

Store and Recall for Direct Marking printers

Rev-2024-3

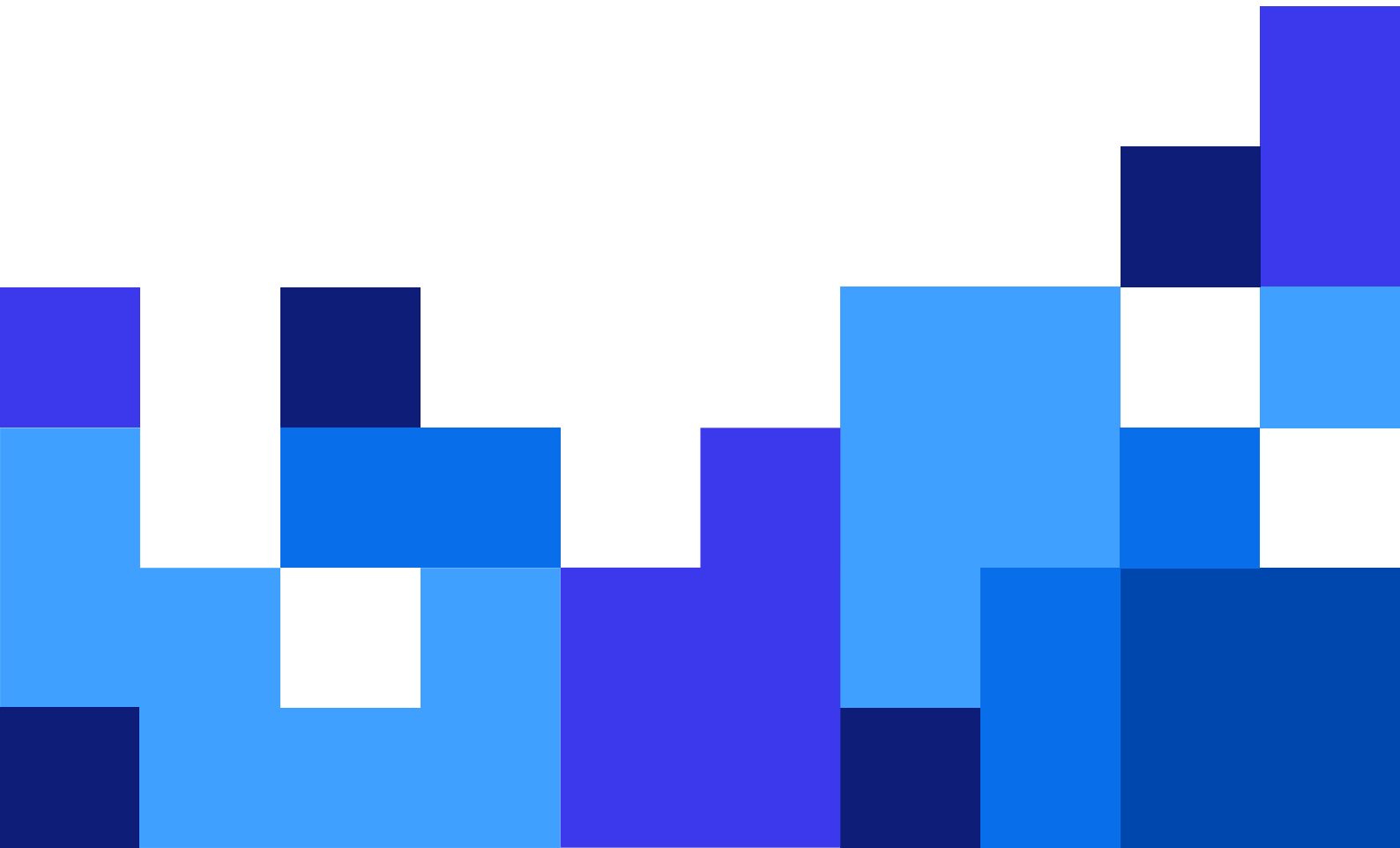


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1. Introduction

Direct marking is a method of printing messages directly to your products on your production line. Each product on your production line triggers your printer to print data directly on items. Data contains your label template stored in printer memory and variable values sent to the printer. Direct marking printers are stand-alone inkjet or laser printers where printing is continuous. The same label template prints until your printer receives the command to change the label template.

The store and recall process has 3 steps:

1. Designing your labels and setting the properties for Store functionality. Design your labels in NiceLabel Designer where you enable the Store functionality and set Store variant property.
2. Storing label templates to your printer. You store your labels after you design them in NiceLabel Designer. Once you design and store your labels, you only perform Recall.
3. Recalling (printing). You perform this step every time you want to change your printed variable data or label template.



NOTE

Some printers support the print quantity option. With this option, you can define the number of prints in your print jobs. Printing stops after the defined quantity of your labels is printed.

