ThinPrint .print®

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

(.print version 7.0)

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
→	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

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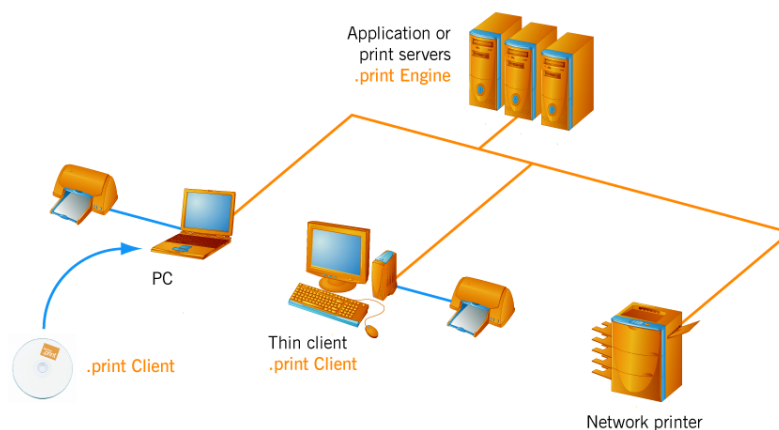
Illus. 1   Using of ThinPrint .print with server and client components

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 and Windows Mobile, for Linux, Solaris, Dos, Win OS/2, and Java, for BlackBerry and Symbian as well as for internal and external print servers for network printers. The following .print Client types are available for Windows[1]:

- .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)[2]

1   Windows 95 and later
2   Information on installing and configuring the .print Client Service Windows can be found in the relevant manual (Page 28).

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.

Page setup   Client-side printer properties such as paper sizes and sources, print resolution, color, and duplex will be displayed in Output Gateway's user interface (Illus. 2, left).
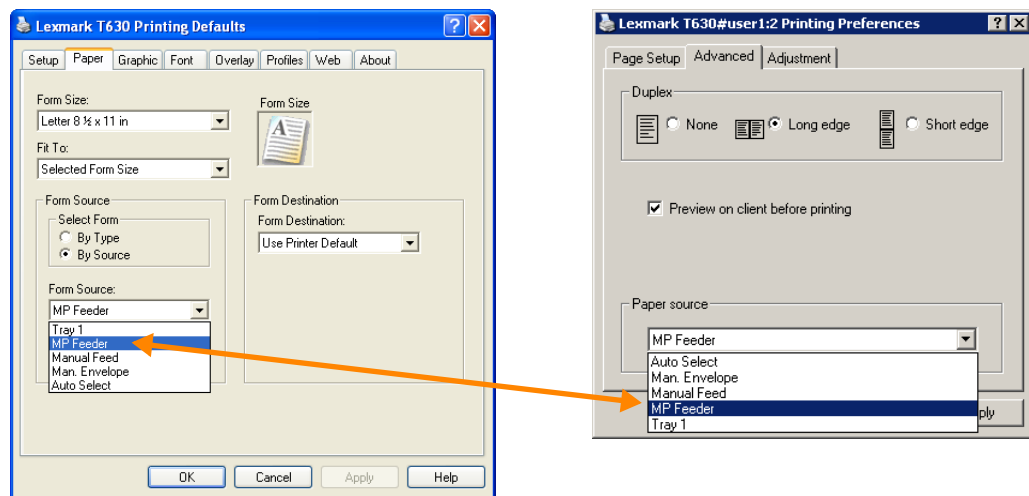
Illus. 2   Display of native printer driver's paper sources on a client (left) and of ThinPrint Output Gateway in a terminal session (right)

Installing .print Client under Windows NT, 2000/3, XP

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.

Installation

> **Note!** Under Windows NT 4.0, the installation routine for .print Client Windows 5.0 SR-2 (5.2) and later requires **Service Pack 6**.

- ■ Please note: Particular installation programs are provided for Windows Vista as well as for RDP printing to .print Clients running under Windows XP x64 or 2003 x64 (see Page 11), and the installation under Windows 9x/ME (see Page 11) differs a little from that under Windows NT 4.0/2000/XP/2003.
- ■ Download of .print Client at: www.thinprint.com/?s=4316&lc=61 in particular: Setup.exe, TPTCPen.msi, TPICAen.msi, TPRDPen.msi
- ■ Please first delete any previously installed .print Client Windows (see Page 32).

.print Client Windows installation

1. Under Windows NT 4.0, 2000, XP, or 2003 start the installation program **Setup.exe** (Illus. 3) or the relevant **.msi file** (Illus. 4)[3]. The abbreviations in the .msi file names have the following meanings:
   - 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)
   - en or de = English or German
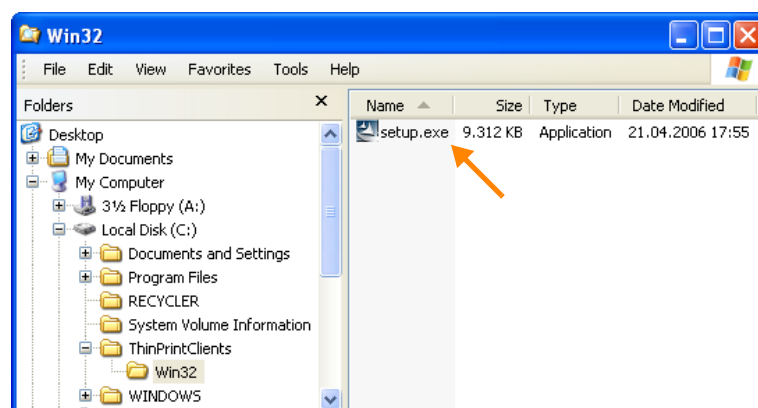
Illus. 3   Installing .print Client with Setup.exe

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3   For the unattended installation see the Preconfiguration and unattended installation of .print Client Windows white paper.
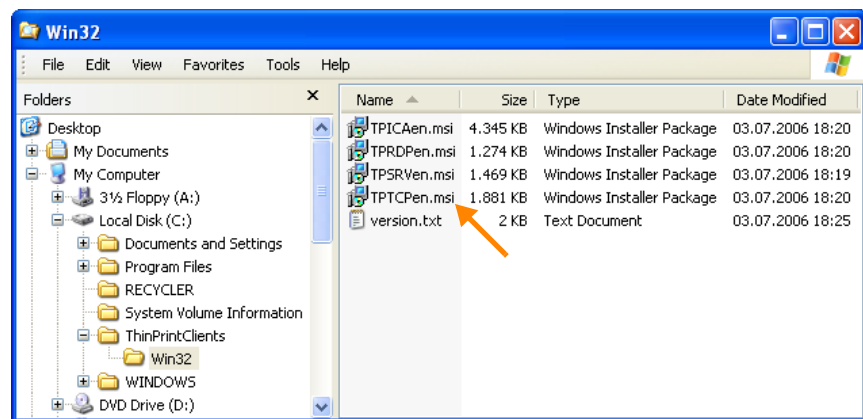
Illus. 4   Installing .print Client with an .msi file under Windows NT 4.0, 2000, XP, or 2003

