

ThinPrint Client Mac for ICA, RDP and TCP/IP

ThinPrint version 11

Manual

ThinPrint GmbH
Alt-Moabit 91 a
10559 Berlin
Germany/Alemania

Cortado, Inc.
7600 Grandview Avenue
Suite 200
Denver, Colorado 80002
USA/EEUU

Cortado Pty. Ltd.
Level 12, Plaza Building,
Australia Square
95 Pitt Street
NSW 2000 Sydney
Australia



E-mail: info@thinprint.com
Web: www.thinprint.com
Issued: May 2, 2017 (v228)

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Safety warning

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.

Introduction	4
Scenario 1: with print server	4
Scenario 2: without print server	5
 Installation	 5
Preconditions	5
Installing client software	6
 Client configuration	 8
Setup tab	8
Assignment tab	9
AutoConnect and Management Center/Services	10
Advanced tab	10
Connection Service	11
 Preparing the servers	 12
ThinPrint Server with ThinPrint Engine (scenario 1)	12
Terminal server with ThinPrint Engine (scenario 2)	12
 Multiple Mac users	 13
 Appendix	 14
Troubleshooting	14
Uninstalling ThinPrint Client Mac	14
Customer service and technical support	15
Additional sources	15
Abbreviations and acronyms	15

Introduction

With *ThinPrint Client Mac for ICA*, *ThinPrint Client Mac for RDP* or *ThinPrint Client Mac for TCP/IP* you can integrate Macs into your ThinPrint environment. The client allows you to print over the Citrix ICA protocol, over the Microsoft RDP protocol or over TCP/IP; there is a separate installer available for each protocol. With this client, all printers created on the Mac will be automatically mapped into the terminal session – locally created printers, as well as network printers.

ThinPrint Client for Mac can be integrated into all Windows or Citrix environments (with or without a ThinPrint Server). This is useful, for example, for home users, as they can then print from a XenApp or XenDesktop session via ICA to printers installed locally, while benefiting from ThinPrint compression.

ThinPrint Client Mac supports the following ThinPrint functions:

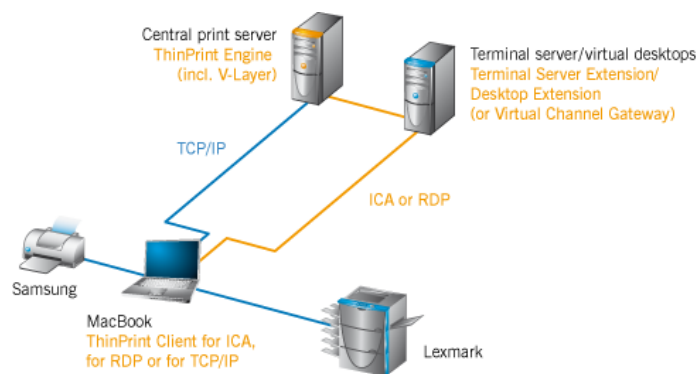
- ThinPrint print data compression, including bandwidth control
- AutoConnect: All Mac printers are automatically mapped into the session.
- V-Layer
- Connection Service (ThinPrint Client Mac for TCP/IP only)
- In Citrix print server environments, a Citrix Universal Print Server is not required.

You will find directions for installation and configuration of the ThinPrint server components in the relevant ThinPrint Engine manual ([Page 15](#)).

Scenario 1: with print server

If a ThinPrint Server is available, you can use *Driver Free Printing* in a terminal session (or remote desktop session). That means that no drivers need to be installed on the terminal servers or the virtual desktops (except for *TP Output Gateway*). All native drivers are installed on the ThinPrint Server only, where ThinPrint Engine runs. In the session, the shared printers of the ThinPrint Server are connected automatically by *ThinPrint AutoConnect*.