For example, most printers can only print continuously, which means you can't print a predefined number of labels. Consult your printer manufacturer for more information.



NOTE

[Download](#) and [install](#) the latest Software driver for your printer and the latest edition of [NiceLabel Designer](#) to design, store, and recall your label templates.

Each Software driver has certain specifics to consider during installation and later while designing and printing labels. For more information, read **Installation And Setup Guidelines** in driver **Help**.

2. Designing labels with Store properties

Store and Recall printing methods require additional steps when you design and print label templates. First, you store your label templates in your printer memory. Once you store your labels, you can print them using the [recall](#) functionality.

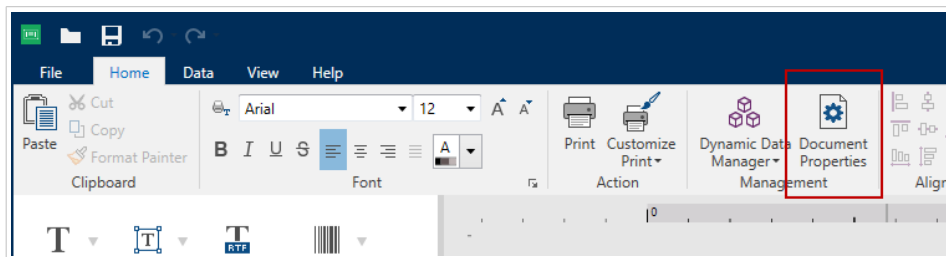
1. Open a new or existing label template in NiceLabel Designer.



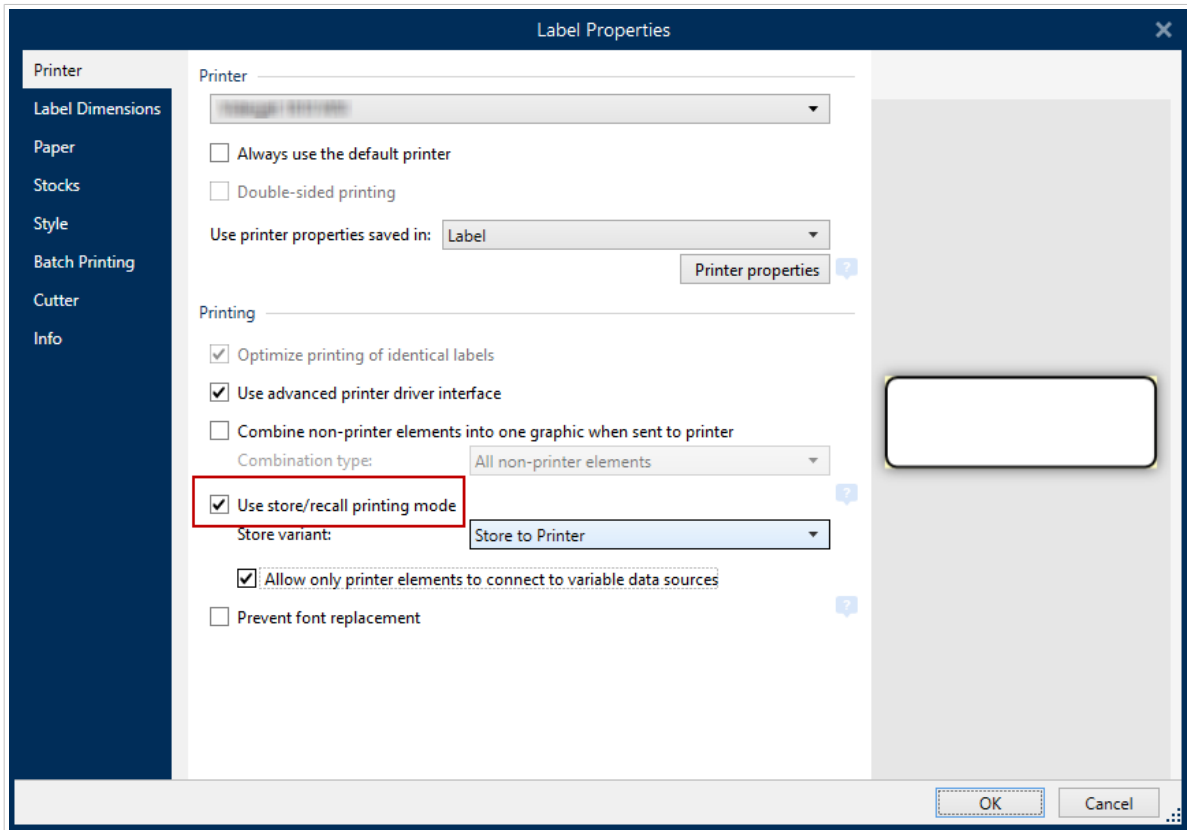
NOTE

Store and Recall is possible with NiceLabel Designer Pro edition or higher. It is not available with NiceLabel Designer Express.

