



MyQ Advanced Job Management Guide

REVISION 5

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1. About

This document provides readers with information about the advanced features and settings of print jobs management. As the job management in the MyQ environment is closely related to management of Queues, most sections of this guide discuss the advanced setup of Queues on the Queues tab of the MyQ Web Interface.

The basic setup of MyQ and the general terms describing the system are introduced in the MyQ Basic Installation Guide. To fully understand the following topics, we strongly recommend you to read the Basic Installation Guide first.

2. Print Jobs and How to Manage Them in MyQ

This topic briefly introduces the essential terms of the printing process, such as print jobs, print queues, and page description languages. Furthermore, it describes the way of receiving print jobs in MyQ and presents management options available to the MyQ administrator and MyQ users.

2.1. Essentials of the printing process

In this section, you can find the basic terms and general information related to the printing process.

Print job, print driver, print queues

Once a document (here meant in a wider sense: as a text, a picture, a Web page etc.) is submitted to be printed, it becomes a **print job**, which is basically a file with instructions for the printer where the job is to be printed.

When a user decides to print the document in some application (text editor, web browser...), they are shown the printing options and let to select the printer and additional parameters of print, such as color, print range or number of copies.

The **print driver** of the selected printer converts the document to a print file, which contains direct instructions for the printer, including the additional information (color, number of copies...). The print file can have different formats depending on the page description language that is used for the print instructions.

The print job is then sent to a **print queue**, where it waits to be printed. The print queue offers some basic management options concerning the waiting print jobs: you can pause, resume or cancel the jobs.

Page description language

A **page description language (PDL)** is a computer language utilized for description of the appearance of a printed page. A print driver uses the language to instruct the printing device where and how to place text and graphics onto the page. The most common page description languages are **PCL5**, **PCL 6 (XL)** and **PostScript**.

2.2. Reception and management of print jobs in MyQ

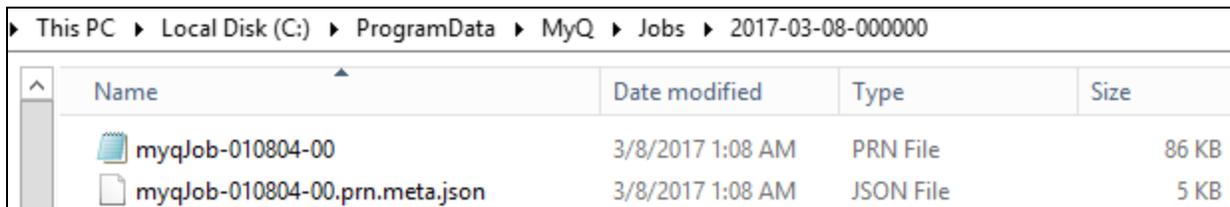
How does MyQ receive print jobs?

The MyQ administrator either creates a new network printer with an LPR print port for printing to MyQ, or creates a new LPR port for printing to MyQ and uses it with some of the already existing printers. Within the setup of the port, the administrator sets the IP address of the MyQ server and one of the MyQ queues. Jobs that are sent via this port are received by MyQ and added to the selected queue.

Where are the print jobs stored?

The jobs are stored as PRN files on the MyQ print server in sub-folders of the **ProgramData/MyQ/Jobs** folder. Each of these sub-folders has the form: **YYYY-MM-DD-XXXXXX** where the front part informs about the date when the sub-folder was created, while the number at the bottom part serves to sort sub-folders created in the same day. The sub-folders contain limited number of jobs and a new sub-folder is automatically created when the first job is sent within one day or when the previous sub-folder is full. Limiting the number of jobs stored in one sub-folder simplifies search for the job files.

If the MyQ SPS service is running on the end-user's workstation, MyQ receives two files: a PRN job file and a JSON metadata file created by the SPS service. The metadata file contains information from job spooler.



Name	Date modified	Type	Size
myqJob-010804-00	3/8/2017 1:08 AM	PRN File	86 KB
myqJob-010804-00.prn.meta.json	3/8/2017 1:08 AM	JSON File	5 KB

FIGURE 2.1. The PRN job file and the JSON metadata file stored on the server

How can I find the PRN print file?

On the **Jobs** main tab of the MyQ Web interface, you can open a job and find the name of its PRN file and the name of the sub-folder where the file is stored.

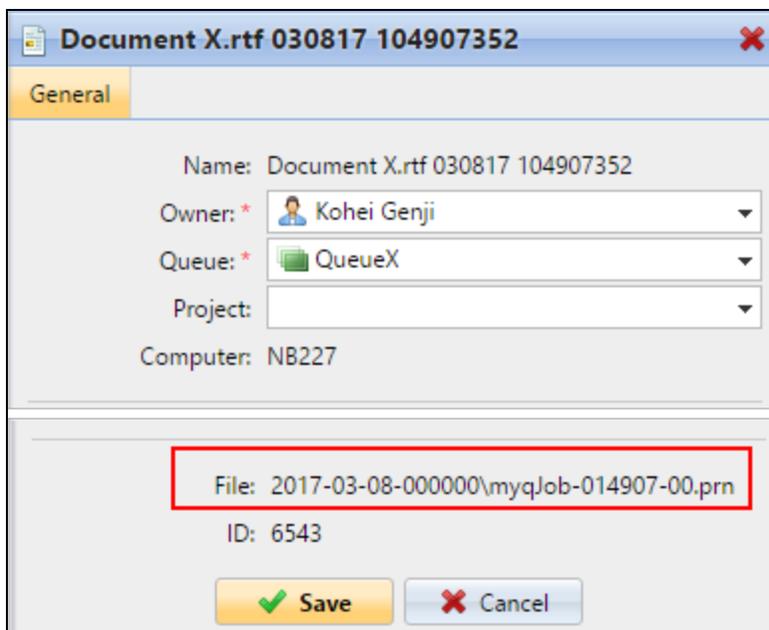


FIGURE 2.2. Information about the PRN file on a job's properties panel

How can jobs be managed in MyQ?

There are two possible parts of the job management process. The first is to prepare the MyQ environment, where the jobs are sent, for example creating multiple queues for different print options or defining the maximum allowed size of jobs on the **Jobs** settings tab. The second part is manipulating with the jobs that have already been sent to MyQ: opening their preview, adding them to favorites, moving them to a different queue etc.

While there is a limited number of basic job processing actions that can be selected within the setup of queues, you can define a large variety of custom actions via two powerful tools: PDL commands and PHP scripts. By creating custom PDL commands or PHP scripts, you can both control print (based on properties such as size or color of the print jobs) and communicate with the printing user.

Where can I find information about the print jobs management options?

The basic preparation of the MyQ print environment is described in three chapters of the MyQ Basic Installation Guide: Queues, Printing to MyQ and Jobs. The advanced options are described in the following topics of this guide: " *Advanced Options of*

Queues on page 6, *Processing Jobs via PJJ Commands* on page 13, *Scripting (PHP)* on page 15, *Prologue, Epilogue* on page 28 and *Watermarks* on page 32.

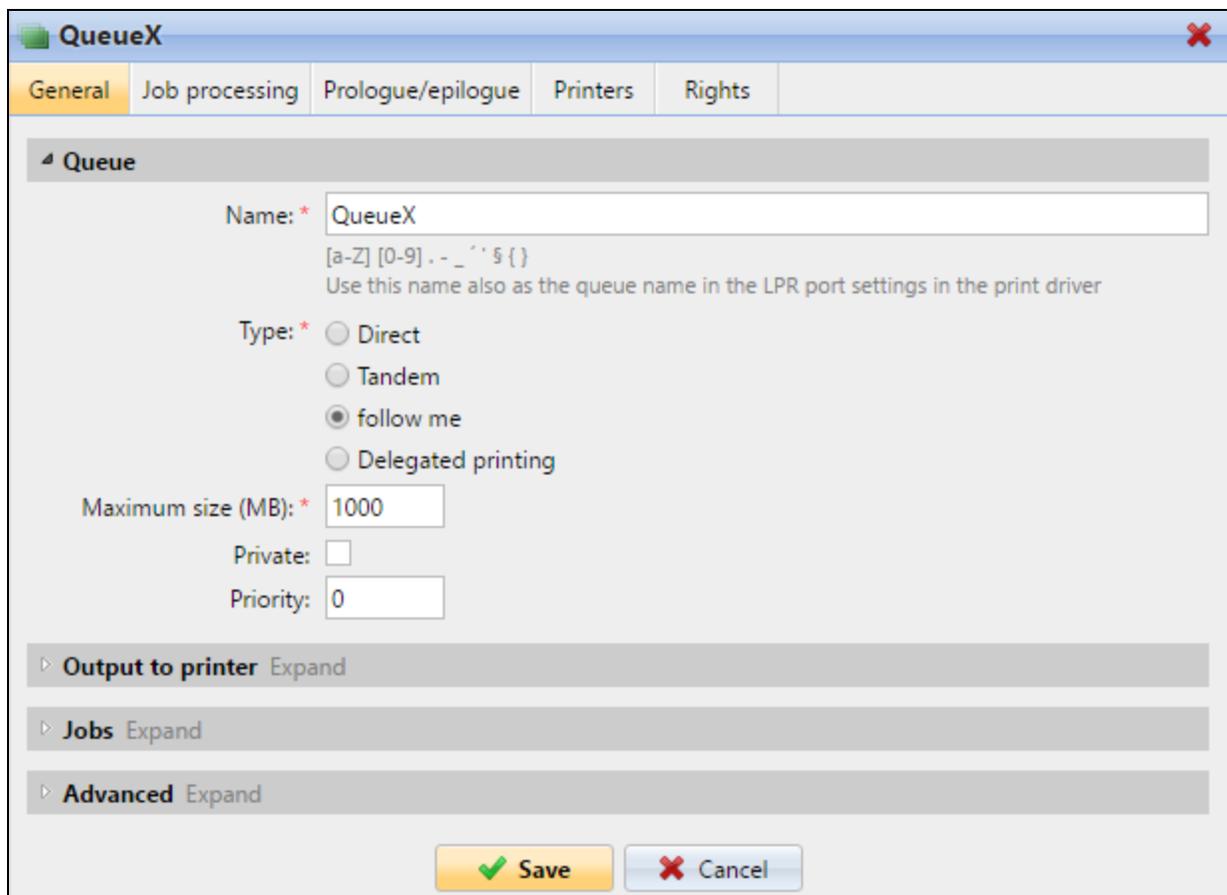
Management of the jobs that have already been sent to MyQ is described mostly in the MyQ Basic Installation Guide: in *Queues* and *Jobs*. The last two topics of this guide, *Job Preview* on page 39 and *Job Archiving* on page 42, show how to preview print jobs and how to archive them.

3. Advanced Options of Queues

This topic introduces advanced options related to Queues in MyQ. The first section describes options and parameters available within the setup of the queue. The second section shows you how to activate and use personal queues in MyQ.

3.1. Advanced options on the General tab of the Queue

Once you have created a queue and set the common options, such as its type or user detection method, you can select some of the more advanced job management features. This topic describes jobs related options available on the **General** tab of queues' properties panel that are not mentioned in the MyQ Basic Installation Guide.



The screenshot shows the 'QueueX' properties panel with the 'General' tab selected. The 'Queue' section contains the following fields and options:

- Name:** * QueueX
[a-Z] [0-9] . - _ ' { }
Use this name also as the queue name in the LPR port settings in the print driver
- Type:** *
 - Direct
 - Tandem
 - follow me
 - Delegated printing
- Maximum size (MB):** * 1000
- Private:**
- Priority:** 0

Below these fields are three expandable sections:

- ▶ **Output to printer** Expand
- ▶ **Jobs** Expand
- ▶ **Advanced** Expand

At the bottom are two buttons: a green 'Save' button and a red 'Cancel' button.

FIGURE 3.1. The General tab of a queue's properties panel

Maximum jobs size, Private jobs, Priority of the queue

Maximum size

Here you can change the size of the queue. On the **Queues** main tab, you can see the ratio of the actual size of all jobs sent to the queue to the maximum size of the queue.

