Desktop Extension 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
→	Consecutive menu or command
■	Enumeration, head note
Example	Example
– 1. 2.	Procedural steps
Page 5 www.cortado.com	Links

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Introduction

Why Desktop Extension?

Desktop Extension is a free add-on for various .print products. It can only be used together with one or more of the following products:

- .print Server Engine and/or
- .print Application Server Engine and/or
- .print Desktop Engine

Desktop Extension is designed for **virtual desktop environments** such as Citrix XenDesktop. It can however, also be used in environments with **real desktops** (see scenarios). Virtual desktops as well as workstations hereinafter referred to as “desktops”.

Components

The Desktop Extension contains the following .print components:

- .print AutoConnect
  (component for printer creation and mapping)
- ThinPrint Output Gateway
  (printer driver for Driver Free Printing)
- .print Virtual Channel Gateway
  (component for printing from print servers via ICA or RDP)
- Session-in-Session
  (component for printing from a second session via the firs session to the workstation)

With the Desktop Extension components installed, no administration is required on the desktops[1].

For AutoConnect configuration see Page 13. For Output Gateway or Virtual Channel Gateway functionality see the “.print Server Engine” manual and for Session-in-Session functionality see the “.print Application Server Engine” manual (Page 17).

1 Only the service is installed here from AutoConnect, the AutoConnect configuration follows in the print server environment with the assistance of the Active Directory’s Group Policies (GPO).

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Package contents

The *.print Server Engine* and the *.print Application Server Engine* version 8.0 product CDs contain:

- This manual
- The *Setup.exe* installation program for **Desktop Extension**

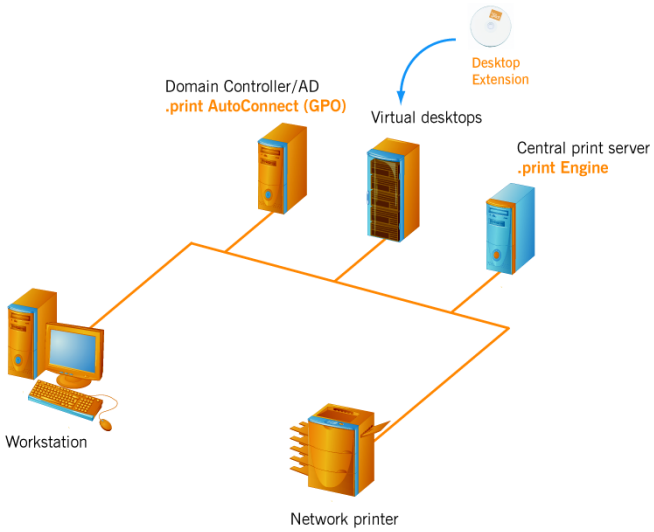
Scenarios

Below are three scenarios showing how Desktop Extension can be used. These are just a sample and other environments, including combinations are possible.

Scenario 1: Virtual desktop environments with print servers

You have one or more central print server on which .print Server Engine is installed. Employees work on virtual desktops – such as Citrix XenDesktop. In the session, printers on the print server which are shared, should be connected. Aside from this, print jobs should be transmitted via ICA or RDP. From Desktop Extension you need the **AutoConnect**, **Virtual Channel Gateway** and **ThinPrint Output Gateway** components. AutoConnect is configured using Group Policies in the Active Directory (Page 13).

Desktop Extension is installed on the virtual desktop (Illus. 1).



Illus. 1 Desktop Extension installation in virtual desktop environments with print servers (example)

Scenario 2: Workstation environments with print servers

Desktop Extension can be used with standard workstations (office PCs) as well as virtual desktop environments. Standard workstations can be used if printers are made available on a central print server and the .print Server Engine is used for print job transmission.

In this scenario, you install the **AutoConnect** and **ThinPrint Output Gateway** components from Desktop Extension (Illus. 2).