2. Click the **Document Properties** icon or double-click the design surface.

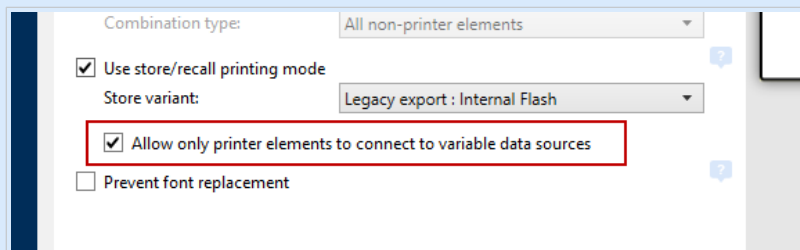


3. The **Label Properties** window opens. Enable **Use store/recall printing mode**.



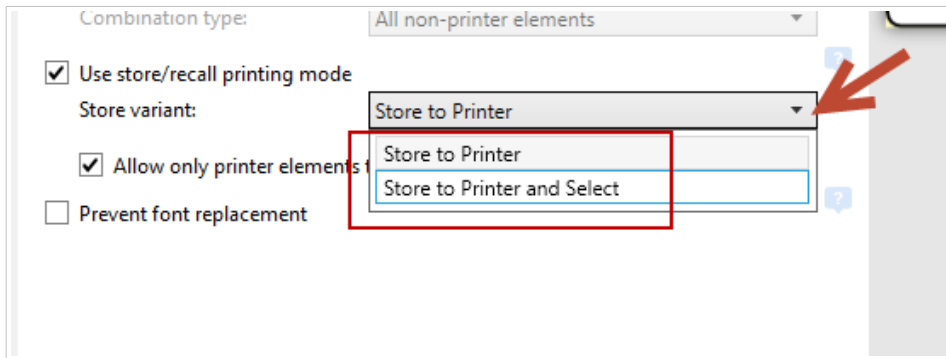
NOTE

Enable **Allow only printer elements to connect to variable data sources** to prevent using non-printer elements (fonts or barcodes) with your data sources (prompt variables, database values, functions...).



If you connect your data sources to objects not marked as internal printer objects, you get an error message and cannot store your label.

4. In the **Store variant** drop-down menu, select one of the 2 options.



- **Store to Printer** only stores your new label template to your printer. This option doesn't change the printing process. The current label keeps printing.



NOTE

With some printers, you must stop the print process when you want to store your new label template. Consult your printer manufacturer for more information.

Your label template stores to your printer when you click **Store** in the **Print** dialog or run Store actions in Automation or Designer PowerForms. For more information, read [Section 3, "Storing labels to printers"](#).

- **Store to Printer and Select** stores your label design to your printer and selects the label for printing. At the next trigger event on your printer, the current label stops printing, and your newly stored label starts printing.

To execute this option, click **Store** in the **Print** dialog or run Store actions in Automation or Designer PowerForms. For more information, read [Section 3, "Storing labels to printers"](#).



NOTE

In some cases, your printer may cause a few seconds of delay when selecting new labels, and some products may print incorrectly. Avoid unnecessary **Store to Printer and Select** actions. Store the label to your printer once, then use the **Print** action to recall your label template. With the **Print** action, you only update variable data in your messages.



NOTE

Some printers have more **Store variant** options. Consult with your printer manufacturer about additional options.

You can also change the **Store variant** option later when you store labels to your printer.

5. Design your label template. Use internal printer objects (counters, date/time) and fonts.



WARNING

When you print variable data (variable text, counters, date/time...), use internal printer objects and internal fonts. If you use, for example, a system (computer) counter, only the label with the last counter value prints. Label objects with TrueType fonts print as fixed graphic objects.

If you want to use TrueType font on your label templates, you can download font to your printer. In such case you can use this font as the printer internal font.



WARNING

Printing different database values on your messages is not possible with most direct marking printers. With standard print methods (without store and recall), you can design and print labels from NiceLabel Designer using one of the many database options. For example, every subsequent printed label contains values from the next database record.

In most cases, you can only print values from the first record in your database.

Use NiceLabel Automation to print different data with each print. Automation retrieves variable values from trigger data.

You can also create a printing form using Designer PowerForms where you manually select database records to print.

Read [printing from Automation](#) and [printing from Designer PowerForms](#) for more information.

6. Save your label template.

Your label template is now ready to be [stored](#) to your printer.

3. Storing labels to printers

After you [design](#) and save your label templates, you can store them to your printers. You can store your label templates from NiceLabel [Designer](#), [Designer PowerForms](#), or [Automation](#).



