NiceLabel Automation Version 1.2

Release Notes

Rev-1311

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What is New in NiceLabel Automation

Automation Products Restructure

Automation Easy and Pro were enhanced with some of the functionality previously available only in more powerful Automation products.

File operations actions are now available in Automation Pro:

- Save data to file
- Read data from file
- Delete file

Database operations are now available in Automation Pro:

- Execute SQL Statement

Changes in Automation Easy:

- Run Command File action is now available.
- Automation Easy is designed as a simple desktop automation software program. The number of the available concurrent print processes for Automation Easy is now one (1).

New Functionality

Automatic Reload of Modified Labels

Automation will now automatically reload the label templates when a new version is saved or approved for printing.

Support for New Image Types

In addition to the already supported image types BMP, EMF, GIF, JPEG, JPG, PNG, TIF, TIFF, and WMF, the new version adds support for image types PCX, TIF, and PSD.

Native support for label printing to PDF

Automation introduces a brand new label printing to PDF files. PDF files can be generated by Automation without the help of any third party software.

As a result, one of the immediate benefits is preserving the label dimensions. The PDF document will comprise a label with exact dimensions as set during the label design in NiceLabel Pro.
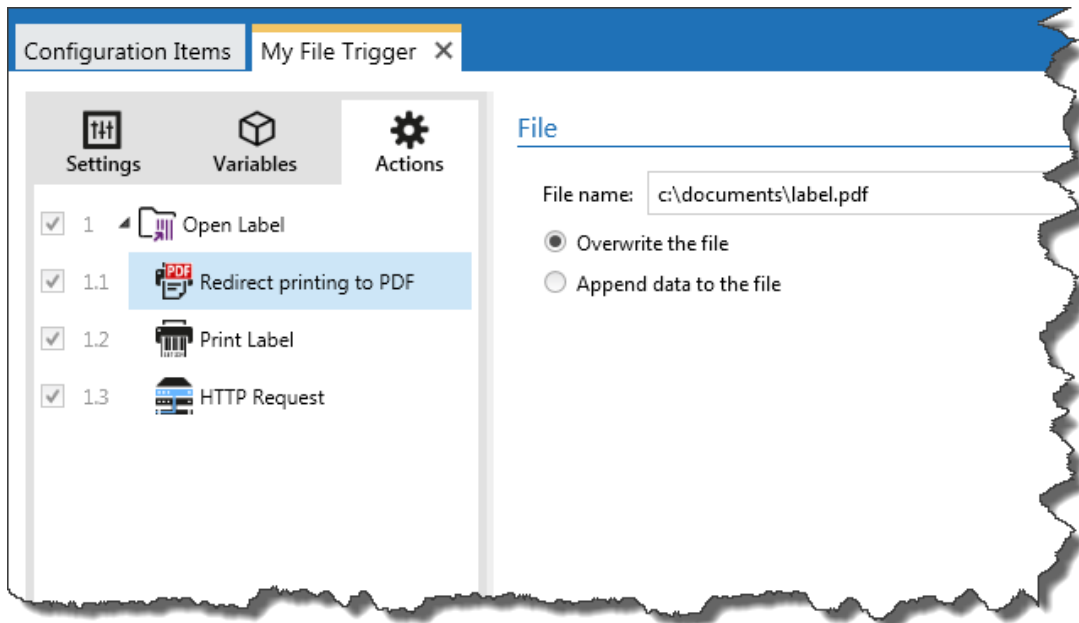
Figure 1: Using action Redirect printing to PDF in order to create a PDF document

You may want to use printing to PDF for the following use cases:

- **Electronic archiving.** After printing the label to the printer, you can also create a PDF document using the same data and use it for archiving purposes.
- **Remote PDF printing.** You can use Automation to create a PDF document from the provided data and send it back to your application as a trigger response. Your application then takes the PDF and prints it.

The "Printing to PDF" action is available in the Automation Enterprise.

Action: Preview Label

The action delivers the label preview as an image. You can control the size and type of the created image. Once you have the preview created, you can:

- Save it to disk.
- Send it to any destination using built-in outbound-connectivity actions, such as **Send Data to TCP/IP Port** and **HTTP Request**.
- Use it in a response message in **HTTP Server** and **Web Service** triggers.
- Run any third party program and provide the image as a parameter in the command-line.

Figure 2: Creating an image of label preview on disk

The "Preview Label" action is available in Automation Enterprise.