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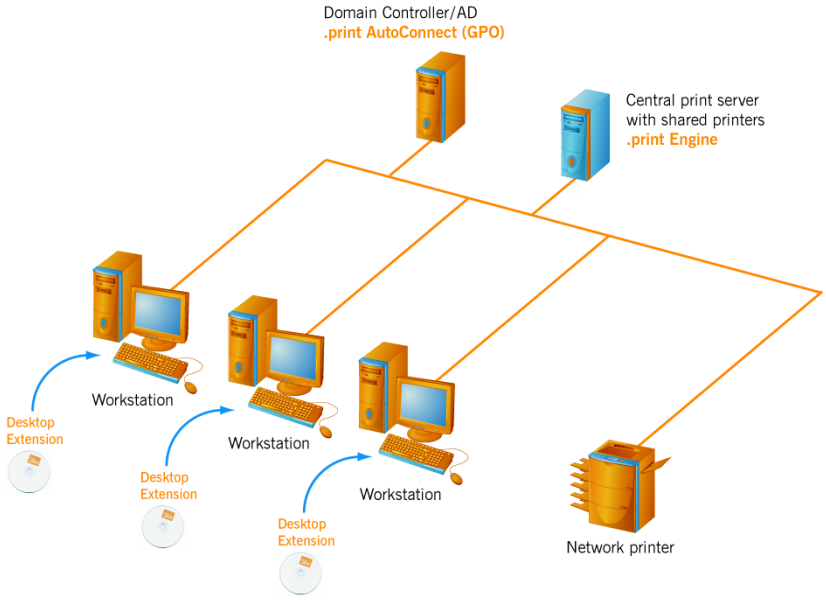
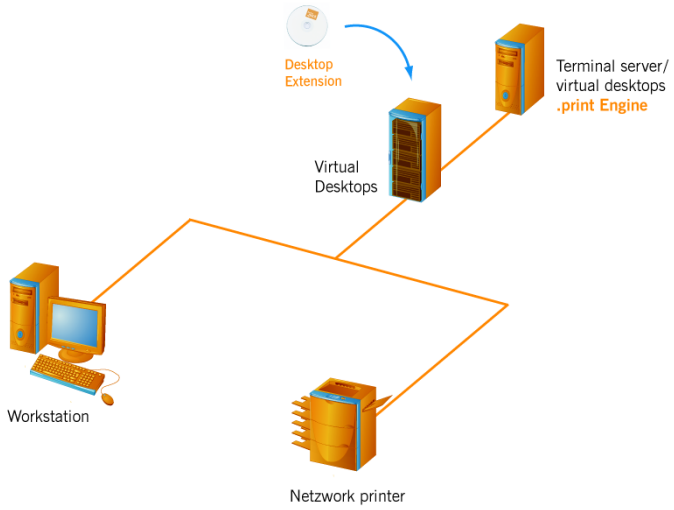


Illus. 2 Desktop Extension installation on workstations (example)

Scenario 3: Environments with virtual desktops and terminal servers

In Terminal server environments (without a central print server), you can use the **Session-in-Session** component with Desktop Extension. This means that from the workstation a session can be started to a virtual desktop, and from there another session to a terminal server or a further virtual desktop. With Session in Session, users have access to the printer of their workstation, even in the second session. This is possible if the .print Application Server Engine or the .print Desktop Engine is installed on the terminal server or the second desktop (Illus. 3).



Illus. 3 Desktop Extension installation in environments with multiple desktop sessions (example)

If **.print Desktop Engine version 7.6.x** is already installed on the desktop where you want to also install Desktop Extension, then not the complete Desktop Extension will be installed, **only** the **Session-in-Session and Virtual Channel Gateway** component.

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Installation

Technical requirements

ThinPrint .print requires the following:

- An environment with virtual desktops or workstations on which on of the following operating systems is running:
  - Windows XP
  - Windows Vista
  - Windows 7
- An installed .print Engine:
  - **.print Server Engine v8.0** (on a central print server) and/or
  - **.print Application Server Engine v8.0** (on a terminal server, for Session-in-Session) and/or
  - **.print Desktop Engine v7.6.x** (on a virtual desktop, for Session-in-Session)

See also the respective .print Engine manual (Page 17).

Supported desktop operating systems

- Windows XP x86/x64 with Service Pack 2 and later
- Windows Vista x86/x644 with Service Pack 1 and later
- Windows 7 x86/x64

Note! Install the **Citrix ICA Client** before Desktop Extension if sessions to terminal servers or desktops via ICA protocol are required.

Administrator permissions

Administrator permissions are required for all installation and configuration procedures. It is therefore best to log on to Windows as ADMINISTRATOR.

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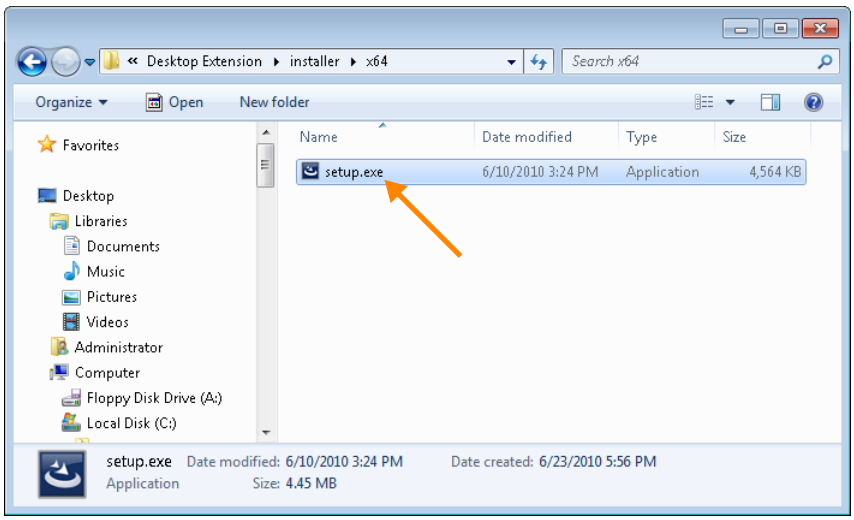
Installing Desktop Extension

