

ThinPrint Tracking

Print job statistics (version 8.6)

Manual

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Safety warning

All Cortado 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.

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Overview

Print job tracking gathers information about print activities using ThinPrint Engine or Personal Printing. With it, print related data is gathered on the server and forwarded to an SQL database (Illus. 1). Print job tracking has the following components:

ThinPrint Engine or Personal Printing

sends data to the ThinPrint Tracking Service

ThinPrint Tracking Service

receives data and writes it to an SQL database

ThinPrint Tracking Report Engine

web component for clear analysis, summary, and graphic report of tracking results

If not yet installed, an SQL server must be installed to enable use of the tracking feature within the ThinPrint Engine. This program is not included in the ThinPrint Engine software.



Illus. 1 Example for using ThinPrint Tracking with ThinPrint Engine

Tracking Service

You can gather information about the print jobs sent with the ThinPrint Engine for your statistics (tracking). To do so, you must set up a Microsoft SQL server. The ThinPrint Engine sends its tracking data to the server that has the tracking service installed. Print data which can be analyzed and displayed by Tracking Report Engine:

- Author of a print job (user/group)
- Printer used
- Settings used
- Number of pages printed
- Information on any errors
- Costs
- Compression rates (ThinPrint Engine only)
- Print duration
- Print data during a defined period

The SQL server can collect print data from different sources – from ThinPrint Engines on application or print servers or from Personal Printing servers.

Tracking Report Engine

ThinPrint Tracking includes a web application for viewing the tracking data. This program represents the SQL data graphically in its web interface – installed on a web server. The tracking data can therefore be analyzed from the web browser on any workstation (Illus. 2).



Illus. 2 Analyzing SQL data in a web browser (example)

Installation and configuration

Technical requirements

Your architecture must meet the following requirements for running ThinPrint Tracking:

ThinPrint Engine + ThinPrint Tracking Service:

See the "ThinPrint Server Engine" or "ThinPrint Application Server Engine" manual.

- or **Personal Printing**: See "Personal Printing" manual.
- The **SQL server** additionally requires:
 - Microsoft SQL Server 2005, 2008 or 2008 R2
- The ThinPrint Tracking Report Engine can be run on the following servers (as a web server):
 - Windows Server 2003 x86 with Service Pack 2 or later
 - Windows Server 2008 x86 and x64 Service Pack 2
 - Windows Server 2008 R2 x64 Service Pack 1

The following is required:

- Microsoft .NET Framework version 3.5 SP 1
- ASP .NET (can be enabled as a Windows component or installed as a part of the .NET Framework)
- Internet Information Services (IIS) 5.1 or later. Port 80 is used by default. Do not change this port number and make sure that no other programs are using this port.

Note! Please note with ThinPrint Tracking, that data printed via a ThinPrint Port is collected.

Administrator Administrator permissions are required for all installation and configuration procepermissions dures. It is therefore best to log on under Windows as **Administrator**.

Installation of Tracking Database

Copy Setup.exe onto the SQL server and open it with a double click. Select the desired language and confirm with OK.

InstallShield Wizard opens, see Illus. 3.



Illus. 3 Start Install Wizard

Click NEXT, another window opens, see Illus. 4.

er and authentication method.	ThinPrint
you want to create an SQL database:	
	Browse
cation credentials of current user	
ntication using the login and password below	
sa	
,	
•••••	
< <u>B</u> ack <u>N</u> e	ext > Cancel
	er and authentication method. /ou want to create an SQL database: cation credentials of current user tication using the login and password below [sa

Illus. 4 Choose Database server and authentication to SQL server

Select the SQL server, on which you wish to install Tracking database (arrow above in Illus. 4).

Then specify how do you wish to access the database (Illus. 4, bottom arrow):

- Windows authentication or
- SQL server authentication

Confirm with NEXT. Another windows opens (Illus. 5).