Status	Name	Type	Size	Printers	Maximum size	Used
Ready	Delegate	follow me	3.24 MB	Number of printers: 4	1.00 MB	324 %

FIGURE 3.2. The actual size of all jobs sent to the queue and the jobs size / maximum size percentage are part of the queue's overview.

Private jobs

The jobs sent to a Private queue are immediately deleted after they are printed. Select this option if you want to disallow reprinting of printed jobs.

Priority

When multiple jobs from follow me queues are to be released at the same time, the jobs that are sent to queues with higher priority are released before the jobs with lower priority.

For example, if there are three jobs waiting to be released on a printing device, one with a priority number 0, one with a priority number -1 and one with a priority number 2, the job with the priority number 2 is printed first, the job with the priority number 0 is printed second and the job with the priority number -1 is printed third.

Output to printer

Protocol + Port

By default, print jobs are sent from MyQ to printing devices via the **RAW** protocol. Instead of it, you can use one of the alternative standard protocol options (**IPP**, **IPPS** or **LPR**) or the **MyQ printing protocol**, which can be used in two versions:

- **MPP**: jobs sent via this protocol are compressed
- **MPPS**: jobs sent via this protocol are compressed and encrypted via SSL

On the **Port** setting, you can change the port of the selected protocol.

Use Fiery if available

If you use a Fiery module for processing Postscript jobs, make sure that this option is selected and set the IP address of the module on the properties panel of the printing device to which the module is connected. Otherwise, you can deselect the option.

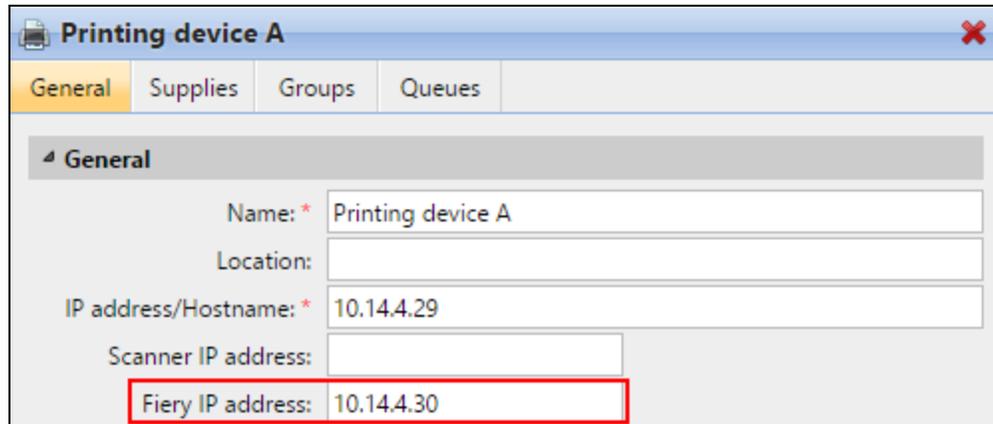


FIGURE 3.3. The Fiery IP address setting on the printing device's properties panel on the Printers main tab

Jobs

Get job name from PJJ

If this option is selected, MyQ takes the job name from the **@PJL JOB NAME** parameter in the PJJ header instead of detecting it from the LPR protocol.

WARNING: The job name in the PJJ header may differ from the name of the printed document.

Job metadata mode

If this option is selected, MyQ discards all jobs that do not contain metadata from the Job Parser. It can be used together with the Credit or the Quota features to prevent printing of jobs without necessary information (number of pages, color etc.).

When a job is discarded due to this setting, the following message appears in the MyQ Log: "**Job metadata is required for the queue but the job parser is turned off. Job is canceled. | queue=QueueX**".

WARNING: If you select this option, make sure that the Job Parser is enabled.

INFO: On the **Jobs** settings tab, you can enable automatic notification on the refused jobs via email for both the administrator and the job sending users. For more information, see "Notifying administrator and users about refused jobs" under "Jobs" in the Basic Installation Guide.

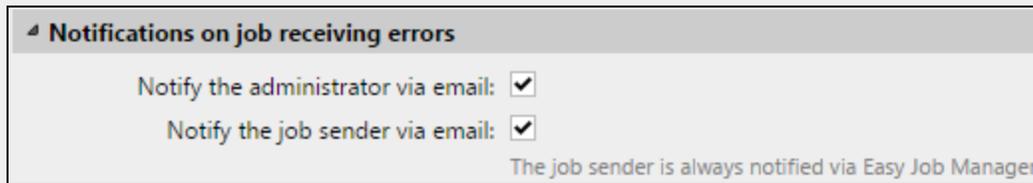


FIGURE 3.4. Notifications on job receiving errors

3.2. Personal Queues

Personal queues in MyQ enable users to select the queues where their print jobs are sent. The users can create multiple queues to ascertain that at least one of them has available printing devices where the job can be released.

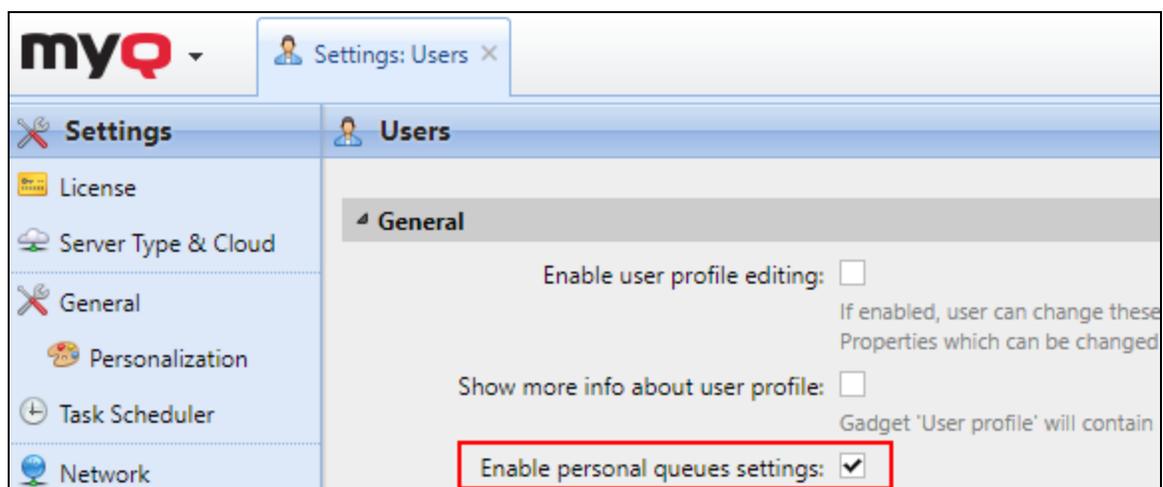


INFO: If a user is not allowed to send the job to the currently checked personal queue, MyQ skips it and moves to the next one. If all personal queues are skipped, the job is sent to the queue set on the print port.

3.2.1. Activating the feature

To activate the personal queues, do the following:

1. On the **Users** settings tab, select the **Enable personal queues settings** option.



2. On the properties panel of the queue where the user's jobs are sent by the print driver (see "Printing to MyQ" in the Basic Installation Guide), add the PHP script shown below. The script moves the jobs to the first available personal queue of the user.

- ```
// get all user's queues sorted by priority
$personalQueues = $this->owner->personalQueues;
// loop them
foreach ($personalQueues as $q) {
 // skip queue if no printer is available
 if ($q->isAnyPrinterAvailable() === false) {continue;}
 // queue printer is available, move job to queue
 $this->moveToQueue($q->name);
 // job is moved, stop the loop
 break;}
```

After the feature is set up, each user can see a button for setup of their personal queues on their account on the MyQ Web Interface.

### 3.2.2. Selecting and using the personal queues

Once the feature is activated, both the MyQ users and the MyQ administrator can add and delete the personal queues.

#### Adding and deleting the personal queues by users

Users add and delete the personal queues on their user account on the MyQ Web Interface. To do this, they need to log in to the interface, then click **Personal queues** there, and lastly set the queues in the **Personal queues** dialog box.

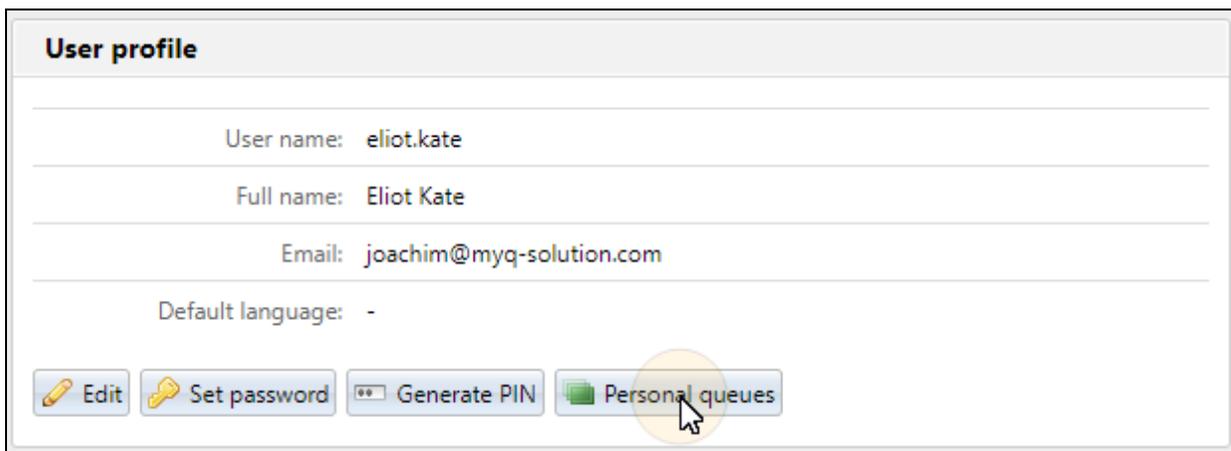


FIGURE 3.5. Opening setup of personal queues

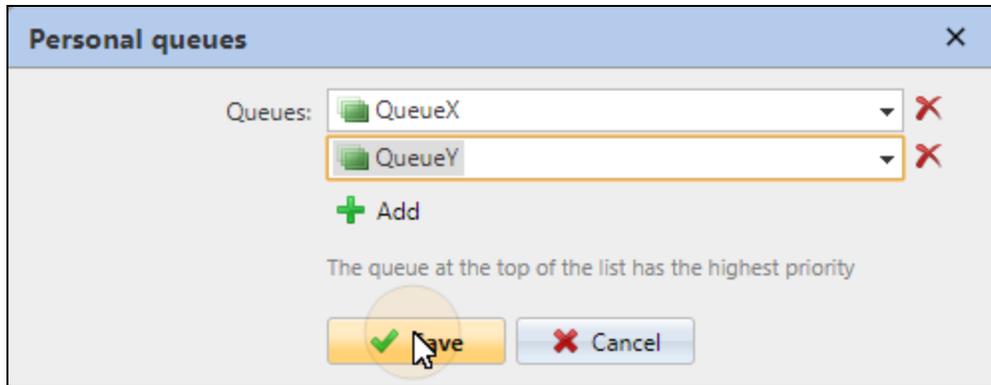


FIGURE 3.6. Setting the personal queues

After the user sends the job, MyQ checks the personal queues and sends the job to the first queue with available printing devices.

### Adding and deleting the personal queues by the administrator

The administrator adds and deletes the user's personal queues on the **Queues** tab of the user's properties panel on the **Users** main tab of the MyQ Web Interface.

To access the tab, open the **Users** main tab (Click **MyQ**, and then click **Users**), then double-click the user (or right-click the user, and then click **Edit** on the shortcut menu) to open the properties panel, and lastly click **Queues** on the panel.

