SysPrint AG *State of the Art printing*

CPS Click2Map Queue Administration Manual

Version: 5.0

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1. Introduction

The queue administration is a powerful optional feature.

On one hand, it allows you to create print queues directly on target print servers, and deploy specific print settings to the print queues. (Point&Print)

On the other hand, it also allows to create print queues directly on the client workstations. (Peer2Peer). In this mode, CPS also forces the print driver installation by referencing to a reference print server, where the drivers are already installed.

Of course, you can have both, point&print and peer2peer queues managed by ***CPS Click2Map*** .

1.1. Requirements

In order to create queues on other servers or workstations, a service account is needed.

Point&Print mode

If you only work in point&print mode, the service user must have full administrative rights on all target print servers and on the server where ***CPS Click2Map*** is installed.

Peer2Peer mode

If you work in peer2peer mode, where local queues on the client workstations are to be created, the service user must have full administrative rights on the workstations and on the server, where ***CPS Click2Map*** is installed.

Mixed Mode

If you work in mixed mode (both, point&print as well as peer2peer) the service user must have full administrative rights on all target print servers and on the workstations, and on the server, where ***CPS Click2Map*** is installed.

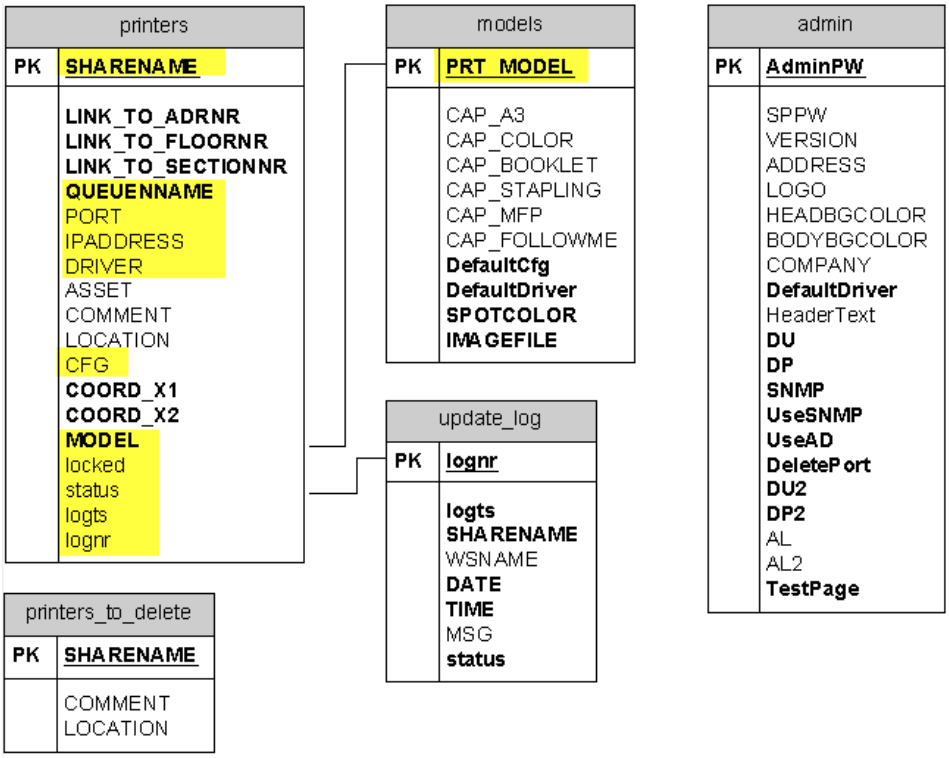
Other than that, WMI access must not be blocked from the ***CPS Click2Map*** server to the print server and/or workstations. All program calls initiated from the ***CPS Click2Map*** server to the print servers and/or workstations are using WMI and Microsoft's PSEXEC utility.

2. Theory of operation

CPS uses a MySQL Database called "appclientqueues" to store the data imported or manually entered by you. Data uploaded (such as printer images and floor plans) will be stored directly within the web server file structure. The table "printers" can be considered as the main table within CPS. The full share name (combined share name and server name, eg. \\servername\sharename) serves as database key within the printer tables. Each printer can be assigned to an address- floor- and optionally a space/office record. The capabilities of the printer models are stored in the "models" table.

Please refer to the CPS Administration manual for more details.

