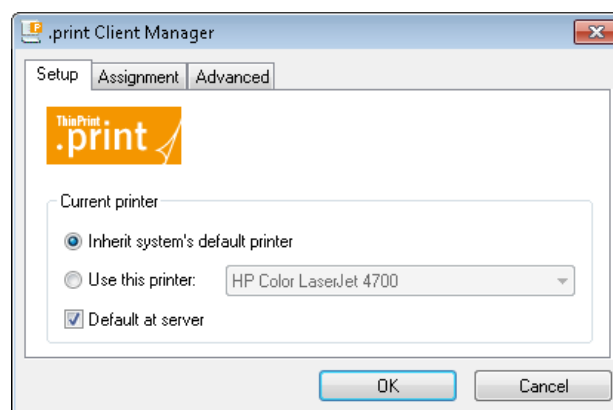


Preconfiguration and unattended installation of .print Client Windows

(version 8.0)



.print Client Manager v8.0

This document describes the unattended installation of .print Client Windows with the option of preconfiguration. With unattended installation, an installation is started, e.g. from the Windows command prompt or with a script.

So that no input is needed during installation, all data necessary for installation can be entered in advance. Appropriate tools for .print Clients Windows enable creation of a sample configuration as a Windows Installer transformation file (.mst file) for the .print Client Windows installation routine. This enables the installation and distribution of a completely preconfigured .print Client Windows.

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Safety warning

All ThinPrint products are pure software solutions. For safety warnings for your hardware, please consult the technical documentation provided by the respective manufacturer of each hardware device and component.

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Foreword

ThinPrint .print is a software solution for comfortable print management. It comprises two main components: the server component .print Engine and the client component .print Client; both will be installed with setup routines. To simplify installation in large networks, ThinPrint .print also allows the unattended installation and therefore easy distribution of both components.

This white paper describes two possibilities of unattended installation of .print Client under Windows: with and without preconfiguration. You can also make unattended changes to the configuration later on.

When you install the .print Client **without preconfiguration** ([Page 6](#)), the default settings will be used for the .print Clients ([Page 11](#)). If you decide to install **with preconfiguration**, a Windows Installer transformation is necessary ([Page 8](#)). Transformation files can be used to perform an unattended installation of the .print Client with a .msi file including pre-settings. Transformation files end with the file extension .mst.

Why preconfiguration?

The objective of unattended installation is to roll out and to use .print Client immediately without user interaction. In most cases, the default settings are sufficient: The print data of .print Engine will be decompressed by .print Client. The client printers will be created or mapped into a terminal or a virtual desktop session, while default printer will be retained.

If these settings are not sufficient, a preconfiguration can make sense – instead of local or remote configuration of each .print Client. A couple of .print Client parameters can be set with its installation using the .msi file. For all further settings, one should use a tool for generating .mst files. This tool is able to preconfigure all of the .print Client settings – you can even set further values in the Windows Registry which are not changeable with .print Client Manager user interface.

Preconfiguration can also be useful when .print Connection Service shall be used, because specific settings on .print Client are necessary. Or if you want to print with encryption (SSL/TLS), the name of the imported client certificate can be set here. More information can be found in the section *Unattended installation with preconfiguration* ([Page 8](#)).

Available .msi files for installation of .print Client Windows

ThinPrint offers the following .msi files for the installation of .print Client Windows. The files can be downloaded at www.thinprint.com → SUPPORT → CLIENTS & TOOLS. An .msi file is necessary in any case – independent of installation with or without preconfiguration.

Version 8.0 of .print Client Windows can be installed on all Windows machines running Windows XP/2003 and later. For older Windows versions the .print Client Windows version 7.0 can be used; for unattended installation of this version a different white paper is available.

Windows version	Installation as an application		Installation as a Windows service	
	English	German	English	German
32 bit (x86)	<ul style="list-style-type: none"> • TPTCP_x86_en u.msi • TPICA_x86_enu .msi • TPRDP_x86_en u.msi 	<ul style="list-style-type: none"> • TPTCP_x86_de u.msi • TPICA_x86_deu .msi • TPRDP_x86_de u.msi 	<ul style="list-style-type: none"> • TPSRV_x86_en u.msi 	<ul style="list-style-type: none"> • TPSRV_x86_de u.msi
64 bit (x64)	<ul style="list-style-type: none"> • TPTCP_x64_en u.msi • TPRDP_x64_en u.msi 	<ul style="list-style-type: none"> • TPTCP_x64_de u.msi • TPRDP_x64_de u.msi 	<ul style="list-style-type: none"> • TPSRV_x64_en u.msi 	<ul style="list-style-type: none"> • TPSRV_x64_de u.msi

Process

.print Client Windows can be installed with or without preconfiguration. The settings can also be changed later on unattended.

Installation without preconfiguration If you want to run an installation of .print Client Windows without preconfiguration, simply copy the relevant .msi installation file (see above) to the client machines and start unattended installation from the command prompt or with a batch file. Therefore, you can use different Windows or ThinPrint .print parameters (see [Page 6](#)).

Installation with preconfiguration If you want to run an installation of .print Client Windows with preconfiguration, the process is as follows:

1. Creation of a Windows Installer transformation file (with the file extension .mst) for a client type (see above) using an appropriate tool (incl. saving the selected installation options in the transformation file).
2. Software distribution/installation
Copying the .msi, the .mst, and the .bat files (if desired) to the client machines and starting unattended installation.

