

## What's new in ThinPrint .print v7.6?

# White Paper

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## Introduction

We are happy to be able to present you with another milestone in our product development with the new Version 7.6 of ThinPrint .print.

With this high-performance software, we are laying the foundation for an **even wider range of applications of the .print technology** in distributed network environments. Print management can thus be perfected with the new version even outside of classic SBC or Terminal Services environments, such as in the areas of client/server, web, or mobile applications. It can also be used for generally optimizing print job processing over WAN connections.

When developing Version 7.6, we paid special attention to supporting the **forthcoming generation of Windows Server 2008** and its **new XPS technology**. Structural revisions and a multitude of detail improvements ensure that ThinPrint customers also get maximum use out of this new Microsoft technology. A **Windows 2008 certification** for our solution will be available soon.

Building on this technological foundation, future versions of ThinPrint .print will also be **optimally coordinated with the new possibilities of this Microsoft technology**. Additionally, numerous new features will provide for **maximum security of investment**.

### Print five times faster thanks to Adaptive Speed

In recent years, ThinPrint has made a global name for itself as a technology leader and has unceasingly added to its lead ahead of the competition. While the **ThinPrint .print compression** of print data in the last version became a **globally recognized benchmark**, the development focus of Version 7.6 was for a noticeable increase of the transfer rate. Now the lead time for printing can thus be reduced again: ThinPrint prints up to five times faster. If desired, the print data can also be transferred without any bandwidth control. There's nothing faster.

Many other protocol level improvements in Version 7.6 contribute to this **considerable speed increase**. In the **adaptive compression**, for example, an **intelligent algorithm** controls the compression complexity required depending on bandwidth setting and adjusts to each situation accordingly. When the branch offices have adequate bandwidth or when printing within a local network, maximum compression is often unnecessary. You can print even faster with less compression.

That makes ThinPrint .print 7.6 the fastest version ever.

## Overview: New in .print version 7.6

New license model	■ User based licensing
Central license management	■ License Manager in the MMC: practical and simple
Adaptive Speed	■ Higher print speed ■ Adaptive speed
.print AutoConnect	■ Variables in the translation table
Driver Free Native Printing	■ Output Gateway assumes the properties of the native printer

## License Models

With ThinPrint's .print Version 7.6, we are introducing an alternative license model option where purchase of .print licenses is based on users rather than the previous server-based licensing.

The new user-based licensing allows the application areas of ThinPrint .print technology to far exceed Server-Based Computing (SBC). In addition to Terminal Services architectures, ThinPrint .print is increasingly used for remote connection of classic client/server systems with network printers, but also, for example, for print processing via web and mobile applications or from other applications via WAN connections.

The availability of two license models thus guarantees fair and cost-effective licensing in every environment where .print technology is used to optimize print management. The server-based and user-based license models will be permanently available.

Choosing which license model to purchase should be based on the existing environment.

### Server-based licensing

This licensing largely corresponds to the licensing of previous versions: The printing server is licensed, the clients are normally exempt from charges. The number of printing users is not limited here. The licensing of additional components, such as the .print Queue Managers or the .print Host Integration Services, also remains unchanged.

License management for dedicated print servers has been improved in Version 7.6. Instead of installing an appropriate server license on every application server, all required licenses can now be entered and managed centrally on the dedicated print server. These "Access License" license keys will be provided free with every .print Application Server Engine of Version 7.6. Customers who update to the new version also receive a free Access License for each application server.

The server-based license model remains the recommended model for SBC architectures. The user-based license model is only recommended for an SBC environment in those cases where a central print server is to be used for printing and for single-server environments with a low number of users. The server-based license model is not suitable for use outside of SBC.