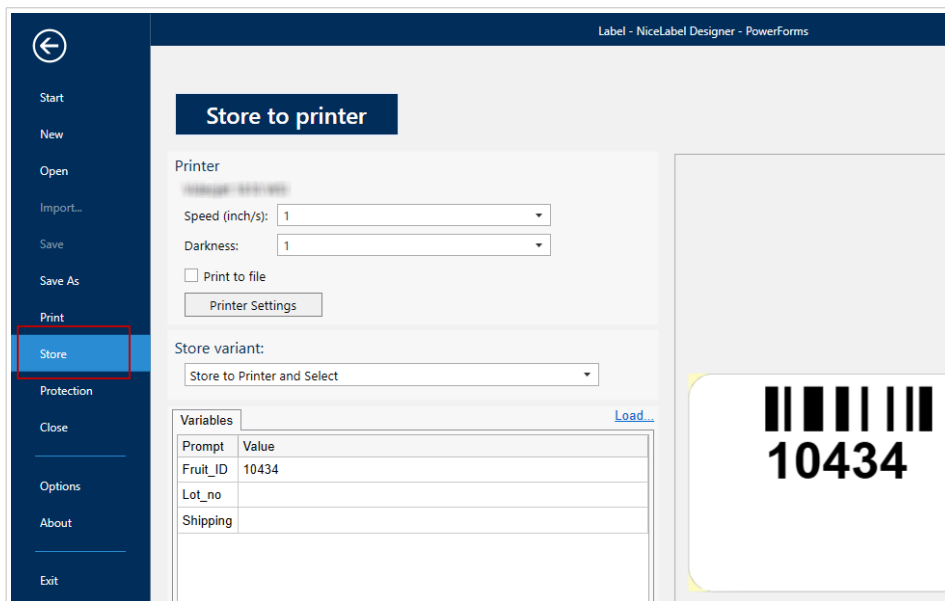
IMPORTANT

When you use computers as printer servers, you want the same printer settings (like speed, darkness, ribbon use, etc.) to apply to all printer server users and users printing on shared printers from their computers.

To change printer driver defaults for all users, use the **Printing Defaults** option in your driver. See the [KB article](#) for detailed instructions.

Storing from Designer

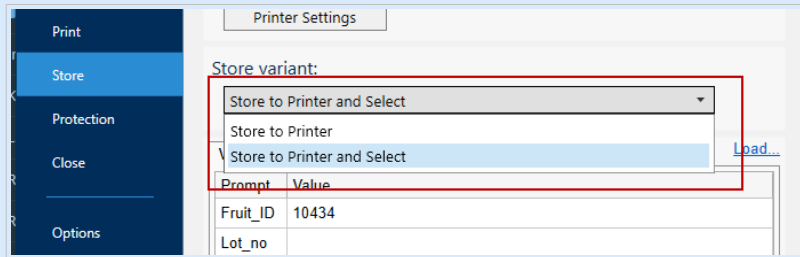
1. Open the label template you want to store to your printer.
2. Go to **File > Store** (or press <Ctrl>+P and click the **Store** button). The printing form opens.





NOTE

You can also change the **Store** variant in printing form.



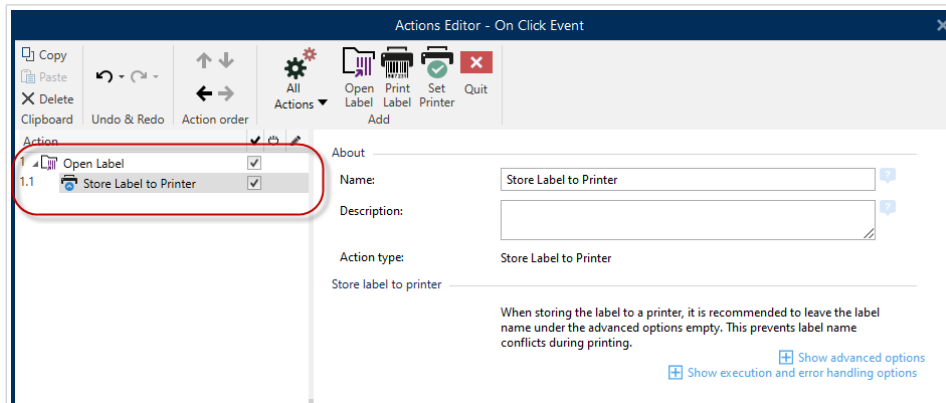
WARNING

Print button does not store your label template to your printer.