2. Select a language and click OK (Setup.exe only)
   and confirm the following window with NEXT.
3. Read the license agreement and accept its terms with NEXT (Illus. 5).
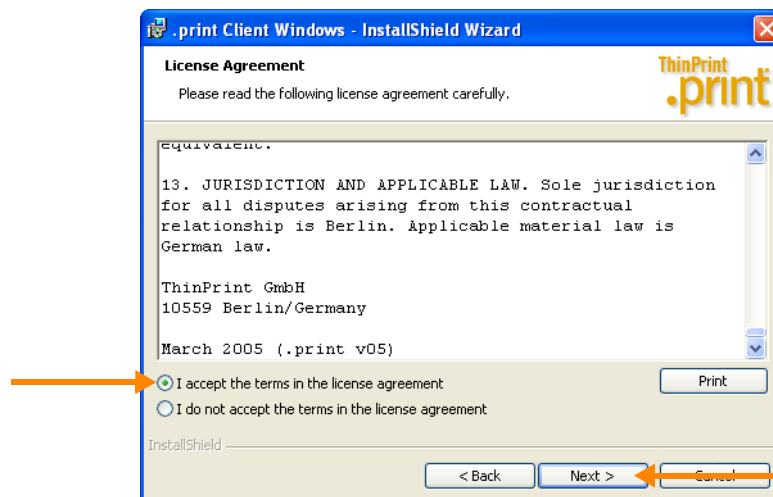
Illus. 5   Read and accept the license agreement; click NEXT

4. Choose the installation path (Illus. 6) and click NEXT.

5. Select an appropriate client type (Setup.exe only) and again confirm by clicking NEXT (Illus. 7).
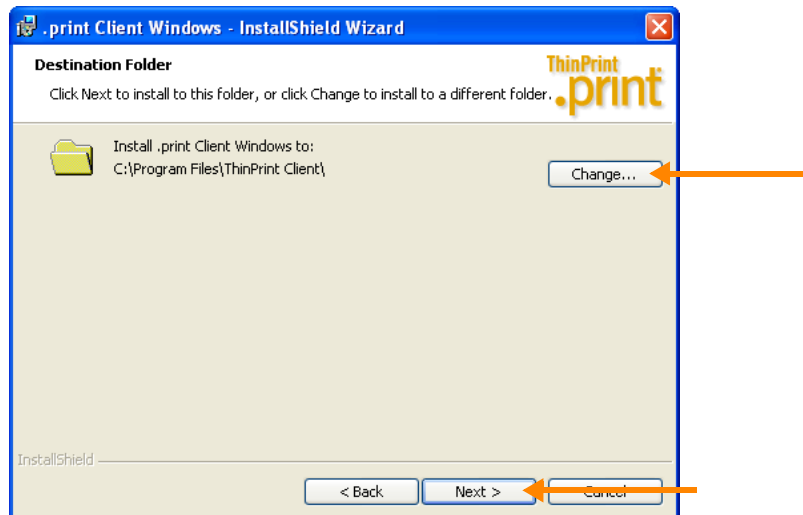
Illus. 6   Changing installation path if necessary
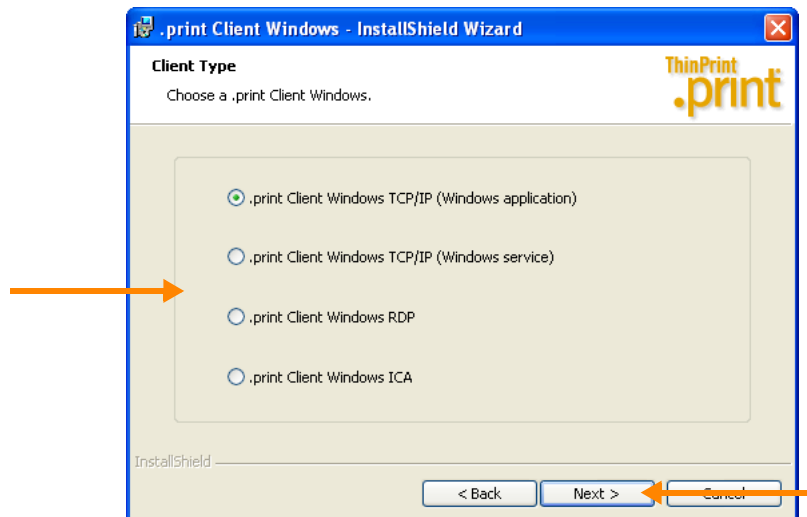
Illus. 7   .print Client Windows type selection (Setup.exe only)

> **Note!** Please note the check list in the ".print Server Engine" or ".print Application Server Engine" manual ([Page 28](#)).

Currently 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[4] can also be used.

The .print Client is started by a shortcut that is automatically created in the Windows Sᴛᴀʀᴛᴜᴘ folder during setup.

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4   Additional licensing required (.print Connected Gateway)

– Click NEXT and continue with step 6., Page 10.

.print Client Service Windows

See the ".print Client Service Windows" user manual (Page 28).

.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 4.20.715 or higher).

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

– Click NEXT and continue with step 6., Page 10.

> **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 – Illus. 8).
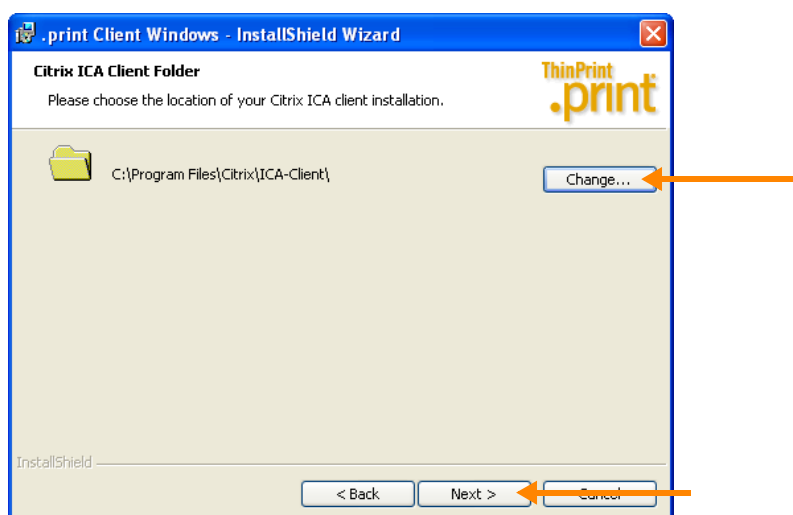
Illus. 8   Path to the Citrix ICA client

.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[5] version must be 5.00.x or higher; the terminal server must be running Windows 2000/XP/2003).

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

Completing installation

6. Confirm the remaining prompts with OK, YES, NEXT, or FINISH. An icon is displayed in the task bar when .print Client Windows is running (Illus. 9).

Illus. 9   .print Client Windows icon in the task bar

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5   Other Microsoft denominations are: Remote Desktop Client and Remote Desktop Connection

Installing .print Client under Windows Vista

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.

Installation

■ Please note: For other Windows versions than Vista as well as for RDP printing to .print Clients running under 32-bit Windows particular installation programs are provided (see Pages 7 and 13).

■ If you want to print via ICA under Windows Vista you need a Citrix ICA client version 10.0 or later (as well as the following .print Client Installer: TPIcaVen.msi; upper arrow in Illus. 10).

■ Download of .print Client at: www.thinprint.com/?s=4316&lc=61
in particular: TPTcpVen.msi, TPTcpVenx64.msi, TPIcaVen.msi, TPRdpVen.msi, TPRdpVenx64.msi

.print Client Windows installation

1. Under Windows Vista start the relevant **.msi file** (Illus. 10)[6]. 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[7])
   • en or de = English or German
   • V = .print Client for Windows Vista
   (and .print Client RDP type for Windows XP x64/2003 x64)
   • x64 = .print Client for Windows Vista x64 as well as for RDP printing to .print Clients running under Windows XP x64 or 2003 x64

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6   For the unattended installation see the Preconfiguration and unattended installation of .print Client Windows white paper.

7   See the .print Client Service Windows manual.

> **Note!** There are .print Client versions both for 32-bit Windows as well as for Windows x64.
> - For printing via **ICA** to .print Clients running under Windows Vista x64, XP x64, or 2003 x64 you can only use the 32-bit version of .print Client, because there are only 32-bit versions of Citrix ICA client.
> - For printing via **RDP** to .print Clients running under Windows Vista x64, XP x64, or 2003 x64 you can only use the x64 version of .print Client, because Microsoft delivers only a 64-bit version of its RDP client together with Windows.
> - For printing via **TCP/IP** to .print Clients running under Windows Vista x64, XP x64, or 2003 x64 you can use both the 32-bit or the x64 version of .print Client.