Action: HTTP Request

Send Data to HTTP action was replaced with **HTTP Request** action. The action is not only used to send data to HTTP using the POST request method. You can also use other request methods, such as GET, PUT, and DELETE. This brings the Automation closer to the Representational State Transfer (REST) architectural style.

The action has also been enhanced to provide not only the status response from the target server, but also the data response. You can do the following:

- **Send data to target server.** Content of the selected variable is sent to the target server. You can get the success status from the server.
- **Request data from the target server.** Content of the selected variable is sent to the target server, which will respond with the data that you can save in another variable.

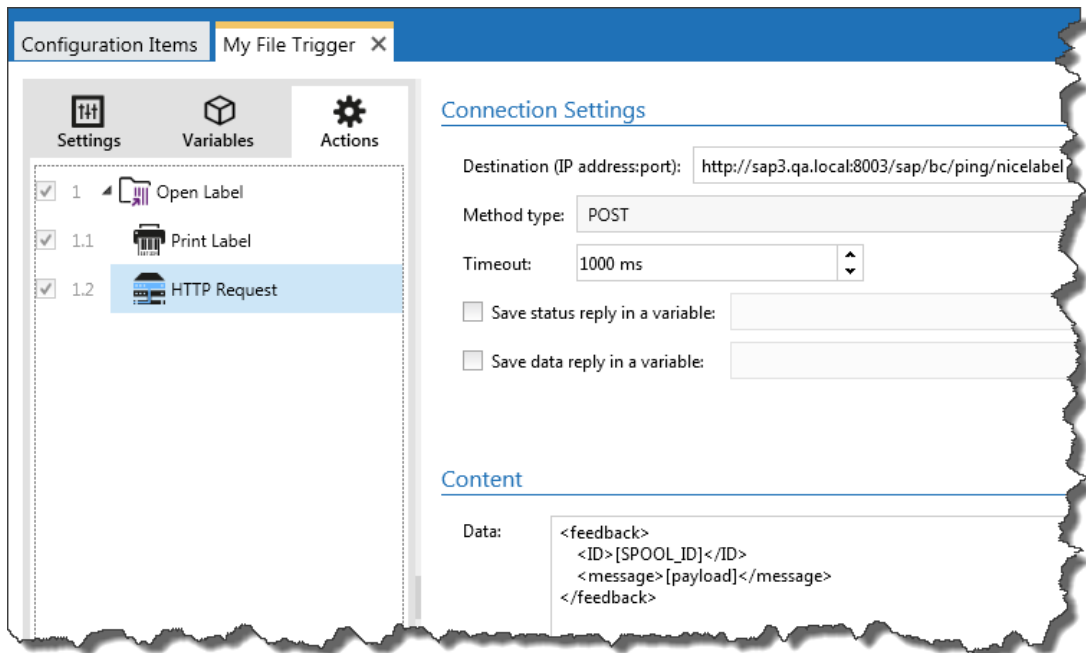Figure 3: HTTP Request sends label printing feedback to the target SAP system

The "HTTP Request" action is available in Automation Enterprise.

Action: Read Data from File

The action reads the content of the provided file and saves it into a variable. You can read the content of any file type, including binary data. Once you execute this action and have the data stored in a variable, you can use any of the available actions to use the data.

This action is useful:

- When you must combine the data received by the trigger with the data stored in some file.
- When you want to exchange the data between the triggers. One trigger prepares the data and saves it to file (using the **Save Data to File** action), and the other trigger reads the data.

The "Read Data from File" action is available in Automation Enterprise and Automation Pro.

Custom Feedback Available for HTTP Server Trigger

HTTP Trigger has been enhanced with a custom feedback possibility. In the previous version you could enable HTTP Response Codes and use them for feedback about statuses. For example, if printing completed successfully, the data-providing application received standard Response Code 200. If there was an error, the Response Code 500 was sent. Based on these Response Codes the logic in the application then determined the next steps.

These response messages only contained the status codes with no content.

New Automation greatly enriches the feedback possibility. You can still use the HTTP Response Codes, but now you can also send the custom message in the feedback. Each message can be formatted in the Internet media type (aka MIME Type, aka Content-Type) as needed.