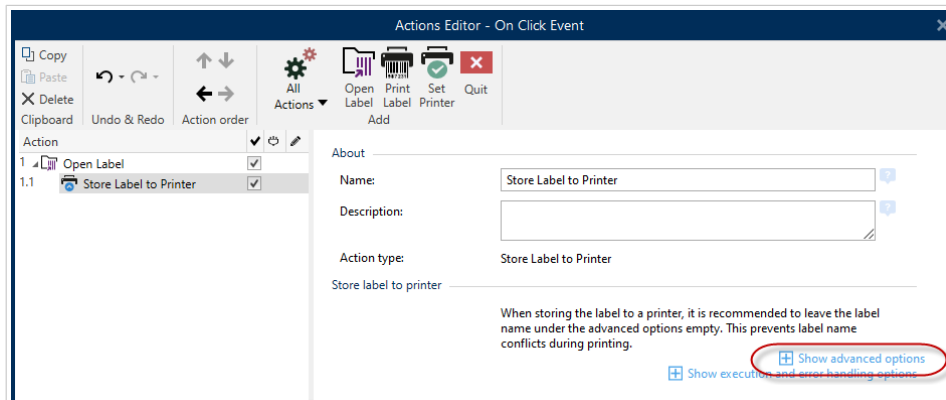
Your label template is now stored to your printer.

Storing from Designer PowerForms

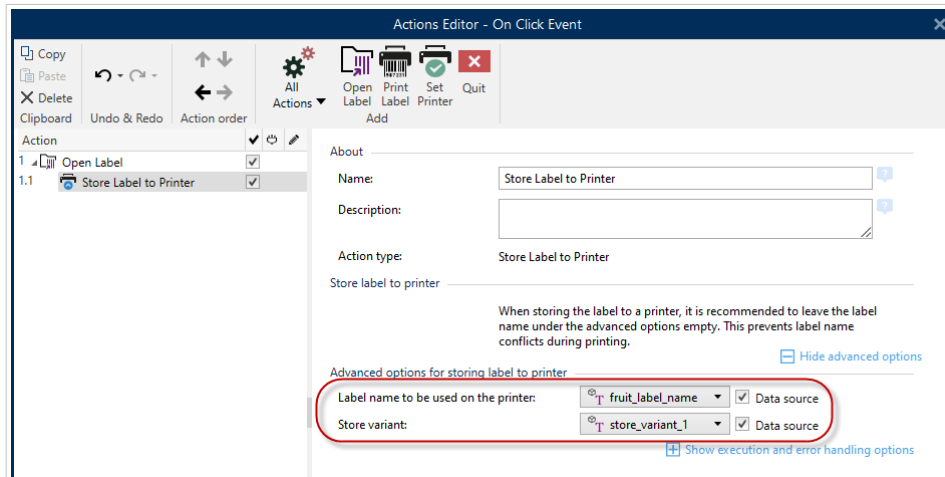
1. Create a set of actions **Open Label**, **Set Printer**, and **Store Label to Printer**. Add a "Store" button on your form to run your actions.



2. Click **Show advanced options**.



3. Set **Label name to be used on the printer** and **Store variant**.



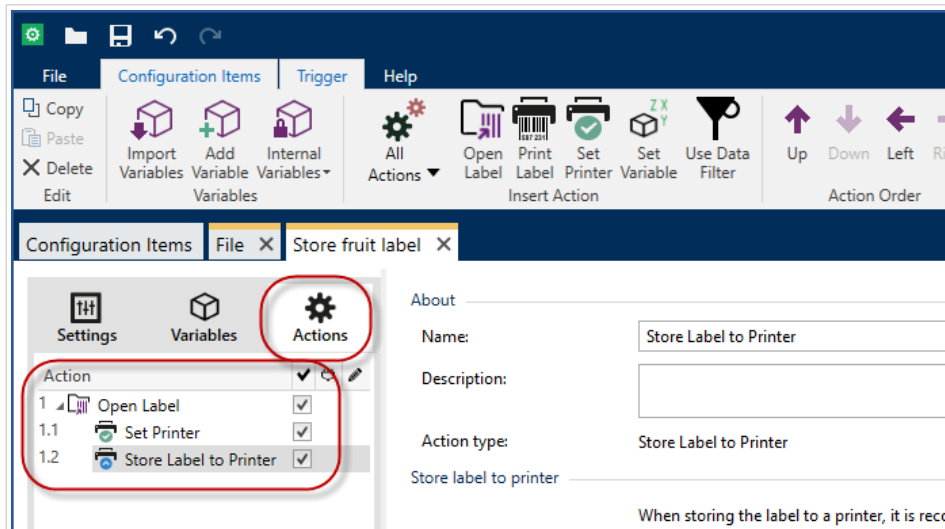
4. Click **OK**.
5. Save and run your form.

When you press the "Store" button on your form or start your store actions with some other form event or condition, your label templates store to your printer.