Example 1: You intend to install the .print Client on a PC and print via ICA.

On the PC runs the 32-bit version of Windows Vista or Windows Vista x64.

Select in both cases the file: **TPIcaVen.msi**   (upper arrow in Illus. 10).

Example 2: You intend to install the .print Client on a PC and print via RDP.

On the PC runs the 32-bit version of Windows Vista. Therefor select the file:

TPRdpVen.msi   (middle arrow in Illus. 10).

Example 3: You intend to install the .print Client on a PC and print via RDP

On the PC runs Windows XP x64. Therefor select the file:

TPRdpVenx64.msi   (lower arrow in Illus. 10).

2. Continue with step 2 on .
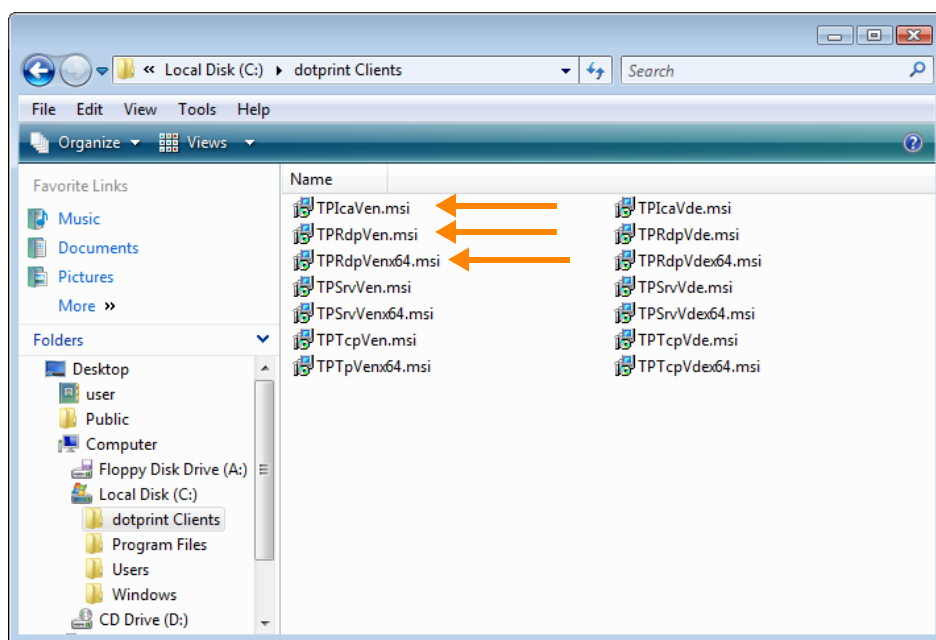
Illus. 10 Installing .print Client under Windows Vista

Installing .print Client under Windows 9x/ME

Installation of .print Client Windows for the Windows versions 9x/ME only differs from that for Windows NT/2000/XP/2003 (see Page 7) in the choice of available .print Client types (Illus. 11). For Windows versions 9x/ME, the .print Client Windows is not available as Windows service.
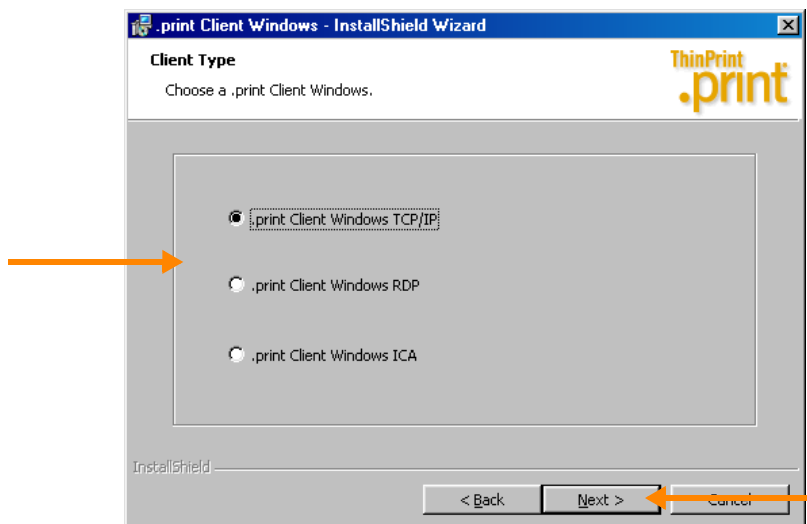
Illus. 11 .print Client Windows type selection under Windows 9x/ME (Setup.exe only)

.print Client context menu

.print Client version 6.2 and later 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. 12 opens.
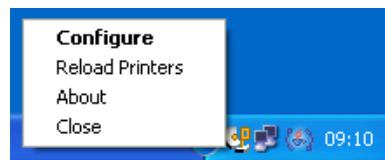
Illus. 12 .print Client context menu

The following options are available in context menu:

■ **CONFIGURE:** Clicking CONFIGURE opens .print Client Manager (see also "Configuration with .print Client Manager", Page 15).

■ **RELOAD PRINTERS:** To read newly installed printers into the .print Client Windows printer list or remove deleted printers from the .print Client Windows printer list without closing and restarting the .print Client, use the RELOAD PRINTERS option. Selecting this option synchronizes the .print Client's printer list with the system's printer list.
If the relevant value in the Windows Registry has been set (see "Select all existing printers for AutoConnect" in ".print AutoConnect", Page 17), these detected printers will also all be selected for .print AutoConnect.

■ **ABOUT:** This option displays version information on the installed .print Client (Illus. 13).
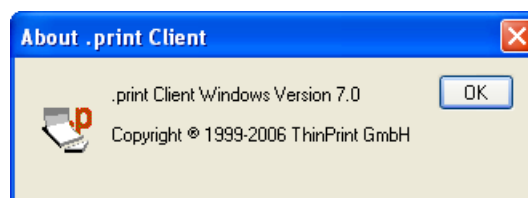
Illus. 13 Information about .print Client

■ **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 20).
- ■ Restart .print Client Windows:
  - • TCP/IP: Select START→ PROGRAMS→ .PRINT CLIENT WINDOWS→ START CLIENT (Illus. 14).
  - • ICA/RDP: Disconnect and reconnect each terminal session.
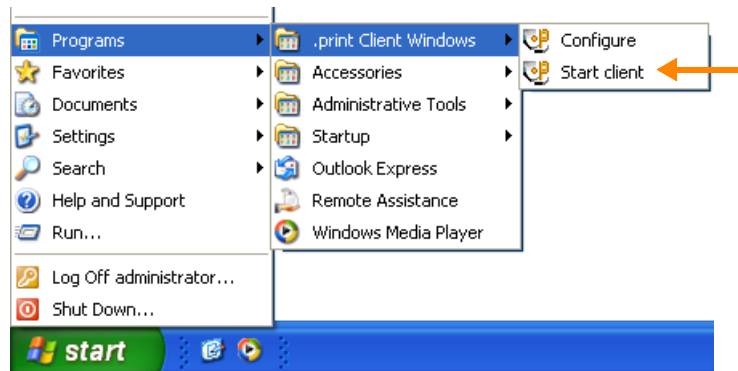
Illus. 14 Start .print Client Windows for TCP/IP

Starting .print Client Manager

.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→ PROGRAMS→ .PRINT CLIENT WINDOWS→ CONFIGURE (Illus. 14)
  - • or by opening the context menu using the right mouse-button and selecting the CONFIGURE option.
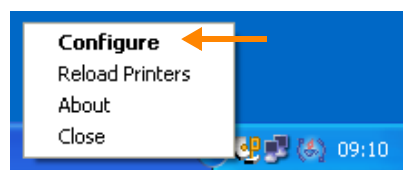
Illus. 15 .print Client Windows context menu