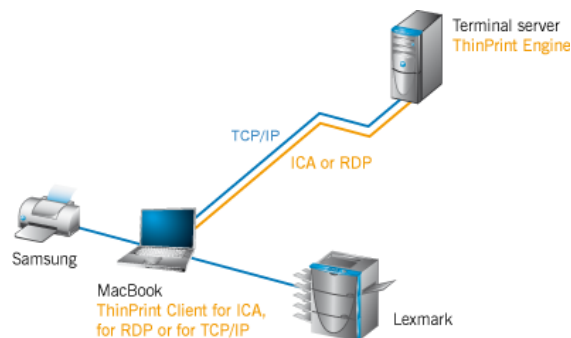
You can choose whether to print directly from the print server to the Mac over TCP/IP or from a terminal session over ICA or RDP. In the latter case, *ThinPrint Virtual Channel Gateway* is used (Illus. 1).



Illus. 1 running ThinPrint with server and client components (example)

Scenario 2: without print server

If no ThinPrint Server is being used, simply install ThinPrint Engine on the terminal servers (Illus. 2). In the session, all Mac printers are created automatically by *ThinPrint AutoConnect*. In general, the universal PostScript driver *TP Output Gateway PS* is used for the session printers. This enables AutoConnect to transfer driver properties from the Mac to the session printers.



Illus. 2 running ThinPrint with server and client components (example)

Installation

Preconditions

- **Mac computer**
with Mac OS X version 10.7 (32 or 64 bit) and later
- **ThinPrint Engine** version 9 and later
installed on the Citrix servers or on a ThinPrint Server¹

¹ Install ThinPrint Engine on the terminal servers, and Desktop Agent on the templates for the virtual desktops. The latter includes (also) Virtual Channel Gateway.

- **only for printing over ICA**
 - on the Mac:
 - either **Citrix Receiver 11.6 or 11.8 (not 11.7)** for Mac OS X 10.7, 10.8 or 10.9
 - or **Citrix Receiver 11.9 or later** for Mac OS X 10.11 (El Capitan)
 - or **Citrix Receiver 12.3 or later** for Mac OS X 10.12 (Sierra)

- on the terminal server:
Citrix XenApp version 5 or later

Make sure that the **Citrix Receiver** is installed. We recommend that the user opens a Citrix session before installing the ThinPrint Client.

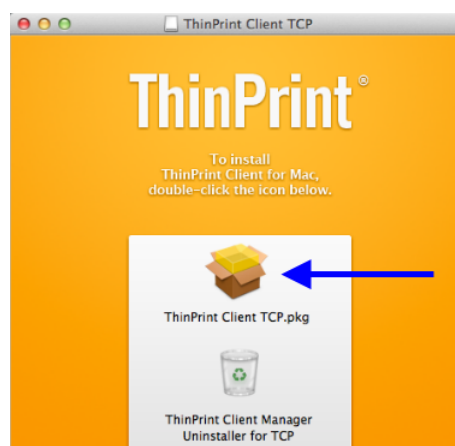
Alternatively, the user has to open a Citrix session after the ThinPrint Client installation and logout and login to the Mac.

- **only for printing over RDP**
 - on the Mac:
Jump Desktop (Remote Desktop) for Mac OS X (with costs available in the App Store)
- Make sure that the **Jump Desktop** is installed. We recommend that the user opens a remote desktop session before installing the ThinPrint Client.
- Alternatively, the user has to open a remote desktop session after the ThinPrint Client installation and then logout and re-login to the Mac.

You need administrator rights for all stages of installation and configuration.