In this manual we will cover the print server, queue generation and configuration file management tasks. The following CPS tables are involved in this tasks:



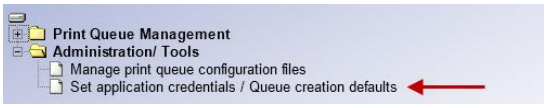
3. Getting started

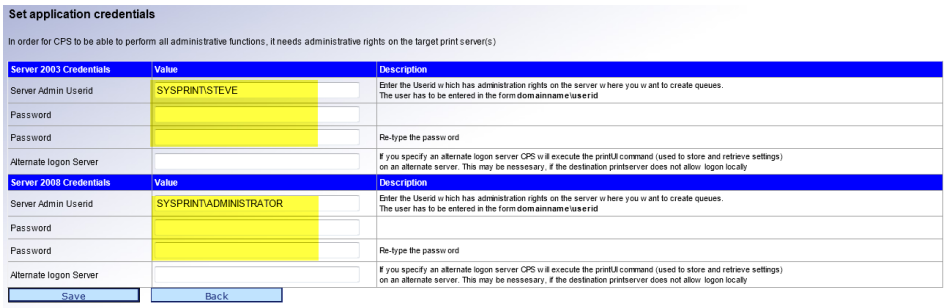
3.1. Login

To connect to the backend of CPS, just add /admin to the URL you normally use to connect to the frontend. Eg. http://servername/QueueAdmin . Alternatively you can access the queue administration over the normal administration menu as well.

3.2. Administrative Settings

The CPS QueueAdmin tasks need administrative credentials to be setup, otherwise CPS would not be able to perform those tasks. To enter the administrative credentials and setup program defaults, choose "Set application credentials / Queue creation defaults" from the administrative tools menu.





Enter the administrative credentials for both, windows 2003 and 2008 servers (can be the same for both, or can be different, even on different domains). The passwords will be transmitted and stored encrypted, to make sure nobody can capture the passwords.

The credentials entered here need to have full administrative rights on the print servers (in point&print mode) and to all client workstations (in peer2peer mode).

Note:

"2003" also covers Windows XP Server 2012 and Windows 10

"2008" also covers "2012", Windows Vista, Windows 7, windows 8.

Once your credentials have been saved, you can setup the other defaults.

Queue creation defaults

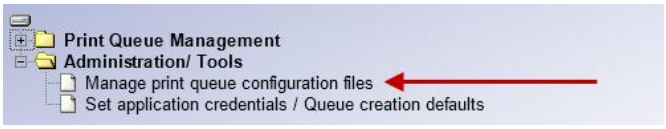
Parameter	Value	Description
Delete / Recreate Port	☑	If checked, the IP Port will be deleted and recreated (if possible and not used by any other queues). If it is not checked, then the port will be created if it does not exist, and configured using port 9100.
Use LPR	☐	If checked, the Ports for the Queues will be generated with LPR instead of TCP Port 9100.
Default LPR queue name	RAW	If LPR has been checked above, the LPR Ports will be generated with the LPR Queue name specified here. If omited, the queue name will also be used as LPR queue name.
Use SNMP	☑	If checked, the IP Port will be configured using the SNMP community name specified below
SNMP community name	public	SNMP V2 community name
Publish in ActiveDirectory	☑	If checked, the created queues will be shared and published in the ActiveDirectory. If unchecked, the queues will only be shared and not published.
Check Duplex	☐	If checked, CPS will do an additional check after the queue configuration, to check if duplex is enabled. This setting should only be enabled here, of most of your queues are configured in duplex.
Print Test Page	☑	If checked, a test page will be sent to the printer after the queue has been created.
Point&Print Mode	☐	If Point&Print mode is checked, CPS Click2Map will create the queues on the specified printserver
Peer2Peer Mode	☐	If Peer2Peer mode is checked, CPS Click2Map will NOT create queues on any Server, but on the workstations instead. Peer2Peer Mode requires a reference server (below) to be setup. For each Printer Model you must select a Queue on that reference server. If the printer driver is not present on the client, a temporary point&print queue will be setup to that reference server, to force the driver to be downloaded to the client. The servername specified on the queue will be ignored.
Mixed Mode	☑	If mixed mode is checked, all queues which have anything else than "localhost" in the servername field, will be generated on the servers specified (point&print). All queues which have "localhost" in the servername field will NOT create queues on any Server, but on the workstations instead. Mixed Mode requires a reference server (below) to be setup. For each Printer Model you must select a Queue on that reference server. If the printer driver is not present on the client, a temporary point&print queue will be setup to that reference server, to force the driver to be downloaded to the client.
Reference print server		If you want to work in peer2peer mode, you need to specify the reference printserver name. This is the server which holds all reference queues and printer drivers

The default parameters are set for a standard point&print environment. IP Ports will be created using standard TCP/IP Port 9100 with SNMP.