The following rules give an overview of which environments should use the server-based license model:

#### Server-based license model

- **can** be used in all SBC environments
- **should** be used in SBC server farms that do not employ a dedicated print server

## User-based licensing

This new licensing is based on the number of Named Users who will use .print technology on a server. This always requires a "Basic Pack", which initially provides – depending on the situation – the basic license for application or print servers in 32-bit or 64-bit versions. Each Basic Pack includes ten user licenses. Additional user licenses are available in the form of "User License Packages" for 10, 20, 50 or 100 users.

**The new user-based license model is designed for environments other than server-based computing: for example, client/server environments, WAN connections, or for print optimization of web or mobile applications.**

In SBC environments, this license model should be used only in smaller environments with up to 20 users. If the user-based license model is intended for server farms operated with load balancing, a dedicated print server must be employed to process the print jobs.

#### User-based license model

- **can** be used in smaller SBC environments with up to 20 users
- **can** be used in SBC server farms with dedicated central print servers
- **should** be used in all non-SBC environments (such as mobile, web, and WAN environments, client/server architectures)

## How will this affect existing licenses?

### *Update to v7.6*

Existing licenses, which are server-based licenses, remain valid despite the introduction of user-based licenses. If you do not use a print server, nothing will change; you can simply update the new .print Engine version through the software. This requires a valid Update Subscription for all existing licenses..

If you use central print servers, you will need additional Access Licenses on the print server for updating. You receive these free from ThinPrint.

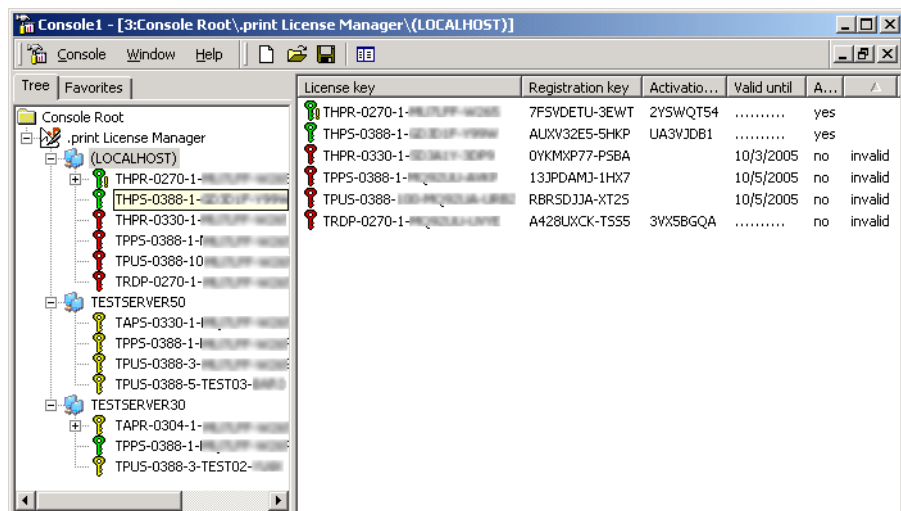
## License Manager in the MMC

### Central license management

With version 7.6, License Manager is now part of the MMC (Microsoft Management Console). That means that all of the advantages of the MMC can also be used for licensing and distributing licenses. In particular, license keys can be entered and managed at a central point for remote servers. The server on which the license keys are entered can be any server in the network on which a .print Engine is installed.

Moreover, licensing has become even simpler; the different colors show you immediately which licenses are valid and which not. The color of the key shows the status of the license. An exclamation point next to the key shows that the subscription will soon expire (Illus. 1):

- Green key: license is activated
- Yellow key: license is valid but not activated
- Red key: license is invalid
- Yellow exclamation point (to the right of the key): subscription will expire soon



Illus. 1 License Manager in the MMC

You can of course install and activate the licenses with unattended installation. With version 7.6, this also applies for remote computers.

The advantages of the new License Manager:

- Central license management
- Display of license status (active / valid / invalid)
- Simple license distribution to remote computers
- Indication of expiring update subscription
- Central unattended installation and activation of licenses

## Adaptive Speed: Print speed

Whether you use the ThinPrint printer driver, Output Gateway, or not, ThinPrint .print greatly compresses print data. In most environments, this is useful because it reduces network traffic and cuts costs.