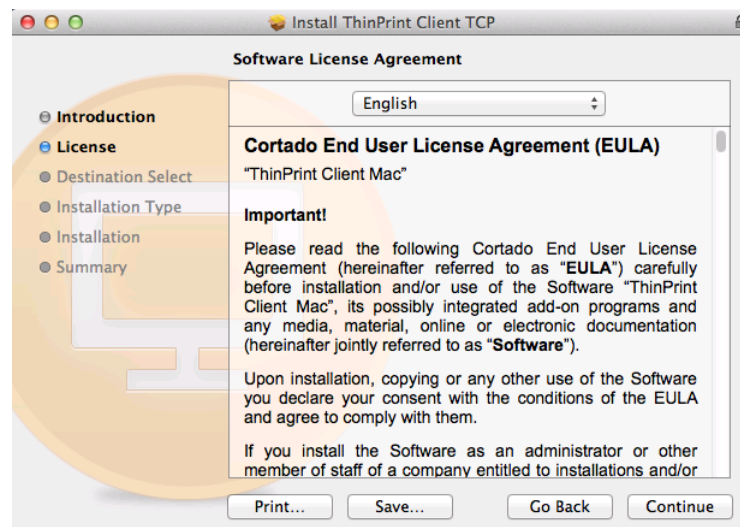
Installing client software

- Copy the installer THINPRINT_CLIENT_ICA.DMG, THINPRINT_CLIENT_RDP.DMG or THINPRINT_CLIENT_TCP.DMG into a local folder on the Mac.
- Double click on the .dmg file to unpack the archive.
- Double click on THINPRINT CLIENT ICA.PKG, THINPRINT CLIENT RDP.PKG or THINPRINT CLIENT TCP.PKG (Illus. 3).



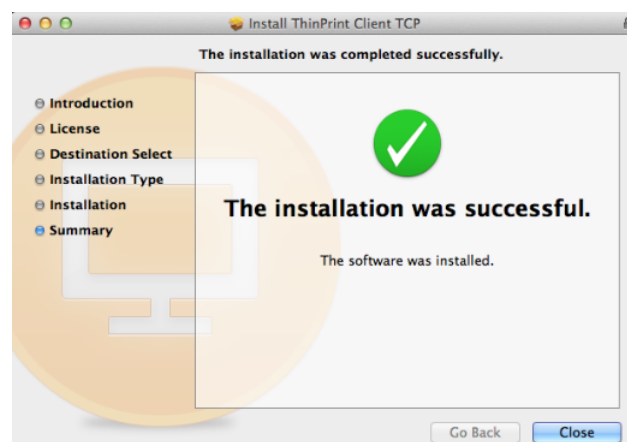
Illus. 3 select the installation program *.pkg (in this example: TCP/IP type)

- Click CONTINUE.
- In Illus. 4, above, you can see the list of languages in which the ThinPrint Client is available; German, English, French and Spanish. It is not necessary to select a language here, as the language of the operating system will be selected automatically².
- Accept the license agreement with CONTINUE.



Illus. 4 accept the license agreement

- Then click INSTALL and enter your credentials.
- A message appears, to confirm that the installation was successful (Illus. 5).
- Restart the Mac OS.



Illus. 5 installation successfully completed

- 2 The first of the listed system languages that matches one of the supported languages (German, English, French and Spanish) will be selected. If you would prefer a different language for the client, place that language higher on the list in your system.

The ThinPrint Client Mac will start automatically, when a user logs on to the Mac.

Client configuration

ThinPrint Client Mac is configured with ThinPrint Client Manager, which can be opened from the launchpad (Illus. 6) or from the Dock (Illus. 7).



Illus. 6 ThinPrint Clients in the launchpad (TCP/IP and ICA type as an example)



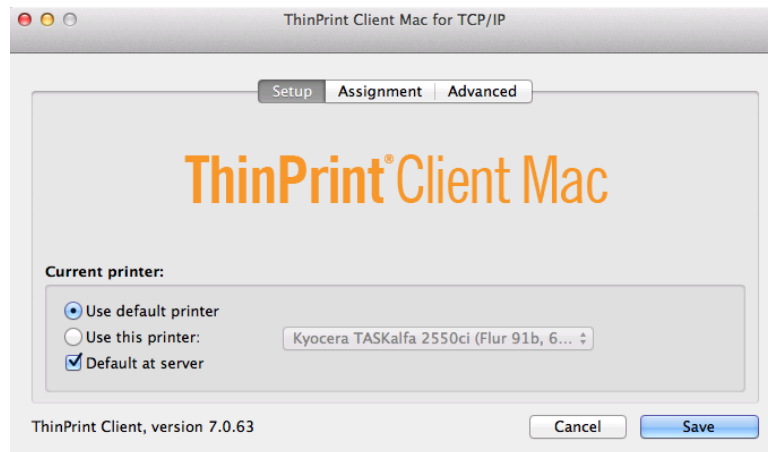
Illus. 7 ThinPrint Client for TCP/IP in the Dock (example)

The ThinPrint Client Manager will open (Illus. 8). The tabs are explained below.