- – This opens the panel in Illus. 16.
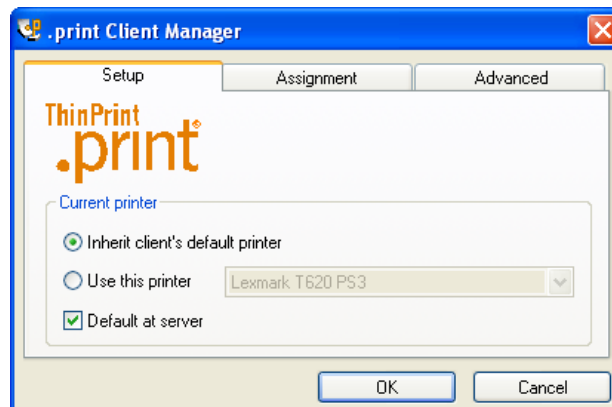
Illus. 16 .print Client Manager: CURRENT PRINTER (Lexmark printer as example)

Setup tab

Current printer Select CURRENT PRINTER here (Illus. 16). 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. 16).

Assignment tab

Printers ASSIGNMENT lists available printers with their IDs and their classes (Illus. 17).
and their IDs
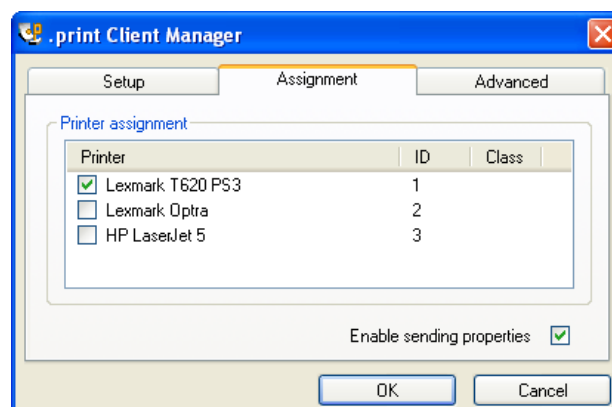
Illus. 17 Printers with assigned IDs and selection for .print AutoConnect

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 the .print Engine manual; Page 28).

> **Note!** If .print Client Windows recognizes a printer as new – e.g., after renaming a printer – it might assign the printer a new ID; in this case, .print Engine may need to be reconfigured.

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, and print resolution will be applied to the printer created on the server. Please also observe the server side option APPLY CLIENT PRINTER PROPERTIES of the .print AutoConnect configuration (see manual of the respective .print Engine; Page 28). Default: enabled.

Plug-and-play client installation
Since .print version 5.3, the .print Client Windows is pre-configured at installation so that user input is no longer necessary. This, too, decisively simplifies administration. The following especially noteworthy settings are default properties:

- The "current printer" in .print Client Windows is selected for .print AutoConnect (and/or roaming service).
- The "current printer" in .print Client Windows is selected as default printer for the session (when running .print AutoConnect).
- "Sending properties" is enabled.

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

.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 please refer to the .print AutoConnect chapter in the .print Engine manual (Page 28).

Select all existing printers for AutoConnect
By starting .print Client from the COMMAND PROMPT, you can enter a parameter for selecting all existing printers as well as all printers to be created in the future for Auto-Connect. This option is only available in the .print Client for TCP/IP.

- Start .print Client Windows from the command prompt from its directory with

```
Thnclnt32 -e1
```

All printers listed on the ASSIGNMENT tab are now selected for AutoConnect.

Should you no longer wish to have all printers automatically selected for AutoConnect, you can disable this function by starting the .print Client Windows with the parameter **-e0**:

– Start .print Client Windows from the command prompt from its directory with

```
Thnclnt32 -e0
```

Printer class　Double clicking a printer name opens an input box for specifying the printer class for .print AutoConnect (Illus. 18). The result is shown in Illus. 19.
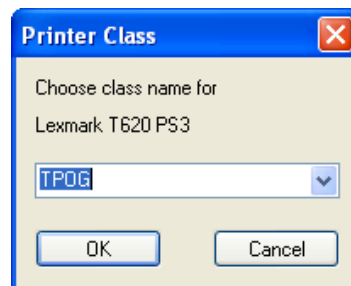
Illus. 18　Enter class name (see .print Auto-Connect in the .print Engine manual; Page 28)

> **Note!**　Unlike printer names, class names may not be longer than 7 characters and may not included blank spaces.
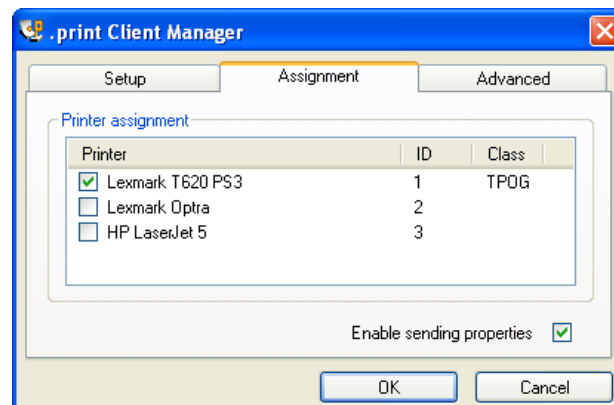
Illus. 19　Printers with ID and class

Advanced tab

The ADVANCED panel (Illus. 20) 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 28) 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.[8] Otherwise, communication between the two .print components is impossible.
The TCP port number is of course only relevant for printing over TCP/IP. Default port number is 4000.

Use Connection Service — If you want to use the .print Connection Service, enable its check box. Once it has been activated, the additional tab card called CONNECTION SVC will be added. This tab offers settings for using the Connection Service (see "Connection Svc tab" below). Default: disabled
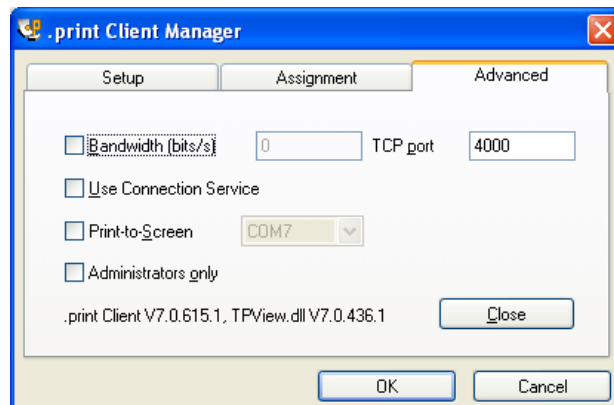
Illus. 20 .print Client Manager for Windows: advanced options

Print-to-Screen This function of .print Client Windows 7.0 is a component of ThinPrint's Cortado Corporate Server[9]; see "Cortado Corporate" user manual (Page 28).

Administrators only Checking this box prevents users from making changes to .print Client Windows settings.

OK Changes are applied without quitting .print Client Windows – changes could, however, first be functional after restarting .print Clients or the terminal session (Page 15).

CANCEL Previous settings remain intact, all changes are ignored.

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8 see also .print Engine manual (Page 28)
9 formerly Content Beamer

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 (Page 15).

Restart could change printer IDs – if printers were deleted along with their Registry entries; in this case, the .print Engine may require reconfiguration.

> **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 Windows files.