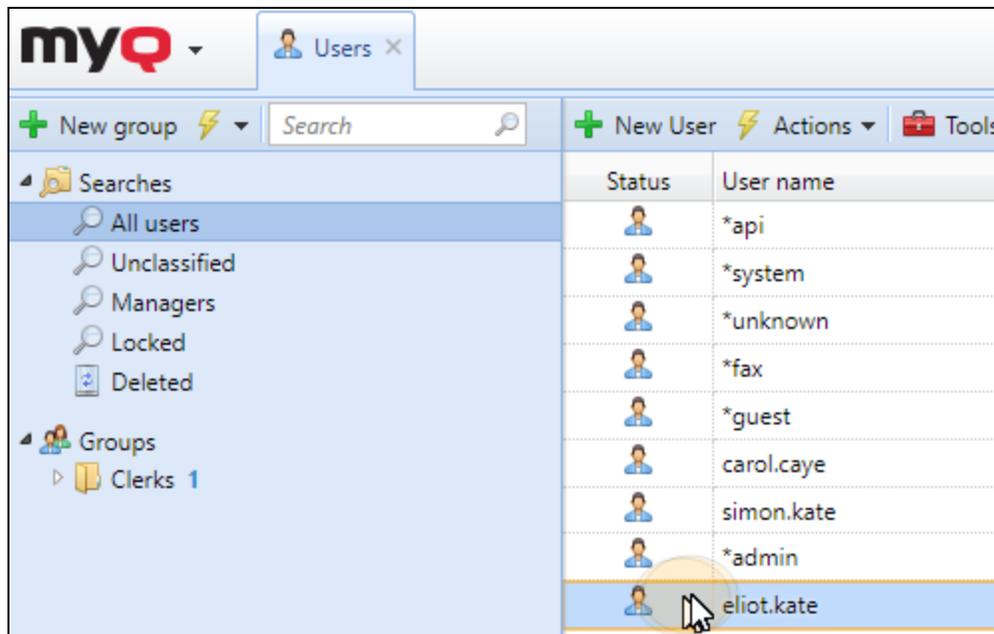


FIGURE 3.7. Opening the user's properties panel

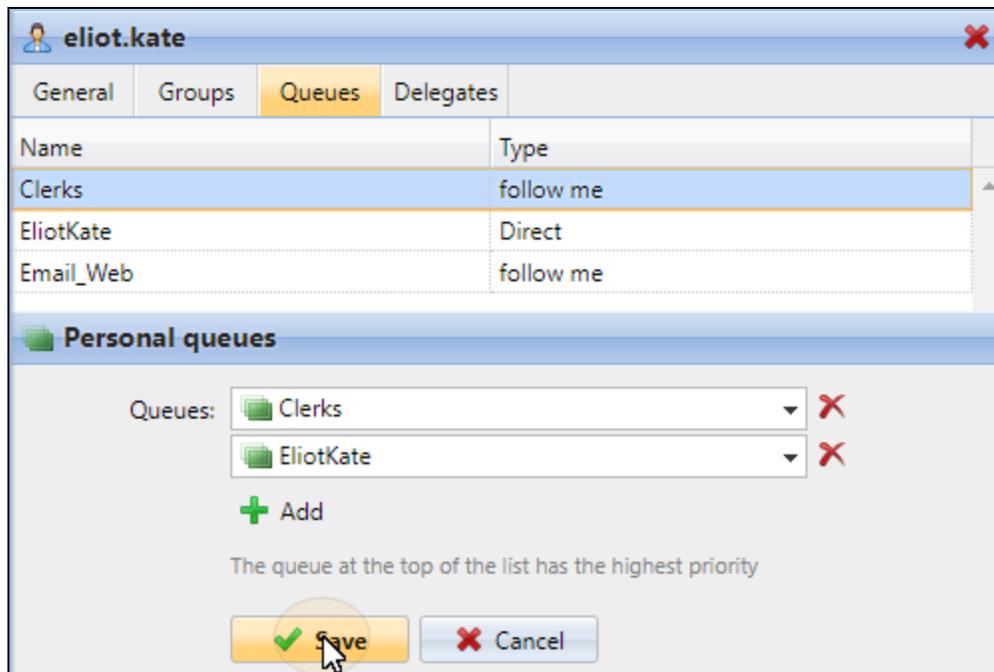


FIGURE 3.8. Personal queues on the Queues tab of the user's properties panel

## 4. Processing Jobs via PJP Commands

On the **Job processing tab** of each queue, under **PJP**, you can enforce additional job processing actions by selecting one or more of the predefined PJP commands or creating any number of custom commands.

When you select to enforce some of the predefined actions (duplex, stapling, number of pages), the original PJP sequences of the print job are replaced. If you enter your own PJP sequence, this sequence is added to the end of the PJP header of the original print job and overwrites all the original settings.

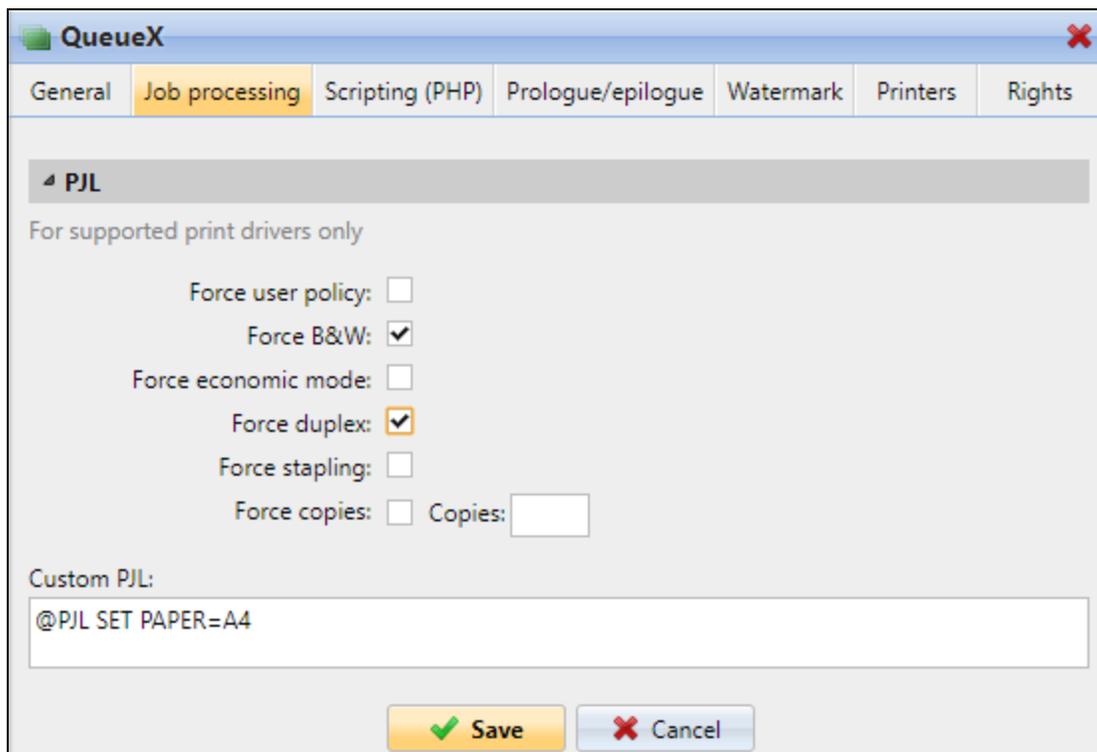


FIGURE 4.1. The PJP options of the Job processing

The predefined commands enforce the following actions:

- **Force user policy:** Applies all user policies attached to the user who releases the job.
- **Force B&W:** The job is printed in black and white.
- **Force economic mode:** A reduced amount of ink is used to print the job; the print appears lighter than in the normal mode.
- **Force duplex:** The job is printed on both sides of paper.
- **Force stapling:** The job is stapled by the finisher module of the printing device (if it is available on the device).
- **Force copies:** An exact number of copies of the job is released.

The custom commands can enforce other actions or provide additional information to the MyQ server. For example, you can use the **@PJM SET PAPER=A4** to enforce the A4 paper format or the **@PJM COMMENT="USERDOMAIN:somedomain.com;"** to provide the MyQ server with the information about the domain of the printing user.



**NOTICE:** When you enter your own PJL sequence, it is necessary to enter the correct syntax. The command should always start with @PJM.



**NOTICE:** To be applied, the PJL command has to be supported by the printing device where the job is released. The information on what PJL commands are supported by a particular model of printing devices can be found in the documentation provided by the manufacturer of the devices.

## 5. Scripting (PHP)

You can use PHP scripts to further process the job after it is received by the MyQ server. Together with the PJI options and customizable queues, the PHP scripting provides you with a large variety of job management options, such as the distribution of jobs between printing devices based on their size or color. Furthermore, you can employ PHP scripts to set up interaction with MyQ users via dialog boxes displayed in the MyQ Smart Job Manager on their computer.

The first section of this topic presents the classes, methods and properties that can be used in the scripts. The other two sections describe the additional job related actions (*"Actions after processing"* on page 22) and the interaction with MyQ users (*"User interaction"* on page 25).

### 5.1. Classes, methods, and properties

There are five classes that can be used within the scripts: **Job**, **User**, **Queue**, **Session** and **QuotaInfo**. The object of the **Job** class represents the job sent to MyQ, the object of the **User** class represents the job's owner, and the object of the **QuotaInfo** class represents quotas of the job's owner. The **Queue** class can be used to move the job to one of the personal queues of the job's owner and method of the **Session** class might be used for additional specific tasks, such as sending a log message to MyQ.

This section describe the methods and properties belonging to the classes.

#### Job class

The **Job** class has the following **methods** and **properties**:

#### Methods

| Name                                         | Description                       |
|----------------------------------------------|-----------------------------------|
| this <b>pause</b> ()                         | Pause the job                     |
| this <b>copyToQueue</b> (string \$queueName) | Copy the job to queue \$queueName |
| this <b>moveToQueue</b> (string \$queueName) | Move the job to queue \$queueName |

| Name                     | Description                                       |
|--------------------------|---------------------------------------------------|
| this <b>setPrinted()</b> | Mark the job as printed without it being released |
| this <b>delete()</b>     | Delete the job                                    |

## Properties

| Name       | Type   | Writable | Description                              |
|------------|--------|----------|------------------------------------------|
| name       | string | yes      | Name of the job                          |
| dataSize   | int    | yes      | Data size of the job in bytes            |
| monoCount  | int    | yes      | Count of the monochrome pages of the job |
| colorCount | int    | yes      | Count of the color pages of the job      |
| pageCount  | int    | -        | Total sum of the pages of the job        |

| Name  | Type   | Writable | Description                                                                                                                                                                                                                                                                                                                                                         |
|-------|--------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| paper | int    | yes      | <p>Format of the paper with the following numbers as its values:</p> <pre>'a4' =&gt; 5 'a3' =&gt; 6 'other' =&gt; 7 'a5' =&gt; 14 'b4' =&gt; 15 'b5' =&gt; 16 'folio' =&gt; 17 'ledger' =&gt; 18 'legal' =&gt; 19 'letter' =&gt; 20 'statement' =&gt; 21</pre> <p>This variable is employed by the 'get' method in MyQ. Use it in conditions of the PHP script.</p> |
| paper | string | yes      | <p>Format of the paper with the following strings as its values:</p> <pre>'a4' 'a3' 'other' 'a5' 'b4' 'b5' 'folio' 'ledger' 'legal' 'letter' 'statement'</pre> <p>This variable is employed by the 'set' method in MyQ. Use it in commands of the PHP script.</p>                                                                                                   |

| Name     | Type    | Writable | Description                                                                                                                                                                                                                           |
|----------|---------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| duplex   | bool    | yes      | <p>Job is in duplex.</p> <p>Note: Changing this property only updates the meta data of the job. The job is not converted to simplex/duplex.</p>                                                                                       |
| color    | bool    | -        | <p>Job is in color.</p> <p>Note: Changing this property only updates the meta data of the job. The job is not converted to B&amp;W/color.</p>                                                                                         |
| owner    | User[ ] | yes      | Owner of the job                                                                                                                                                                                                                      |
| copies   | int     | yes      | <p>Number of copies of the job</p> <p>Note: Changing this property only updates the meta data of the job. The number of copies to be released is not changed.</p>                                                                     |
| filename | string  | yes      | <p>A path including the filename of the job. The path is relative to the job folder.</p> <p>Note: The path must exist, otherwise the job is not parsed and is declared as "deleted".</p>                                              |
| lang     | int     | -        | <p>The PDL of the job with the following integers as its values:</p> <p>1<br/> UNKNOWN = 0,<br/> PDL_PCL = 1,<br/> PDL_PS = 2,<br/> PDL_ESCP = 3,<br/> PDL_PRESCRIBE = 4,<br/> PDL_PCLXL = 5,<br/> PDL_PDF = 6,<br/> PDL_JPEG = 7</p> |