Setup tab

Select the current printer here (Illus. 8). Print jobs are printed from the current printer if no printer ID is given with addressing.

If the user's default printer in his local printers folder should be his default printer in the session, leave the settings unchanged (USE DEFAULT PRINTER or USE THIS PRINTER).



Illus. 8 change default printer (in this example: TCP/IP type)

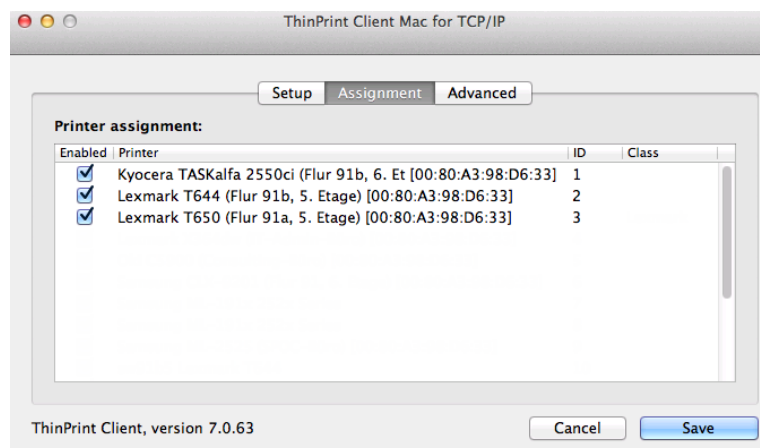
If another printer is to be provided as default printer in the session, select the preferred printer under USE THIS PRINTER. In both cases, DEFAULT AT SERVER remains checked. Only remove the checkmark if you don't want the default printer allocation to be influenced by the Client (but rather by server settings).

Take note that the default printer can also be determined by certain server settings. These settings might then take priority over the settings in ThinPrint Client. For assistance, read the corresponding ThinPrint Engine manual.

Assignment tab

*Printers
and their IDs*

ASSIGNMENT lists all printers that are found in the client's printer folder with their IDs and their classes (Illus. 9).



Illus. 9 printers with assigned IDs (in this example: TCP/IP type)

The printer IDs are automatically assigned by the ThinPrint Client Mac and are necessary for manually assigned printer names on the ThinPrint Engine (without Auto-Connect or Management Center/Services; for more information, see ThinPrint Engine manual).

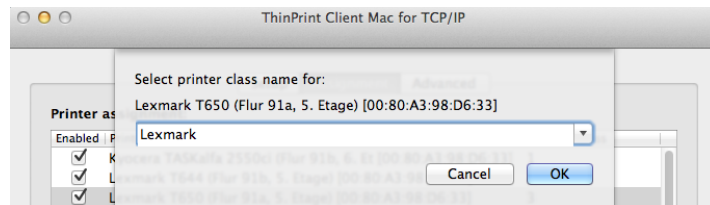
AutoConnect and Management Center/Services

It's also possible to select different printers by checking (or unchecking) the box next to them. All selected printers are created or connected automatically on a server or in a session by AutoConnect or by the Management Center/Services.

AutoConnect will automatically map all selected printers on a server and connect them with a ThinPrint Port – provided templates exist and 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 ThinPrint Engine or Management Center/Services documentation.