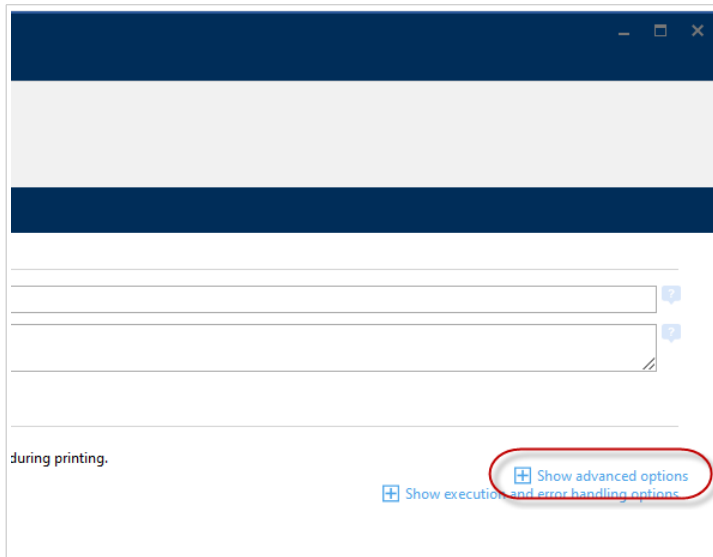
Storing from Automation

Create a new trigger or open an existing trigger and add actions to store your labels.

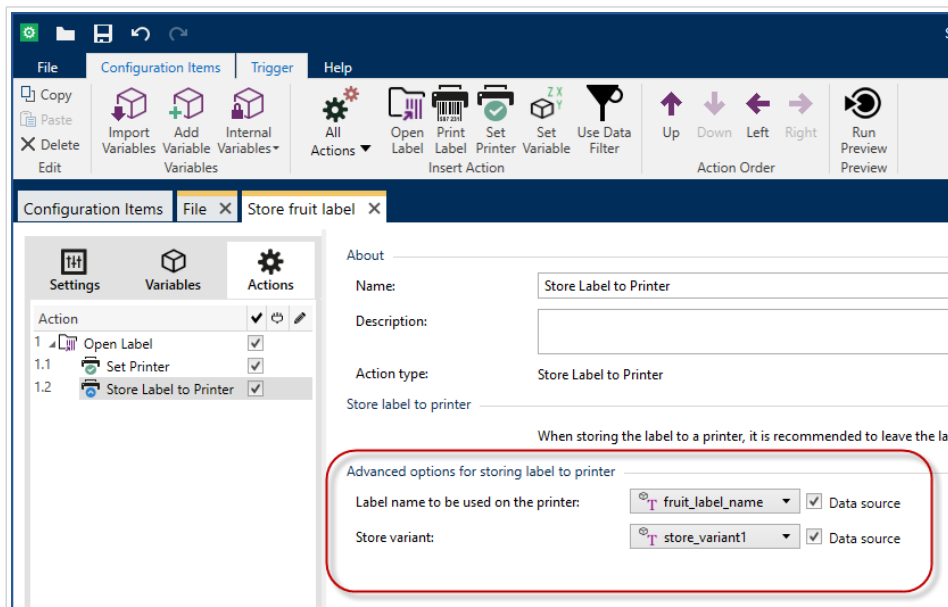
1. Add a set of actions **Open Label**, **Set Printer**, and **Store Label to Printer**.



2. Click **Show advanced options**.



3. Set Label name to be used on the printer and Store variant.



4. Save and deploy your Automation configuration.

At the Automation trigger event, your label stores to your printer.

4. Recalling (printing) labels

After you [store your label templates](#) to your printer, you can print messages on your products. Usually, you use a form you create with Designer PowerForms or Automation to print your labels, but you can also print with NiceLabel Designer.



NOTE

Some printers perform the Recall functionality using PLC devices. PLC devices send recall streams directly to your printer without using NiceLabel applications.

There are 3 printing scenarios:

1. Printing unlimited messages where you can change variable data during printing but the label template stays the same.



NOTE

NiceLabel uses the term "unlimited quantity" when you print continuously. Continuous printing is the most common method of printing on production lines, but with some printers, you can also define the quantity of labels to print (For example, 500). Unlimited quantity is typically the preferred option or even the only option. You can set this option in [printing forms](#) or in [Automation](#). Printers that only use unlimited quantity skip your entered quantity data and replace it with "unlimited".

2. Printing the same label template with a predefined (limited) quantity. For example, you want to print your selected label template on 500 products.



NOTE

This option is not supported on all printers.

3. Printing unlimited messages where you change your variable data and label templates during printing.

When you use "unlimited quantity", your printer prints your selected label template until:

- You activate your **Print** action in Designer PowerForms or Automation.
- You send new data by pressing the **Print** button in Designer.
- Your printer recognizes an internal trigger event to change the label template.

Executing the **Print** action starts the following procedure:

1. NiceLabel sends the recall stream (print stream) to your printer with information about:

- Which label template starts printing
 - Variable values
 - Printing quantity (if supported by your printer)
2. Your printer stops printing the current label template or current variable values and starts printing your selected label template with your new data.