🙀 ThinPrint Tracking Database 8.6	×
Database Authentication Specify database name and authentication mode.	ThinPrint
Database na <u>m</u> e: PrintJobTracking	Browse
Database authentication mode:	
C Windows authentication	
SQL server authentication (recommended)	
Select SQL server authentication, if your SQL server is not a domain member	
InstallShield	Cancel

Illus. 5 Choose database server and Authentication mode

Choose a name for the database in which the information about print jobs will be stored: PRINTJOBTRACKING for example (Illus. 5, top arrow).

Authentication mode

Authentication mode (Illus. 5, lower arrow) defines how the users and Tracking Service access the stored print data via Tracking Report Engine.

Note! SQL server authentication is recommended.

SQL server Authentication Create an account with administration permissions (Illus. 6), TRACKINGSERVICE for example. Note the user name and password. Confirm with NEXT and close InstallShield Wizard with FINISH.

🙀 ThinPrint Tracking Da	abase 8.6	×
SQL Server Authentica Specify an SQL account	tion for this database.	ThinPrint
ThinPrint Tracking stores its create a new user or to spe permissions on the databas Engine.	information in a database. To access the data it wify an existing one. This account will have admin e and is needed for the ThinPrint Engine and the	is necessary to nistrator Tracking Report
Login:	TrackingService	
<u>P</u> assword:	•••••	_
1	If you wish to create a new account, make su the password is complex enough to meet the policy requirements.	re that Windows
InstallShield —	< <u>B</u> ack (<u>N</u> ext >	Cancel

Illus. 6 Create administrator account for the Database

Windows authentication If you choose Windows Authentication (Illus. 7), all users and servers need to be members of the same domain. Users can log on with their user name and their domain password.

🚏 ThinPrint Tracking Database 8.6	×
Database Authentication Specify database name and authentication mode.	ThinPrint
Database na <u>m</u> e: PrintJobTracking	Browse
Database authentication mode:	
<u>Wi</u> ndows authentication <u> </u>	
Select SQL server authentication, if your SQL server is not a domain member.	
InstallShield	Cancel
Illus. 7 Choose Windows authentication mode	

- Here, select also a database (Illus. 7, arrow above) on which you wish to install Tracking Database. Choose WINDOWS AUTHENTICATION (bottom arrow) and confirm with NEXT.

🙀 ThinPrint Tracking Database 8.6	×
Windows Authentication Specify accounts for Windows authentication.	ThinPrint
The Select Groups	?×
(c) Select this object type: Groups From this location:	Object Types
mydomain.com <u>E</u> nter the object names to select (<u>examples</u>):	Locations
TrackingAdmins	Check Names
Advanced	Cancel
<back next=""></back>	Cancel

Illus. 8 Inherit groups from Active Directory

You can select user groups from the Active Directory which should be able to access Tracking Database. For this, click ADVANCED (arrow in Illus. 8).

🙀 ThinPrint Tracking Database 8.6	×
Windows Authentication Specify accounts for Windows authentication.	ThinPrint
ThinPrint Tracking stores its information in a database. Specify two domain gro data and to login to Tracking Report Engine. The first account has administrato (create/modify database). The second one is a read only account.	ups to access the or permissions
Tracking database administrator: MYDOMAIN\TrackingAdmins Browse Tracking database user: Browse	
InstallShield Sack Next >	Cancel

Illus. 9 Define administrator groups and user groups

During installation of Tracking database, Tracking database administrators (Illus. 9, arrow above) with read and write permissions will be created, as well as users with read permissions only (see Illus. 9, bottom arrow).

 Finally, conclude Tracking database installation in InstallShield Wizard with INSTALL and FINISH.

Open a management tool for the database, as for example Microsoft SQL Server Management Studio Express¹. With this tool, you can administer the database created by the installer (Illus. 10).



Illus. 10 Database PrintJobTracking

When you install Tracking database with SQL authentication, a user account will be created with read permissions on the database. This name of the user account will be TRACKINGUSER, and the password is: THINPRINT-1.