## User

The **User** class has the following **methods** and **properties**:

### Methods

| Name                                                                        | Description                                                                                                                                                    |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| this <b>sendEmail</b> (string \$subject, string \$body)                     | Send an email to the user.                                                                                                                                     |
| bool <b>canPrintToQueue</b> (string \$queueName)                            | The user has the rights to send jobs to the queue.                                                                                                             |
| bool <b>hasGroup</b> (string \$name)                                        | The user is a member of the group.                                                                                                                             |
| this <b>sendNotification</b> (string \$type, string \$title, string \$body) | Send a notification to the user via the MyQ SJM:<br><br>type: info, warning, error<br>title: notification title<br>body: notification text (plain text format) |
| QuotaInfo <b>getQuotaInfo</b> ()                                            | Get information about user's quotas.                                                                                                                           |

### Properties

| Name      | Type    | Writable | Description                   |
|-----------|---------|----------|-------------------------------|
| name      | string  | -        | Login name of the user        |
| email     | string  | -        | Email of the user             |
| fullname  | string  | -        | Name and surname of the user  |
| delegates | User[ ] | -        | Array of the user's delegates |
| notes     | string  | -        | Notes                         |

| Name           | Type    | Writable | Description                                  |
|----------------|---------|----------|----------------------------------------------|
| personalQueues | Queue[] | -        | Array of personal queues ordered by priority |

## Queue

The **Queue** class has the following **methods** and **properties**:

### Methods

| Name                                     | Description                                                   |
|------------------------------------------|---------------------------------------------------------------|
| bool <b>isAnyPrinterAvailable</b><br>( ) | There is at least one printing device available to the queue. |

### Properties

| Name | Type   | Writable | Description       |
|------|--------|----------|-------------------|
| name | string | -        | Name of the queue |

## Session

The session object is accessible via the **MyQ()** global function. The **Session** class has the following **methods**:

### Methods

| Name                                                 | Description                                                                |
|------------------------------------------------------|----------------------------------------------------------------------------|
| User <b>getUserByUserName</b><br>(string \$userName) | Find a MyQ user by their user name. If no user is found, null is returned. |
| this <b>logError</b> (string \$message)              | Create an error message in the MyQ log.                                    |
| <b>logWarning</b> (string \$message)                 | Create a warning message in the MyQ log.                                   |

| Name                                | Description                                                                                        |
|-------------------------------------|----------------------------------------------------------------------------------------------------|
| <b>logInfo</b> (string \$message)   | Create an info message in the MyQ log.                                                             |
| <b>logNotice</b> (string \$message) | Create a notice message in the MyQ log.                                                            |
| <b>logDebug</b> (string \$message)  | Create an debug message in the MyQ log.                                                            |
| string <b>getJobsPath</b> ()        | Get the path to the folder on the MyQ server where the print job is stored. Ends with a backslash. |

## QuotaInfo

The **QuotaInfo** class has the following **methods**:

### Methods

| Name            | Description                                   |
|-----------------|-----------------------------------------------|
| bool canColor() | Check if the user can print or copy in color. |
| bool canPrint() | Check if the user can print.                  |
| bool canCopy()  | Check if the user can copy.                   |
| bool canScan()  | Check if the user can scan.                   |

 **INFO:** This class contains information about the user's current state of quotas.

## 5.2. Actions after processing

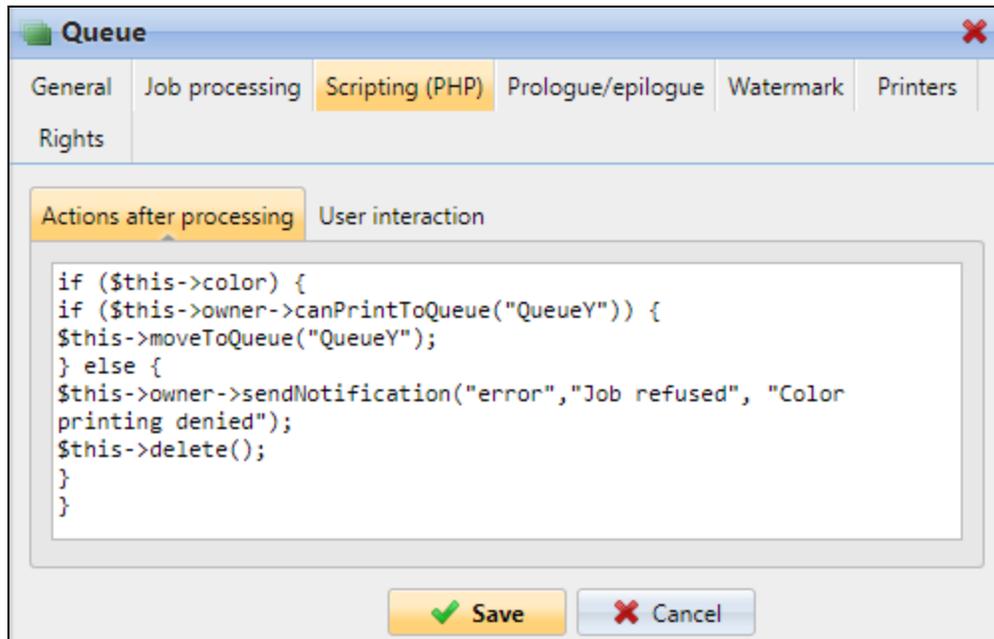


FIGURE 5.1. The Scripting (PHP) tab of a queue with an example of the PHP script

This section presents the options of processing the job received by the MyQ server. To set up the processing via the PHP script, go to the properties panel of the queue where you want to use it, open the **Actions after processing** tab and enter the script there.

In the scripts, you can use all basic PHP functions and all of the classes, methods and properties from section *"Classes, methods, and properties"* on page 15.



**INFO:** The PHP script runs immediately after the print job is parsed and before the job is marked as ready.



**INFO:** The properties of the print job can be obtained via the MyQ Job parser, the MyQ Smart Print Services or the job's PJP header.

### 5.2.1. Examples of use of the PHP scripts

In this section you can find examples covering a variety of job management options. These examples should give you an idea about how to use the PHP scripting in MyQ. You can also substitute the properties and methods in the examples to use them as building blocks of more complex scripts.

#### Actions based on the number of pages

Move jobs with a higher number of color pages to a monochrome queue.

- `if ($this->colorCount>20) {$this->moveToQueue("ForceMonochrome");}`

Delete jobs with a large number of pages.

- `if ($this->pageCount>500) {$this->delete();}`

#### Actions based on the size of the job

Move large jobs to a dedicated queue.

- `if ($this->dataSize>1000000) {$this->moveToQueue("LargeJobs");}`

Delete oversized jobs.

- `if ($this->dataSize>5000000) {$this->delete();}`

#### Actions based on paper format

Move jobs with the a3 paper format to a dedicated queue.

- `if ($this->paper===6) {$this->moveToQueue("LargePaperFormat");}`

#### Actions based on the job owner

Move jobs of a certain owner to a dedicated queue.

- `if ($this->owner->name==="eliot.kate") {$this->moveToQueue("EliotKate");}`

Change the owner of the job.

- `if ($this->owner->name==="eliot.kate")  
{$this->owner=MyQ()->getUserByUserName("simon.kate");}`

#### Actions based on the duplex property

Move duplex jobs to a duplex queue.

- `if ($this->duplex) {$this->moveToQueue("Duplex");}`

Move simplex jobs to a simplex queue.

- `if ($this->duplex===false) {$this->moveToQueue("Simplex");}`

### **Actions based on the color property**

Move color jobs to a color queue.

- `if ($this->color) {$this->moveToQueue("Color");}`

### **Actions based on the job name or the source application**

Move jobs printed in MS Word to a dedicated queue.

- `if (strpos($this->name,"Microsoft Word")!=false) {$this->moveToQueue("MSWord");}`

Delete jobs sent from Facebook.

- `if (strpos($this->name,'Facebook')!=false) {$this->delete();}`

### **Actions based on the rights to a queue**

Move jobs of users who are not allowed to print to one queue to a different queue

- `if ($this->owner->canPrintToQueue(Color)===false) {$this->moveToQueue(Monochrome);}`

### **Actions based on group membership**

Move jobs sent by members of a group to a dedicated queue

- `if ($this->owner->hasGroup(Clerks)){$this->moveToQueue(Clerks);}`

### **Actions based on the PDL of the job**

Move all jobs sent in a certain PDL to a dedicated queue

- `if ($this->lang===0){$this->moveToQueue(UnknownPDL);}`

### **Sending custom log messages to MyQ**

Send a log info message to MyQ Log

- `MyQ()->logInfo("This message appears in the MyQ log.");`

## Complex actions

If number of pages multiplied by number of copies exceed a certain number, delete the job and inform the user

- ```
// get the number of pages and the number of copies
$pages_number = $this->pageCount; $copies_number = $this->copies;
// if total (pages*copies) exceeds 500, delete the job and notify its owner
if ( $pages_number* $copies_number>500)
{$this->delete(); $this->owner->sendNotification("error", "Job refused", "Cannot
print jobs exceeding 500 pages.");
}
```

Send color jobs to a dedicated queue; if the job owner does not have rights to this queue, delete the job and inform the user

- ```
// if the job is color, perform the next action
if ($this->color) {
// if the owner has rights to the queue, move the job to the Color queue
if ($this->owner->canPrintToQueue("Color")) {
$this->moveToQueue("Color"); }
// if they don't have rights to the queue, delete the job and inform the user
else {
$this->owner->sendNotification("error", "Job refused", "Color printing denied");
$this->delete(); }}}
```

### 5.3. User interaction

You can set up this feature to provide users with elementary interaction options via the MyQ Smart Job Manager. A dialog box informs the user about a certain situation and lets them select from the following options: YES/NO, PRINT/NO, YES/NO/CANCEL. After the choice is made, the job is either printed, canceled, or processed based on the Yes/No selection.

In the scripts, you can use all basic PHP functions and almost all of the classes, methods and properties from the section *"Classes, methods, and properties"* on page 15. The only two methods **not supported** by the feature are **`$this->job->setPrinted()`** and **`$this->job->pause()`**. Apart from the common classes, methods and properties, you can use several additional functions to communicate with the MyQ Smart Job Manager application.

The User interaction script runs in the context of the UserScript class. The sent job can be accessed as **`$this->job`**. Objects from all classes except the Session class can be accessed via the job object, for example the owner **`$this->job->owner`**. Objects from

the Session class can be accessed via the **MyQ ()** global feature, for example **MyQ()->logInfo("This message appears in the MyQ log.");**



**INFO:** The properties of the print job can be obtained via the MyQ Job parser, the MyQ Smart Print Services or the job's PJJ header.

### 5.3.1. How does the user interaction work?

1. After a user sends a job to be printed, the main function is called to decide which dialog boxes should be shown.
2. The dialog boxes are shown to the user (one after another) and in each of them, the user reads the message and selects the interaction option (Yes, No, Print, Cancel).
3. Responses are sent back to the MyQ server.
4. If another user interaction is returned to SJM, the procedure returns to step 2.
5. When no more interactions are needed and if the job was not canceled, it is sent to MyQ.