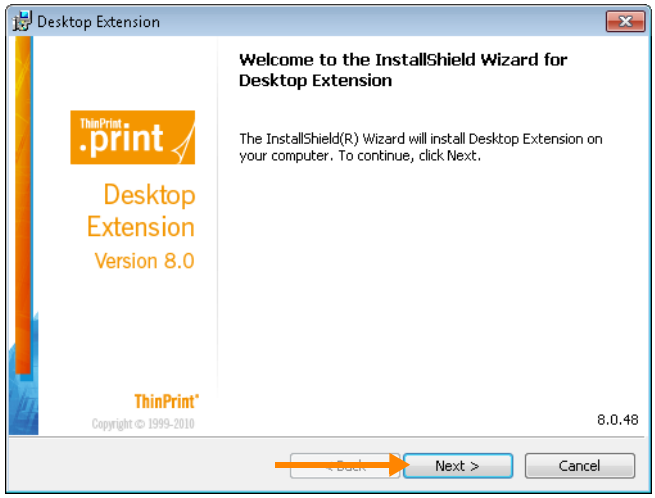
Desktop Extension can be installed on the virtual or real desktops. This can be done unattended; see the “Unattended installation and licensing of .print Engine components” white paper. Below, the installation using the InstallShield Wizard is described.

1. Copy the Desktop Extension to the desktop’s hard disk.
2. Start the *Setup.exe* file (Illus. 4).



Illus. 4 Start *Setup.exe*

3. Select a language. Click OK to confirm.
4. The Welcome windows will appear. Click NEXT to continue (Illus. 5).



Illus. 5 Start the InstallShield Wizard

5. Read the license agreement and accept it. Click NEXT to continue .

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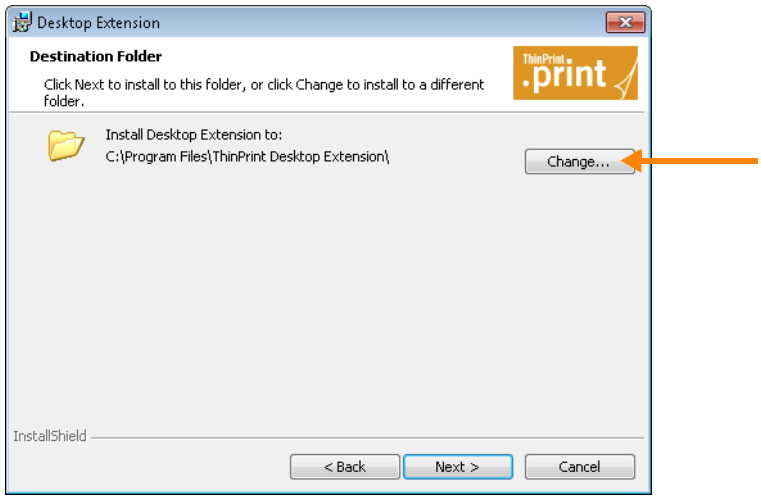
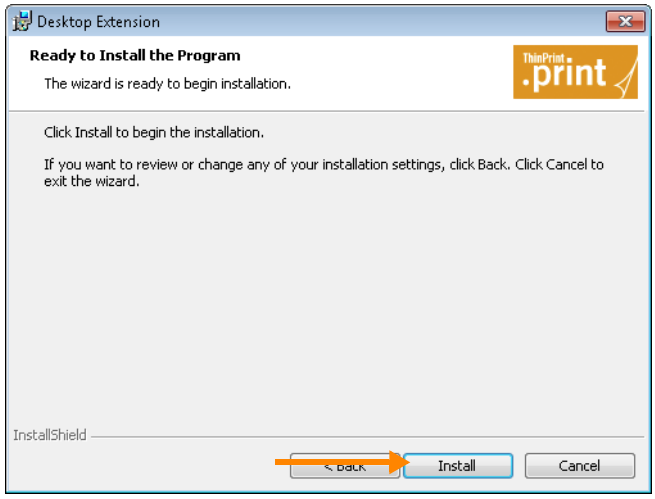
6. if you want to change the installation's destination folder click CHANGE. Click NEXT to continue (Illus. 6).



Illus. 6 Change the installation path if necessary

7. In the next windows click INSTALL to begin with the actual software installation (Illus. 7).
8. In the last window click FINISH and restart the machine afterwards.