🙀 SQL Server Configuration Manager		
<u>D</u> atei Ak <u>t</u> ion <u>A</u> nsicht <u>?</u>		
🕵 SQL Server Configuration Manager (Local)	Protocol Name	Status
SQL Server 2005 Services	🍹 Shared Memory	Enabled
SQL Server 2005 Network Configuration	🕉 Named Pipes	Enabled
	TCP/IP	Enabled
	a VIA	Disabled
	•	

Illus. 11 Enable protocols

To access the SQL server remotely, open SQL Server Manager and enable the protocols NAMED PIPEs and TCP/IP (IIIus. 11). Then start the SQL SERVER BROWSER in the services folder.





Illus. 12 Install access for Tracking Service on the SQL server

To ensure the Tracking Service gets access to the SQL server (only in case of Windows authentication), open Management Studio Express (Illus. 12) and enter with a right click in the FOLDER SECURITY on NEW and LOGIN. A new window opens (Illus. 13).

🚪 Login - New		
Select a page	_ Script 👻 📑 Help	
General General User Mapping Securables Status	Login game: © Windows authentication © SQL Server authentication Password: Confirm password: © Enforce password policy © Enforce password policy © Liser must change password © Mapped to certificate Cetylicate name:	at next logn
	Mapped to asymmetric key	
Connection	Key name:	
Server: SQL07\SQLEXPRESS	Default <u>d</u> atabase:	master
Connection:	Default language:	<default></default>
View connection properties		
Progress		
Error occurred		
		OK Cancel

Illus. 13 Install login for Tracking Service

Create a new account according to this sample: <domain>\<Server name of Tracking Service>\$ Here: mydomain\ps13\$

E Login Properties - MYDOMAIN	\ps13\$				
Select a page	Script - 🖪 Help				
🚰 General					
Server Roles	Livers manned to this login:				
🚰 User Mapping	New Detekson Uter				
Securables		Database	0.561	Derault Scheina	
T Status	는 문	master			
	듣는	model			
		msdb	10001000 404		
	<u>†</u> ≝	PrintUobTracking	MYDUMAIN\ps13\$		
		tempdb			
		tptrack			
Connection	Guest	eccount enabled for: PrintJo role membership for: PrintJol cessadmin	bTracking o Tracking		
Server:	db_da	itareader			
o v	🗌 db_da	tawriter			
Lonnection:	db_do	lladmin			
••••••••••••••••••••••••••••••••••••••		rnyuatareauer enurlatawriter			
Mew connection properties	db_ov	vner			
2	db_se	curityadmin			
Progress	✓ public				
Ready		ser			
Nam ²					
	1				
				ОК	Cancel //

Illus. 14 User mapping

Put a checkmark at the database, which is configured for Tracking, here: PRINTJOB-TRACKING (arrow above in Illus. 14) and a checkmark at TREADMIN, lower arrow in Illus. 14.

Then Tracking Service can access the database with Windows authentication.

Installation of Tracking Report Engine on the webserver

Please consider that Tracking Report Engine cannot be installed on Windows 2003 x64 machines.

Make sure that the following Windows components are installed and started: IIS and ASP.NET.

Copy SETUP.EXE of Tracking Report Engine onto the web server and open it with a double click. Select the desired language and confirm with OK. InstallShield Wizard opens.

🙀 ThinPrint Tracking	Report Engine 8	3.6		×
Database Server Select database ser	ver, authenticatior	n method and da	tabase.	ThinPrint
Database server that	: you are connectin	g to:	•	Browse
Connect using: © <u>W</u> indows authe © SQL S <u>e</u> rver aut	ntication credential hentication using th	s of current use ne login and pass	, word below 🔶	
Login:	TrackingService			
Password:	•••••			
Database na <u>m</u> e:				
PrintJobTracking	—			Browse
InstallShield				
		< <u>B</u> ack	Next >	Cancel

Illus. 15 Choose database and authentication mode

- Select the database server on which Tracking Database has been installed (Illus. 15, arrow above). Then select the same authentication mode which you have selected during Tracking database installation (Illus. 5), here SQL SERVER AUTHENTICATION (Illus. 15, middle arrow). Finally, indicate the database which has been created by Tracking database installer, here: PRINTJOBTRACKING, (Illus. 15 lower arrow).
- Confirm with NEXT. Another window opens, see Illus. 16.