### 5.3.2. Functions for communication with the Smart Job Manager

The following functions can be used for the communication with the Smart Job Manager application, the first three determine which dialog box will be created and the last one will terminate the script processing:

| Name                                              | Description                                                                  |
|---------------------------------------------------|------------------------------------------------------------------------------|
| <code>\$this-&gt;dialogYesNo(\$text)</code>       | Creates a dialog box with \$text as text content and Yes, No buttons.        |
| <code>\$this-&gt;dialogPrintNo(\$text)</code>     | Creates a dialog with \$text as text content and Print, No buttons.          |
| <code>\$this-&gt;dialogYesNoCancel(\$text)</code> | Creates a dialog with \$text as text content and Yes, No and Cancel buttons. |
| <code>\$this-&gt;terminate()</code>               | Terminates the script processing.                                            |

### 5.3.3. How to write the script?

First, you need to define the **main()** function. This function decides if the dialog box should be opened (under which conditions) and which dialog box should be shown.

Then you can define on click functions with reactions to the selected option: **onYes()**, **onNo()**, **onPrint()**, **onCancel()**

 **NOTICE:** Public properties are kept between calls. In fact, they are sent to the client and back.

#### Example of the user interaction script

```
function main(){
// If the job is color, show a Yes/No dialog box to ask the user if they want to print the
job in B&W.
if ($this->job->color){
$this->dialogYesNo("Jobs sent to this queue are printed in B&W,
do you still want to send the job here?"); }
}
function onYes(){
// The user is informed that the job was sent to the B&W queue via a SJM notification.
$this->job->owner->sendNotification("info","Job sucessfully sent","Your job was sent
to the B&W queue.");
}
function onNo(){
//The job is deleted and the user is informed about it via a SJM notification.
$this->job->delete(); $this->job->owner->sendNotification("info","Job deleted","Your
job was deleted.");
}
```

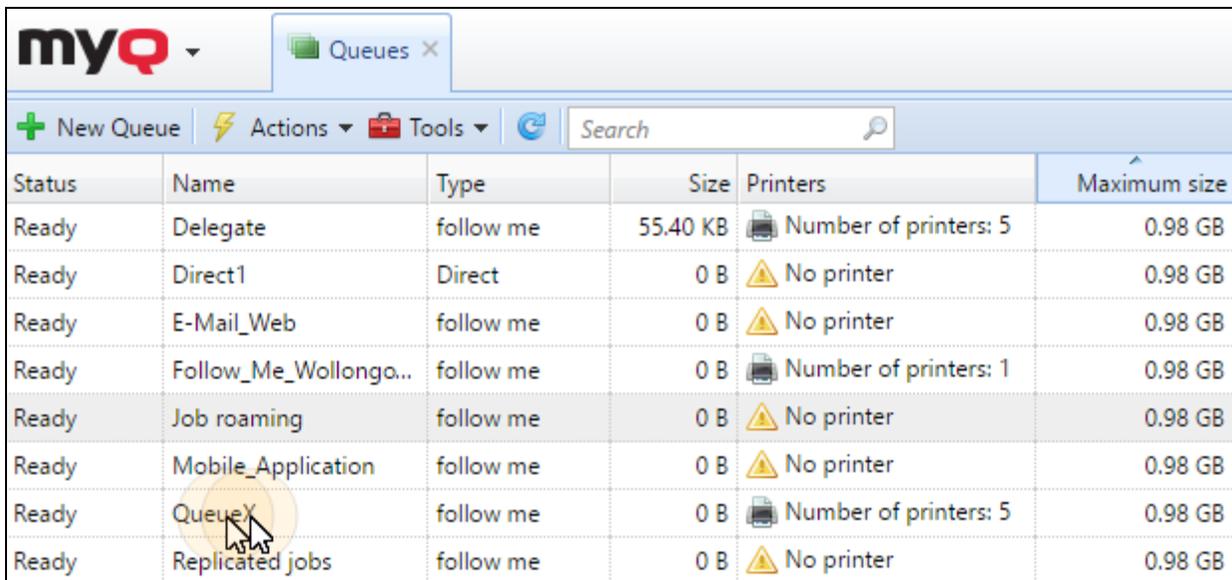
## 6. Prologue, Epilogue

Some brands of printing devices support the Prescribe PDL (page description language), which can be used to set up special rules for additional modification of printed output. For example, you can use Prescribe to add a custom header or footer to selected pages of a document or to the whole document.

In MyQ, these rules are part of the options available on properties panels of print queues. For each queue, you can create custom rules by importing a text file with a set of Prescribe commands and selecting in which part of printed document the commands should be applied.

 **INFO:** Multiple rules can be defined for each queue.

### 6.1. Adding, editing and deleting rules



| Status | Name                  | Type      | Size     | Printers                                                                                                  | Maximum size |
|--------|-----------------------|-----------|----------|-----------------------------------------------------------------------------------------------------------|--------------|
| Ready  | Delegate              | follow me | 55.40 KB |  Number of printers: 5 | 0.98 GB      |
| Ready  | Direct1               | Direct    | 0 B      |  No printer            | 0.98 GB      |
| Ready  | E-Mail_Web            | follow me | 0 B      |  No printer            | 0.98 GB      |
| Ready  | Follow_Me_Wollongo... | follow me | 0 B      |  Number of printers: 1 | 0.98 GB      |
| Ready  | Job roaming           | follow me | 0 B      |  No printer            | 0.98 GB      |
| Ready  | Mobile_Application    | follow me | 0 B      |  No printer            | 0.98 GB      |
| Ready  | QueueX                | follow me | 0 B      |  Number of printers: 5 | 0.98 GB      |
| Ready  | Replicated jobs       | follow me | 0 B      |  No printer            | 0.98 GB      |

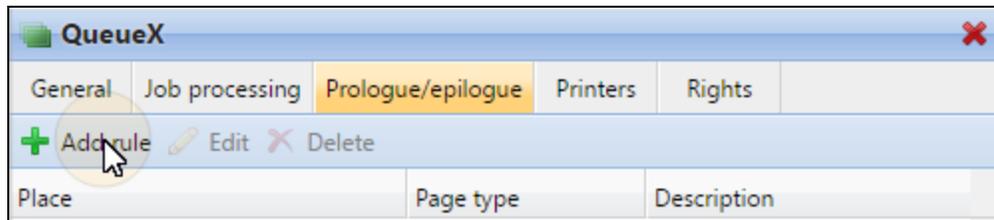
FIGURE 6.1. Opening the properties panel of the QueueX

The rules can be added and edited on the **Prologue/epilogue** tab of the queue's properties panel on the **Queues** main tab. To open this tab, click **MyQ** at the top left corner of the MyQ Web Interface, and then click **Queues** on the drop-down menu. Once you are on the **Queues** main tab, double-click the queue where you want to set up the rules (or select the queue, click **Actions** on the bar at the top of the tab, and then click **Edit**).

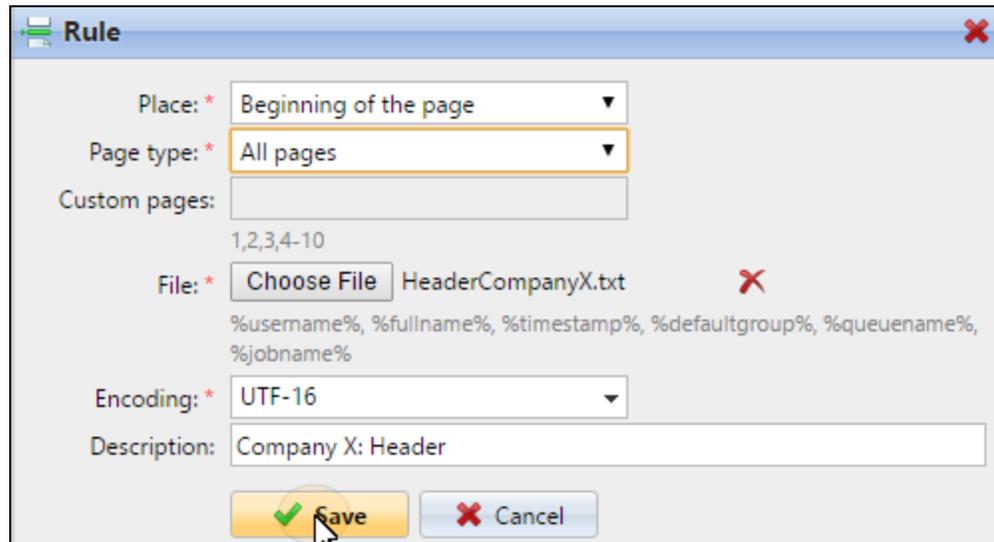
### 6.1.1. Adding rules to a queue

To add a rule to a queue, do the following:

1. Open the queue's properties panel.
2. On the panel, click **Prologue/epilogue**. The **Prologue/epilogue** tab opens.
3. On the tab, click **+Add rule**. A panel with settings of the new rule open at the bottom of the panel.



4. On the panel, download the rule, set it up (for information on the settings, see "*Table of settings*" on the facing page.), and then click **Save**. The new rule is added to the list of rules on the **Prologue/epilogue** tab.



### 6.1.2. Editing a rule

To open settings of a rule, double-click the rule on the **Prologue/epilogue** tab. Settings of the new rule open at the bottom of the panel.

#### Table of settings

|                     |                                                                                                                                                                     |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Place</b>        | The object defined by the Prescribe code can be placed to the beginning of the document, end of the document, beginning of selected pages or end of selected pages. |
| <b>Page type</b>    | Here you can select to which pages the Prescribe code will apply: All pages, Odd pages, Even pages or Custom pages.                                                 |
| <b>Custom Pages</b> | Here you can further specify to which pages the Prescribe code will apply.                                                                                          |
| <b>File</b>         | Here you can upload the text file with the Prescribe code.                                                                                                          |
| <b>Encoding</b>     | Here you have to select the encoding that is used in the text file with the Prescribe code.                                                                         |
| <b>Description</b>  | Here you can type a description of the rule. You will see this description on the rules overview.                                                                   |

### 6.1.3. Deleting a rule

To delete a rule to a queue, do the following:

1. Open the queue's properties panel.
2. On the panel, click **Prologue/epilogue**. The **Prologue/epilogue** tab opens.
3. On the tab, select the rule, click **Delete**, and then confirm the action in the confirmation dialog box. The rule is removed from the panel.

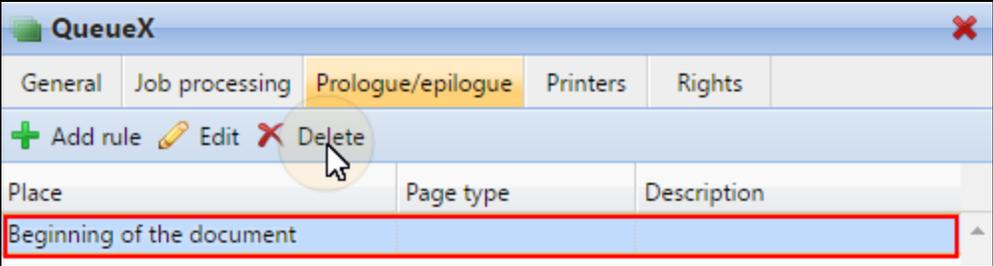


FIGURE 6.2. Delet ing the "Beginning of the document" rule.