Message examples:

- The message can be as simple as "OK" and "Error" in order to indicate the status.
- You can construct a custom message. You can combine fixed strings with values from variables.
- The message can contain **binary data**. For example, the trigger can provide label preview in JPEG, the print stream (content of *.PRN file), or a PDF file as a response.
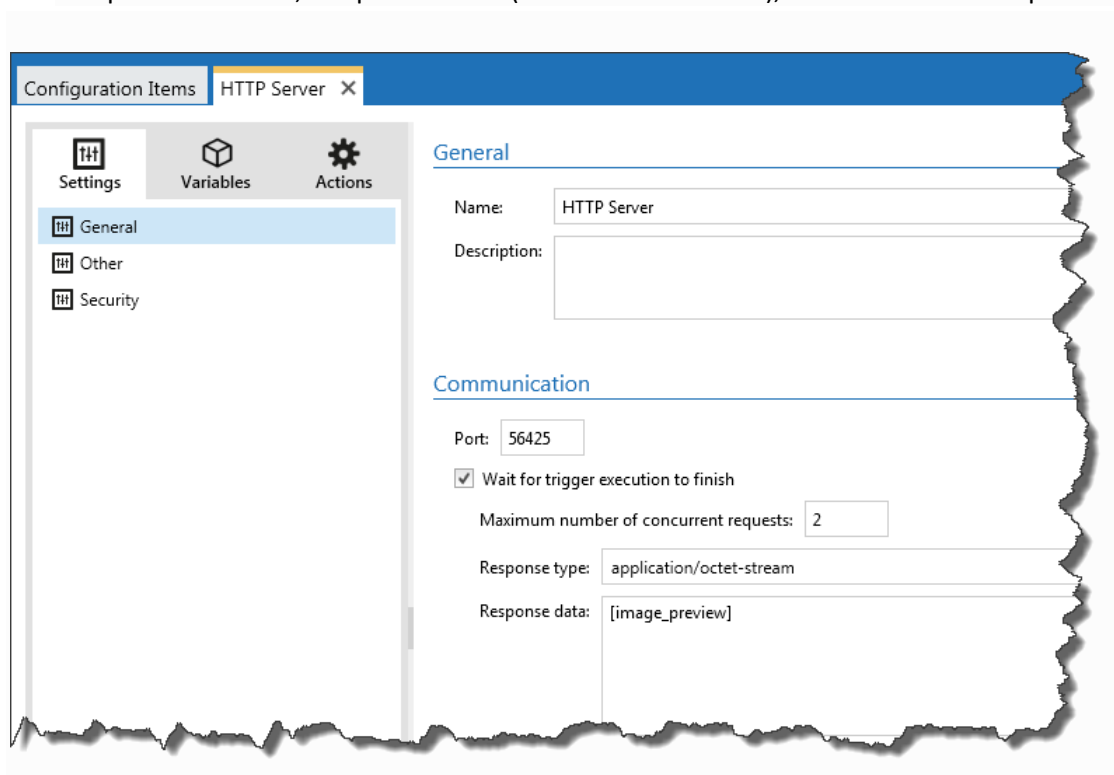

Figure 4: When the label preview is created and saved into binary variable `image_preview`, the trigger will return it to an external application as an application/octet-stream-encoded response

Imagine a situation where you already have an output management system in place. All print jobs in your company are managed with one central Spooler. You can use NiceLabel Automation as an external tool to print the label based on your data. You will provide the label data, Automation will create a print file (*.PRN) based on the target label printer and then send it back to you. Your output management system then handles the print process itself.

The "HTTP Server" trigger is available in Automation Enterprise and Automation Pro.

Custom Feedback Available for Web Service Trigger

By design, Web Service trigger supports bidirectional communication. When you send data to the Web Service trigger you can optionally configure the feedback option. Your

application can be notified if the print stream had been generated successfully or not. In case of errors, Automation will return the exact error message.

Automation 1.2 greatly enhances the feedback possibility. The new version adds another Web Service function that provides the same data as the existing function together with the possibility for a custom response message.