🚏 ThinPrint Tracking Report Engine 8.6	×
Database Authentication Specify authentication mode.	ThinPrint
Select authentication that Tracking Report Engine will use to connect to th database.	ie Tracking
O Windows authentication	
SOL server authentication	
InstallShield	
< Back <u>Next</u> >	Cancel

Illus. 16 Choose authentication mode

 Here, select the authentication mode with which Tracking Report Engine establishes a connection to Tracking Database. Confirm with NEXT and close InstallShield Wizard with FINISH.

Personal Printing

ThinPrint[®]

The settings for Tracking are described in the Personal Printing manual (Page 29).

ThinPrint Engine

Installation

Please consult the ThinPrint Engine user manual for installation information (<u>Page 29</u>).

Preparing ThinPrint Engine and Tracking Service

To prepare the ThinPrint Engine for sending data of sent print jobs to the SQL server, you must make the following settings in the configuration for the ThinPrint Engine:

- 1. Open configuration with START \rightarrow (ALL) PROGRAMS \rightarrow THINPRINT ENGINE \rightarrow CONFIGURATION.
- 2. Mark the respective THINPRINT ENGINE node (Illus. 17) and select EDIT SETTINGS.

2.print Engine		
File Action View Help		
Þ 🔿 🖄 👔		
P ThinPrint	.print Engine (P513)	
Green Connect Green C	The following table shows all events generated by print components which will also appear in the display the print spooler events here, this can be enabled in the dialogue at the bottom. There also second table you'll find all services used by print components.	Windows Event Viewer, Additionally you ca the Tracking Service can be selected. In th
	Name Service Status Startup Type	Start Service
	Print Spooler Spooler Running Auto	Stop Service
	TP AutoConnect Service TPAutoConnSvc Running Auto TP Tracking Service TPTrackSvc Running Auto	Restart Service
	Description: ThinPrint, print component that stores print job information in a database.	📝 Edit Settings
	Spooler Events (Not supported for Windows Server 2008 R2)	💑 Send Configuration
	E Log spooler error events	😂 Refresh All
	E Log spooler warning events	
	Log spooler information events	
	Tracking	
	3 Status on	
	Database Server SQL07\SQLEXPRESS	

Illus. 17 Selecting TRACKING SETTINGS



- ENABLE TRACKING
- SQL server's address and name
- SQL server/Windows authentication: an account or the which has write permissions for the installed database PRINTJOBTRACKING

- Encryption settings if the data are to sent encrypted to the SQL server
- Name of the Tracking database (PrintJobTracking).
- Click OK to confirm.

The Result is shown in Illus. 19.



Caution! The Tracking Service is licensed with ThinPrint Server Engine and ThinPrint Application Server Engine. If you enable Tracking Service with another product, printing won't be possible.

ver Properties				
racking				
🔽 Enable Tracking -				
Enter information to st Choose SQL server a settings to connect.	ore the .print Tra nd database nar	ucking data into a N ne as well as authe	ficrosoft S Intication	iQL database and encryptic
Select or enter an SQ	L server name:			
SQL07\SQLEXPRES	is 🔶		•	Refresh
□ l og on to the serve	r —			
C Use Windows A	uthentication			
Use SQL Server	Authentication			
User name:	sa ┥			
Password:	••••••	←		
SQL server connec	tion settings —			
Use encryption		TCP port:		
Trust server cert	ification			
Select or enter a data	base name:			
PrintJobTracking				
			C	ancel Search

Illus. 18 Enable Tracking and enter settings

Spooler Events (N	t supported for Windows Server 2008 R2)	💏 Send Configuration
E Log spooler error e	rents	😂 Refresh All
E Log spooler warnin	events	
E Log spooler informa	tion events	
Tracking		
E Status	on	
📃 Database Server	SQL07\SQLEXPRESS	-
📃 Database	PrintJobTracking	

Illus. 19 Print job tracking enabled

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For information about preparing Tracking on a print server cluster see the "Microsoft Failover Clusters and ThinPrint" white paper (<u>Page 29</u>).