Preparing to install

For installation of .print Client Windows, you need the installation file for the desired type and language version of .print Client Windows ([Page 4](#)). Download it from the ThinPrint website and save it in a local directory.

If the ICA type of .print Client Windows shall be installed you should know the path to the Citrix ICA client on the target machines; alternatively you can install the Citrix ICA client additionally on the machine on which the Wizard will be installed. Administrator permissions are required to install .print Clients Windows.

Installation of a preconfigured file requires deinstallation of all (old or recent) .print Clients on client machines. This can also be done unattended, as described on [Page 18](#). The values of .print Client in the Windows Registry will not be deleted. A list of Registry values can be found on [Page 11](#).

Unattended installation without preconfiguration

Unattended installation without preconfiguration means that .print Client Windows will be rolled out to client machines with default settings. A list of available .msi files is found on [Page 4](#). An appropriate administration tool is used for distributing .print Client through the network, e.g. SMS¹.

Calling up the .msi File

For unattended installation, use the command prompt, as shown in the following example.

1. Copy the .msi file of the desired .print Client Windows to a directory on the target computers.

Note! As an alternative to copying the .print installation files to the clients, you can also leave them on the server and map the relevant drives on the clients.

2. Start the .print Client installation routine with:
`<system directory>\msiexec /qn /i <path to .msi file>`

Example for the ICA type TPICA_x86_enu.msi:

```
c:\Windows\System32\msiexec /qn /i "c:\.print Clients\TPICA_x86_enu.msi"
```

Parameters

In contrast to unattended installation with preconfiguration, here you can use specific parameters in the command line call-up of the .print Clients. The following shows the use of Windows Installer properties for preconfiguration with two examples. Furthermore, two ThinPrint .print properties can also be used, as described below.

¹ Systems Management Server by Microsoft; see also "Distributing Software in the Active Directory" ([Page 15](#))

*Windows Installer
parameters***Naming an installation directory**

If you want to name an installation directory for the unattended installation of .print Client Windows, start the .print Client installation routine with:

```
<system directory>\msiexec /qn /i <path to .msi file>  
INSTALLDIR=<installation path>
```

Example for TPICA_x86_enu.msi:

```
c:\Windows\System32\msiexec /qn /i c:\.print Cli-  
ents\TPICA_x86_enu.msi INSTALLDIR="C:\Program  
Files\ThinPrint Client"
```

A complete list of Windows Installer parameters can be found in the Windows help section by entering the keyword "msiexec".

*.print parameters***Installation with path to Citrix ICA Client for the ICA type of .print Client Windows**

If multiple Citrix ICA Clients are installed on the target computer (e.g. general or web client) or if problems occur during automatic path detection, you can run unattended installation for the ICA type of .print Client Windows with input of the path to the desired Citrix ICA Client. Start the installation routine with:

```
<system directory>\msiexec /qn /i <path to .msi file>  
CITRIXCLIENTDIR=<path to citrix ica client>
```

Example for TPICA_x86_enu.msi:

```
c:\Windows\System32\msiexec /qn /i "c:\.print Cli-  
ents\TPICA_x86_enu.msi" CITRIXCLIENTDIR="C:\Program  
Files\Citrix\ICA Client"
```

Installation of .print Client Service Windows

Under certain conditions the installation of .print Client Service Windows requires input of a user (with administrator permissions) and password. This information can be entered at the start of the unattended installation. Start the installation routine with:

```
<system directory>\msiexec /qn /i <path to .msi file>  
SRVUSER=<user name> SRVPASS=<password>
```

Example for TPSRV_x86_enu.msi:

```
c:\Windows\System32\msiexec /qn /i "c:\.print Cli-  
ents\TPSRV_x86_enu.msi" SRVUSER="admin"  
SRVPASS="pw_admin"
```

If the account (SRVUSER + SRVPASS) has been omitted the NETWORK SERVICE account will be used. To specify more .print specific preconfigurations, we recommend use of a transformation file (see [Page 8](#)).

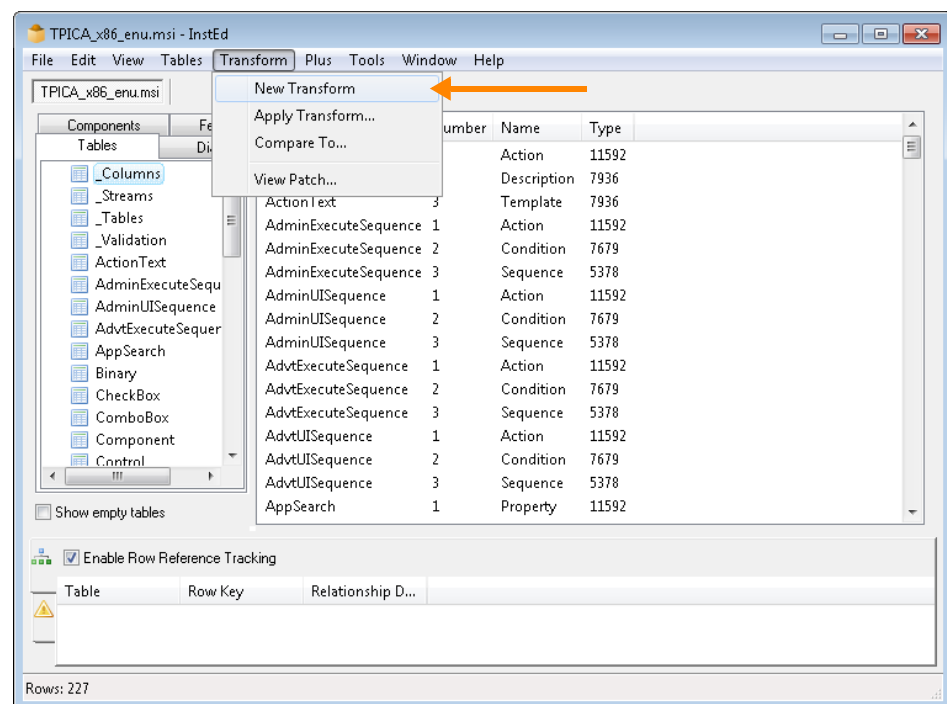
Unattended installation with preconfiguration