Illus. 7 Begin the actual installation

Installing AutoConnect as a Group Policy Object

Copy the AutoConnect configuration tool onto the computer (in the Domain) on which you wish to edit your Group Policy Objects (GPOs) and register it.

1. Copy the following AutoConnect files into any directory:
   - **TPACGPo.dll** for the Dynamic Printer Matrix

   and
   - **TPACGPomap.dll** for Map Additional Printers

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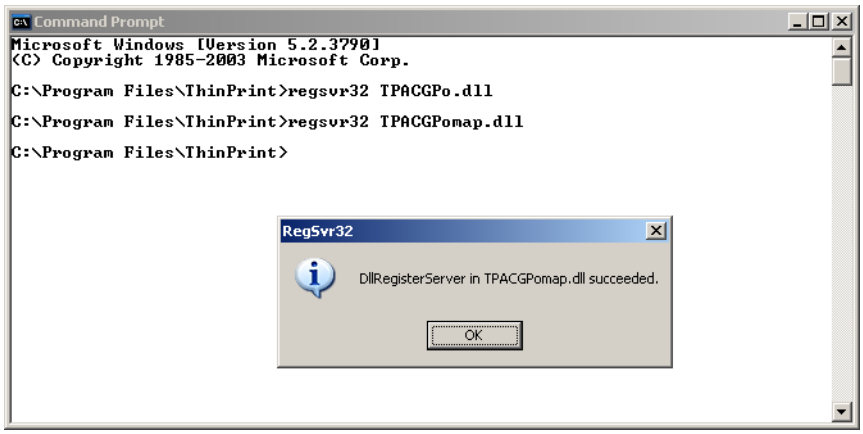
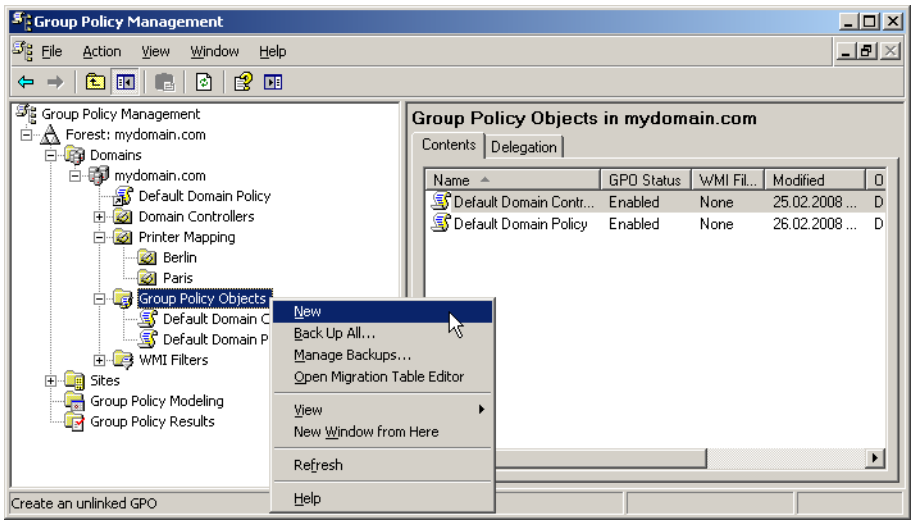
2. Register the files TPACGPo.DLL AND TPACGPomap.dll with REGSVR32 in the command prompt (Illus. 9).



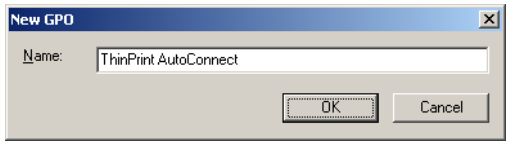
Illus. 8 Register AutoConnect files TPACGPo.dll and TPACGPomap.dll

3. Open the Group Policy Management. This is part of Windows Server 2008. For Windows Server 2003, you need to install the service GPMC.MSI which can be downloaded from the Microsoft website (a free download).