Analyzing tracking data

ThinPrint Tracking Report Engine

The ThinPrint Tracking Report Engine makes it possible to display data from the SQL database as an overview in a web browser. All significant information on print jobs can be summarized by various criteria, sorted, and graphically displayed.

You can analyze the data with the included Tracking Report Engine, or any other tool, to retrieve the database.

 To analyze the tracking data, start your web browser and call up the website of the server that ThinPrint Tracking Report Engine is installed on:

```
http://<webserver>/tracking
Example:
    http://ps13/tracking
```

 Enter the account created on the SQL server (here: TRACKINGSERVICE) which has write permissions for the database PRINTJOBTRACKING (IIIus. 20). Confirm with OK.



Illus. 20 Open the Tracking Report Engine in a web browser



Overview

The page OVERVIEW appears (Illus. 21). You see the following information for analysis:

- Number of print jobs
 - Color and b/w (grayscales)
 - Simplex and duplex
- Paper consumption
 - Color and b/w (grayscales)
 - Simplex and duplex

You can also specify the information as follows:

Function	Description
GROUP	Choice between a specific or all user groups (see "Manage Groups", <u>Page 22</u>)
Printer	Choice between a specific or all printers
Start	Start of a report period (display and input)
End	End of a report period (display and input)
Predefined	Choice of a report period



Illus. 21 Overview of number of printouts and paper usage

Distribution

The DISTRIBUTION page allows analysis of which users, groups, or printers have printed the most (Illus. 22). You can specify the information as follows:

CATEGORY	Description
Print Jobs	Number of print jobs
Costs	Print costs for the number of pages printed by the respective selection (group(s) or users), taking into account printer-specific costs per page
Paper Consumption	Number of sheets used for printing
SIMPLEX	Number of pages printed one-sided
Duplex	Number of pages printed on both sides
Black/White	Number of pages printed in black-and-white
Color	Number of pages printed in color
Errors	Number of failed print jobs
GROUP	Choice between a specific or all user groups (see "Manage Groups", <u>Page 22</u>)
Printer	Choice between a specific or all printers
Start	Start of a report period (display and input)
End	End of a report period (display and input)
Predefined	Choice of a report periods

C ThinPrint Tracking Report Engine - Windows Internet Explorer		
CO V Intp://192.168.116.141/tracking/Distribution.aspx	🗕 😓 😽 🗙 🖸 Bing	◄ ٩
File Edit View Favorites Tools Help		
🖕 Favorites 🖉 ThinPrint Tracking Report Engine	👌 🔹 🗟 👻 🖻	🔋 🔻 Page 🔻 Safety 🔻 Tools 🔻 🔞 🔻
ThinPrint Tracking Report Engine Here you can see print activity for groups or printers, which can be filtered Category: Pfint Jobs 2 Start: 0/1/2011 Broup: All End: 0/30/2011 Predefined: Previous Month	Overview Distribution Trend according to criteria such as cost, compression or fa	Logout Manage Groups Costs led print jobs.
Print Jobs	Ranking Users/Groups Ranking Printer	5
MYDOMAINuser1: 17 . 29 MYDOMAINuser . 29 MYDOMAINuser 3: 11 MYDOMAINuser 3: 11 MYDOMAINuser 3: 11 MYDOMAINuser	MTGOMANUARINATINGT 43 MPCOVELLENT MTGOMANUARE 29 MP MTGOMANUARE 10 MP MTGOMANUARE 11 MP	54 46

Illus. 22 Ranking

Trend

The TREND page gives an overview of how the frequency of printing has developed across a set timeframe. The example in Illus. 23 shows a cost trend. See above for a description of available functions.

Additionally you have the option to display compression rates of print jobs, when printing with a ThinPrint Engine (arrow in Illus. 23).



Illus. 23 Displaying trends (here, number of print jobs)

Manage Groups

On the MANAGE GROUPS page (Illus. 24) you can define user groups to make the previous pages easier to read. Include each user in one group only to avoid possible corruption of the general overviews. Users can be arranged or redirected in any groups.

Note that users will only appear here after they have printed at least once or have been imported from a Active Directory group.