An appropriate tool (e.g. Orca or InstEd) lets you create a sample configuration for a selected .print Client Windows type as a Windows Installer transformation (.mst) file. The tool's user interface offers you the option of making several configuration settings for .print Client Windows and these settings may be saved to an .mst file. By installing the selected .msi file using this .mst file, you can install a preconfigured .print Client Windows on the target computers – attended or unattended.

Creating a transformation file

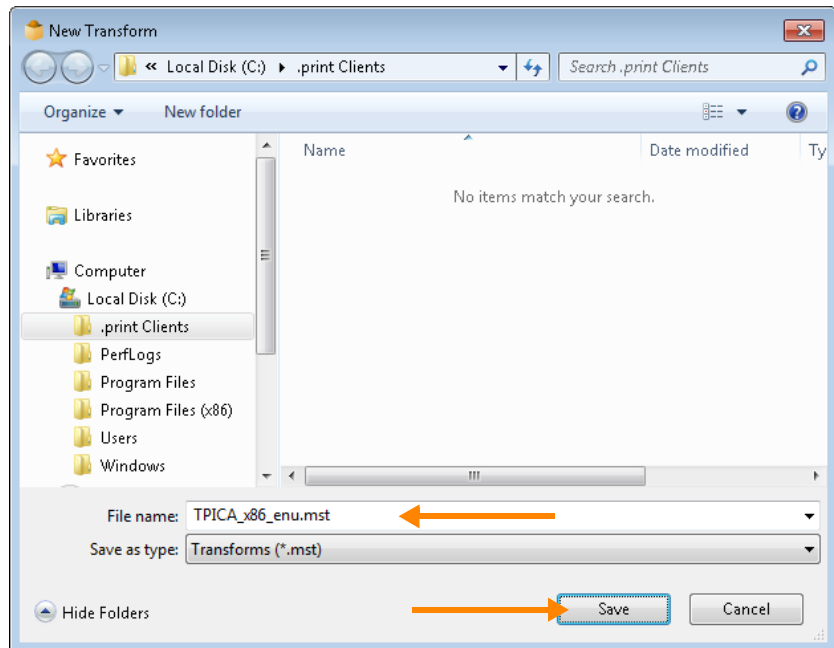
Create an .mst file for the .print Engine's .msi file. To do so, use a (free) transformation tool – e.g. *Orca* (from Microsoft) or *InstEd* (www.instedit.com). Here is an example for InstEd:

1. Run InstEd.
2. Select FILE→ OPEN, mark the installation software of .print Client (e.g. TPICA_x86_enu.msi), and click OPEN to confirm. The window in Illus. 1 will appear.



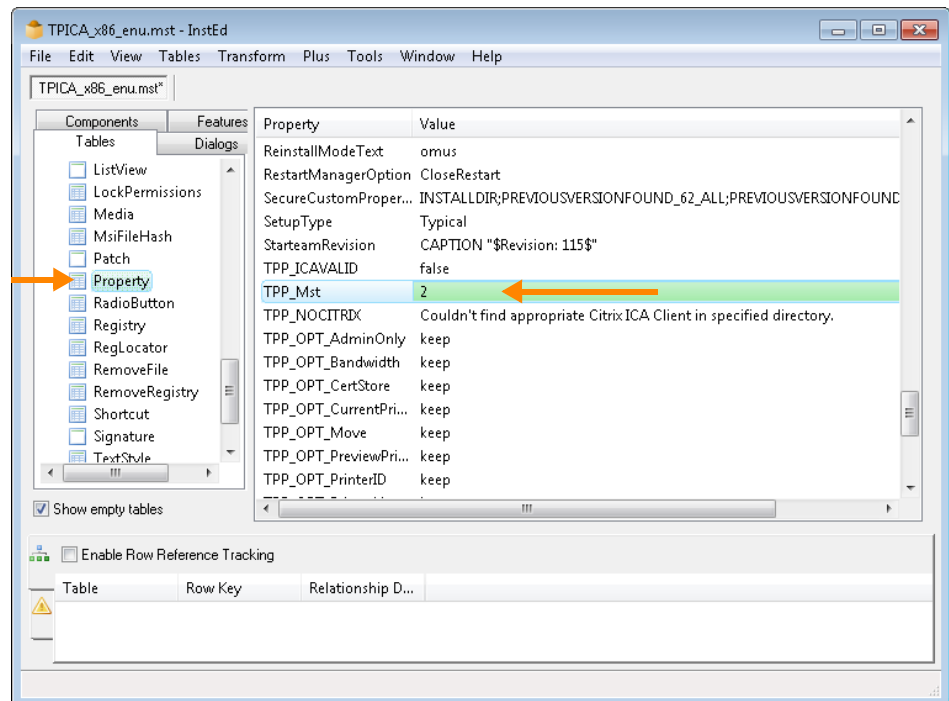
Illus. 1 InstEd: Adding a transform file (example)