## 7. Watermarks

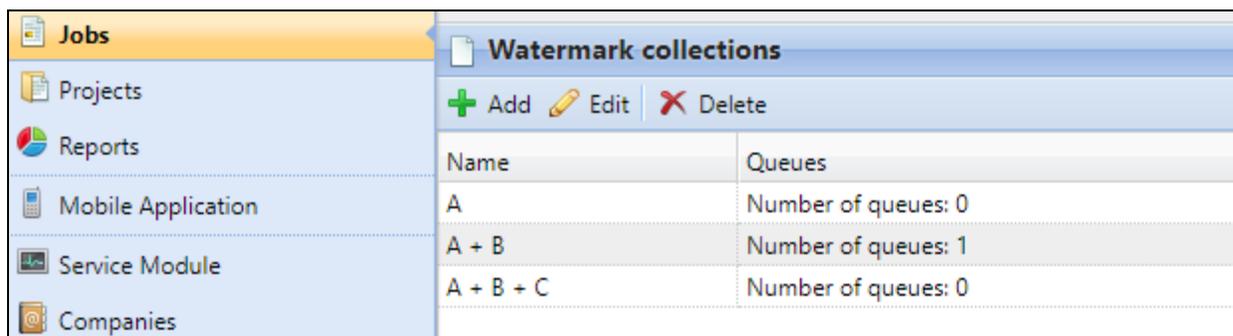
On the MyQ Web Interface, you can create collections of watermarks and associate them with the queues where they will be used. Each collection can contain multiple watermarks and can be associated with any number of queues.

Jobs sent to a queue will have the watermarks of the associated collection printed on each page.

Individual watermarks can be positioned horizontally at the top of the page, horizontally at the bottom of the page, or diagonally. The text of the watermark can have one of the three predefined sizes (small, normal, large). You can also represent the text of the watermark as a QR code or a Bar code.

### 7.1. Creating, editing and deleting watermark collections

The collections of watermarks are created in the **Watermark collections** section at the bottom of the **Jobs** settings tab. To open the tab, click **MyQ**, then click **Settings**, and lastly click **Jobs**.



| Name      | Queues              |
|-----------|---------------------|
| A         | Number of queues: 0 |
| A + B     | Number of queues: 1 |
| A + B + C | Number of queues: 0 |

FIGURE 7.1. The setup of watermark collections on the Jobs settings tab

#### 7.1.1. Creating a new watermark collection

To create a new watermark collection, do the following:

1. On the **Jobs** main tab, under **Watermark collections**, click **+Add**. The properties panel of the new collection opens on the right side of the screen.

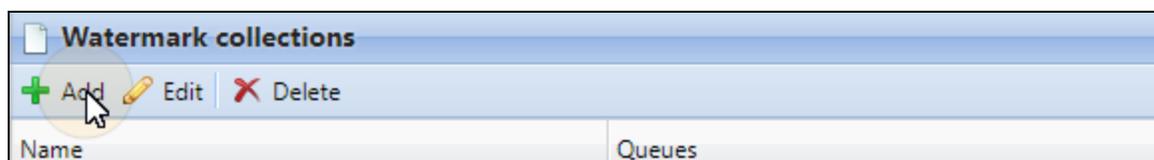


FIGURE 7.2. Adding a new watermark collection

2. On the panel, enter the name of the collection, then create the watermarks, and lastly click **Save**. For information on how to add and remove the watermarks, see *"Adding, editing and deleting watermarks within a collection"* on the facing page.

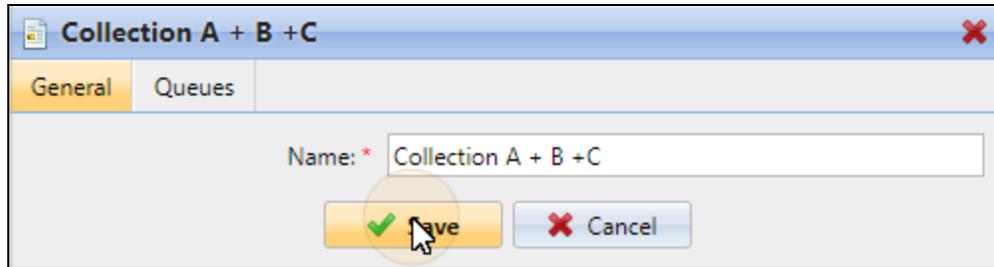


FIGURE 7.3. Editing and saving the collection

### 7.1.2. Editing a watermark collection

The properties panel of the collection opens immediately after the collection is created. To open a properties panel of an already existing collection, select it on the on the list on the **Jobs** main tab, under **Watermark collections**, and lastly click **Edit**.

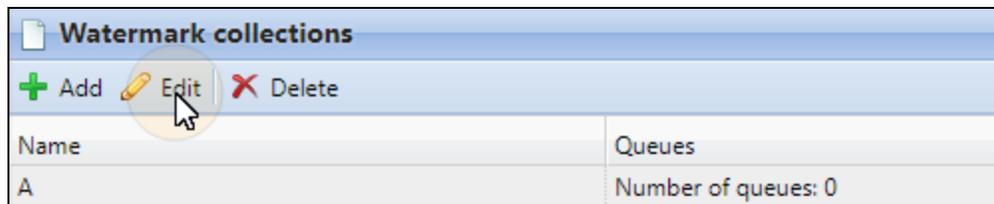


FIGURE 7.4. Opening the editing options of a watermark collection

On the properties panel, you can rename the collection, create watermarks and remove them. For information on how to add and remove the watermarks, see *"Adding, editing and deleting watermarks within a collection"* on the facing page.

### 7.1.3. Deleting a watermark collection

To delete a collection, do the following:

- On the **Jobs** main tab, under **Watermark collections**, select the collections that you want to delete, and then click **Delete**.

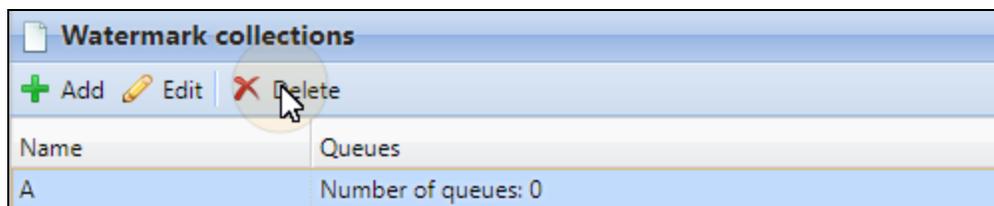


FIGURE 7.5. Deleting a watermark collection



**INFO:** A watermarks collection cannot be deleted if there is at least one queue attached to it.

## 7.2. Adding, editing and deleting watermarks within a collection

Within each collection, you can create an unlimited number of watermarks. Each of the watermarks in the collection can be activated or deactivated.

### 7.2.1. Creating a new watermark

To create a new watermark, do the following:

1. On the properties panel of the watermark collection, click **+Create watermark**. The properties panel of the new watermark opens.

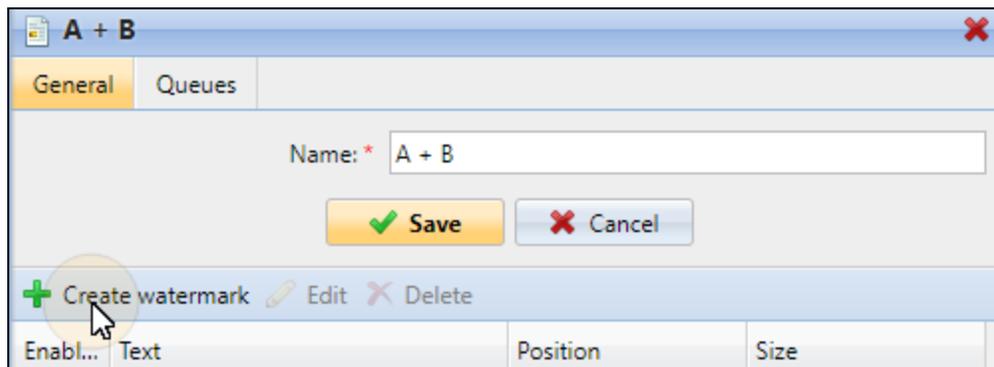


FIGURE 7.6. Creating a new watermark

2. On the panel, set up the watermark, and then click **Save**. For information on how to set up the watermark, see *"Editing a watermark"* on the next page.

## 7.2.2. Editing a watermark

The properties panel of a watermark opens immediately after the watermark is created. To open properties of an already existing watermark, double-click it on the list on the **Jobs** main tab, under **Watermark collections**.

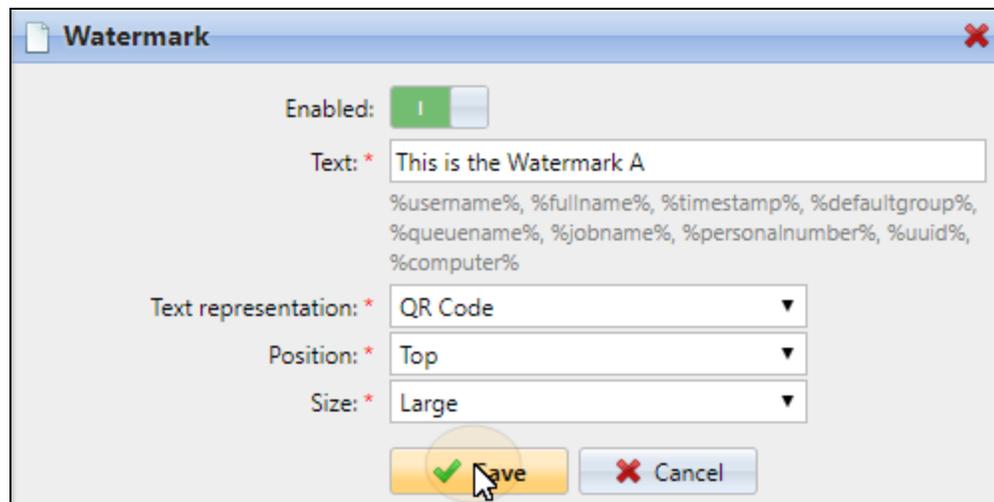


FIGURE 7.7. Editing and saving the watermark

After you set the properties, click **Save** to submit the changes.

Each watermark has the following properties:

- **Enabled:** Enable / disable the watermark
- **Text:** Text of the watermark; max. length: 512 characters
- **Text representation:** The text can be represented in the following forms:
  - Text
  - QR Code
  - BAR Code 128
  - BAR Code 39
  - BAR Code PDF417
- **Position:** Position of the watermark on the page (top, bottom, diagonal: bottom-left to top-right)
- **Size:** Size of the text of the watermark (small, normal, large)

### 7.2.3. Deleting a watermark

To delete a watermark, do the following:

- On the properties panel of the watermark collection, select the watermarks that you want to delete, and then click **Delete**.

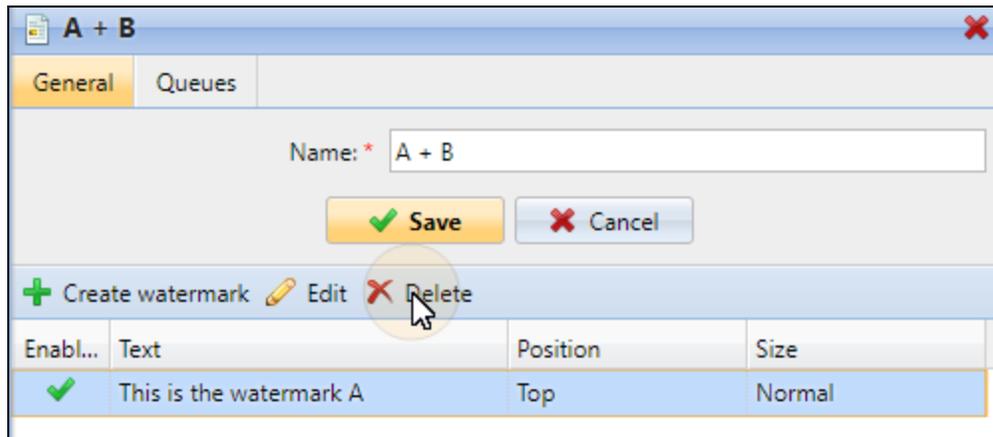


FIGURE 7.8. Deleting a watermark

## 7.3. Attaching watermark collections to queues

You can attach a watermark collection to a queue either within the setup of the collection, or within the setup of the queue.

Each queue can have only one watermark collection attached to it.

### 7.3.1. Attaching watermark collections to queues within the setup of the queues

The collection can be selected on the **Job processing** tab of the properties panel of the queue. To open the properties panel, click **MyQ**, then click **Queues** to open the **Queues** tab, and then double-click the queue on the list of queues.