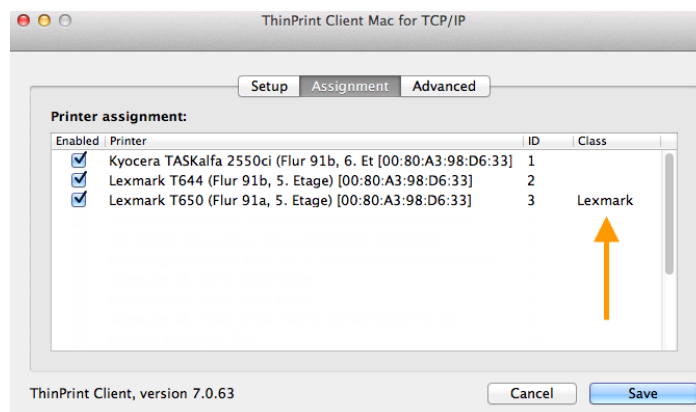
Printer class

Double clicking a printer name opens an input box for specifying the printer class (Illus. 10). The result is shown in Illus. 11.



Illus. 10 enter class name (see AutoConnect in the ThinPrint Engine manual)

Note! Unlike printer names, class names may not be longer than 7 characters and may not include blank spaces.



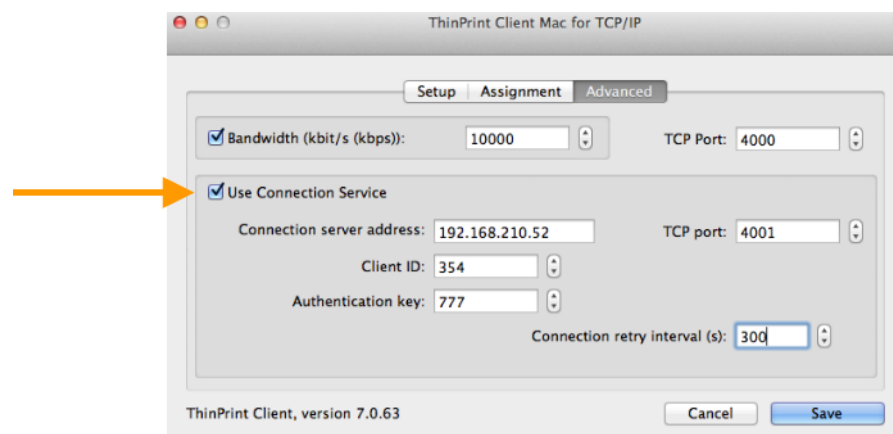
Illus. 11 printers with ID and class (in this example: TCP/IP)

Advanced tab

The ADVANCED panel (Illus. 12) is only available for ThinPrint Client Mac for TCP/IP. It offers the following settings:

Bandwidth Check this box and enter a bandwidth value. If the value is larger or if CLIENT CONTROL is disabled at the server, server settings (see ThinPrint Engine manual) are applied.

TCP Port Enter here the port number where ThinPrint Client Mac should receive incoming connections. Be sure: Same TCP port number for both ThinPrint Client and ThinPrint Engine printer port to which the client printer is connected and adjust AutoConnect configuration³. Otherwise, communication between the two ThinPrint components is impossible. Default TCP port number is 4000. Make certain that this port is open for incoming connections. If you want to avoid that condition, you can use the ThinPrint Connection Service (outgoing connection only).



Illus. 12 advanced options including Connection Service (TCP/IP type only)

Connection Service

The **TCP/IP type** of ThinPrint Client installed on a Mac can connect to the Connection Service installed on any server. **Print jobs can then be sent via TCP/IP, even where the Mac is found in a masked network** (e.g., behind a router with Network Address Translation) or firewall restrictions necessitate to turn the communication direction.

Checking **USE CONNECTION SERVICE** (arrow in Illus. 12) offers settings for using the Connection Service. information about installing and configuring the Connection Service in the manuals *Connection Service*, *ThinPrint Engine on print servers* and *Management Center* ([Page 15](#)).

Connection Service address Enter the IP address (or FQDN) of the server on which the Connection Service has been installed.

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

³ see ThinPrint Engine manual

Client ID Here you enter the Client ID that was assigned to this workstation by the server with the Connection Service.

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

Connection retry interval (s) Enter the wait time (in seconds) after which a new attempt should be made to establish a connection if the Connection Service is not reachable. Default: 300 (five minutes).