Illus. 9 Create a new Group Policy

4. Create a new Group Policy: Select NEW under GROUP POLICY OBJECTS (Illus. 10) and choose a name (Illus. 11).



Illus. 10 New AutoConnect Group Policy

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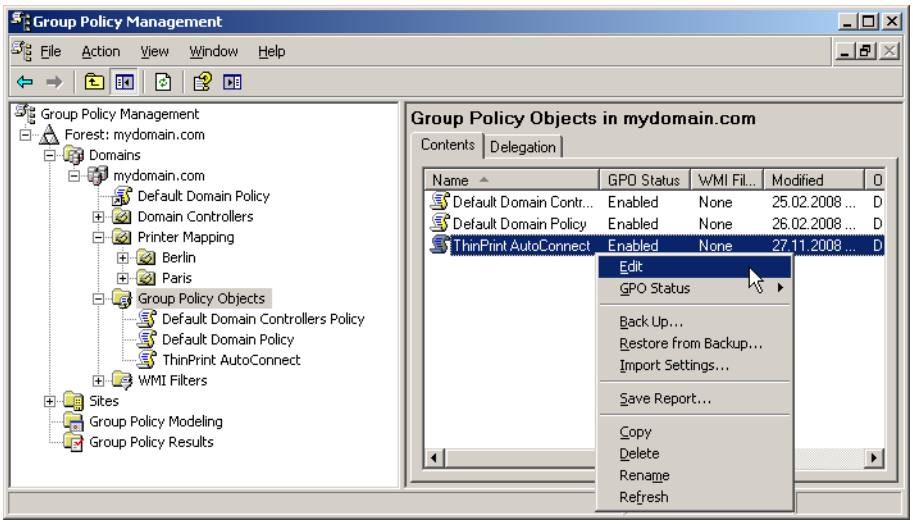
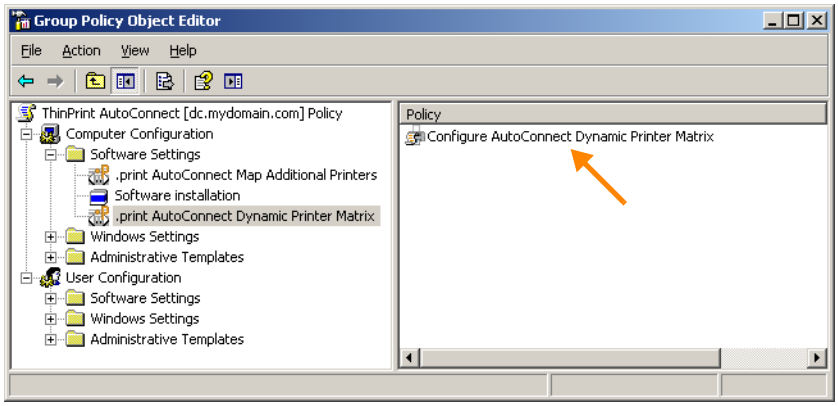
5. Select EDIT to configure the new AutoConnect Group Policy (Illus. 11). The GROUP POLICY OBJECT EDITOR will open.



Illus. 11 Configure new AutoConnect Group Policy

6. **Dynamic Printer Matrix:** Double-click CONFIGURE AUTOCONNECT DYNAMIC PRINTER MATRIX to edit this Group Policy (Illus. 12).
7. **Map Additional Printers:** Double-click CONFIGURE AUTOCONNECT MAP ADDITIONAL PRINTERS to edit this Group Policy (Illus. 13).



Illus. 12 Open Group Policy editor for Dynamic Printer Matrix

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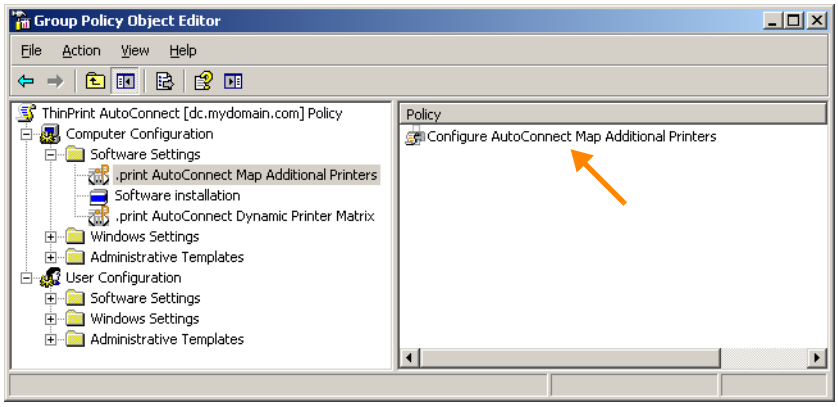
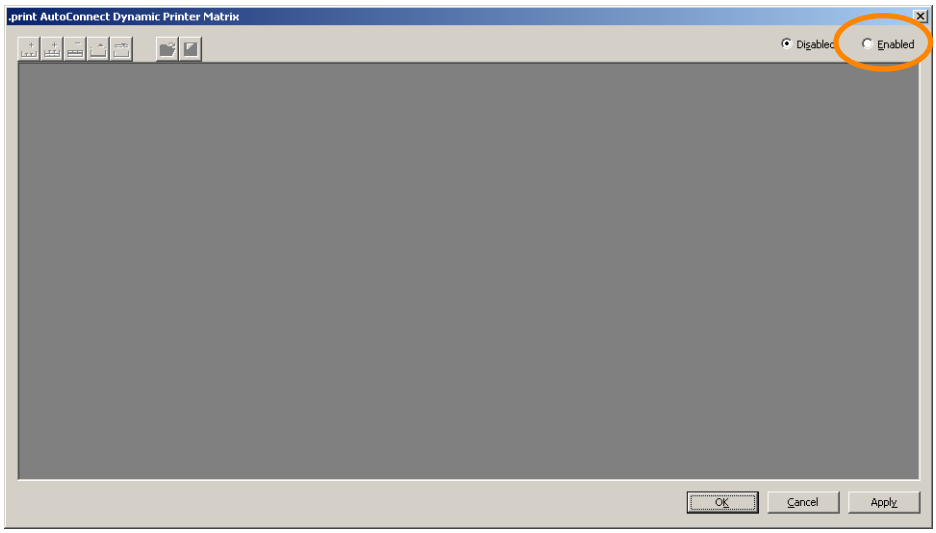