To attach a watermark to a queue here, select it in the combined box on the **Job processing** tab, and then click **Save**.

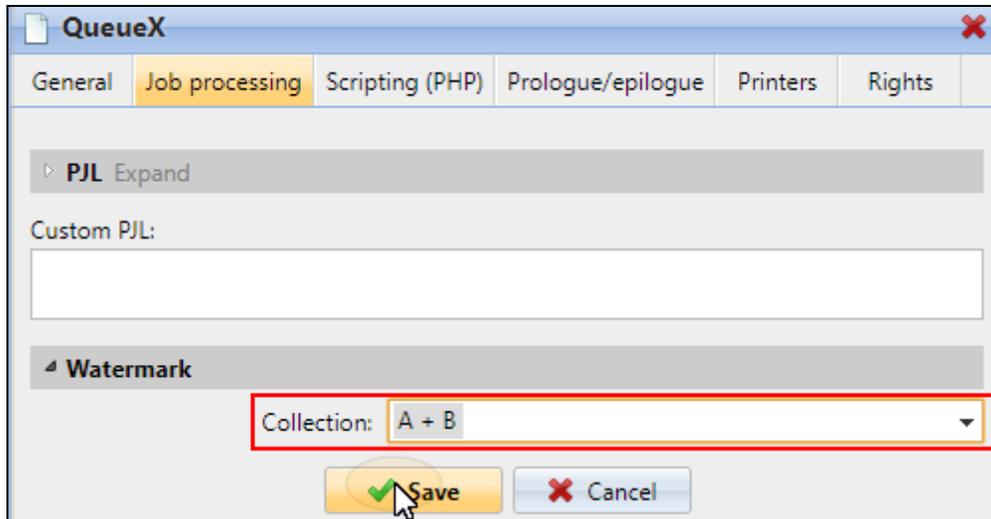


FIGURE 7.9. Selecting and saving the collection

### 7.3.2. Attaching watermark collections to queues within the setup of the collections

Within the setup of the watermark collection on the its properties panel, you can select the queues to which the collection will be attached.

To assign a new queue to a watermark collection here, do the following:

1. On the properties panel of the watermark collection, click **Queues**. The **Queues** tab opens.

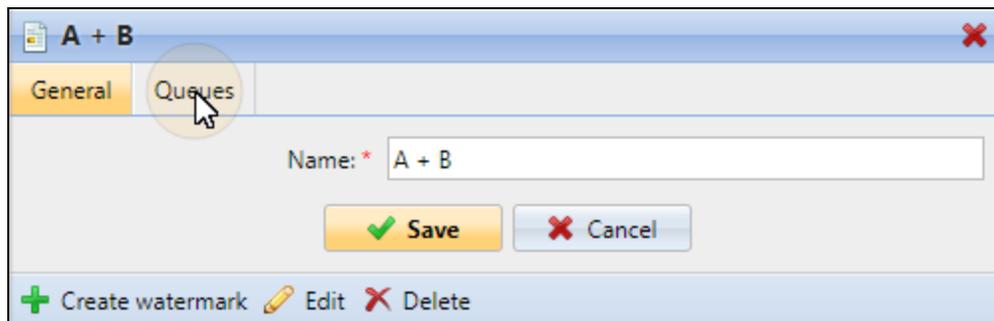


FIGURE 7.10. Opening the Queues tab on the watermark collection's properties panel

2. On the tab, click **+Add**. A dialog box with a selection of queues appears.

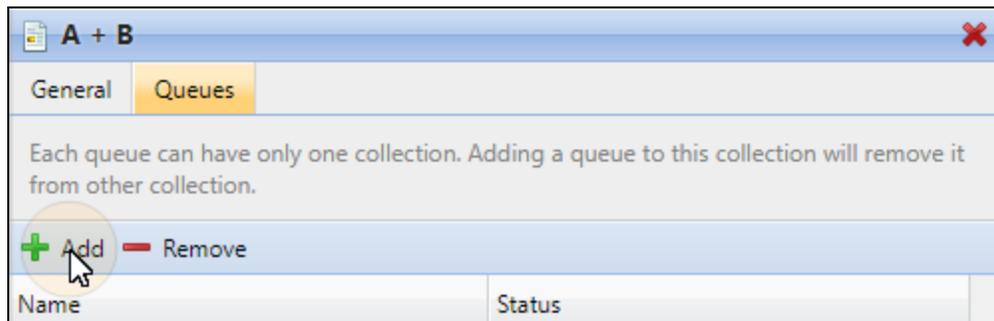


FIGURE 7.11. Adding a new queue to the watermark collection

3. In the dialog box, select the queue, and then click **OK**.

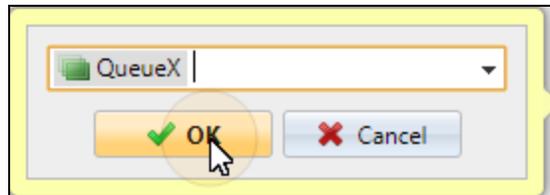


FIGURE 7.12. Selecting the queue

## 8. Job Preview

With a third-party job preview software installed on the MyQ server, you can enable MyQ users and the MyQ administrator to preview print jobs that are sent to MyQ in one of the three most common page description languages: PCL 5, PCL 6 and Postscript. After the feature is set up, both users and the administrator can open the job preview on the **Jobs** main tab of the MyQ Web Interface.

**NOTICE:** MyQ does not contain any software for preview of the print job; a third-party software has to be installed on the MyQ server and used for the preview.

### 8.1. Setting up the Job Preview feature

To set up the feature, open the **Jobs** settings tab of the MyQ Web Interface (click **MyQ**, then click **Settings**, and lastly click **Jobs**).

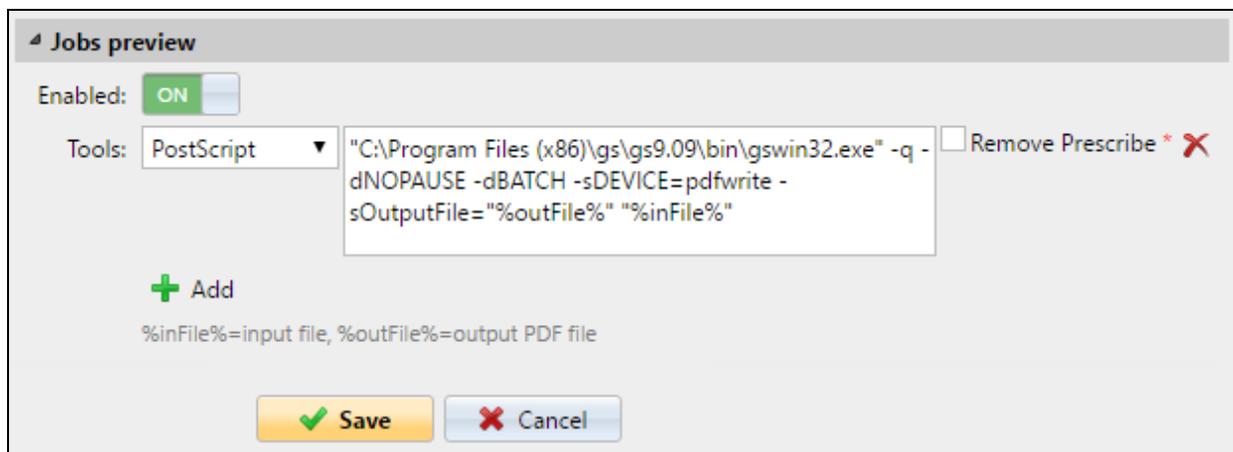


FIGURE 8.1. Settings of the Jobs preview

On the tab, you can enable or disable the preview and select the external applications to be used for the preview. For every type of output (PCL 5, PCL 6 and PostScript), you have to select the external tool and set parameters of the preview via the commands of the third-party application.

The following examples show you what the command line can look like:

**PostScript** (GhostScript): `"c:\Program Files\Ghostscript\gswin64c" -q -dNOPAUSE -dBATCH -sDEVICE=pdfwrite -sOutputFile="%outFile%" "%inFile%"`

**PCL** (GhostPCL): `"c:\Program Files\GhostPCL\gpcl6win64" -dNOPAUSE -sDEVICE=pdfwrite -sOutputFile="%outFile%" "%inFile%"`

**PCL (Redtitan):** "C:\Program Files (x86)\RedTitan\software\escapee.exe" /PDF "%inFile%" /PDF /TO "%outFile%" /pdfopts 65792 /errorok ALL /X /ERRORLOG "%inFile%error.log"

 **INFO:** For detailed information on how to use the commands, see the documentation of the third-party application.

### To enable (or disable) the Jobs preview feature, do the following:

Click the **ON/OFF** button next to **Enabled**.



FIGURE 8.2. The ON/OFF button for enabling and disabling the feature

### To set the tool for a particular print job output type, do the following:

1. Under **Jobs preview**, click **+Add**. The settings of the new tool appear on the tab.

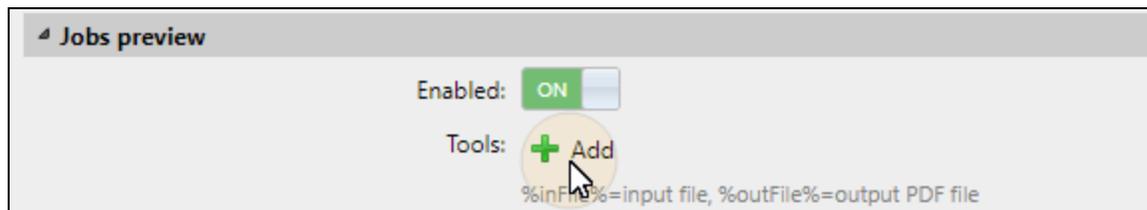


FIGURE 8.3. Adding the new tool for job preview

2. On the tools drop-down box on the left, select the page description language, in the text box on the right, enter the path to the external application to be used for this language and set the parameters of the preview using internal commands of the application. After this, click **Save** at the bottom of the tab.

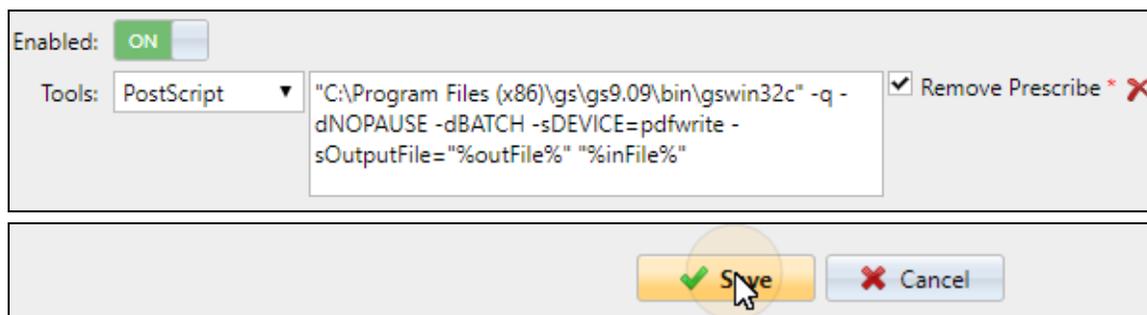


FIGURE 8.4. Setting and saving the new tool

**NOTICE:** The **Remove Prescribe** option can be used in case the external software does not support Prescribe orders. For information about the Prescribe orders, see *"Prologue, Epilogue"* on page 28.

## 8.2. Previewing the print jobs

The jobs can be previewed on the **Jobs** main tab of the MyQ Web Interface. To open the tab, click **MyQ**, and then click **Jobs**.

To preview the print job, select the job on the tab, and then click **Preview** at the left side of the toolbar. (Or right-click the job, and then click **Preview** on the shortcut menu.)