A custom response also supports **binary data**. For example, the trigger can provide a label preview in JPEG, the print stream (content of *.PRN file), or a PDF file as a response.
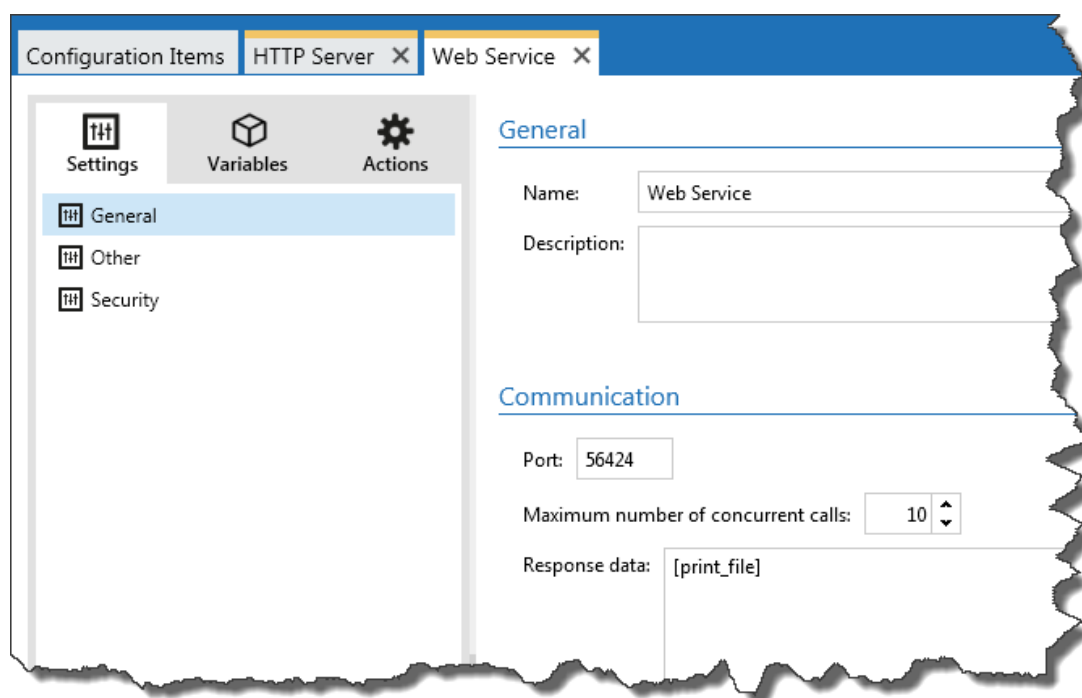

Figure 5: Trigger will wait until print file (*.PRN) has been generated and saved into variable `print_file`, and then send its content as a response to the external application

The "Web Service" trigger is available in Automation Enterprise.

Non-restrictive Data Processing Mode

Enabling the non-restrictive data processing mode will loosen the validation rules for data processing. In this mode, Automation will truncate the values that are longer than variables and ignore the missing variables instead of reporting the error. By default, the error is reported and the printing process breaks, including if you try to save too long of a value into the label variable. The same actions take place when you try to set a value to the label variable that does not even exist.

The option has the following effects:

- Data values exceeding the variable length will be shortened to fit into the variable. This option affects the setting of the variable value from filters, from the command files and setting trigger variables to label variables.

> For example, the label variable accepts a maximum of 10 characters. With this option enabled, any value longer than 10 characters will be truncated to the first 10 characters, and all characters past the character number 10 will be ignored.

- Ignore errors when setting non-existent label variables. When you execute printing with command files (such as JOB file), the printing process will ignore all the variables that are specified in the command file (using command SET), but are not defined in the label.

The Non-restrictive data processing mode is available in Automation Enterprise and Automation Pro.

Wrap text around objects

NiceLabel Pro designer introduced text wrapping with its previous release. Automation follows with 1.2, so it can print labels with wrapped text.

Some industries and standards define the need to wrap text around objects. In the label-printing world the next milestone is chemical standard **GHS** (Globally Harmonized System of Classification and Labeling of Chemicals), which requires full compliance by 2015.

The system involves hazardous pictograms being enclosed in a red diamond, accompanied by hazard information, which may also need to be in a range of languages depending on where the chemicals are being shipped.