Illus. 13 Open Group Policy editor for Map Additional Printers

8. The respective table opens and is at first disabled. Select ENABLE in the upper right hand corner (Illus. 14 and 15).



Illus. 14 Enable Dynamic Printer Matrix

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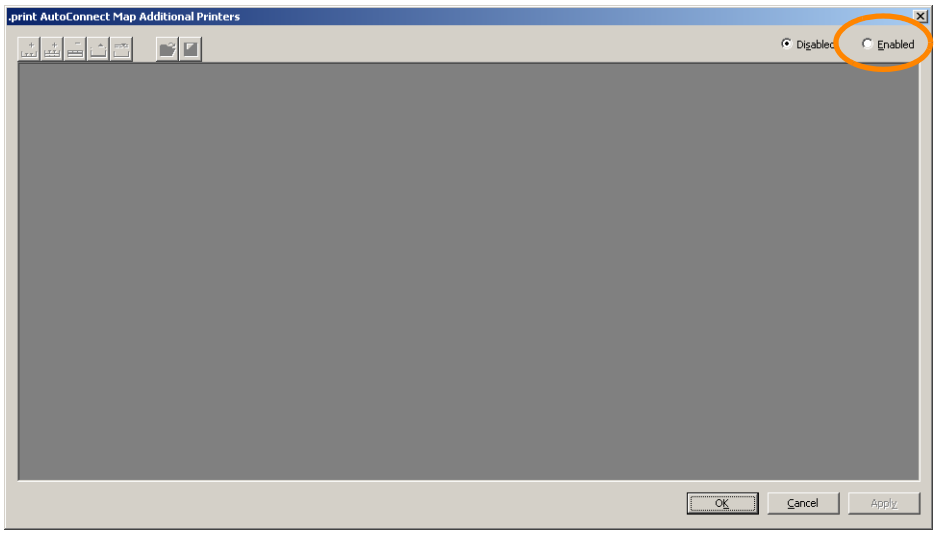

Illus. 15 Enable Map Additional Printers

Configuration

.print AutoConnect is already installed on virtual desktops running VMware View[2]. To manage AutoConnect for all desktops, you can configure it in Group Policies. When a user logs on, AutoConnect is sent dynamically to the user's virtual desktop. In a session, AutoConnect automatically creates the local printers of users working on a virtual desktop and can be used immediately. It makes the client printer mapping much easier, but it is optional.

Group Policies can be configured on any computer in the Active Directory, local or remote. We recommend configuring them directly on the Domain Controller (Active Directory Server). This process is described here.

Configuring AutoConnect

.print AutoConnect searches a respective entry in the **Dynamic Printer Matrix** for each printer activated in a workstation's .print Client – but not in the **Map Additional Printers** table. When the first entry in the table fits, the printer specified under TARGET is mapped into the session.