If you want to use point&print mode only, you will have to make sure, that each print server has the proper drivers and driver versions installed, for both 32- and 64 Bit.

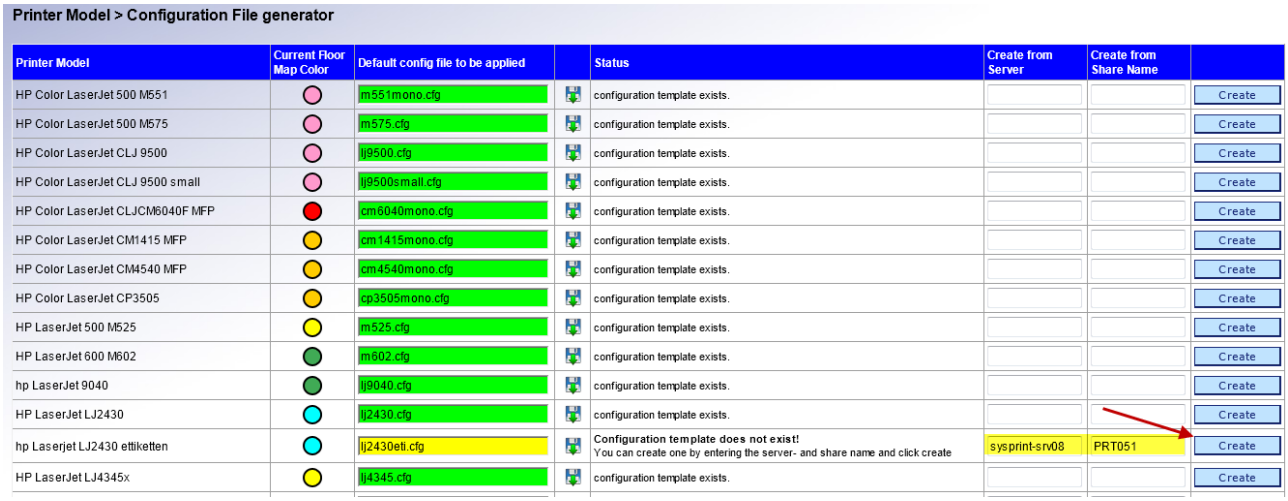
If you want to use mixed- or peer2peer mode, a reference print server must be specified. The reference print server must have all necessary print drivers installed, for both 32- and 64 Bit. For each printer model (and configuration) you are planning to use, one queue needs to be specified. When peer2peer queues are generated by CPS Click2Map, the client workstation will connect to that reference queue, if the driver is not present on the client workstation. This will force the driver installation on the client.

3.3. Configuration file generation and management

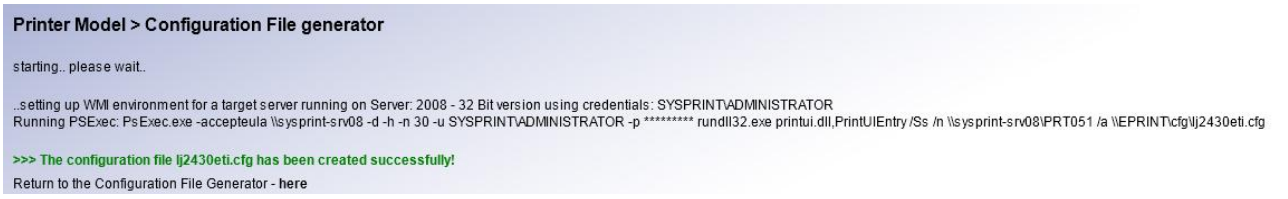


The printer models and configuration file names are inherited from the CPS backend. Configuration files are stored in the \\cpsserver\cfg shared directory on the CPS server. If the configuration file already exists, it will be highlighted in green. Missing configuration files are displayed with a yellow background.