Connection Svc tab

The CONNECTION SVC tab (Illus. 21) 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 (Page 28).
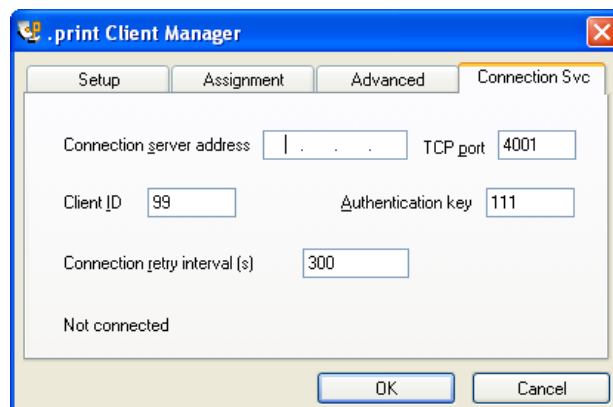
Illus. 21   .print Client Manager started; CONNECTION SVC tab

Connection server address   – Enter the IP address of the server on which the .print Connection Service has been installed.

TCP port   – Enter the number of the TCP port via which the .print Client connects to the Connection Service. Default port number is 4001.

Authentication key   – Enter the .print Client's authentication key for the Connection Service.

Client ID   – 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.

Connection retry interval (s)   − 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. Default: 0.

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. 21).

SSL encryption

If you want a secure SSL connection between .print Engine and .print Client, you can encrypt print data (version 6.2 and later) with the SSL based TLS[10] norm. To do so, Windows 2000 or higher is required as operating system on the client machine.

This print data encryption is based on client authentication. When using SSL encryption, two certificates are installed on the server 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[11]. 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.

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10 TLS = Transport Layer Security; SSL = Secure Socket Layer

11 e. g., www.verisign.com or www.trust-center.de

Importing SSL certificates

If the USE ENCRYPTION option is enabled in the ThinPrint Port configuration[12] 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).

1. To install a client certificate, open the Microsoft Management Console (MMC) with **mmc.exe** from the COMMAND PROMPT.
2. 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→ ADD/REMOVE SNAP-IN→ ADD→ CERTIFICATES→ ADD→ COMPUTER ACCOUNT→ FINISH→ CLOSE→ OK
3. Now import the certificate by selecting ALL TASKS→ IMPORT in the context menu (Illus. 22) and then
   NEXT→ BROWSE→ OPEN→ NEXT→ PASSWORD→ NEXT→ PLACE ALL CERTIFICATES IN THE FOLLOWING STORE→ NEXT→ FINISH→ OK
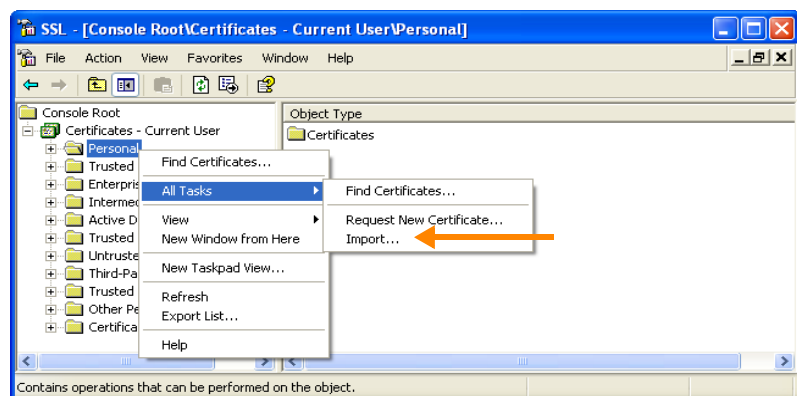
Illus. 22 Starting import of an SSL certificate
(example for MY USER ACCOUNT or CURRENT USER)

Illus. 23 and 24 show the results of import.

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12 see .print Engine manual (Page 28)
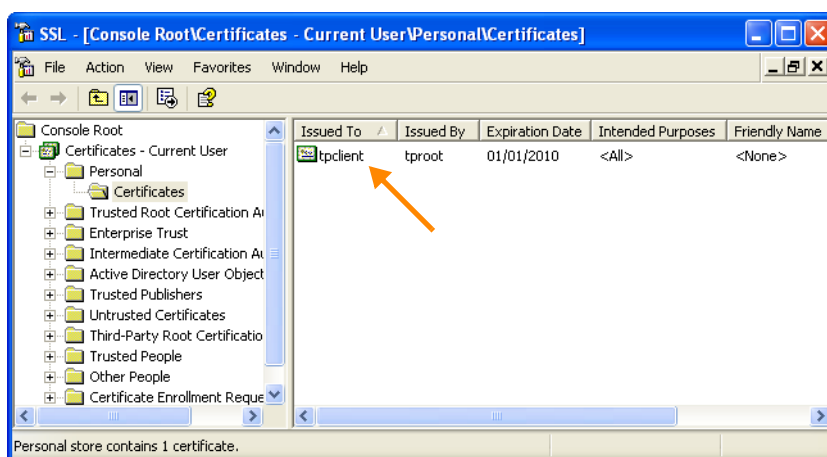
Illus. 23 SSL certificate imported to a client machine
(example for MY USER ACCOUNT or CURRENT USER)
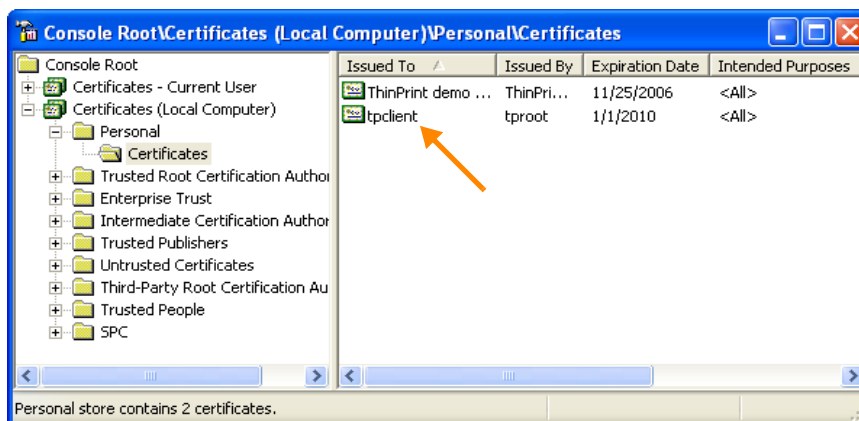
Illus. 24 SSL certificate imported to a client machine
(example for COMPUTER ACCOUNT or LOCAL COMPUTER)

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 with the Custom Installation Wizard[13] or manually as follows:

1. After the certificate has been imported, create the following Registry entry on the client machines with REGEDIT (Illus. 25; data type: reg_sz):

   `hkey_local_machine\software\`**`thinprint\client`**`\CertName`

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13 See the Preconfiguration and unattended installation of .print Client Windows white paper.
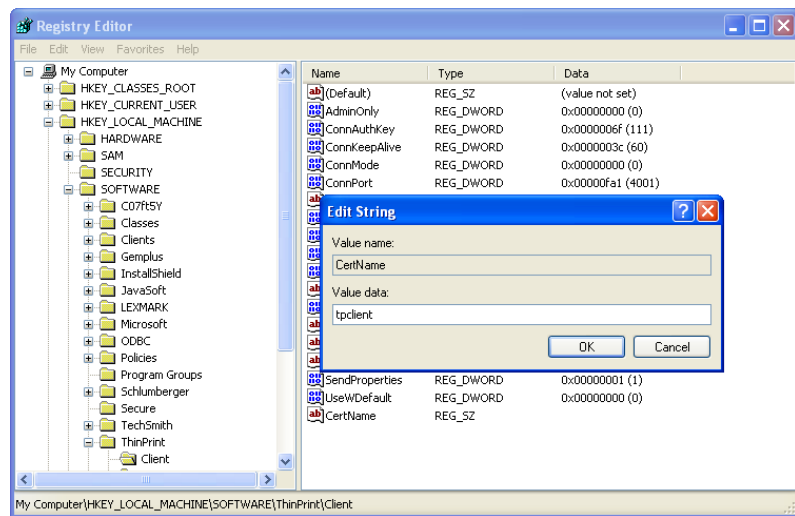
Illus. 25 Registry entry for SSL encryption on Windows clients
(example for `tpclient` certificate)

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. 23 and 25).
3. Restart .print Client Windows (Page 15).