Preparing the servers

ThinPrint Server with ThinPrint Engine (scenario 1)

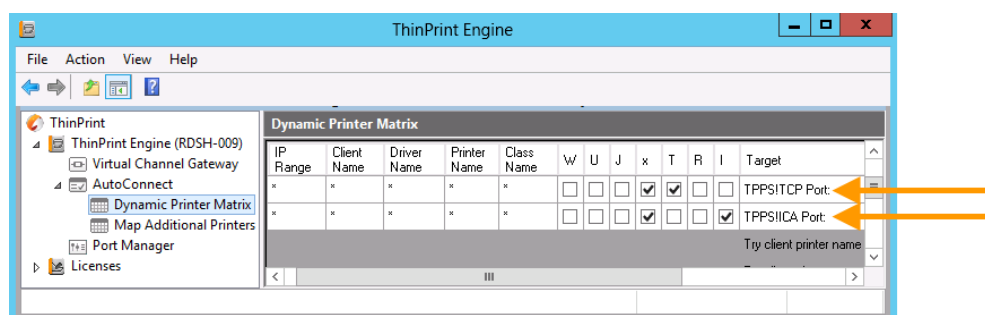
For all the preparations you need to make on a ThinPrint Server (on which a ThinPrint Engine is installed) as well as on the terminal servers and XenDesktop templates (Illus. 1), refer to the manual *ThinPrint Engine on print servers* ([Page 15](#)).

Terminal server with ThinPrint Engine (scenario 2)

On the terminal server, you can make an entry in the AutoConnect table so that the Mac printer will be mapped into the terminal session – without creating a template.

- When configuring *AutoConnect*, enter an additional line into *Dynamic Printer Matrix*, in order to map printers without templates (Illus. 13), e. g.:

TPPS!ThinPort:

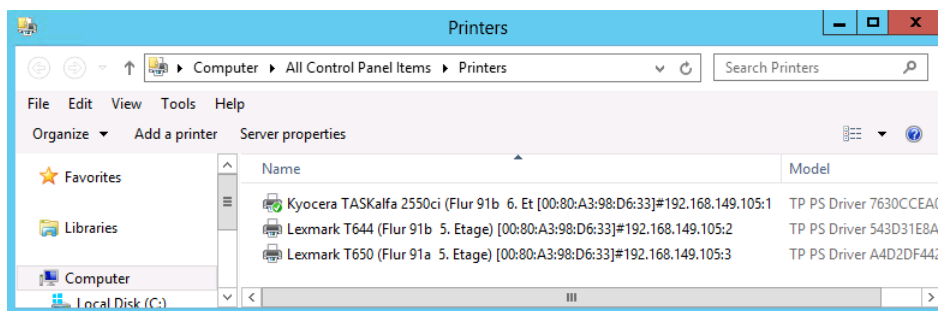


Illus. 13 Dynamic Printer Matrix: additional lines for the creation of the Mac printers, first line for the TCP/IP type, second line for ICA.(example)

Legend:

- Column **x** applies to Mac OS X clients, and others
- Column **I** applies only for the ICA protocol
- Column **R** applies only for the RDP protocol
- Column **T** applies only for the TCP/IP protocol
- TPPS** the PostScript driver TP Output Gateway PS
- !** separator
- ThinPort:** name of the ThinPrint Port with which the session printers are to be connected (one line is needed per ThinPrint Port). For TCP/IP, the print protocol of the port must be set as TCP/IP (SOCKETS), and for ICA or RDP as VIRTUAL CHANNEL PROTOCOL (ICA OR RDP)

The PostScript driver *TP Output Gateway PS* (see TPPS in the TARGET column of Illus. 13) enables AutoConnect to transfer the driver properties from the Mac to the session printers (Illus. 14).