2 Under the condition that VMware Tools and View Agent 3.0.1 including Virtual Printing option are installed

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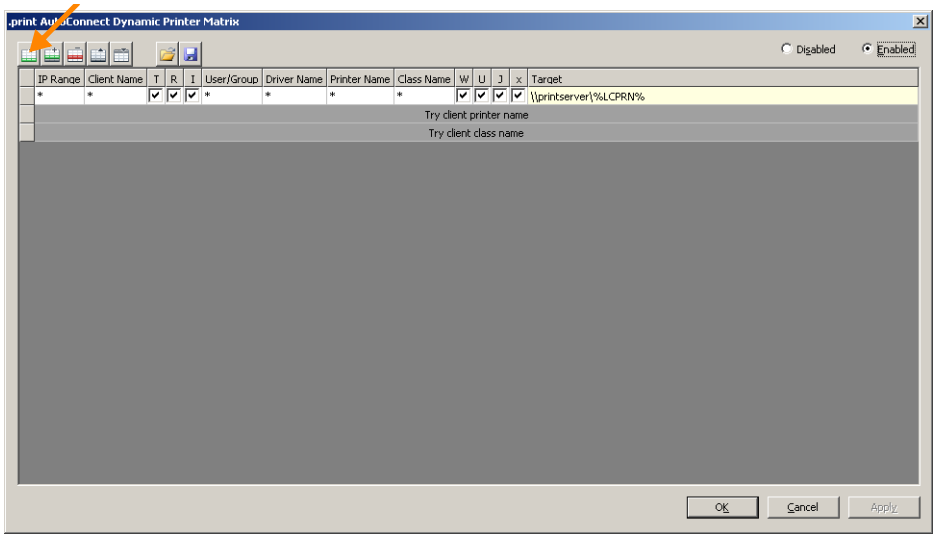
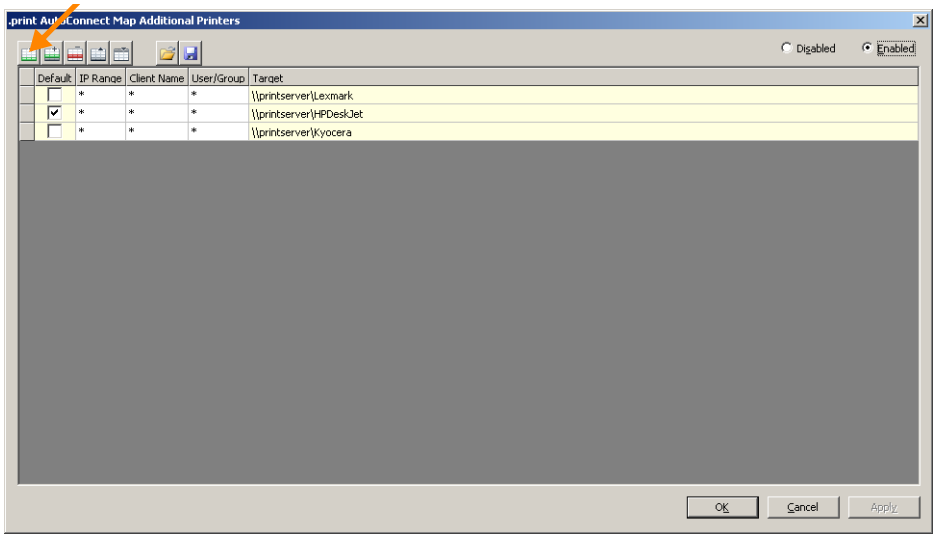
– Click on the first icon left on top to insert a new line (Illus. 16 and 17, arrow).



Illus. 16 Dynamic Printer Matrix with a variable



Illus. 17 Map Additional Printers with three printer shares and a default printer

In pure Windows environments it is possible that only one entry in the TARGET column of the **Dynamic Printer Matrix** is sufficient to map all printers of all .print Clients into the sessions:

\\PRINTSERVER\%LCPRN%
Example:
\\192.168.13.16\%LCPRN%

Here, *printserver* is the name of the central print server, the variable %LCPRN% stands for *Local Client Printer*, i.e. for the name of the printer on the workstation (= client printer).

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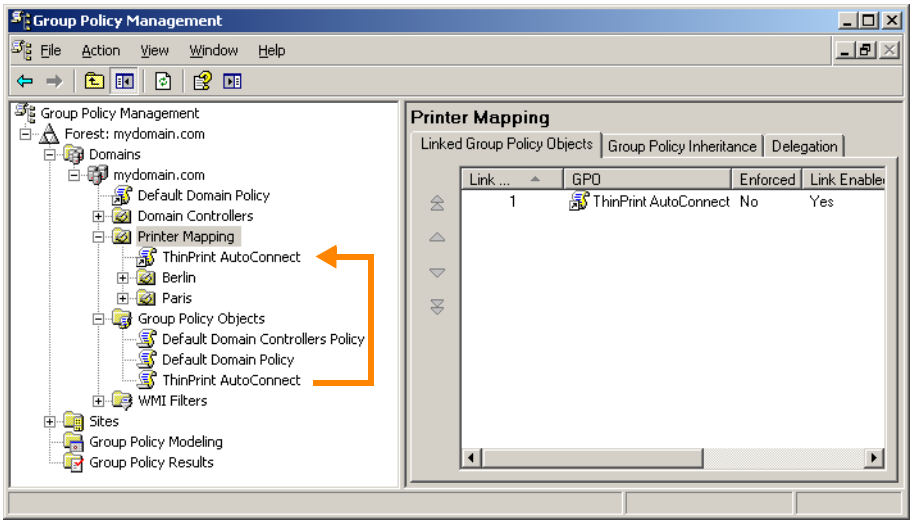
You can create one or more Group Policies for AutoConnect. The policy created here could be used for all branch offices and can therefore be linked with different Organizational Units (OUs).

Note! Using the DISABLED button at top right deletes all AutoConnect entries. As a precaution, save your configuration before, so you can import it later, if necessary.

Organizational Units in the Active Directory

Link the Group Policy here with the OU of your choice (Illus. 18). In this example, it is linked to the OU PRINTER MAPPING.