ThinPrint				Logout
Tracking Report Engine		Overview	Distribution	Trend Manage Groups
Here you can assign users to a group, create new group. Users are first listed when they have print Group: Creating a new group: Import a group from Active Directory	Available:	ps from Active Directory, '	This allows you	to track print data per user

Illus. 24 Defining user groups

If the Tracking Report Engine runs remotely and you wish to import groups from Active Directory, it is necessary to run the Tracking Report Engine in Internet Explorer. Additionally, you have to run the CASPOL² script on the command line on the local computer (see IIIus. 25 and 26).

- install CASPOL.EXE (component of .NET Framework)
- run caspol -m -ag All_Code -allcode FullTrust -n ThinPrint

🐼 Eingabeaufforderung	<u>_ ×</u>
c:\temp>dir	
Volume in Laufwerk C: hat keine Bezeichnung. Volumeseriennummer: F8C9-9E11	
Verzeichnis von c:\temp	
06/29/2011 11:10 AM (DIR)	
06/29/2011 11:10 HM (DIR) 06/29/2011 10:51 AM 57 caspol-kommandozeile.txt	
06/10/2009 11:22 PM 106,496 CasPol.exe	
2 Verzeichnis(se), 96,342,016 Bytes frei	
c:\temp>caspol -m -ag All_Code -allcode FullTrust -n ThinPrint	
Copyright (c) Microsoft Corporation. All rights reserved.	
The operation you are performing will alter security policy. Are you sure you want to perform this operation? (yes/no)	
Added union code group with "-allcode" membership condition to the Machine 3	level
Success	
c:\temp>	
	-

Illus. 25 Run caspol.exe



💀 Eingabeaufforderung		_O×
c:\temp)caspol -m -ag All_Code -allcode FullTrust -n ThinPrint Microsoft (R) .NET Framework CasPol 2.0.50727.4927 Copyright (c) Microsoft Corporation. All rights reserved.		_
The operation you are performing will alter security policy. Are you sure you want to perform this operation? (yes/no) yes		
Added union code group with "-allcode" membership condition to	the Machine	level
Success		
c:\temp>		
		-

Illus. 26 Run Caspol script successfully

If you import a new group from Active Directory, You can also import users which have not yet printed. To do so, click the button IMPORT GROUP FROM ACTIVE DIRECTORY, (SEE Illus. 28, arrow). Another window opens, see Illus. 27.

Click ADVANCED then choose the desired group from the Active Directory (arrow in Illus. 28).

Select Groups	<u>? ×</u>
Select this object type:	
Groups	Object Types
From this location:	
Entire Directory	Locations
Enter the object names to select (<u>examples</u>):	
	Check Names
Advanced	

Illus. 27 Choose database and authentication mode

Another window opens, see Illus. 30. If you click FIND Now (arrow above right), groups are displayed. Checkmark the desired group and confirm with OK.