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. This can be done manually (Illus. 26 or Page 36) or by using the Custom Installation Wizard 7.0 or 7.0 V (see the Preconfiguration and unattended installation of .print Client Windows white paper).

– 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. 26).
– 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. 27).
– Now, the selected machine is ready for remote configuration (Illus. 28).
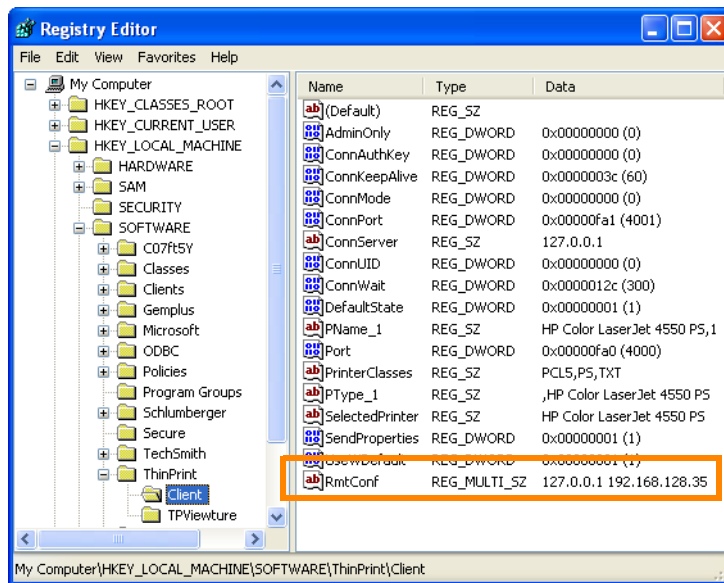
Illus. 26 .print Client machine:
Registry entry RMTCONF added for remote configuration of .print Client
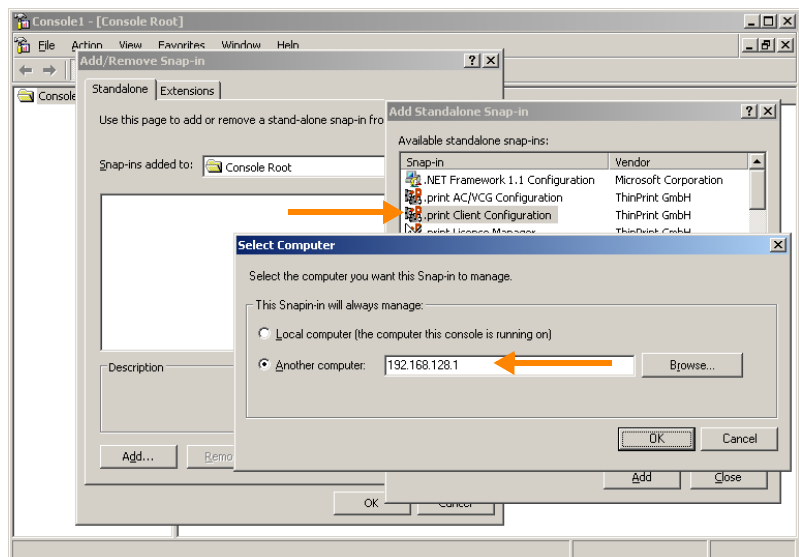
Illus. 27 .print Engine machine: Open the MMC, select .print Client snap-in and enter
the address of the client machine to configure
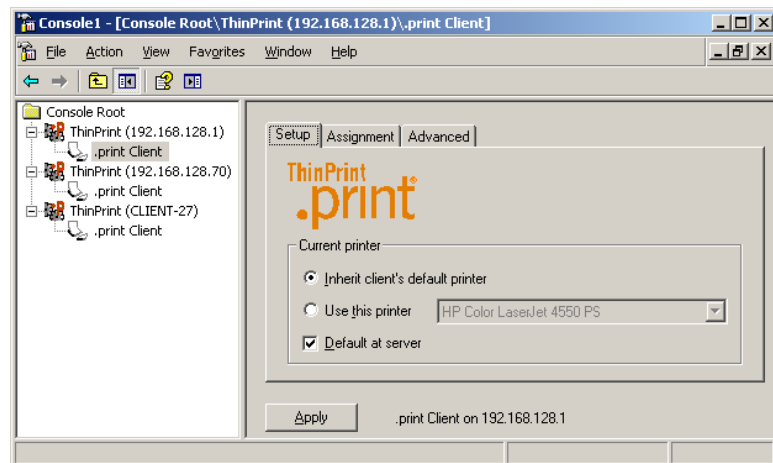
Illus. 28 .print Engine machine: Remote configuration of a .print Client

.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. 29). 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, PDAs, 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 <u>Windows computer as a .print Client Gateway</u> white paper.
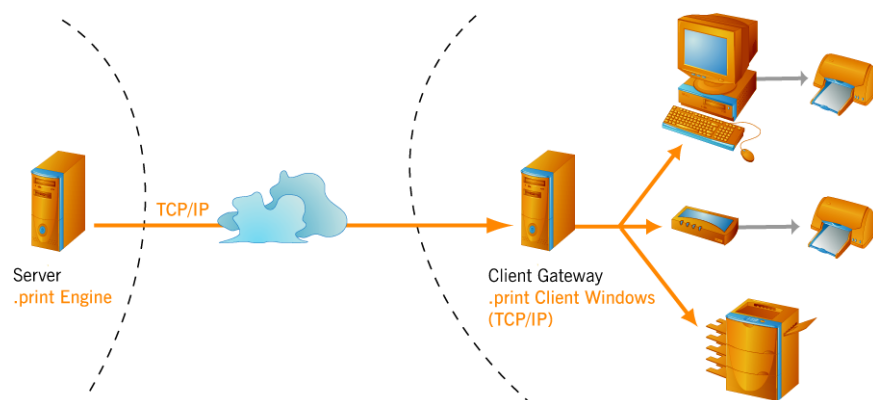
Illus. 29 Windows computer as a .print Client Gateway (example)

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. 30).

More information can be found in the .print Connected Gateway manual and in the SEH TPG60/120 as a .print Client Gateway white paper.
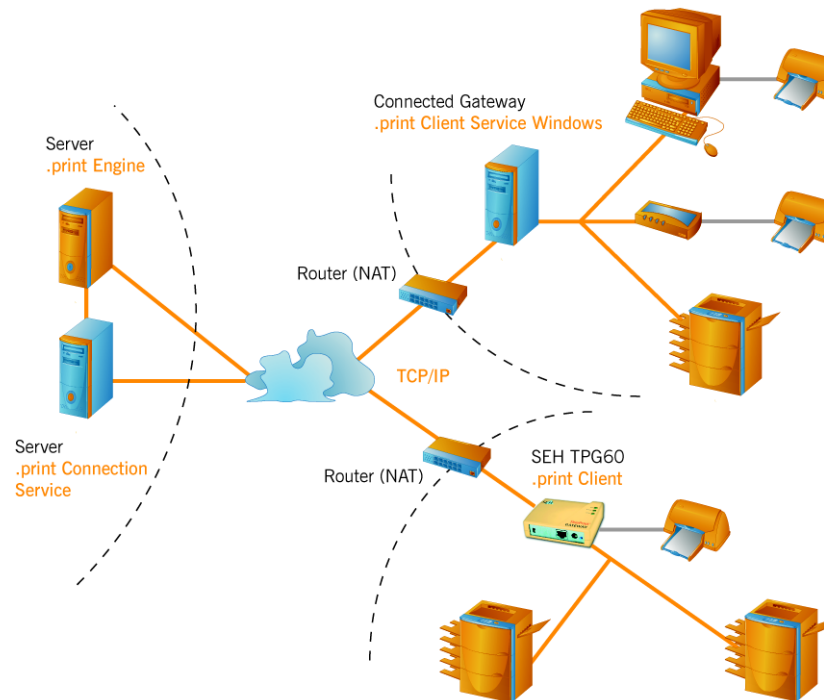
Illus. 30 Windows machine and SEH TPG60 as .print Connected Gateways (example)