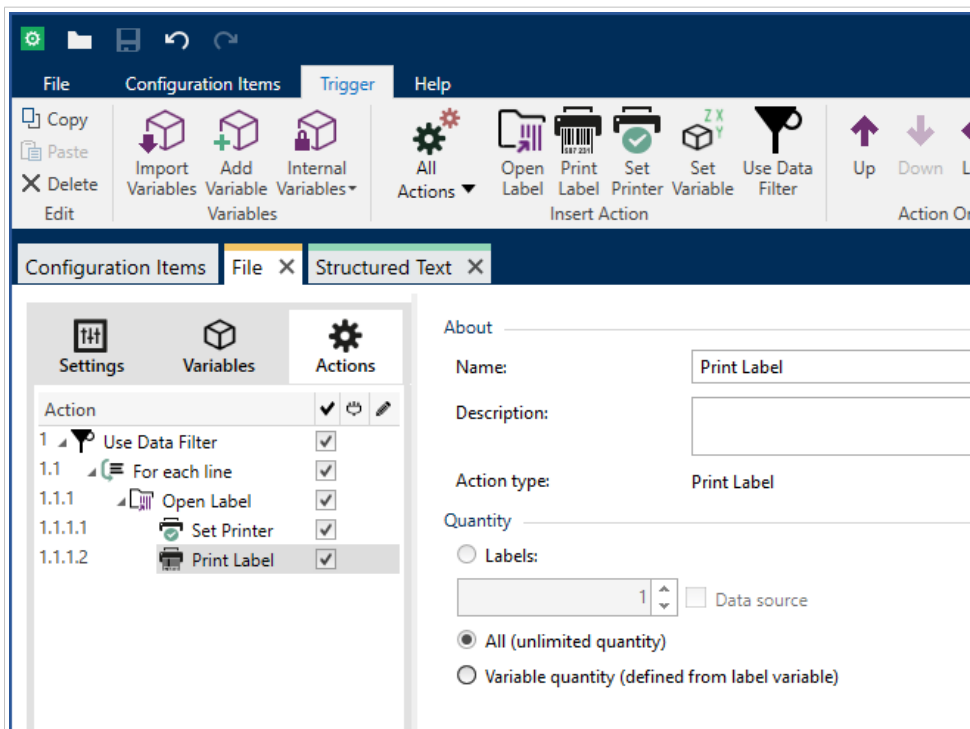


NOTE

These steps execute instantly and your printer starts printing new messages immediately.

Recall your variable data or label templates with:

- **Automation:** Use this method when every product contains different data to print. Create a set of actions to print your label designs in the same way as standard printing to thermal printers.



Using Automation, you can print the same message with different data, or print with different label templates.

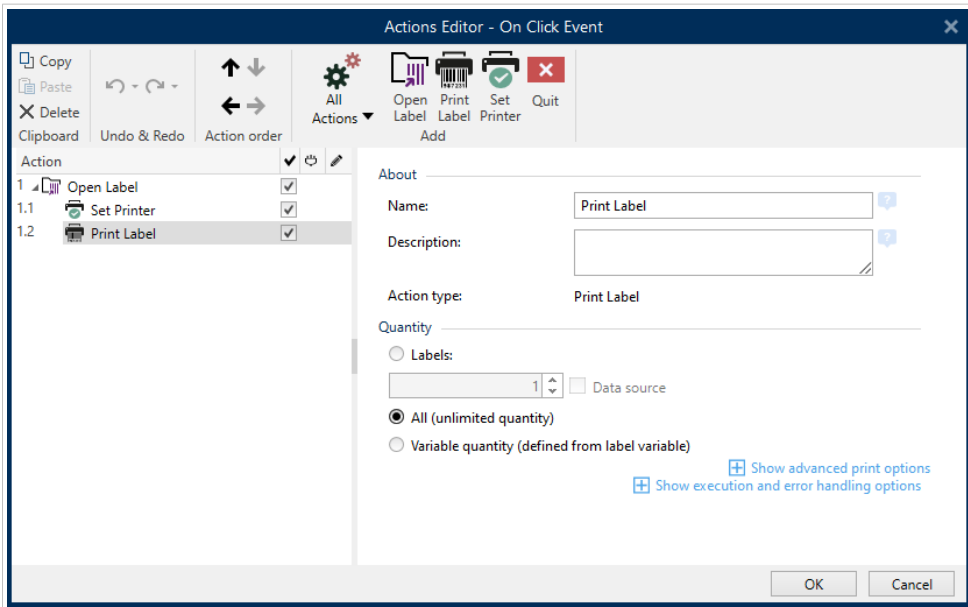


NOTE

You must also synchronize Automation triggers with printing triggers on your production line. Automation only changes your variable values. Triggers on your production line then ensure your new variable values actually print on your messages.

Read the [Automation User Guide](#) for more information on creating configurations and using triggers.