To generate a new configuration file, we recommend to create the queue on a tests server manually, and setup the printing parameters as needed. After it has been verified, that the queue/printer is working correctly, you can generate a configuration file from that queue by entering the server- and share name of your test queue. CPS will connect to the server, retrieves the configuration and stores it using the file name displayed.

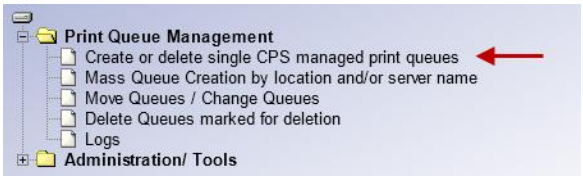


Once you click on "create" the process will be displayed:



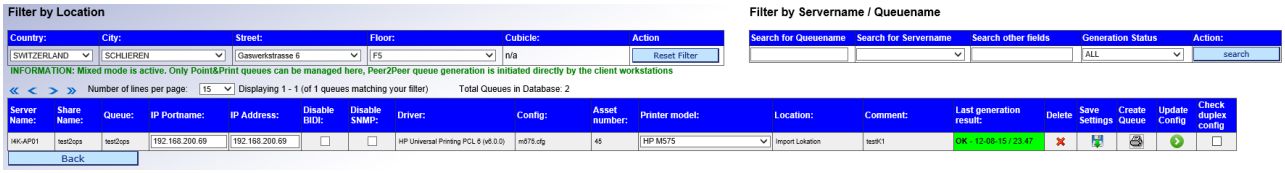
4. Print Queue tasks (Print Servers)

4.1. Creating, deleting or updating single queues

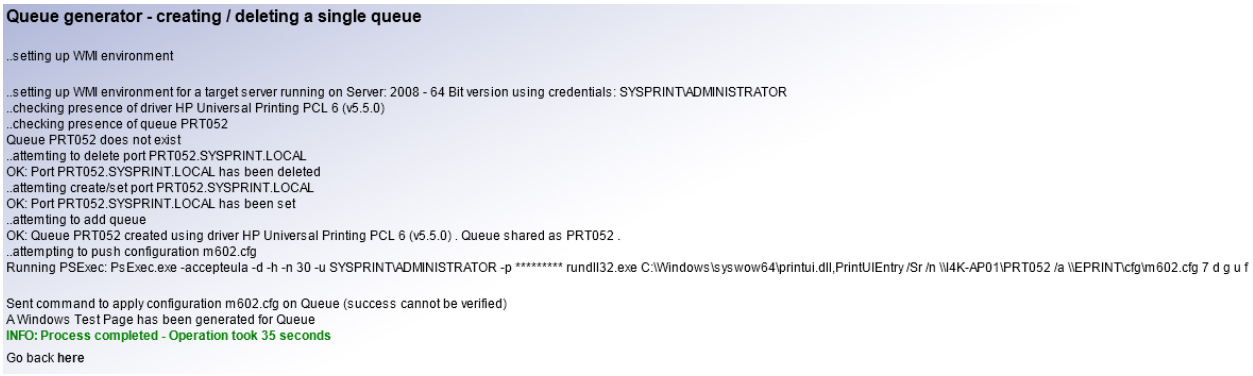


To deal with single queues, you can search for locations, server or queue names.

The "Last generation results" explains the current status of the queue. A status of "OK" indicated, that the queue has been generated by CPS. If you want to get more details, just move the mouse pointer over the status field. If you want to create a queue, click on the printer icon for the queue want to create.



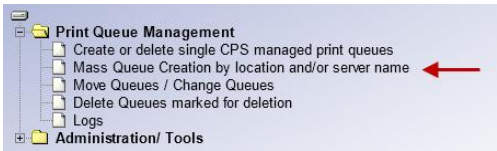
The example below shows the information displayed while creating a queue. If you create an already existing queue, the queue will be deleted and re-created.



Note: If just want to update the configuration for a queue, you can click on the "update" icon. You should do this only, if the printer driver is exactly the same, otherwise unpredictable results may occur. If you are not sure, better re-create the queue !

Existing printers can be deleted as well here. You should delete only if you're 100% sure! If you delete a printer here, it will not only delete the queue from the server, but also remove the printer from the CPS database, including address assignment and floor mapping. If you just want to move the queue over to another server you should use "Move Queues / Change Queues" function instead!

