifies the starting value for printer ID assignment	reg_dword	none
PreviewPrinter	Specifies whether a preview should be displayed on the cli- ent computer when using ThinPrint Output Gateway,	reg_dword	none
RmtConf	IP address of the administration machine from which the .print Client remote configuration is allowed (it is possible to enter more than one address); Page 19	reg_multi_sz	none



1

Name	Description	Туре	Default value
SetIDList	Specifies whether changes in the .print Client (new printers, classes, etc.) should be applied when client is restarted $1 =$ changes are applied (printer list is updated) 0 = changes are reset Note: The "Reload printers" function (see <u>Page 10</u> ) has a higher priority than these settings.	reg_dword	none
StartDelay	Specifies whether and how long (in seconds) .print Client startup should be delayed after user login (applies only to .print Client Windows TCP/IP)	reg_dword	none

hkey\_local\_machine\software\thinprint\tpview

Name	Description	Туре	Default value
Move	Specifies whether the position of the screen is to be moved to the printable area of the client printer (for use with ThinPrint Output Gateway only)	reg_dword	none
Resize	Specifies whether the position of the screen is to be scaled to the printable area of the client printer (for use with ThinPrint Output Gateway only)	reg_dword	none

Further information on the single entries can be found in the respective chapters of this manual and of the "Preconfiguration and unattended installation of .print Client Windows" white paper.



## .print Clients and supported features

.print Client		Network protocol		20		ontrol	ryption	vay	Ð	nel	ervice
		•		onnect	ession reamin	/idth c	LS enc	t Gatev	Viewtu	l Chani ay	ction S
+ possible – not possible	ICA	TCP/II	RDP	.print AutoC	Compi and st	Bandv	SSL/T	Outpu	.print	Virtua Gatew	Conne
Windows (TCP/IP) <sup>a</sup>	-	+	_	+	+	+	+	+	+	_	+
Windows (ICA)		_	_	+	+	+	+	+	+	+	_
Windows (RDP) <sup>b</sup>		_	+	+	+	+	+	+	+	+	_
Service Windows (TCP/IP) <sup>a</sup>		+	_	+	+	+	+	+	_	_	+
ActiveX Windows (TCP/IP) <sup>a</sup>		+	_	+	+	+	+	+	+	_	+
Linux (TCP/IP) <sup>a</sup>	-	+	_	+	+	+	+	_	_	_	+
Linux (RDP)	-	_	+	+	+	+	+	_	_	+	_
Java (TCP/IP) <sup>a</sup>	_	+	_	+	+	+	+	_	_	_	+
Java as an applet (ICA)	+	_	_	+	+	+	+	_	_	+	_
Win16 (TCP/IP) <sup>a</sup>	-	+	_	+	+	+	_	_	_	_	_
Win OS/2 (TCP/IP)		+	_	+	+	+	_	_	_	_	_
MS-DOS (TCP/IP) <sup>a</sup>		+	_	+	+	+	_	_	_	_	_
Windows CE (TCP/IP) <sup>a</sup>	-	+	_	+	+	+	_	_	_	_	_
Windows CE (ICA)	+	_	_	+	+	+	_	_	_	+	_
Windows CE (RDP)	-	_	+	+	+	+	_	_	_	+	_
Windows Mobile (TCP/IP) <sup>a</sup>		+	_	+	+	+	_	_	_	_	_
Windows Mobile (ICA)		_	_	+	+	+	_	_	_	_	_
Windows Mobile (RDP)		_	+	+	+	+	_	_	_	_	_
ActiveX Windows Mobile (TCP/IP) <sup>a</sup>	-	+	_	+	+	+	-	_	_	-	+
LPD device	_	+	_	-	+ <sup>c</sup>	+	_	_	_	_	_

a Also usable for ICA/RDP sessions, provided a TCP/IP connection exists between server and client

b RDP 5.0 required

c If a decompression filter can be installed