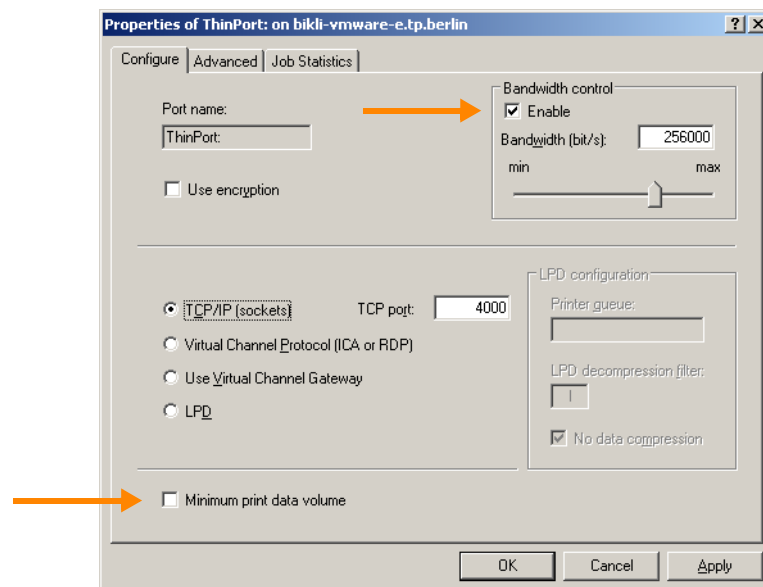
Print data is compressed on the server side and decompressed on the client side by a .print Client. If there is enough bandwidth available, though, or if printing takes place entirely within a local network, high compression is often unnecessary. Printing can be faster if there is less compression. With version 7.6, you have the option of influencing this.

*Faster printing  
or higher  
compression?*

In the new version, compression can be modified according to the bandwidth control. The GUI now features an option for disabling the bandwidth control. This is useful with leased lines or when printing takes place entirely within the same network - precisely there where broad bandwidth is available: 100 MB or more. In this case, the data is compressed less. The result is that you can print faster.

If there is only limited bandwidth available in remote offices, though (e.g., DSL or WLAN connection with 10 MB), you can enable the bandwidth limit as usual and set it exactly with the slide bar (Illus. 2). Then compression will be greater to ensure a lower amount of data to be transferred. You can also directly specify that the print data is to be compressed to a minimum (Illus. 2).

You can thus also influence compression when using native printer drivers. Until now, it was only possible to select a compression level (*normal*, *maximal*, etc.) with Output Gateway.



**Illus. 2** Port configuration with Adaptive Speed: Bandwidth control can be turned off directly and print data can be reduced to a minimum

*Faster printing*

The ThinPrint protocol got better and in the new version generally prints faster than previously. This has a particularly positive effect with broad bandwidths. Now you can print five times faster than before.

In summary: you can print faster with version 7.6, because the compression adapts to your network architecture and bandwidth control.

## .print AutoConnect: Variables

.print AutoConnect enables automatic mapping of client printers in the terminal session. To simplify printer administration, it is now possible to use variables.

In addition to the wildcards, variables (example: %LPSRV%) can now also be used in the name translation table. Several printers can thus be created with one single entry where the variables are replaced by the printer name or the print server name of the printer in the .print Client respectively.