GHS requires labels to be printed in color on a range of sizes. Some label dimensions require a more compact label layout, where the text must wrap around the images in order to save label space.
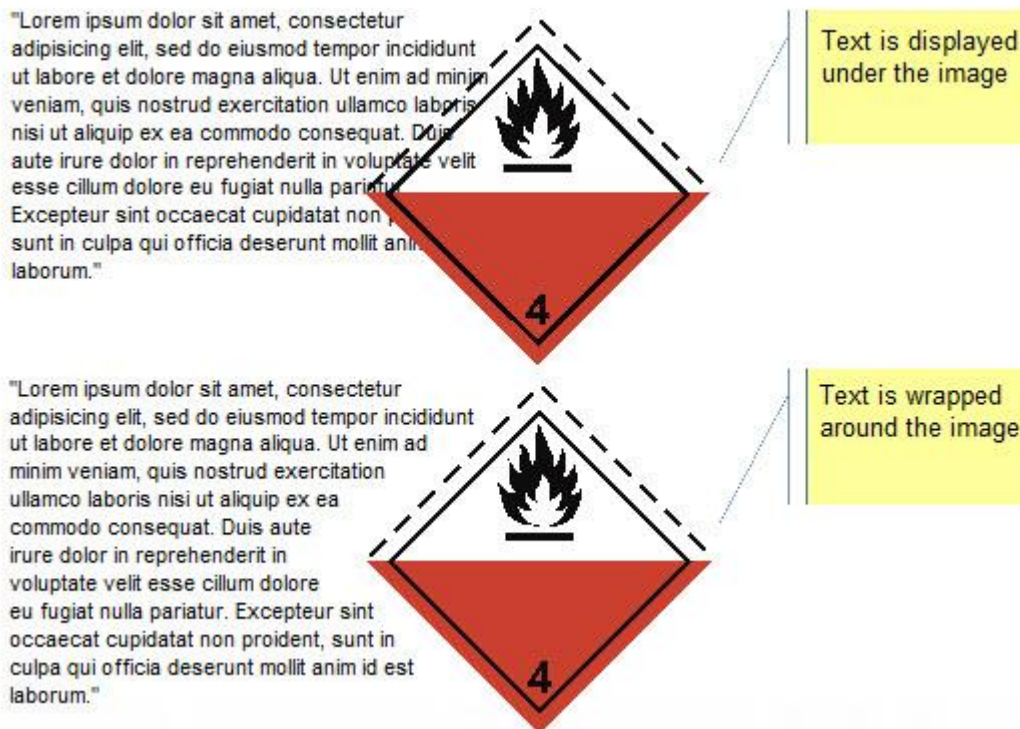
Figure 6: You can wrap text around other objects

Support for QLS Kiaro! and Vivo! Touch Printers

Automation supports native full-color support for **QLS Kiaro!** and **Vivo! Touch** printers to print labels in photographic quality. QuickLabel Systems has introduced Kiaro! and Vivo! Touch models as a cost-effective intelligent color label printing solution.

Automation will take the label combining all the design and variable-data features of NiceLabel Pro with the full-color output of the QLS printers. For optimal results, drive your QLS printer with the NiceLabel printer driver for QLS that is available for download from NiceLabel website.

Binary Content in "Save Data to File" Action

You can use the action **Save Data to File** to store any data in a file. With version 1.2, the action has been enhanced to support binary data, such as printer commands in a print job and label previews (images).

The "Save Data to File action is available in Automation Enterprise and Automation Pro.

Importing Database Variables from the Label

There are two main configuration directions that you will face when it comes to using data from databases.

1. Automation will handle the database connection using the Database trigger or Execute SQL Statement action
2. The label will handle the database connection using its own database connectivity and SQL statements

New Automation gives you the opportunity to import database variables from the label, so that you can take control of them. Then, Automation will query the data from a database and assign values to all label variables. In this case, the database connection inside the label will be ignored.

You can also choose not to import database variables. In this case, the connectivity to the database is done in the label. Automation will have to provide the key value that will be used to extract matching records from the database.

Support for Grouped Objects

Object grouping is a label design feature that makes object positioning easier in the label designer. You might want to group objects to easily manage their relative positions.

Automation 1.2 can print grouped objects.

Updated Support for ANSI MH10.8.2-2013

This data identifier and application identifier standard provides a comprehensive dictionary of MH 10/SC 8 Data Identifiers and GS1 Application Identifiers. The standard was approved in 2006, but it is undergoing continuous maintenance. Automation 1.2 includes changes from the last update from September 16, 2013.

In NiceLabel software, this standard is supported by the ASC (FACT) function.

Include searched string in the trigger data for COM Port and TCP/IP Triggers

The TCP/IP and Serial port triggers can be defined to execute actions **On sequence of characters received**. In this case, the trigger event is executed whenever the configured string of characters has been accepted. By default, Automation will strip this string from the received data. The data sent into the filter will be without these characters.
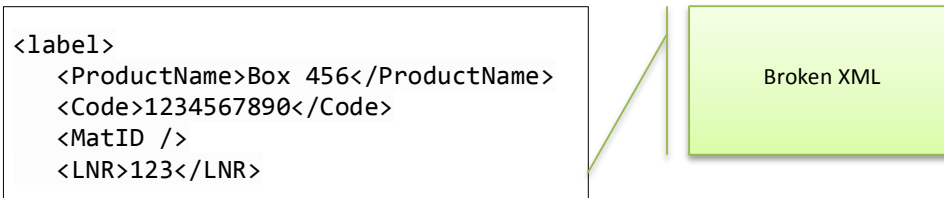
In some cases, you will want the string to be included in the data.
For example, the client establishes a connection to the Automation's TCP/IP Server trigger and keeps the connection open. For each label that must print, the client will send XML data, such as:

```
<label>
    <ProductName>Box 456</ProductName>
    <Code>1234567890</Code>
    <MatID />
    <LNR>123</LNR>
</label>
```

> By default, the "searched-for characters" are removed.