- Select TRANSFORM→ NEW TRANSFORM, and enter a file name for the .mst (transform) file (Illus. 2). The names of .mst and of .msi file should match.



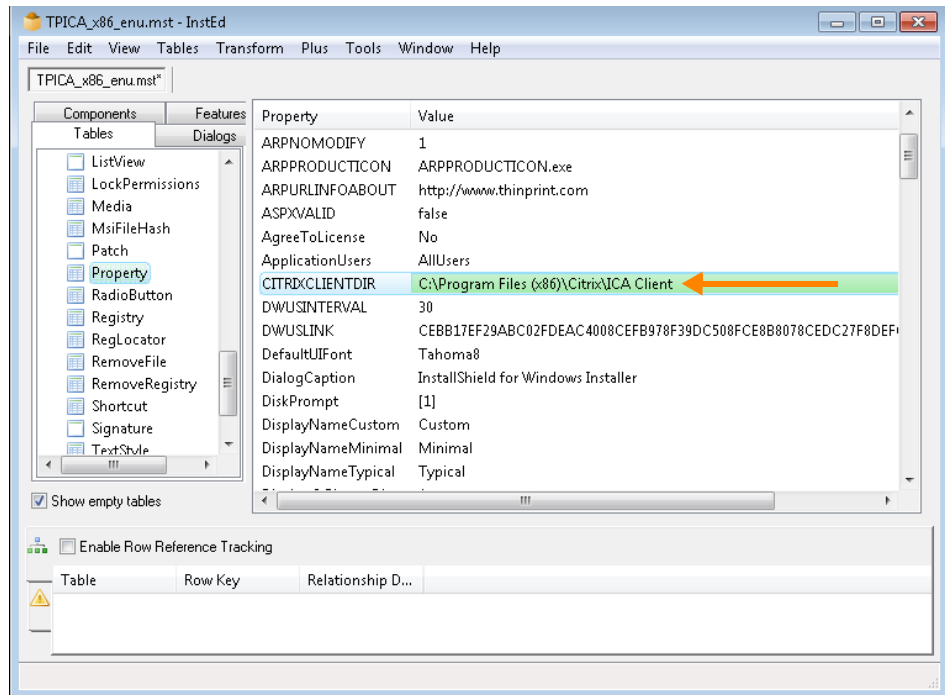
Illus. 2 InstEd: Enter a file name for the transform file (example)

3. Select PROPERTY→ TPP_MST and enter 2 as value (Illus. 3).



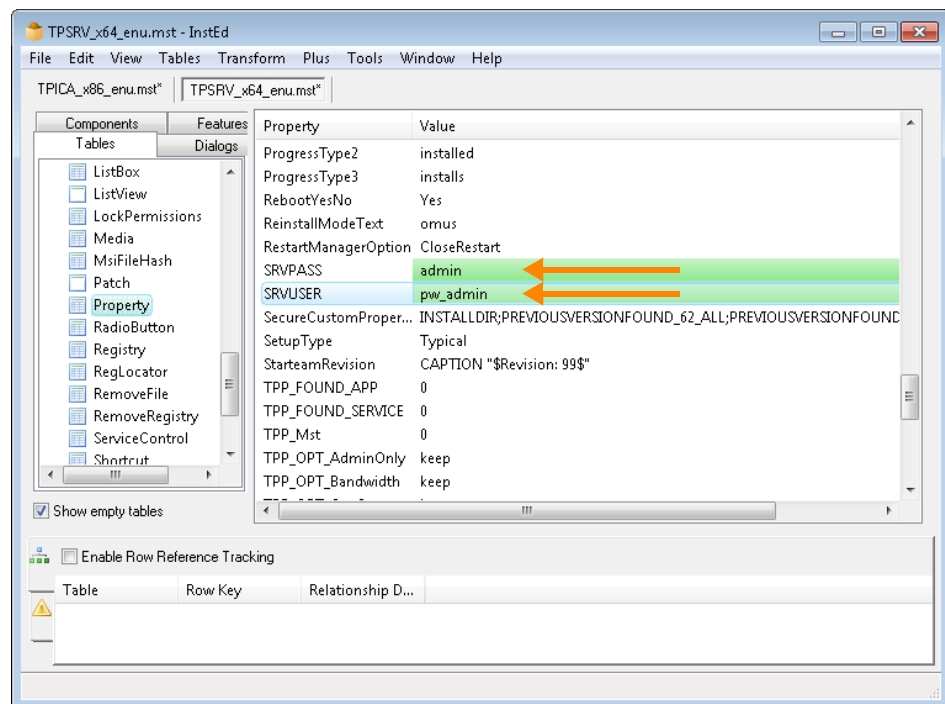
Illus. 3 InstEd: Set the property TPP_Mst to 2

4. With .print Client ICA type optional you can specify an alternative path to the Citrix ICA Client under PROPERTY→ CITRIXCLIENTDIR (Illus. 4).