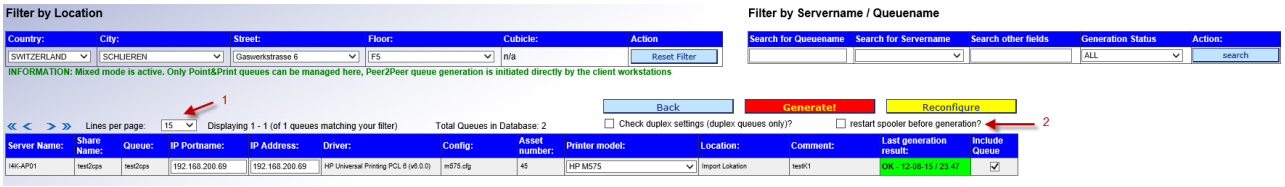
4.2. Mass Queue Creation



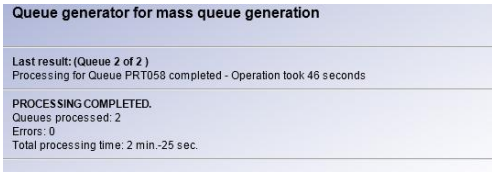
Mass queue creation works the same way as single queue creation, but it allows you to generate or reconfigure several queues in one shot.

Select the queues by searching for location, or server name. Uncheck the queues, you don't want to generate and click "Generate" or "Reconfigure" when you're ready.

Note: The mass queue generation can take from minutes up to hours, depending on the amount of queues to be generated. The processing speed is dependent on the load and speed on the target server, and on the printer driver used. The maximum number of queues which can be created in one shot also depends on how high you have set the "Lines per page" value (1). The maximum is 1000. If you generate a lot of queues on one server - especially on one which has not been rebooted lately - we recommend to set the "restart spooler before generation" checkbox (2). Experiences have shown, that the generation runs faster, if the spooler is restarted first.

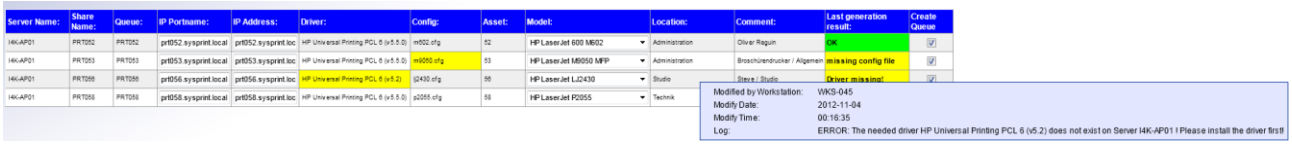


The progress will be shown on the screen:

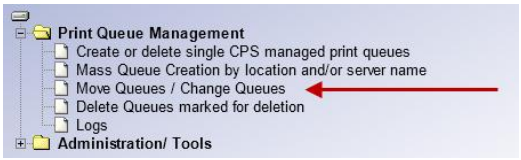


Note: If one or more queues cannot be generated because of missing drivers on the target servers or other reasons, the process will still continue. The overall result will be shown at the end of the process.

The List of queues will also show, if there was a problem. A yellow status means that there is some action needed. If you move the mouse over the status field, you will see more detailed information.



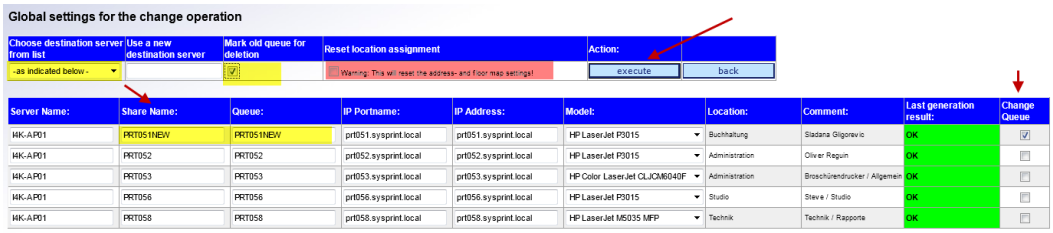
4.3. Move / Change Queues



This database-only function allows to rename existing queues or move them to another server while retaining existing address / floor mappings. Orphaned queues will be added to a table for later deletion.