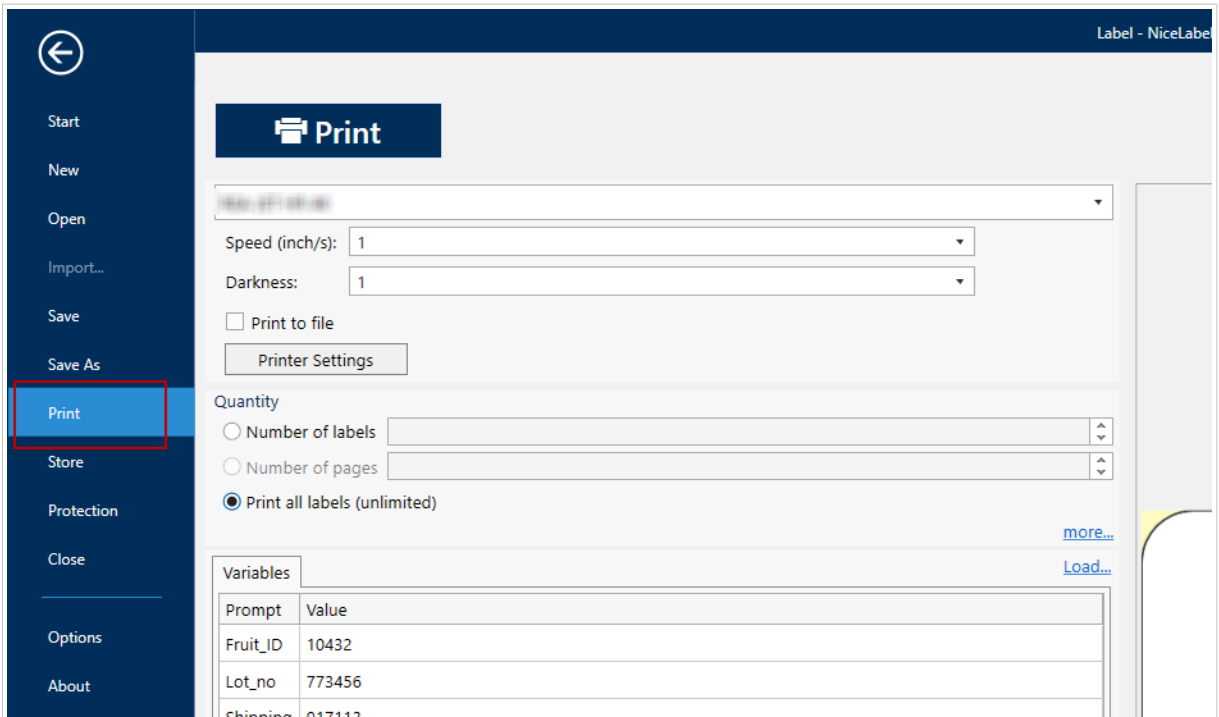
- **Designer PowerForms:** Use this method when multiple products contain the same data to print. Create a set of actions for your **Print** button the same way as standard printing to thermal printers.



Depending on your form design and sets of actions, you can print the same label template with different data (manually entered variable values using edit fields or database values), or print different label templates.

Read the [Designer Pro/PowerForms user guide](#) for more information on creating label designs and printing from Designer PowerForms.

- **Designer Pro:** Use this method when you change your data on your messages only occasionally. Go to **File > Print**, type your variable values, and press **Print** to print your messages.



The label with typed variable values prints until you type new variable values and press **Print** again. Read the [Designer Pro/PowerForms user guide](#) for more information on creating label designs and printing your labels.



NOTE

To minimize user errors, print your label designs from Automation or Designer PowerForms.

When you recall your label template, you change your variable data or your label template on your printed messages.

5. Common printing scenarios

Depending on how often you change variable data on your messages, choose from different printing methods:

Manually updating variables several times per shift

Use this method when multiple products contain the same data to print.

Your printer operator updates variable data (product name, lot number, product code) in NiceLabel Designer PowerForms. The printer prints messages with the same data until the operator changes variable data. Variable data is usually connected to text objects or barcodes. The print operator can change the date, time, or counter value directly on the printer or in NiceLabel.

Printing speed is high because variable data doesn't change with every print.

Updating variable data with every print

Use this method when every product contains different data to print.

Automation receives trigger events (usually generated by photocell signals) from your printer. The trigger event starts a set of actions in Automation, then Automation retrieves data from a database or other external data sources. Automation processes data and sends the Recall command with new variable values to the printer.

Automation processes every trigger event, so this scenario is suitable for medium-speed printing.

Providing lists of variable values

This scenario is similar to [Updating variable data with every print](#) but faster.

Some printers can accept lists of variable values. Automation sends these lists to your printer. Your printer gets variable values from the list and prints messages. When printing approaches the end of the list, your printer sends a trigger signal to Automation. Automation then sends a new list to the printer.

With this scenario, you can print 10-20 messages per second.