Illus. 4 InstEd: alternative path to the Citrix ICA Client

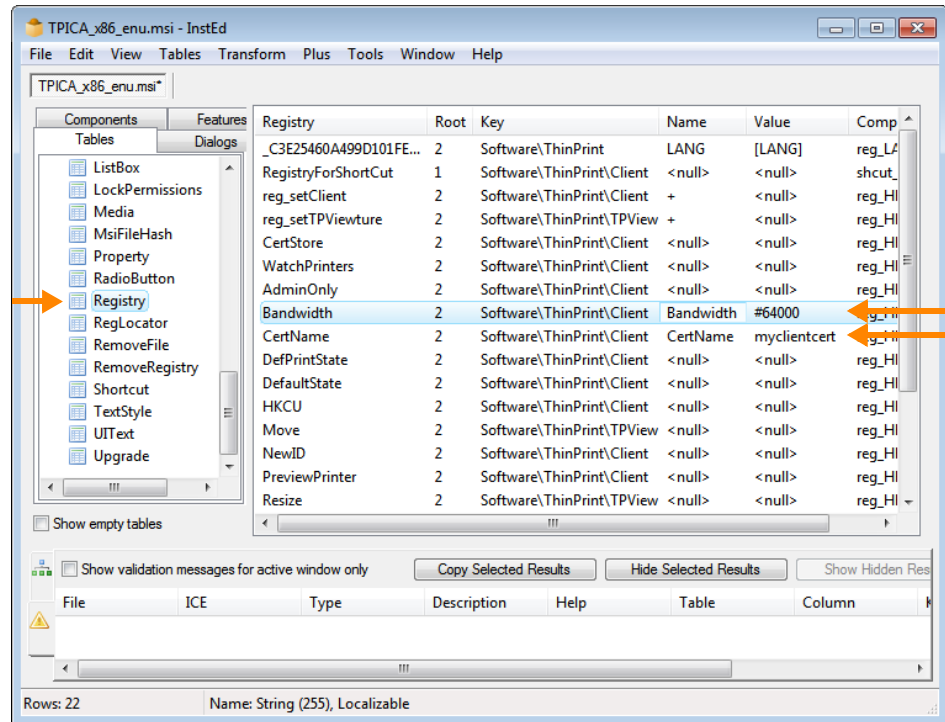
5. With .print Client Service Windows optional you can specify an account the Windows service has to be run with. To do so, select PROPERTY→ SRVUSER and PROPERTY→ SRVPASS (Illus. 5); see also "Installation of .print Client Service Windows" ([Page 7](#)).



Illus. 5 InstEd: user name and password for installation as a service

6. For all .print Client types optional you can specify the .print Client's Registry values under REGISTRY (Illus. 6). See the table in the following chapter.

Note: Numbers (reg_dword) must have a hash mark (#) as prefix. Enter the registry key's name in the NAME column.



Illus. 6 InstEd: Configure Registry values (example)

Save the .mst file. Afterwards you can distribute the .msi file of .print Client together with its .mst file to the target computers.

Note! There are many possibilities for software distributing, for example from the command prompt, using a batch file, the Active Directory ([Page 15](#)), or third-party solutions as [ASDIS](#).

Relevant Registry values of .print Client Windows

The following table gives an overview of all the Registry values of the .print Client that can be changed with a transformation file. The first column of the table contains the Registry value, the second column gives a description of the value, and the third gives the default value. Default value NONE means that this value is only set if required.

More information about the individual values is found in corresponding sections of the manual [.print Client Windows](#) or [.print Client Service Windows](#). The Registry values of the .print Client can be found in the following Registry key:

hkey_local_machine\software\thinprint\client

Registry value	Description	Default value
ADMINONLY	Limits .print Client configuration to administrators (1 = admins only)	0
BANDWIDTH	Client-side bandwidth setting (bit/s; 0 = .print Engine settings)	0
CACHEPRINTER-PROPERTIES	Enables cache (accelerates sending of printer properties)	1
CERTNAME	Name of the imported SSL/TLS certificate (Windows 2000 and later)	None
CERTSTORE	0 = use the user's certificate store 1 = use the computer's certificate store Note: Permissions have to be assigned to the certificate.	0
ConnAuthKey	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.	0
ConnKeepAlive	Interval for refreshing the connection; has to be lower or equal than .print Connection Service's "KeepAliveTO" (server side); (in seconds)	60
CONNMODE	3 = use of the .print Connection Service (Static Mode) 0 = receiving of print data without .print Connection Service (Listen Mode) 1 = Static and Listen Mode simultaneously (= 3 + 0)	0
CONNPORT	TCP port for communication with the .print Connection Service (Static Mode); must be the same as the "ClientPort" of the .print Connection Service (server-side)	4001
CONNSERVER	IP address of the computer on which the .print Connection Service is running	127.0.0.1
CONNUID	Client ID for the static mode – an unambiguous ID must be assigned for all clients	0
CONNWAIT	Wait time for connection retries if .print Connection Service cannot be reached (in seconds)	300