Illus. 14 Mac printers in a terminal session (example for TCP/IP)

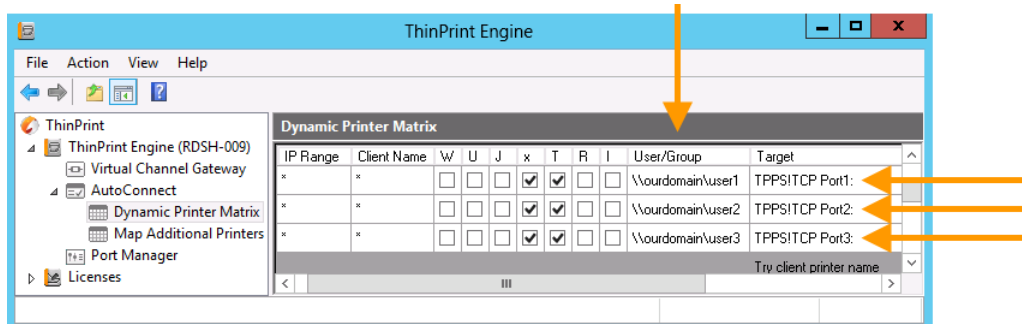
Multiple Mac users

If the ThinPrint Client Mac for TCP/IP is installed, and several users use a Mac simultaneously, and if the different users make changes to the client configuration, then print jobs may not print correctly.

If you want to set up the Mac Client for TCP/IP for multiple users, proceed as follows:

- Any user who has the ThinPrint Client for TCP/IP installed on his Mac should log out when he is not using the Mac himself
- Every Mac user needs a separate TCP port (see TCP port setup above right in Illus. 12 on [Page 11](#))
- Create a separate ThinPrint Port on the server for each user, and enter a port number that matches the one on the Mac

- On the server, AutoConnect should be configured such that the user prints over the port created for him, e.g. by listing the user in USER/GROUP in Dynamic Printer Matrix and entering his port as the target (Illus. 15).



Illus. 15 multi-user printing over TCP: an own printer port created in AutoConnect for each user

Appendix

Troubleshooting

- Issue: After updating the Mac to OS X 10.12 (Sierra) printers are mapped but printing doesn't work anymore.
Cause: some changes in Virtual Channel and used Citrix Receiver version
Solution: Update Citrix Receiver to version 12.3. Steps to be aware of:
 - Update Citrix Receiver to the current version (12.3).
 - Uninstall ThinPrint Client Mac for ICA
 - Install ThinPrint Client Mac for ICA again
 - Restart system.
 - Start Citrix Receiver.
 - Open the session.
 - Print.

Uninstalling ThinPrint Client Mac

To uninstall ThinPrint Client Mac, open THINPRINT CLIENT ICA.PKG, THINPRINT CLIENT RDP.PKG or THINPRINT CLIENT TCP.PKG and click on the icon recycle bin THINPRINT CLIENT MANAGER UNINSTALLER (Illus. 3 on [Page 6](#)).

Customer service and technical support

www.thinprint.com/ → RESOURCES & SUPPORT

<https://www.thinprint.com/en/resources-support/support-request/>

Additional sources

Further information about ThinPrint can be found on our website.

Manuals and descriptions

Manuals and other technical information are available at

<https://www.thinprint.com/en/resources-support/guides-manuals/>.

Thin clients and gateways

Thin Clients or terminals with embedded ICA/RDP type of ThinPrint Client as well as ThinPrint gateway appliances can be found at

<https://www.thinprint.com/en/resources-support/supported-devices/>.

Software downloads

The current version of **ThinPrint Engine**, can be downloaded at:

www.thinprint.com/demo.

ThinPrint Clients as well as tools like **Finishing Detector** and **ThinPrint Preview** (TPView.exe) can be found at

<https://www.thinprint.com/en/resources-support/software/clientsandtools/>.

Abbreviations and acronyms

FQDN	Fully Qualified Domain Name
ICA	Independent Computing Architecture (session protocol from Citrix)
ID	Identification number
Output Gateway	ThinPrint Output Gateway
OS	Operating System
PS	PostScript (Adobe)
RDP	Remote Desktop Protocol (session protocol from Microsoft)
TCP/IP	Transmission Control Protocol/Internet Protocol
TP	ThinPrint
TPPS	ThinPrint PostScript
V-Layer	Printer Virtualization Layer (ThinPrint)