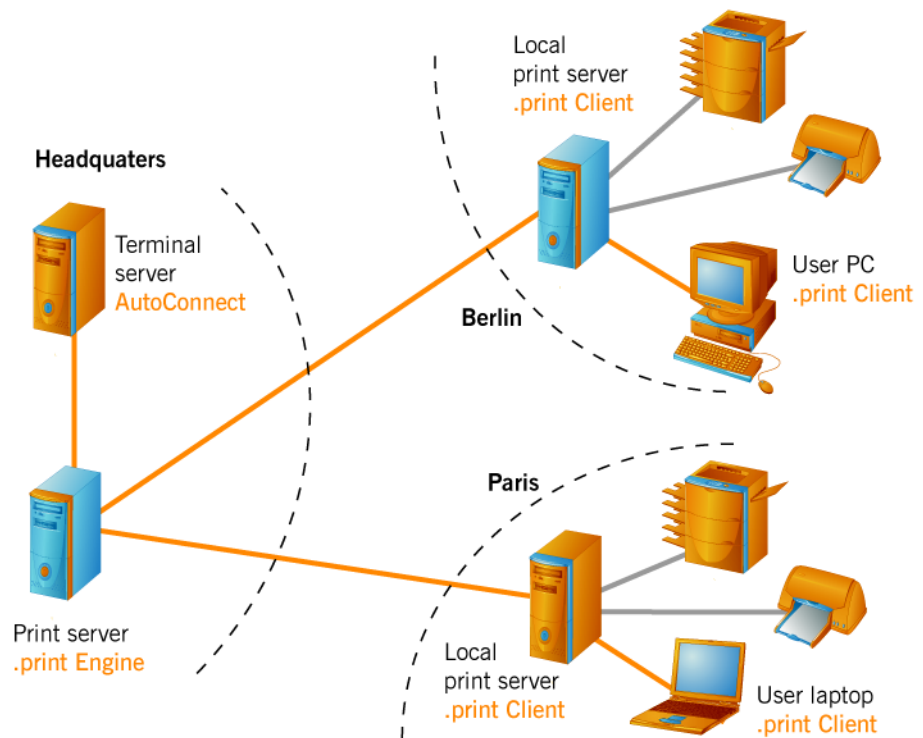
<b>%LPSRV%</b> <b>(Local Print Server)</b>	<b>%LCPRN%</b> <b>(Local Client Printer)</b>
This variable is replaced by the <b>print server name</b> in the .print Client of the user machine.	This variable is replaced by the <b>printer name</b> in the .print Client of the user machine.

The entries are made in the TARGET field in the name translation table of AutoConnect. Either variable can be used as desired and also used in combination.

Below is an example of how entries in the table can be simplified with variables.

### Example for using variables

In the following environment, using variables can save a lot of work on the terminal server: The main office has a terminal server and a central print server with the .print Server Engine, the numerous branch offices each have a local print server installed with the .print Client as a service (Illus. 3). The goal is to create the printers of the respective branch offices in the session of each user with only one entry in the AutoConnect table of the terminal server.



Illus. 3 Example scenario for variables in the name translation table

The printers of each branch office are created and shared on the local print servers (here: Berlin and Paris).

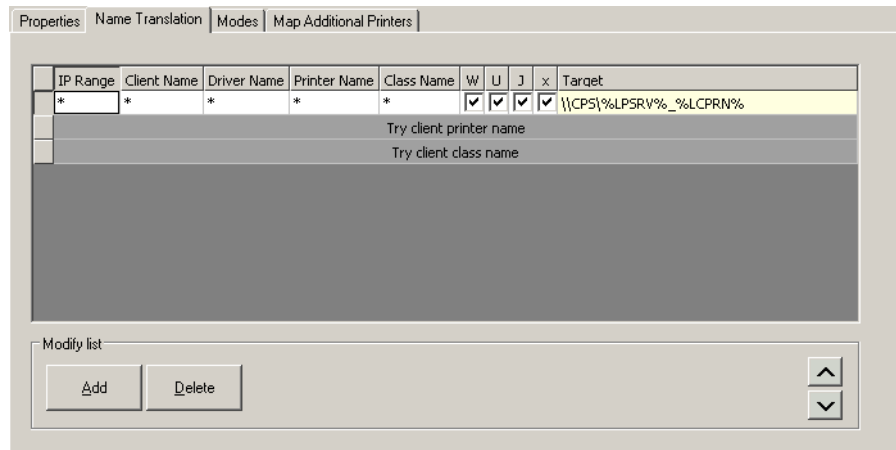
The individual printers of the various branch offices are created according to ThinPrint name conventions (here: TCP/IP) and shared on the central print server (CPS) at the main office, for example:

Printer name	Share
Lexmark Optra#berlin:1	berlin_Lexmark Optra
HP Color#berlin:2	berlin_HP Color
Lexmark Optra#paris:1	paris_Lexmark Optra
Epson Stylus#paris:2	paris_Epson Stylus

The printer ID (:1, :2) is the ID in the .print Client on the local print server. Berlin and Paris are the names of the local print servers. In this example, we are printing via TCP/IP. Only one entry is then necessary in the name translation table of AutoConnect, namely

```
\\CPS\%LPSRV%\_LCPRN%
```

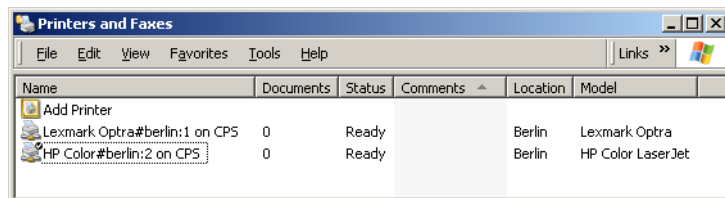
where CPS is the central print server (Illus. 4):



**Illus. 4** Name translation table:  
A single entry is enough to create the printers of all the branch offices

The variable %LPSRV%\_%LCPRN% is then translated based on the printer name in the .print Client of the user machine as follows: BERLIN\_HP COLOR or PARIS\_EPSON STYLUS. It thus exactly matches the share name on the central print server. Using this share, you can then print directly to the corresponding printer on the local print server: for example HP COLOR on the BERLIN print server.

The printer folder is then displayed in the user session as shown (Illus. 5, example for Berlin):



**Illus. 5** Printers created with variables in the session

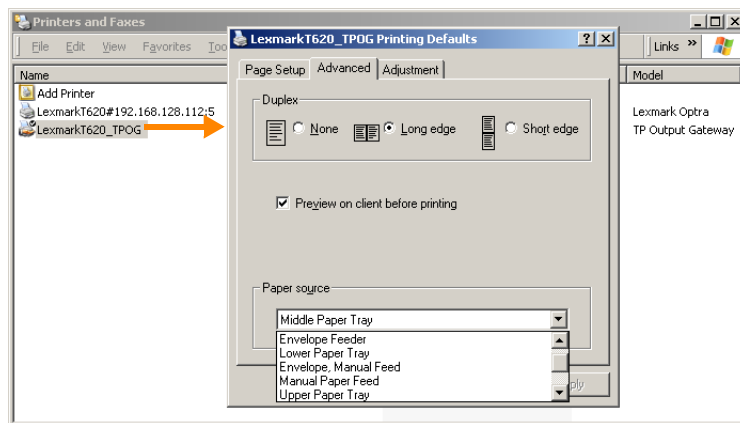
## Driver Free Native Printing

*Driver Free Native Printing* is used when you want to keep the terminal server free of printer drivers (Driver Free Printing), but no Windows machine is available on the client side to render the print job.

In order to use the practical Driver Free Printing with thin clients too, for example, *Driver Free Native Printing* has been available since Version 7.0. A central print server is needed for this.

ThinPrint's Output Gateway printer driver sends the print job from the terminal server to the central print server; from there it is sent to the thin client with the native printer driver. This has the advantage that, despite the required native driver, the terminal server can remain free of printer drivers.

In *Driver Free Printing* of Version 7.6, it is now also possible to automatically transfer most individual properties of the native printer driver (such as paper formats, paper trays, and resolution) to Output Gateway and to display them there (Illus. 6).



**Illus. 6** Now send printer properties in *Driver Free Native Printing* too