Registry value	Description	Default value
DEFAULTSTATE	Specifies whether the "current printer" is to be defined as default printer in a remote session by .print AutoConnect	1 (enabled)
DEFPRINTSTATE	Value for automatically selecting new printers on the client machine – thus enabled for .print AutoConnect (value = 1)	None
HKCU (not for .print Client Service Windows)	1 = configuration of .print Client is saved for specific user under: hkey_current_user\software\thinprint\client 0 = configuration of .print Client is saved under: hkey_local_machine\software\thinprint\client	None
NEWID	Specifies the starting value for automatic printer ID assignment	None
PORT	TCP port for communication with .print Engine (Listen Mode); must be the same as "Port" in .print Engine for a normal ThinPrint port	4000
PREVIEWPRINTER	Creates a new printer that opens the preview when using ThinPrint Output Gateway. From the preview, any printer can be used for printing. Select a high printer ID not already assigned to another printer (e.g., 99).	None
RMTCONF	IP address of the administration computer from which the .print Client may be remotely configured (multiple addresses possible)	None
SELECTEDPRINTER	CURRENT PRINTER (.print Client's default printer)	UseW-Default
SENDPROPERTIES	Option for sending properties from the native printer driver (when using .print AutoConnect)	1 (enabled)
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	None

Registry value	Description	Default value
STARTDELAY	Specifies whether and how long .print Client startup should be delayed after user login (in seconds; applies only to .print Client Windows TCP/IP)	None
USEWDEFAULT	Specifies whether Windows default printer is to be used as "current printer"	1 (enabled)
WATCHPRINTERS	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	0

The Registry values of the ThinPrint Output Gateway component of .print Client can be found in the following Registry key:

```
hkey_local_machine\software\thinprint\tpviewture
```

Registry value	Description	Default value
MOVE	Specifies whether the page is to be moved to the printable area of the client printer (1 = move; for use with ThinPrint Output Gateway only)	None
RESIZE	Specifies whether the page is to be scaled to the printable area of the client printer (1 = scale; for use with ThinPrint Output Gateway only)	None

Rolling out the preconfigured client

The transformation tool has now created a Windows Installer transformation file (.mst file). The files are found in the same directory as the .msi files (see example in Bild 7). To roll out the configured .print Clients, you will need both .msi file and .mst file – and a batch file, if desired.

There are many possibilities for distributing, for example from the command prompt, with a batch file, Active Directory ([Page 15](#)), or third-party solutions as [ASDIS](#).

When installing the .msi file via the command prompt you can also specify the .mst file:

```
<system directory>\msiexec /qn /i <path to .msi file>  
TRANSFORMS=@<name .mst file>
```

Example for TPICA_x86_enu.mst:

```
c:\Windows\System32\msiexec /qn /i c:\.print Cli-  
ents\TPICA_x86_enu.msi TRANSFORMS=@"TPICA_x86_enu.mst"
```