Appendix

Customer service and technical support

Customer Service   www.thinprint.com/?s=8&lc=61
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/→ FIND PRODUCT
→ <product name>→ MANUAL(S):

- .print Client Service Windows
- .print Application Server Engine
- Cortado Corporate
- .print RDP Engine
- .print Virtual Desktop Engine
- .print Desktop Blade Engine
- .print Tracking Service
- Remote Desktop Suite Standard
- Remote Desktop Suite Premium
- .print Server Engine
- .print Engine Unix
- .print Engine AS/400
- .print RDP Engine XP
- .print Queue Manager
- .print Connected Gateway

White papers   The following white papers can be downloaded at www.thinprint.com/→ FIND PRO-
DUCT→ <product name>→ WHITE PAPERS or www.thinprint.com/→ SUPPORT &
SERVICES→ WHITE PAPER DOWNLOAD:

- 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

License agreement

ThinPrint End User License Agreement (EULA)

”.print Client Windows”

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Please read the following ThinPrint End User License Agreement (hereinafter referred to as "EULA") carefully before installation and/or use of the Software ".print Client Windows", its possibly integrated add-on programs and any media, material, online or electronic documentation (hereinafter jointly referred to as "Software") as specified in section 4 of the EULA.

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1.6 If the Software is marked "School Version", End User is only entitled to the use described in 1.1–1.3, if End User uses the Software as "Entitled User in an Approved Educational Establishment". To obtain the entitlement mentioned in sentence 1, End User has to apply in writing to ThinPrint GmbH, Alt-Moabit 91a/b, 10599 Berlin, Germany.

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3. Licensing

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The ".print Client Windows" is an additional software component of the ".print"-product line that provides services and functions on a computer.

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6.1 The Software only has to perform those functions mentioned and described in the manual without error.

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7. Liability

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10. Scope of the EULA

The EULA ultimately stipulates all rights of use of the Software as well as any other right and/or obligation of End User and ThinPrint, as long as deviant written agreements and conditions individually agreed between the Parties do not exist. The EULA supersedes any and all previous oral or written agreements, information or offers concerning the Software.

11. Place of Jurisdiction/Applicable Law

The EULA and its implementation shall be construed and interpreted in accordance with German Law and be subject to the exclusive jurisdiction of the Courts of Berlin, Germany. Any terms of the CISG (United Nations Convention on Contracts for the International Sale of Goods) are applicable, if and insofar as they include mandatory law.

12. Severability Clause

If any one or more of the provisions contained in the EULA shall, for any reason, be held invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect the remaining provisions of the EULA, but the EULA shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein, unless the deletion of such provision or provisions would result in such a material change so as to cause completion of the transactions completed herein to be unreason-

able. In lieu of such invalid, illegal or unenforceable provision shall be added a provision similar in terms to such provision as may be valid, legal and enforceable and suiting the Parties contractual interests best.
ThinPrint GmbH, 10559 Berlin
November 2007/v2.2

Distributing .print Client

The program "Custom Installation Wizard" can be used together with the Preconfiguration and unattended installation of .print Client Windows white paper for presetting .msi-versions of .print Client Windows.

Custom Installation Wizard   The CUSTOM INSTALLATION WIZARD FOR .PRINT CLIENT WINDOWS .MSI FILES can be downloaded from: www.thinprint.com/→ SUPPORT & SERVICES→ SOFTWARE DOWNLOAD→ CONTINUE→ .PRINT CLIENT WINDOWS .MSI FILES.

Installing additional .print Client Windows types

It is possible to install several types of .print Client Windows on a single client machine. Thus you get a .print Client, that supports multiple protocols simultaneously (TCP/IP, ICA, and/or RDP).

1. Therefor run the .print Client installation program **Setup.exe** (not over CONTROL PANEL→ADD/REMOVE PROGRAMS). The menu in Illus. 31 appears. Or run the relevant **.msi file** (Pages 8 and 13).
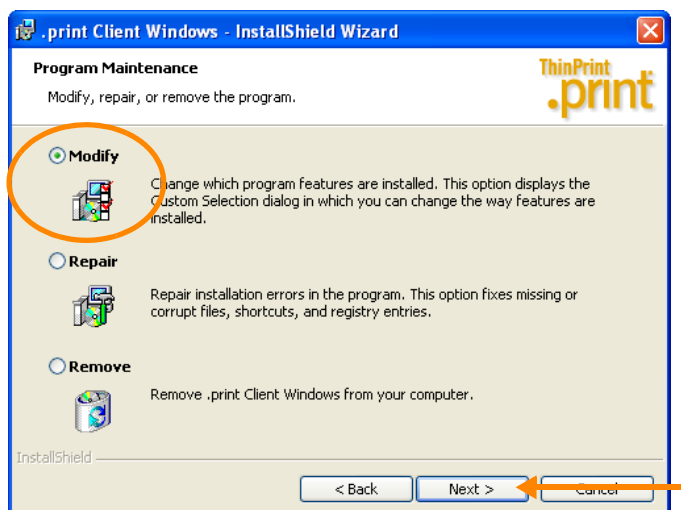
Illus. 31 Modify or repair the .print Client Windows

2. If you run the **Setup.exe** select MODIFY afterwards. The menu in Illus. 32 appears.

3. Select additional .print Client Windows types for installation.

Note! It is not possible to install both TCP/IP clients (.print Client Windows and .print Client Service Windows) on the same computer. Removing the checkmark (Illus. 32) will uninstall the .print Clients.
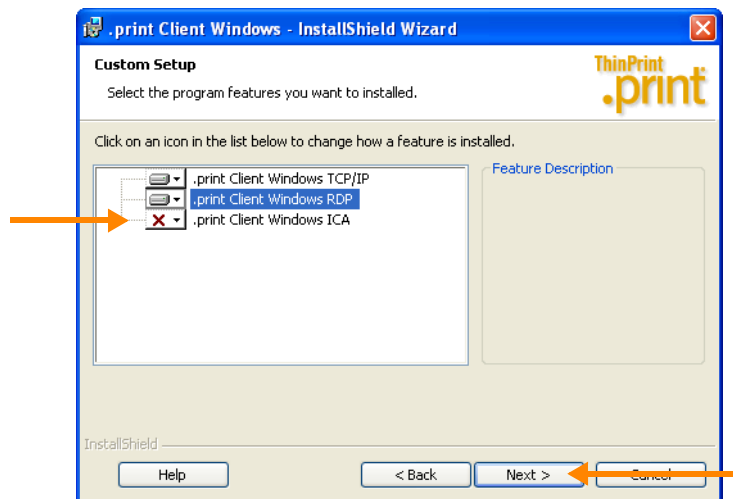
Illus. 32 Installing additional (or uninstalling) .print Client Windows types (example)

Repairing .print Client Windows

Should .print Client Windows ever quit functioning, you don't have to reinstall it – you can repair it. .print Client Windows are repaired exactly as described above, except that REPAIR is selected instead of MODIFY (Illus. 31).

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 7 or 13).