Illus. 18 Link Group Policy to an OU

– To activate the Group Policies **restart the respective virtual machines**.

Note that the AutoConnect OUs are **computer specific**, and not user specific. Therefore the **virtual desktops** in the domain must be located under ACTIVE DIRECTORY USERS AND COMPUTERS in their respective OUs (Illus. 19).

AutoConnect settings can be found in Group Policy Object Editor under COMPUTER CONFIGURATION → SOFTWARE SETTINGS.

Note! Updating **Group Policies** can take some time. You can speed up the process with the following entry in the command line: `gpupdate /force`.

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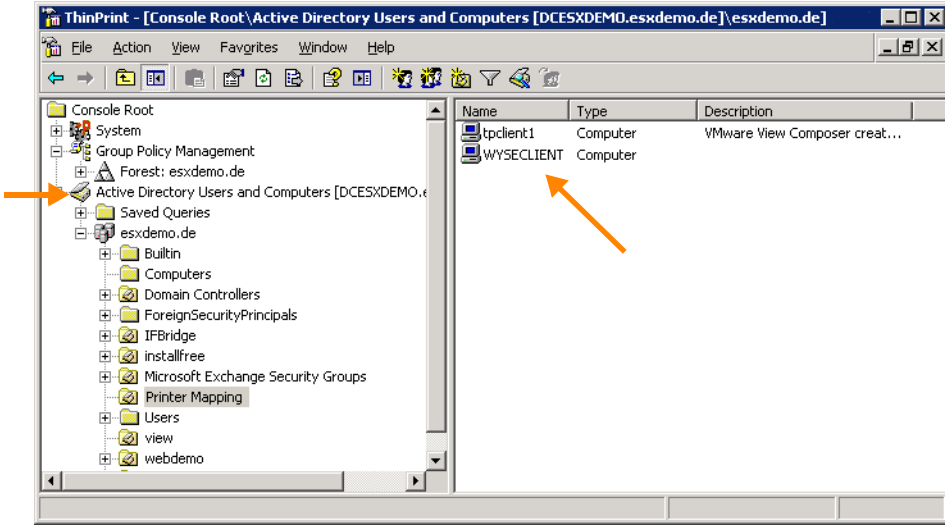

Illus. 19 Desktops in the OU “Printer Mapping” (example)

Appendix

Customer service and technical support

Customer Service www.thinprint.com/→ SUPPORT
support@thinprint.com

Uninstallation

– Open PROGRAMS in the CONTROL PANEL.
– Mark the Desktop Extension and select UNINSTALL (Illus. 20).

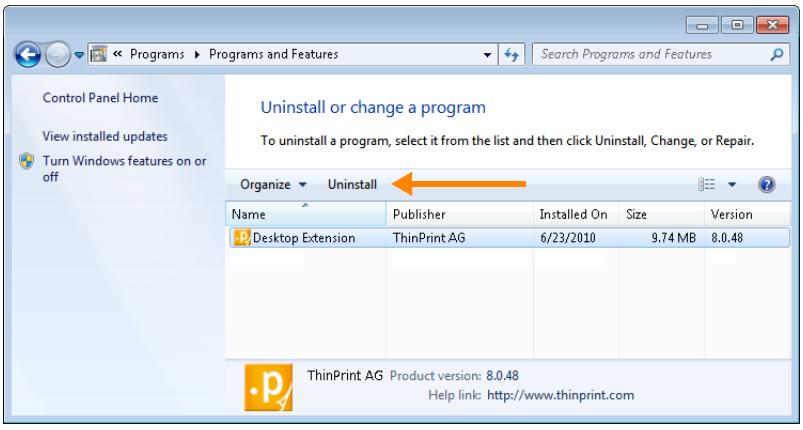

Bild 20 Desktop Extension uninstallation

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Additional sources

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

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

- .print Server Engine
- .print Application Server Engine
- .print Desktop Engine

White papers The following white papers (amongst others) are available at www.thinprint.com/ → SUPPORT→ WHITE PAPERS.

- Unattended installation and licensing of .print Engine components
- .print in a nutshell: Printing in virtual environments
- Centralize your printer drivers
- ThinPrint licensing

Abbreviations

AD	Active Directory
GPO	Group Policy Object
ICA	Independent Computing Architecture (Citrix)
ID	Identification (number)
MMC	Microsoft Management Console
NAT	Network Address Translation
OU	Organizational Unit
Output Gateway	ThinPrint Output Gateway
RDP	Remote Desktop Protocol (Microsoft)
TCP/IP	Transport Control Protocol/Internet Protocol
TP	ThinPrint
TPAC	.print AutoConnect
TPOG	ThinPrint Output Gateway
VC	Virtual Channel (= ICA or RDP)
VCG	.print Virtual Channel Gateway
V-Layer	.print Printer Virtualization Layer

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