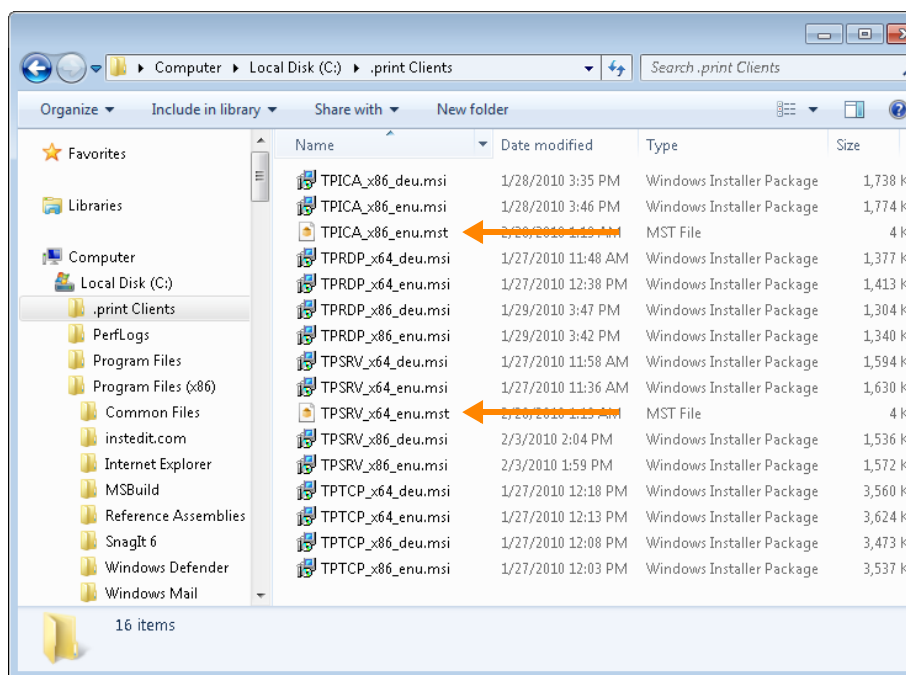


Bild 7 Two .mst files created

Appendix

Customer service and technical support

www.thinprint.com → SUPPORT

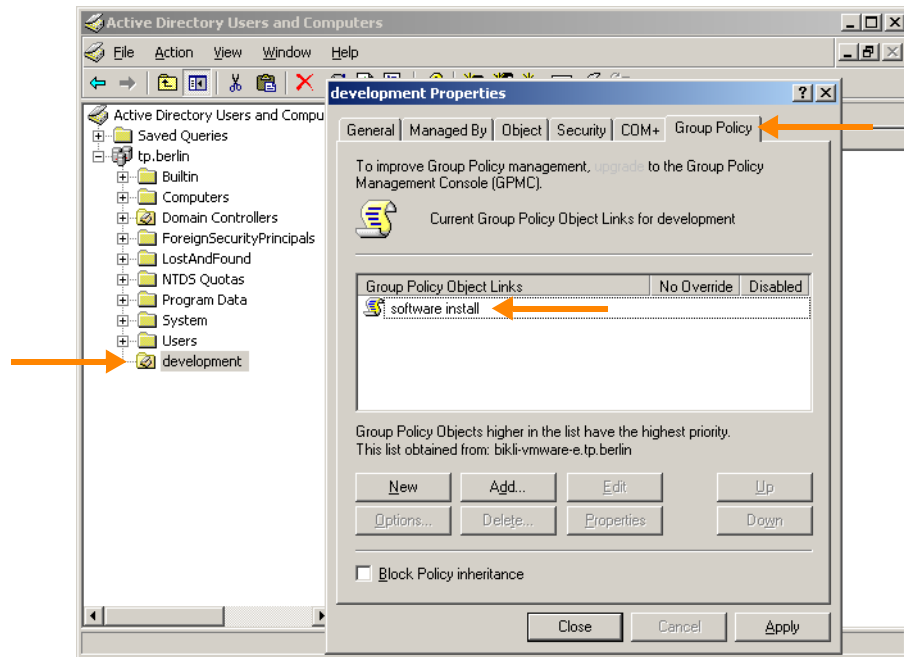
support@thinprint.com

Distributing Software in the Active Directory

Below is an example of how you can distribute files via your Active Directory. In this example, the file TPICA_x86_enu.msi should be installed unattended and without preconfiguration. The Active Directory is the directory service from Microsoft and can be used without further licensing or installation.

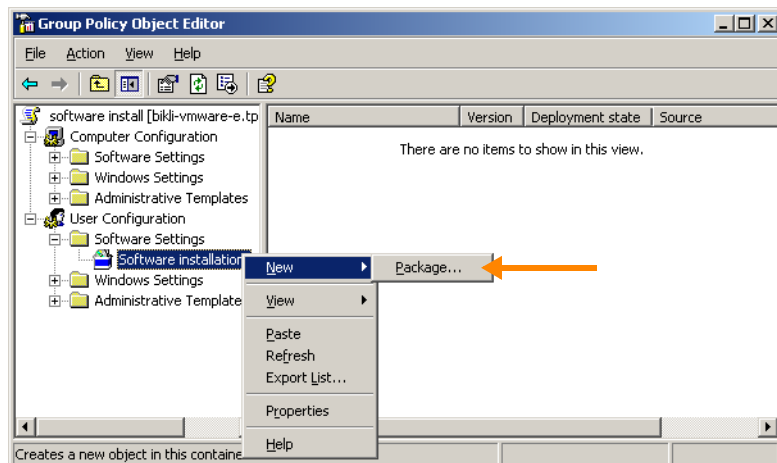
1. Copy the file TPICA_x86_enu.msi to a directory available to the user who is to receive the software.
2. Open the user administration of the Active Directory via ADMINISTRATIVE TOOLS → ACTIVE DIRECTORY USERS AND COMPUTERS.

With the right mouse button, select the properties of the respective organization unit (Illus. 8; here: DEVELOPMENT) that the group policy will be applied to and select the tab GROUP POLICY. You can set up a new group policy (with the NEW button) or use an already existing one – as in the example here SOFTWARE INSTALL.



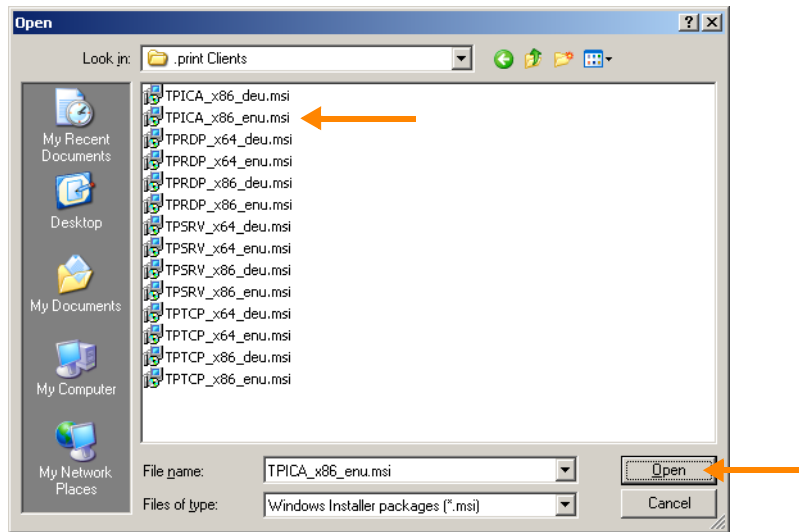
Illus. 8 Create group policy in the Active Directory (example)

3. Double-click on the group policy. It appears in the window in Illus. 9. Select USER CONFIGURATION → SOFTWARE SETTINGS → SOFTWARE INSTALLATION and then with the right mouse button NEW → PACKAGE.