You can configure Automation to trigger event, whenever string `</label>` has been received. However, Automation will remove the string and send data until the `</label>` string. This breaks the processing in the XML filter because the data no longer conforms to the XML specifications.

```
<label>
    <ProductName>Box 456</ProductName>
    <Code>1234567890</Code>
    <MatID />
    <LNR>123</LNR>
```

Broken XML

The new option **Include string in the received data** does not remove the defined characters from the content, but rather sends the complete, received stream into the filter.

Disconnect delay in the action Send data to TCP/IP

The action **Send data to TCP/IP port** allows you to send the data to any external device that accepts a TCP/IP connection on a predefined port number. The action establishes a connection to the device, sends the data, and terminates the connection. The connection and communication is governed by the handshake that occurs between a client and server when initiating or terminating a TCP connection.

With some of the devices the standard quick disconnect procedure will fail. In such cases, the user can now configure the disconnect delay in Automation.

UI Updates

Add or Edit Filter from Use Data Filter action

When you create the action **Use Data Filter**, you have to select the filter that will be used in the action. If there is no filter created yet, you can create it right from this action.

- You can click the Add button to create a new filter.
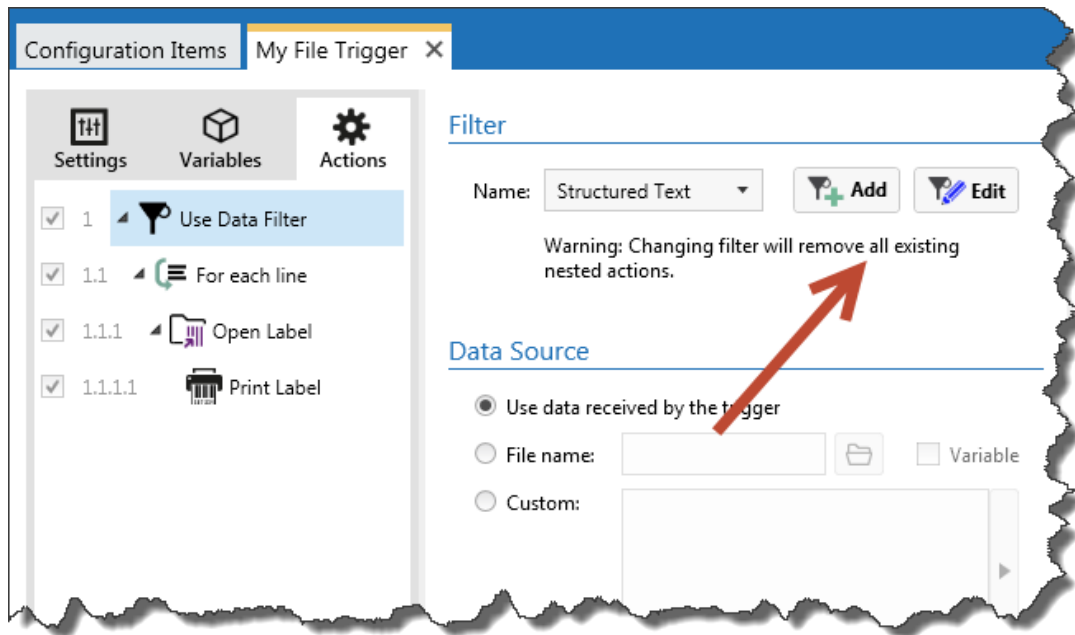- You can click the Edit button to edit the currently selected filter.

Figure 7: Creating new filter, and editing existing filter from Use Data Filter action

This will save time when creating new filters because you do not have to move the focus to the **Configuration Items** tab or select the **Configuration Items** ribbon.

Label Preview Zoom In/Out

When you run the trigger preview, the trigger will execute in the Automation Builder. You will see the preview of the label as it will look when printed out, and you will see all the processing details displayed in a log pane.