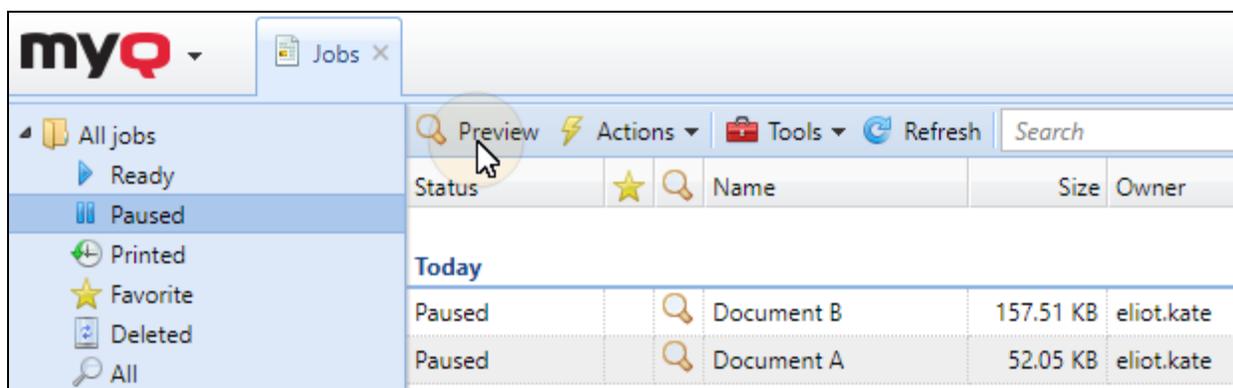


FIGURE 8.5. Previewing a job

**INFO:** To open the preview, you might need to allow pop-up windows in your Web browser.

## 9. Job Archiving

With a dedicated Job Archiving license and the Job Preview feature set up on the MyQ server, you can automatically archive all print jobs that are sent to MyQ. On selected brands of printing devices, you can also archive all copy and scan jobs.

This way you can have a full control over what has been printed, scanned and copied within your printing environment, which can be required for example in high security areas in order to be able to identify sources of data leakage.

**INFO:** For information on how to acquire the Job Archiving license, please  contact the MyQ Sales department. For information on how to set up and activate the Job Preview, see "*Job Preview*" on page 39.

### 9.1. Setting up the Job Archiving feature

The feature is not part of the default setup of the MyQ server and before the Job Archiving license is added to the server, the settings of the feature on the MyQ Web Interface are hidden from the administrator. After you add the licenses, you can set up the feature on the Jobs settings tab of the MyQ Web Interface.

#### Adding and activating the license

1. Open the **License** settings tab of the MyQ Web Interface (Click **MyQ**, then click **Settings**, and lastly click **License**).
2. On the toolbar at the top of the **License** section, click **+Add license**. The **Add license** dialog box appears.

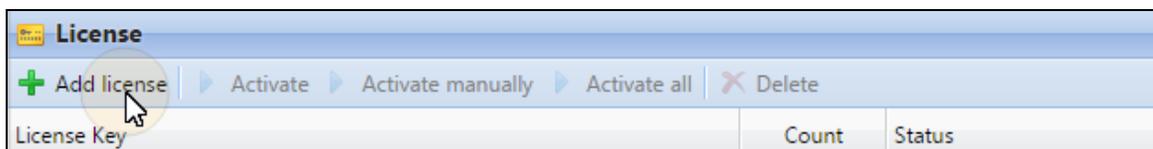


FIGURE 9.1. Adding the license on the **License** section of the **License** settings tab

3. In the dialog box, enter the license, and then click **OK**. The license is added to the server and displayed in the list of licenses on the **License** section.

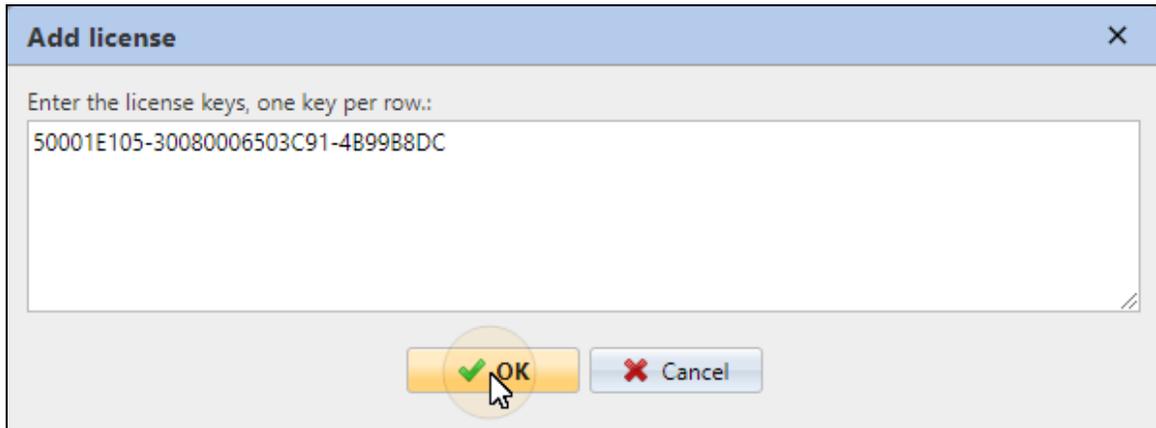


FIGURE 9.2.

4. To activate the license, select it on the list, and then click **Activate**.

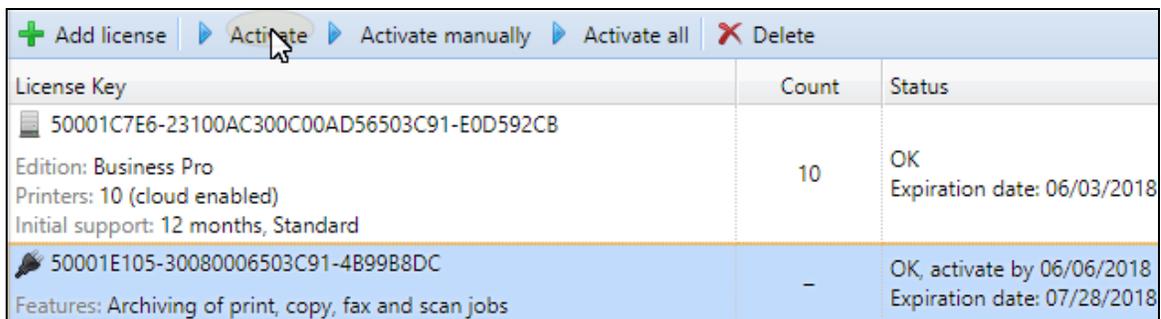


FIGURE 9.3.

## Setting up the feature

On the **Jobs** settings tab of the MyQ Web Interface (to open, click **MyQ**, then click **Settings**, and lastly click **Jobs**), under **Jobs archiving**, you can enable or disable the feature and change the folder where the jobs are archived (by default it is the JobsArchive subfolder of the MyQ data folder).

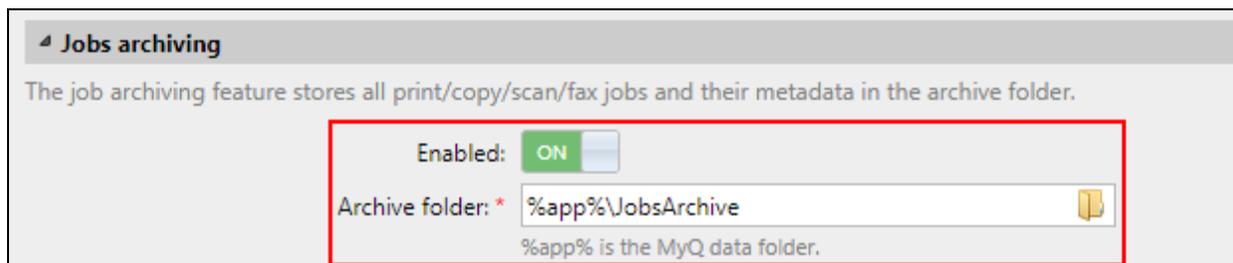


FIGURE 9.4. Enabling the Job archiving

## 9.2. Viewing the archived jobs

The jobs are stored in subfolders of the **Archive folder**, each of these sub-folders has the form: **YYYY-MM-DD-XXXX** where the front part informs about the date when the sub-folder was created, while the number at the bottom part serves to sort sub-folders created in the same day.

In the subfolders, you can find two files for each of the printed, copied or scanned jobs: a PDF file with the view of the job and an XML file with basic information about the job, such as the type of the job or the username of the printing user.

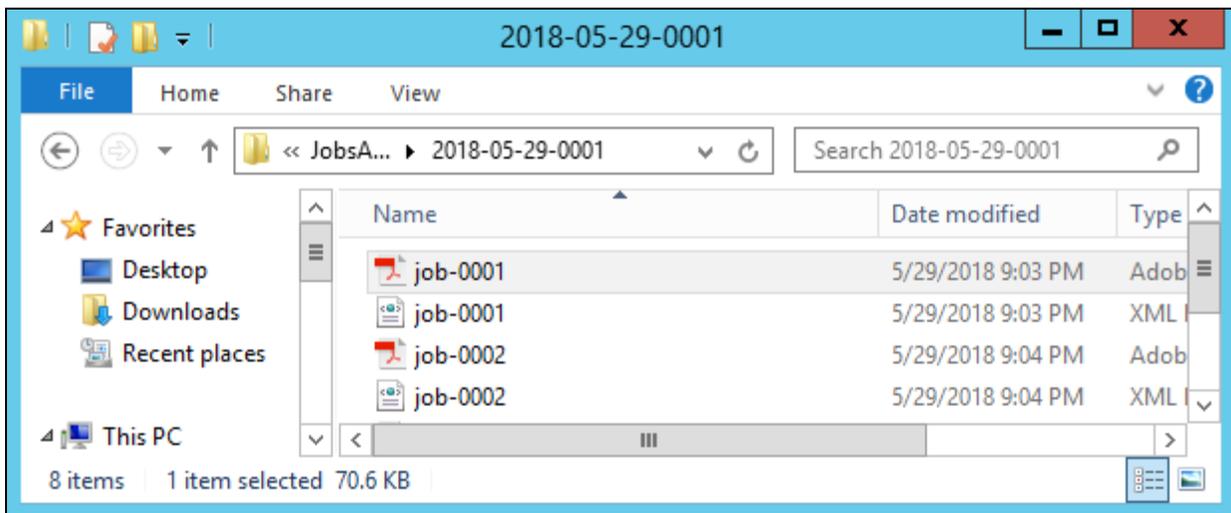


FIGURE 9.5. The folder with the archived jobs

```
<?xml version="1.0" encoding="UTF-8"?>
- <data>
 <timestamp>2018-05-29 21:03:39</timestamp>
 <username>eliot.kate</username>
 <jobType>copy</jobType>
 <serverName>10.14.5.96</serverName>
 <serverVersion>7.1.0.366</serverVersion>
 <printerAddr>10.14.4.12</printerAddr>
 - <files>
 <file>job-0001.pdf</file>
 </files>
</data>
```

FIGURE 9.6. The job's data shown in the XML file

## 10. Appendix: Overview of Changes

This topic shows the changes made within revisions of the guide.

### Revision 2

#### Changes in topics

##### Scripting (PHP)

- "5.3.3. How to write the script?": Corrected the example of the user interaction script.

### Revision 3

#### Changes in topics

##### Job Preview

- "8.1. Setting up the Job Preview feature": Changed the example of the PCL (Redtitan) command line.

### Revision 4

#### Changes in topics

##### Advanced Options of Queues

- Added section "3.2. Personal Queues"

##### Scripting (PHP)

- "5.2.1. Examples of use of the PHP scripts": Corrected examples of the user interaction script.

##### Watermarks

- "7.2.2. Editing a watermark": Added information about the Text representation option.

## Revision 5

### Changes in topics

#### Advanced Options of Queues

- "3.2. Personal Queues": Added information about the option to add and delete the personal queues by the MyQ administrator.

## 11. Business contact

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