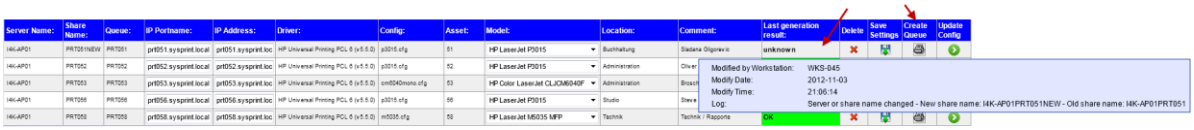
Method 1: renaming a single queue

If you just want to rename an existing queue, you search for the queue by name, server and/or address. Under "Choose destination server from list" select "as indicated below". Overtype the queue you want to rename. If you're planning to remove the old queue name later on by CPS, then also select "Mark old queue for deletion". Warning: select "reset location assignment" only, if you really want to reset the address- and floor map assignments. Click on "execute" to start, once you're finished with your setup.



This usually only takes a second or so, since it is a database only operation. When finished, a confirmation will be shown:

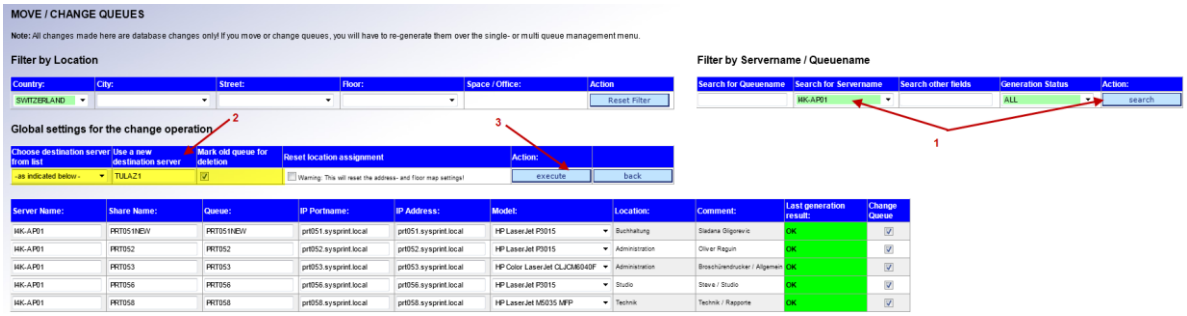
Note: This will NOT generate the new queue. The new queue will have the status "unknown" and you will need to generate it again over the single- or mass creation menu.



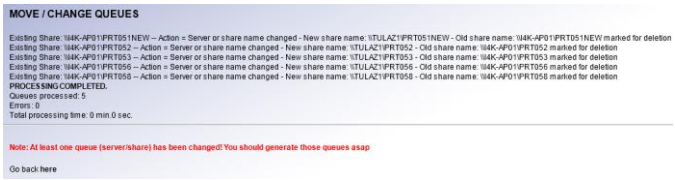
Method 2: moving several queues to a new server

If you need to move several or all queues from an existing sever to a new server, the way to do it quite similar to method 1:

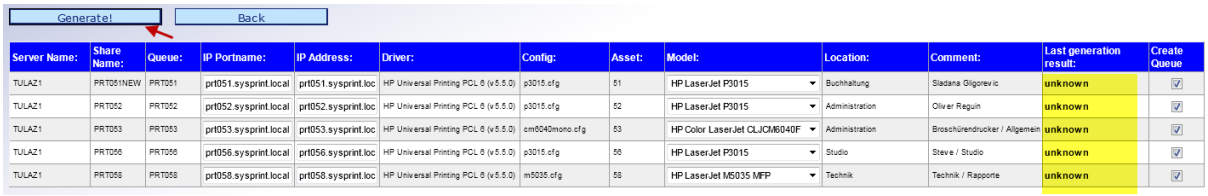
1. Select the old server and click on "search".
2. If the new server is already known to CPS, you can select it from "Choose destination server from list". Else type the new server name in the field "Use a new destination Server".
3. Click on "execute".



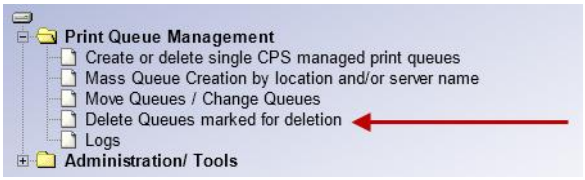
As in method 1, the operation will be confirmed. Please note, that CPS would deny the operation, if the destination queue already exists.