The size of your label preview depends on the label dimensions, size of your monitor, and the space you dedicated for the Print Preview pane. In some cases you the preview might be too small to identify the objects on the label.

New Automation provides the zoom in/out feature with a mouse wheel.

Figure 8: Zooming in/out the label preview

Responsive Structure Panels

Shortcuts are now available for easier access.

The structure panels are clickable in Automation 1.2. You can click the suggestion to execute the associated action. For example, clicking the text **Use 'Import Data Structure' wizard to import structure from text file** will start the Import Data Structure wizard.
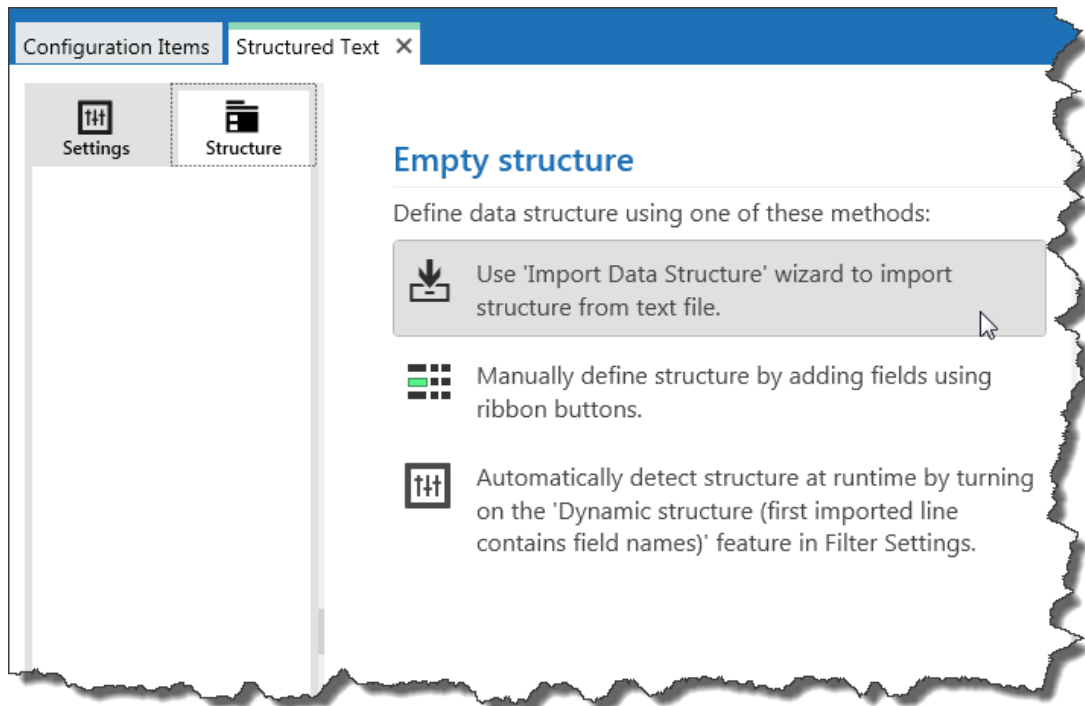
Figure 9: You can click the suggestion in the panel to execute its action

These new clickable suggestions are available when defining:

- Structured Text file
- XML filter
- Variables.

Automatic Conversion of Network Drive Letters into UNC syntax

Whenever Automation Builder identifies the specified drive letter as network share, it will convert it into UNC syntax. Note that UNC (Universal Naming Convention) is a naming convention to specify and map network drives.

For example, if the network file is available as **H:\tmp\data.txt**, Automation will convert it into **\\sunset\dawn\tmp\data.txt**, where 'sunset' is the server name and 'dawn' is the share name.