Uninstalling .print Client Windows

1. Select CONTROL PANEL→ADD OR REMOVE PROGRAMS, select .PRINT CLIENT WINDOWS[14], and click REMOVE (Illus. 33).

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14 formerly ThinPrint Client
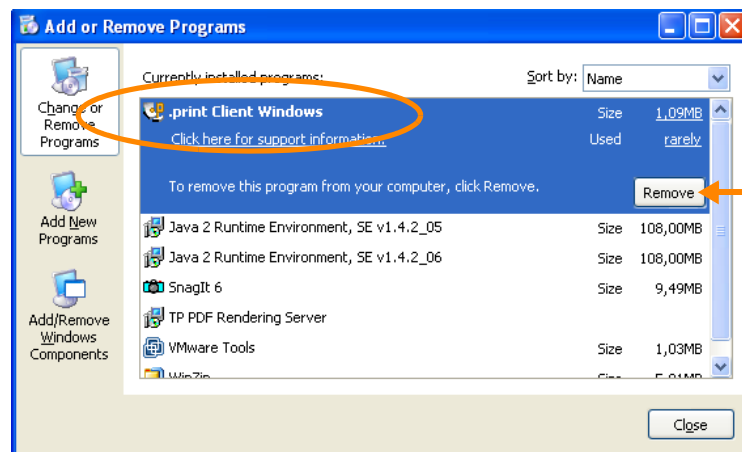
Illus. 33 Removing .print Client Windows (Example for Windows XP)

2. Did you use the Setup.exe for installation the menu in Illus. 34 appears. Select REMOVE and then NEXT.
3. Confirm the following windows with REMOVE and FINISH.
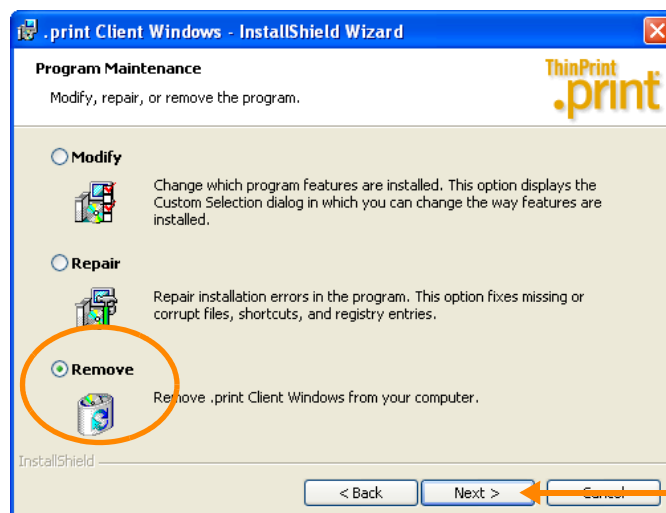
Illus. 34 Deleting .print Client(s) Windows

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	Type	Default value
AdminOnly	ADMINISTRATORS ONLY	Restricts client configuration to administrators only	reg_dword	0
Bandwidth	BANDWIDTH	Client-side bandwidth setting (bit/s or bps)	reg_dword	none
ConnAuthKey	AUTHENTICATION KEY	Value can be defined by the admin on the connection server; otherwise it's irrelevant for the first logon, but may **not** 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 SVC)	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 unambiguous ID must be assigned for all clients (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 16	reg_dword	1

Name	Menu item (.print Client Manager)	Description	Type	Default value
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
PTSPort	PRINT-TO-SCREEN	Print-to-Screen interface (e.g. COM2, RIM_USB); not .print Client Windows 7.0 V	reg_sz	none
PType_*n*	CLASS (ASSIGNMENT)	Assigned printer class (*n* corresponds to *n* from PName_*n*) plus printer driver name	reg_sz	none
Selected-Printer	CURRENT PRINTER	.print Client's default printer	reg_sz	UseWDefault
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 by the Custom Installation Wizard or have to be created manually under:

hkey_local_machine\software\thinprint\client

Name	Menu item (Custom Instal-lation Wizard)	Description	Type	Default value
CertName (Windows 2000 and later)	SSL ENCRYPTION → CERTIFICATE NAME	Name of the imported SSL/TLS certifi-cate; Page 23	reg_sz	none
CERTSTORE (.print Client Windows 7.0 V and later)	CERTIFICATE STORE	0 = use the user's certificate store 1 = use the computer's certificate store Note: Permissions has to be assigned to the certificate (see the Creating SSL cer-tificates for printing with .print white paper).	reg_dword	0
DefPrintState	PRINTER SELEC-TION	Value for the automatic selection of all newly installed printers for Auto-Connect; 1 = enabled	reg_dword	none
HKCU	PRIORITY FOR SAV-ING SETTINGS	1= .print Client configuration is user specific saved under: hkey_current_user\software\thin-print\client	reg_dword	0
NewID	ASSIGN PRINTER ID	Specifies the starting value for printer ID assignment	reg_dword	none
PreviewPrinter	PREVIEW PRINTER FOR OUTPUT GATEWAY	Specifies whether a preview should be displayed on the client computer when using ThinPrint Output Gateway,	reg_dword	none
RmtConf	REMOTE CONFIGU-RATION	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 24	reg_multi_sz	none

Name	Menu item (Custom Installation Wizard)	Description	Type	Default value
SetIDList	MODIFYING THE PRINTER LIST	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 Page 14) has a higher priority than these settings.	reg_dword	none
StartDelay	START DELAY	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
WATCHPRINT-ERS (.print Client Windows 7.0 V and later)	PRINTER LIST UPDATE	1 = .print Client updates its printer list automatically (as soon as a printer is added to or deleted from the machine) 0 = .print Client updates its printer list only if it is restarted or its "Reload Printers" option is executed	reg_dword	0

hkey_local_machine\software\thinprint\tpviewture

Name	Menu item (Custom Installation Wizard)	Description	Type	Default value
Move	POSITION	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	SIZE	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 + possible − not possible	Network protocol			.print AutoConnect	Compression and streaming	Bandwidth control	SSL/TLS encryption	Output Gateway	.print Viewture	Virtual Channel Gateway	Connection Service
	ICA	TCP/IP	RDP								
Windows (TCP/IP)[a]	−	+	−	+	+	+	+	+	+	−	+
Windows (ICA)	+	−	−	+	+	+	+	+	+	+	−
Windows (RDP)[b]	−	−	+	+	+	+	+	+	+	+	−
Service Windows (TCP/IP)[a]	−	+	−	+	+	+	+	+	−	−	+
ActiveX Windows (TCP/IP)[a]	−	+	−	+	+	+	+	+	+	−	+
Linux (TCP/IP)[a]	−	+	−	+	+	+	+	−	−	−	+
Linux (RDP)	−	−	+	+	+	+	+	−	−	+	−
Java (TCP/IP)[a]	−	+	−	+	+	+	+	−	−	−	+
Java as an applet (ICA)	+	−	−	+	+	+	+	−	−	+	−
Win16 (TCP/IP)[a]	−	+	−	+	+	+	−	−	−	−	−
Win OS/2 (TCP/IP)	−	+	−	+	+	+	−	−	−	−	−
MS-DOS (TCP/IP)[a]	−	+	−	+	+	+	−	−	−	−	−
Windows CE (TCP/IP)[a]	−	+	−	+	+	+	−	−	−	−	−
Windows CE (ICA)	+	−	−	+	+	+	−	−	−	+	−
Windows CE (RDP)	−	−	+	+	+	+	−	−	−	+	−
Windows Mobile (TCP/IP)[a]	−	+	−	+	+	+	−	−	−	−	−
Windows Mobile (ICA)	+	−	−	+	+	+	−	−	−	−	−
Windows Mobile (RDP)	−	−	+	+	+	+	−	−	−	−	−
ActiveX Windows Mobile (TCP/IP)[a]	−	+	−	+	+	+	−	−	−	−	+
LPD device	−	+	−	−	+[c]	+	−	−	−	−	−

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