elect Groups				?	X
Select this object ty	vpe:				
Groups			 Objec	t Types	
j . Franciska i staniska s					
From this location:			 1		
Entire Directory			Loc	ations	
Common Queries	1				
Name: S	itarts with 💌			Columns	
Description: S	itarts with 💌			Find Now	
Disabled an	counts			Stop	
	1 Decemond				_
) passing a				
				-	
Days since last l	logon:			÷7	
Days since last l	logon:			? "	
Days since last i	logon:			9 7	
Days since last l	logon:			<i>چې</i> Cancel	_1
Days since last Search results:	logon:		DK	۶۶۶ Cancel	
Days since last Search results: Jame (RDN)	logon:	In Folder	DK	۶۶۶ Cancel	
Days since last Search results: Vame (RDN)	Description All domain users	In Folder mydomain.com/	DK	Service Cancel	
Days since last	Description All domain users Designated admi	In Folder mydomain.com/ mydomain.com/	DK	97/ Cancel	_
Days since last	Description All domain users Designated admi Microsoft Excha	In Folder mydomain.com/ mydomain.com/ mydomain.com/		<u>چې</u> Cancel	-
Days since last	Description All domain users Designated admi Microsoft Excha	In Folder mydomain.com/ mydomain.com/ mydomain.com/ mydomain.com/	DK	Series Cancel	-
Days since last	Description All domain users Designated admi Microsoft Excha Members in this	In Folder mydomain.com/ mydomain.com/ mydomain.com/ mydomain.com/	 DK	97	
Days since last I Search results: Name (RDN) Domain Users Enterprise Ad Exchange Do Exchange Do Group Policy Group Policy	Description All domain users Designated admi Microsoft Excha Microsoft Excha Members in this	In Folder mydomain.com/ mydomain.com/ mydomain.com/ mydomain.com/ mydomain.com/	DK	97 Cancel	-
Days since last I Search results: Name (RDN) Domain Users Enterprise Ad Exchange Do Exchange Ent Group Policy Gruppe_1 HelpServices	Description All domain users Designated admi Microsoft Excha Microsoft Excha Members in this Group for the He	In Folder mydomain.com/ mydomain.com/ mydomain.com/ mydomain.com/ mydomain.com/ mydomain.com/	DK	977 Cancel	
Days since last	Description All domain users Designated admi Microsoft Excha Microsoft Excha Members in this Group for the He Servers in this or	In Folder mydomain.com/ mydomain.com/ mydomain.com/ mydomain.com/ mydomain.com/ mydomain.com/ mydomain.com/	DK		•
Days since last Search results: Ame (RDN) Domain Users Enterprise Ad Exchange Day Exchange Ent Group Policy Group Policy HelpServices RAS and IAS Sales	Description All domain users Designated admi Microsoft Excha Microsoft Excha Members in this Group for the He Servers in this gr	In Folder mydomain.com/ mydomain.com/ mydomain.com/ mydomain.com/ mydomain.com/ mydomain.com/ mydomain.com/	DK	<i>Fi</i> /	

Illus. 28 Database PrintJobTracking

The selected group will be displayed with the included users.

Costs

On the Costs page (Illus. 29) you can define costs to analyze the financial effects of printing. Given values are the estimated values of toner and paper consumption. Because these costs can vary greatly for different printers and types of printouts, ThinPrint recommends changing the default values to reflect your individual factors.

To do so, select a PRINTER and enter its average costs.

Function	Description
CURRENCY	Enter a currency (three characters)
Printer	 Select printer or change template (= default value)
New Paper Size	Define additional paper formats
Save Settings	Save cost values for b/w and color for the template or the selected printer
Delete	Delete paper format
Apply	Apply the same settings for other printers (multiple selection with Ctrl and Shift keys)

🍘 ThinPrint Tracking Report Engine - Windows Internet Explorer								
🕒 🕞 🗢 🙋 http	p:// 192.168.116.141 /trac	king/Settings.asp	x	👻 😽 🗙 🔽 Bing 🖉	- C			
File Edit View Favorites Tools Help								
🔶 Favorites 🛛 🔠	🝷 🏉 ThinPrint Tracki	ng Rep 🗴 🌔	ThinPrint Tracki	ing Report 🔄 ▼ 🗟 ▼ 🖃 🖶 ▼ Page ▼ Safety ▼ Tools ▼ 🌘	₽ -			
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11X17	0.00 €	0.00 €	0					
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A3	0.08 €	0.25 €	•					
LEGAL	0.04 €	0.20 €	0					
LETTER	0.04 €	0.20 €	0					
12X11	0.00 €	0.00 €	0	Save				
Other	0.04 €	0.20 €						
15X11	•	+						

Illus. 29 Settings for estimated costs

Appendix

Customer service and technical support

Customer Service <u>www.thinprint.com/</u>→ SUPPORT <u>www.thinprint.com/Support/SupportRequest.aspx</u>

SQL server management tools

Overview

In addition to the ThinPrint Tracking Report Engine, you can also use management tools for directly accessing the SQL database, such as Microsoft SQL Server Management Studio Express³. This has the advantage that you can both create a database and analyze all data stored in the database (Illus. 30).

