nQ v6.1

What's new in this version

Summary

The nQ web interface was updated to v6 in 2020 to improve the cross-browser support and to modernise the application to make it easier to use but functionally the same as the previous versions. We soon realised that it worked well until there was a problem with an application. The errors didn't feed back to the interface and the input file that caused the issue was often lost.

To improve this, we added several new features:

1. Capture the input file and the control file
2. Ability to download these files for testing
3. Ability to submit the files back to the queue they came from for processing
4. Improved error reporting as an email can be sent with each error
5. Kill applications that hang with zero CPU usage
6. Kill applications that exceed a running timeout (hung using CPU)
7. Ability to edit "Advanced configuration" files from the interface
8. Ability to edit Postbox-style email carriers from the interface
9. Other cosmetic enhancements

Let's look in more detail

The short version

Any errors in the system, missing fonts, page errors, app crashes or hangs are reported in yellow text to the top of the nQ interface windows. If your system is set up to do so you will also get an email detailing the error. Files that get an error are saved to a RejectedJobs folder under the root of nQ.

On the spooler page, you will see a Rejected Jobs link, clicking this link will open a new panel that will show the folders containing rejected jobs, click a folder link to see the files. You can download the files for manual testing or submit them back to the system for reprocessing.

On the Programs page, there is a link alongside applications that are running and have an Advanced Configuration file. This allows the editing of these files through the interface. It is unlikely you will access these configuration files frequently.

On the Email page, there is a new Email Carriers link. This enables the editing or creation of 'Postbox' style email carriers for the nQ Email system. A panel appears listing the current files with edit and new options.

See the long version below for more information.

The long version

When a job is submitted there are 3 timers that will start after a given period. These are set in nQlpd2.cfg and look like this:

ActionTimeoutSeconds = 300 email spoolfolder = "EmailErrorTimeout"
ActionKillIdleSeconds = 600 email spoolfolder = "EmailErrorKillIdle"
ActionKillSeconds = 3600 email spoolfolder = "EmailErrorKilled"

ActionTimeoutSeconds sets the time (in seconds) before a job is considered to be in an error state. This is just a warning at this stage. The default is 300 seconds (5 minutes).

ActionKillIdleSeconds sets the time before an application that is running but not using any CPU will be killed. The default is 600 seconds (10 minutes).

ActionKillSeconds sets the time before a running application using CPU has taken too long and is killed. The default is 3600 seconds (1 hour). This should allow all jobs time to complete but you might need to adjust this to suit your system.

Customers running lots of small jobs taking less than 10 seconds might like these values as 60, 120, 240 respectively.

The errors are shown on the web interface and look like this:

```
nQLPD - Error : 12-Aug-2022 12:02:53 : Cfa/Dfa pair copied from: C:\nqroot\Spool\GE_PDF\cfA0001upload /
C:\nqroot\Spool\GE_PDF\dfA0001upload to C:\nqroot\RejectedJobs\GE_PDF\cfA0001upload_1 /
C:\nqroot\RejectedJobs\GE_PDF\dfA0001upload_1
nQLPD - Error : 12-Aug-2022 12:02:53 : RuleExecutionContext, Process killed, command line was:
D:\REDTITAN\SOFTWARE\ESCAPEE.EXE C:\nqroot\Spool\GE_PDF\dfA0001upload /fields C:\nqroot\ge.ee /pdf /to
C:\nqroot\result\{UNIT}\{FNAME}.pdf /mkdir /x
nQLPD - Error : 12-Aug-2022 12:02:53 : RuleExecutionContext, Rule "GE_PDF" has failed to process
C:\nqroot\Spool\GE_PDF\cfA0001upload before kill idle timeout! The process will be killed.
nQLPD - Error : 12-Aug-2022 12:02:38 : RuleExecutionContext, Rule "GE_PDF" has failed to process
C:\nqroot\Spool\GE_PDF\cfA0001upload before timeout!
```

These errors are listed with the first error at the bottom and the latest error at the top. New errors are added to the top of the list

The bottom-most error shows a warning that the app has stalled. The second from the bottom informs you that the app will be killed. The third from the bottom shows the command that created the error and the top error shows where the files were sent.
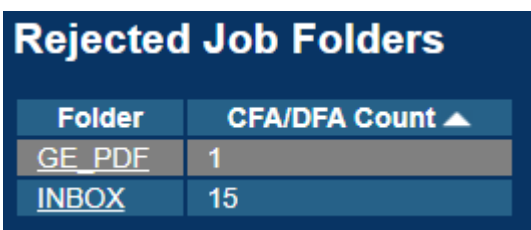
If you have the email system configured to send error emails to you then you will get one email per error. This is configured in the spooler Advanced configuration file nQlpd2.cfg and looks like this:

RejectedJobs email spoolfolder = "EmailErrorReject"

This can be used in conjunction with a rule to send emails. RedTitan supplies some default rules and postbox-style files to use.

In theory, errors should be few and far between but we ask that errors, however minor, get fixed to avoid them building up and it makes it easier to read the error log if it is not full of minor, ignored errors.

To examine the failing file, navigate to the nQ interface, click the spool tab and click the Rejected Jobs link. This will open a page showing the folders that contain error files (these match the spool folder structure). Click on the folder you are interested in and a list of files will appear.

Rejected Job Folders

Folder	CFA/DFA Count ▲
GE_PDF	1
INBOX	15

You can select the file(s) using the tick box and then select an action from the left panel. If you opt to download the file the system will create a zip of all the files and you will receive a cfa/dfa pair of files for each entry. The cfa file is the control file and the dfa is the data file. You can test the dfa file manually in the application that created the error to see what the problem was. Please contact help@redtitan.com if you need help with this.

You can select jobs and click the "Submit Selected" link. This puts the job back into the correct spool folder for re-processing.

The hyperlinked folder name, when clicked, will take you straight to the spooler folder so that you can see how the job runs.

The Reject Jobs folder will be on the nQ system under the root of the installation. E.g., if your root install is C:\redtitan\nqroot then the reject folder will be C:\redtitan\nqroot\rejectjobs.

Configuration editing

To edit the "Advanced Configuration" files, click the Programs tab. Running applications that have a configuration file will have an Advanced Configuration link. Click this link to open the configuration file.

When you click the "Update" button your file is saved as the new configuration and a copy of the old file with a date & time stamp is created.

Email enhancements

Click the Email tab and you will see a new link in the left panel Email Carriers. Clicking this link will open a panel showing all the Postbox-style email carriers that are supported by the nQ Email system. These files are located in …\nqroot_nq\software\ folder and XML files that do not contain <POSTBOX> or that have invalid XML are not shown.

In the "Action" column are links to edit the file or delete them. You will be asked to confirm any files you delete.

Below this panel is an empty email carrier form which you can fill in. Note the "Attachment" is ticked by default. You can turn this option off and the file that triggered the email will not be attached. Useful if you want to alert someone to a file that they must get by logging into a secure environment.

The Edit link will populate the email carrier form with the current details from the XML file. You can edit and save the file, cancel any changes or create a new file.

Edit Email Carrier:

Save Cancel New

To:	clive.simpson@redtitan.com
From:	help@redtitan.com
Subject:	RedTitan Application error notification
Attachment:	☑
Body:	An Application encountered an error, see attached file for more details. The file that encountered the error is in the RejectJobs folder and can be viewed from the nQ web interface. Note: the job has probably been processed but may contain errors, these

If you need any help please contact RedTitan using help@redtitan.com or see our web site www.redtitan.com for contact information.

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