This will ensure that the Automation service will be able to access the network file. The service applications cannot access the drive letter of the network shared folder. Persistent drive letters are only restored at the interactive logon, which services do not perform.
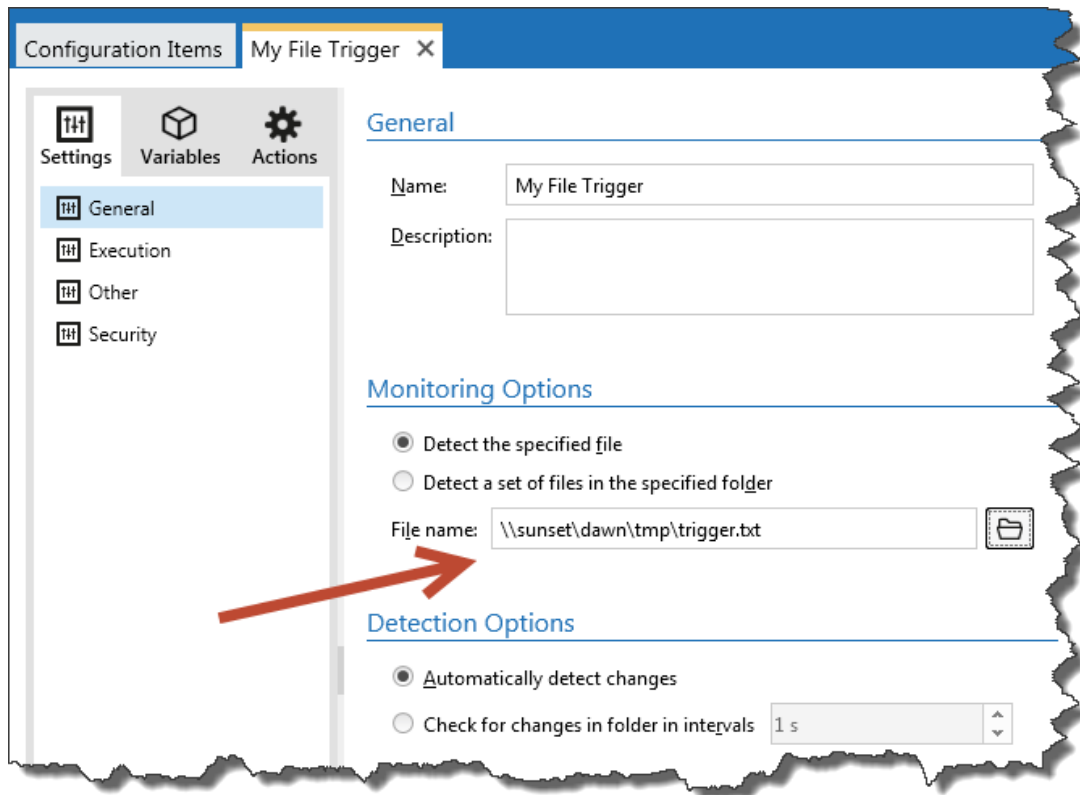
Figure 10: Network drive letters are automatically converted into UNC syntax \\server\share

This will minimize the errors when users forget to use the UNC syntax for trigger filenames, and for label filenames.

Usage of seconds and milliseconds in action properties

The default units of time-related configuration parameters have been reviewed and updated to the most appropriate unit.

Additionally, the time control now supports data entry in the desired unit. You can enter the value in one time unit and it will be automatically converted to the control's default unit.

Logging Optimizations

Customizing Log Verbosity

You can select the custom log level under which your Automation service will operate. In the testing and deployment phase you might want to enable verbose logging, while for production you only want to monitor errors and warnings and minimize the overhead.

The available log levels are:
- No log
- Errors

- Errors and warnings
- All messages.

Improved Time Accuracy in Event Log

Automation Manager will display the timestamp of the events in the log with greater accuracy. Next to the hour, minute, and seconds it will also display milliseconds when the event occurred.

Clear log

Automation Manager introduces the user-initiated removal of all entries in the log. Clearing the log might be a good idea after you have done some extensive testing. You can remove all past events and start with an empty log.
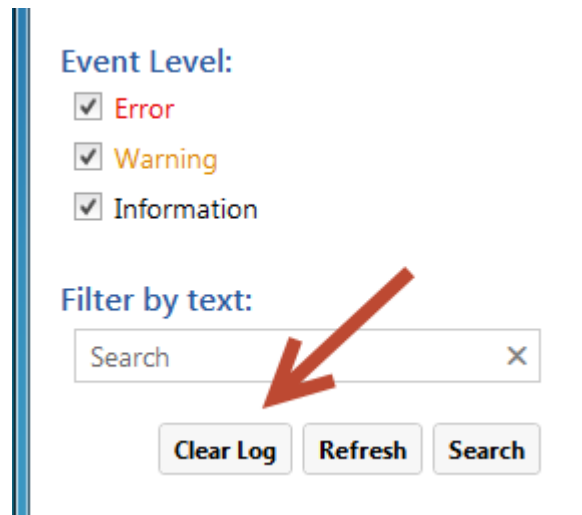

Figure 11: Clearing all log entries for the selected trigger