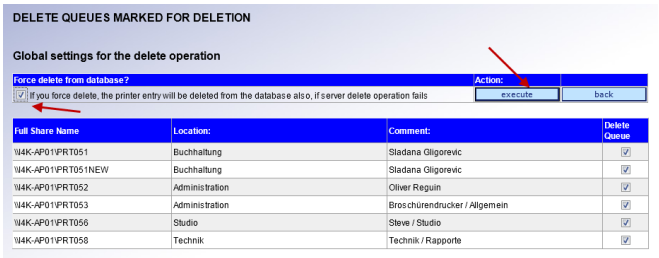
Please note: you will need to re-generate the "new" queues!



4.4. Delete queues marked for deletion

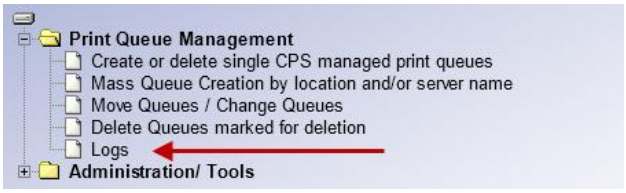


If queues are marked for deletion, you can delete them safely. CPS checks if the queue really does no longer exists in the main CPS database.



Note: If the queues cannot be deleted anymore (for example because the server no longer exists), you can check the "Force" checkmark. This will force the entries out of the "deleted" database also if the delete operation fails.

5. Logs



CPS logs all queue manipulations. You can search by date, queue- or server name and you can filter the type of log information displayed.

Search for log entries

Date >= (US Format, eg. 2012-05-15)	Date <= (US Format, eg. 2012-05-20)	Filter by Return Code	Filter by Server Name	Filter by Queue Name	
		System Informational Messages			search

Date	Time	Share Name	Queue Name	Asset Nr	Location	Status	Message
2012-11-04	00:18:35	\\I4K-AP01\PRT058	PRT058	58	Technik	System Informational Message	IP port changed - New port: prt058.sysprint.local - Old port: prt058.sysprint.local1
2012-11-04	00:18:26	\\I4K-AP01\PRT058	PRT058	58	Technik	System Informational Message	IP port changed - New port: prt058.sysprint.local1 - Old port: prt058.sysprint.local
2012-11-03	23:45:38	\\I4K-AP01\PRT053	PRT053	53	Administration	System Informational Message	Started single Queue migration, setting up WMI
2012-11-03	23:43:37	\\I4K-AP01\PRT058	PRT058	58	Technik	System Informational Message	Model changed - New model: HP LaserJet 600 M602 - Old model: HP LaserJet M5035 MFP
2012-11-03	23:43:37	\\I4K-AP01\PRT056	PRT056	56	Studio	System Informational Message	Model changed - New model: HP LaserJet 600 M602 - Old model: HP LaserJet P3015
2012-11-03	23:43:37	\\I4K-AP01\PRT053	PRT053	53	Administration	System Informational Message	Model changed - New model: HP LaserJet 600 M602 - Old model: HP Color LaserJet CLJCM6040F MFP
2012-11-03	23:43:37	\\I4K-AP01\PRT052	PRT052	52	Administration	System Informational Message	Model changed - New model: HP LaserJet 600 M602 - Old model: HP LaserJet P3015
2012-11-03	22:18:12	\\I4K-AP01\PRT058	PRT058	58	Technik	System Informational Message	Server or share name changed - New share name: \\I4K-AP01PRT058 - Old share name: \TULAZ1PRT058
2012-11-03	22:18:12	\\I4K-AP01\PRT056	PRT056	56	Studio	System Informational Message	Server or share name changed - New share name: \\I4K-AP01PRT056 - Old share name: \TULAZ1PRT056

6. Local Queues (Peer2Peer)

In order to use CPS Click2Map to create local queues, "mixed mode" or "peer2peer" mode must be active in the administrative settings of the Queue Administration Backend. (mixed mode is active by default).