Illus. 9 Select new software installation package

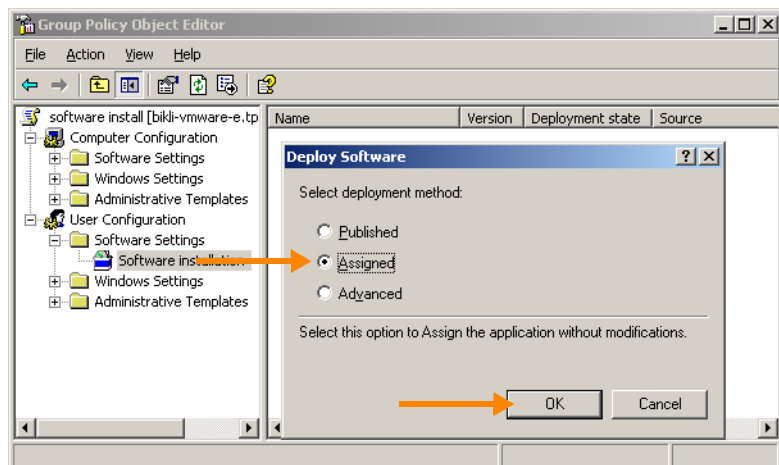
4. A window opens in which you can select the .msi file (Illus. 10). Click OPEN to confirm.



Illus. 10 Select .msi file (example)

5. When you select ASSIGNED in the next window (Illus. 11), the .print Client will be installed for the user without further inquiry. Click OK and close all windows.

Finish. At the next log-on, the selected .print Client will be automatically installed for all users of the selected organization unit.

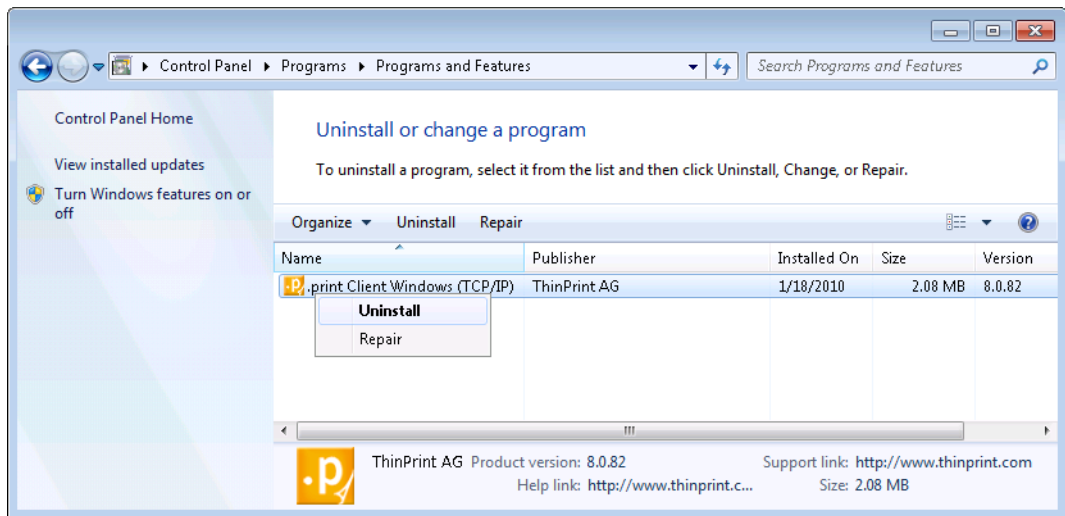


Illus. 12 ASSIGNED for immediate installation at the next log-on (example)

Uninstalling .print Client

Attended uninstallation

1. Select CONTROL PANEL → PROGRAMS → UNINSTALL A PROGRAM select .PRINT CLIENT WINDOWS, and click UNINSTALL (Illus. 12).



Illus. 13 Removing .print Client Windows (Example for Windows XP)

2. Confirm the following windows with REMOVE and FINISH.

Unattended uninstallation

An unattended uninstallation can also be performed for the .print Client. Enter the following in the command line:

```
<system directory>\msiexec /qn /x <path to .msi file>
```

Example for TPICA_x86_enu.msi:

```
c:\Windows\System32\msiexec /qn /x "c:\.print Clients\TPICA_x86_enu.msi"
```

Additional sources

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

Manuals The following manuals are available at www.thinprint.com/ → PRODUCTS → OVERVIEW → <product name>:

- .print Client Windows
- .print Client Service Windows
- .print Application Server Engine
- .print RDP Engine
- .print Server Engine
- .print Engine for VMware View
- .print Desktop Engine
- .print Connected Gateway

White papers The following white papers are available at www.thinprint.com/→ PRODUCTS→ OVERVIEW→ <product name>:

- Unattended installation and licensing of .print server components
- Creating SSL certificates for printing with .print
- Tips for configuring ThinPrint .print
- Windows machine as a .print Client Gateway