KMicrosoft SQL Server Management Studio Express															
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Illus. 30 Microsoft SQL Server Management Studio Express (example)

Data from the ThinPrint Tracking Service

If printer drivers and applications in use on the source computer⁴ provide certain values and the specific version of ThinPrint Engine (or Personal Printing) also supports

³ Can be downloaded from the Microsoft website for free (<u>Page 30</u>; note system requirements!)

⁴ The computer creating the print jobs that ThinPrint Engine sends to the ThinPrint Tracking Service

them, the following information can be sent with each print job to the ThinPrint Tracking Service, which will write it to the **PrintJobTracking** SQL database:

Value in the database	Meaning	Supported by ThinPrint Output Gateway		
MachineName	IP address of the source computer (e.g., 192.168.131.30)			
DriverName	(not currently used)			
DestName	Host name of the target computer (e.g., client-22)	•		
ServerName	Host name of the source computer (e.g., server-03)	•		
PrinterName	Name of the printer on the source computer (e.g., HP LaserJet 4#client-22:6)	•		
ID	ID in the SQL database			
UserName	lame Name of the person who printed (= Account)			
Orientation	rientation Orientation Paper orientation (portrait or landscape)			
PaperSize	erSize Papersize Paper format (e.g., A4, Letter, Executive)			
PaperLength	rLength Paper length (cm)			
PaperWidth	Paper width (cm)	tormats, otherwise value = 0		
Copies	Number of copies	•		
DefaultSource	Default paper source	•		
PrintQuality	rintQuality Printout quality (maximum value of XRes and YRes; e.g., 600 dpi) or quality level (e.g., fine)			
Color or grayscale (b/w)		•		
Duplex	Double-sided or single-sided (duplex or simplex)			
XRes	XRes Horizontal resolution (dpi)			
YRes	Vertical resolution (dpi)			
TTOption	TTOption Load TrueType fonts embedded in the file as bitmap, as soft font, or outline or information about what printer font is to be replaced	•		
dmCollate	Sorting option; e.g., print longer documents consecu- tively	depending on the appli- cation		
FormName	Name of the paper format	•		
JobSize	(not currently used)			

Value in the database	Meaning	Supported by ThinPrint Output Gateway
JobTSize	(not currently used)	
JobID	Print job ID	•
Status	Values: 1 = Print job delivered 2 = Successfully printed 3 = Print job cancelled	•
ClientID	(not currently used)	
Pages	Number of printed pages	•
TStamp	Time of print job (start of communication between ThinPrint Engine and ThinPrint Tracking Service)	•
Duration	Duration of the printout (ms)	•
DevMode	device mode Data as blob (binary large object)	
PrintType	Format of print data values: m = EMF; r = RAW	•
CompressionRate	compression rate of the print job (divides the value jobTsize by value jobsize). With ThinPrint Engine only.	•
DocumentName	name of the document	•

Additional sources

Further information about ThinPrint can be downloaded from our website.

- Manuals
 The following manuals (amongst others) are available at:

 www.thinprint.com/→
 PRODUCTS→
 OVERVIEW→
 <product name>
 - ThinPrint Application Server Engine
 - ThinPrint Server Engine
 - Personal Printing

Current program versions

■ Download the ThinPrint Engine: <u>www.thinprint.com/</u>→ PRODUCTS → OVERVIEW→ <product name>→ DEMO VERSION

Update subscriptions If your software is more than one year old, you also require a current license key for product updates. This key can be purchased inexpensively as a so-called **update sub-scription**. For more information, contact your dealer or <u>info@thinprint.com</u>.

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 Microsoft website
 Management software for SQL servers "Microsoft SQL Server Management Studio

 Express" can be downloaded (for free) at:
 www.microsoft.com/downloads/details.aspx?Fami

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Abbreviations

- **ASP** Active Server Pages
- **DLL** Dynamic Link Library
- dpi dots per inch
- EMF Enhanced Metafile
 - **ID** Identification (number)
 - **IIS** Internet Information Service
- MMC Microsoft Management Console
- Output Gateway ThinPrint Output Gateway
 - SQL Structured Query Language