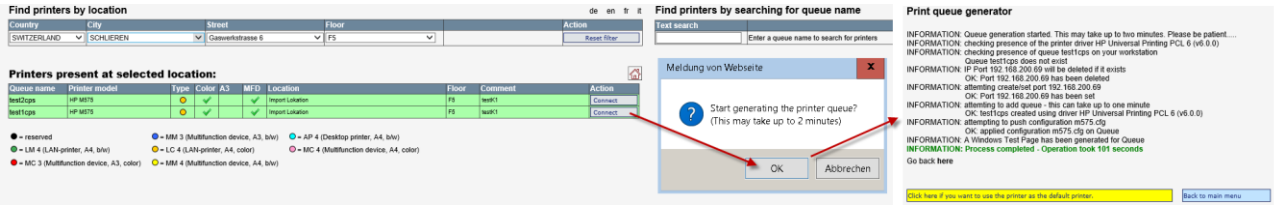
The service user credentials must have administrative rights on the CPS Click2Map server and on all workstations! WMI must not be disabled or blocked by a firewall between the CPS Click2Map server and the client Workstations. All WMI calls will be initiated by the CPS Click2Map server.

The following steps will be executed, when the user connects a peer2peer printer:

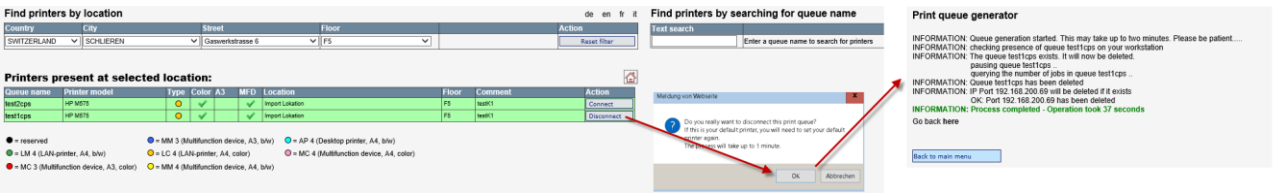
- A WMI connection to the client workstation will be initiated from the CPS Click2Map server.
- A check for the needed printer driver will be made. If the printer driver is not present on the workstation, CPS Click2Map will do the following **:
    - A point&print connection to the specified reference queue on the reference server will be forced from the client workstation. This will automatically download the driver from the reference server to the client.
    - After the reference queue is connected, CPS will delete the point&print mapping again. (The driver will remain on the client workstation).
- If the queue already exists on the client workstation, it will be deleted
- The queue will be created on the client workstation
- The configuration file will be applied on the newly created queue on the client workstation
- The user will be asked, if he wants to have the new queue as default. If yes, a Vbscript will be downloaded to the clients workstation, which has the code to set the new queue as default.

** We recommend to have the driver deployed to the client workstations through your usual software distribution tools. This is faster and more reliable.

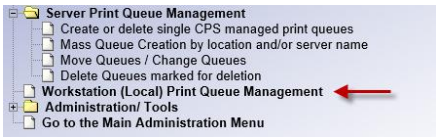
The following is an example of a generation process. This is how the client PC sees it:



The user can also delete local queues created over CPS Click2Map. Example:

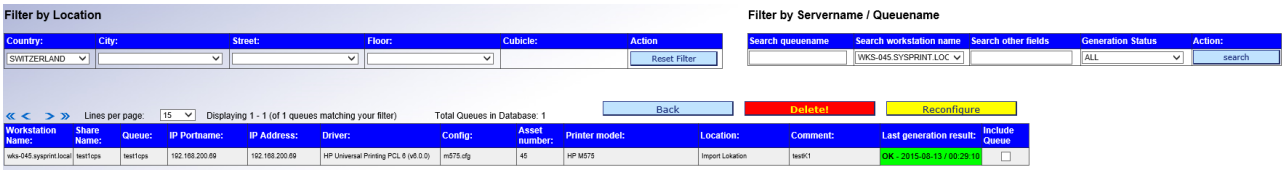


6.1. Administrator Options for local Queues



Introduced in version 5.0, CPS Click2Map now contains a database table with all queues created by the users on their workstations. (Upgrading to version 5 will create this table from the log files.)

The filtering options will help you to find what you need. You can still use the location filters to see all local printers and the workstations that have created one or more local queues. If you want to know, which workstations have created a specific queue, just enter the queue name. If you want to know all the printers that have been created on a specific workstation, select the workstation from the dropdown menu.



If anything has changed on the "Master" configuration (The entry called \\localhost\printername), differences compared to what it was, when the client has created the queue on he's workstation, will be highlighted in yellow. An example could be a different config file, printer model or even driver.

You can force a reconfiguration of the queue on the client workstation (assumed that it is powered on and connected to the network). Note: A driver change will only work, if the new driver is present on the client workstation in this case.

You can also delete queues created over Click2Map on the client workstations (also assuming that the workstation is powered on and connected to the network).