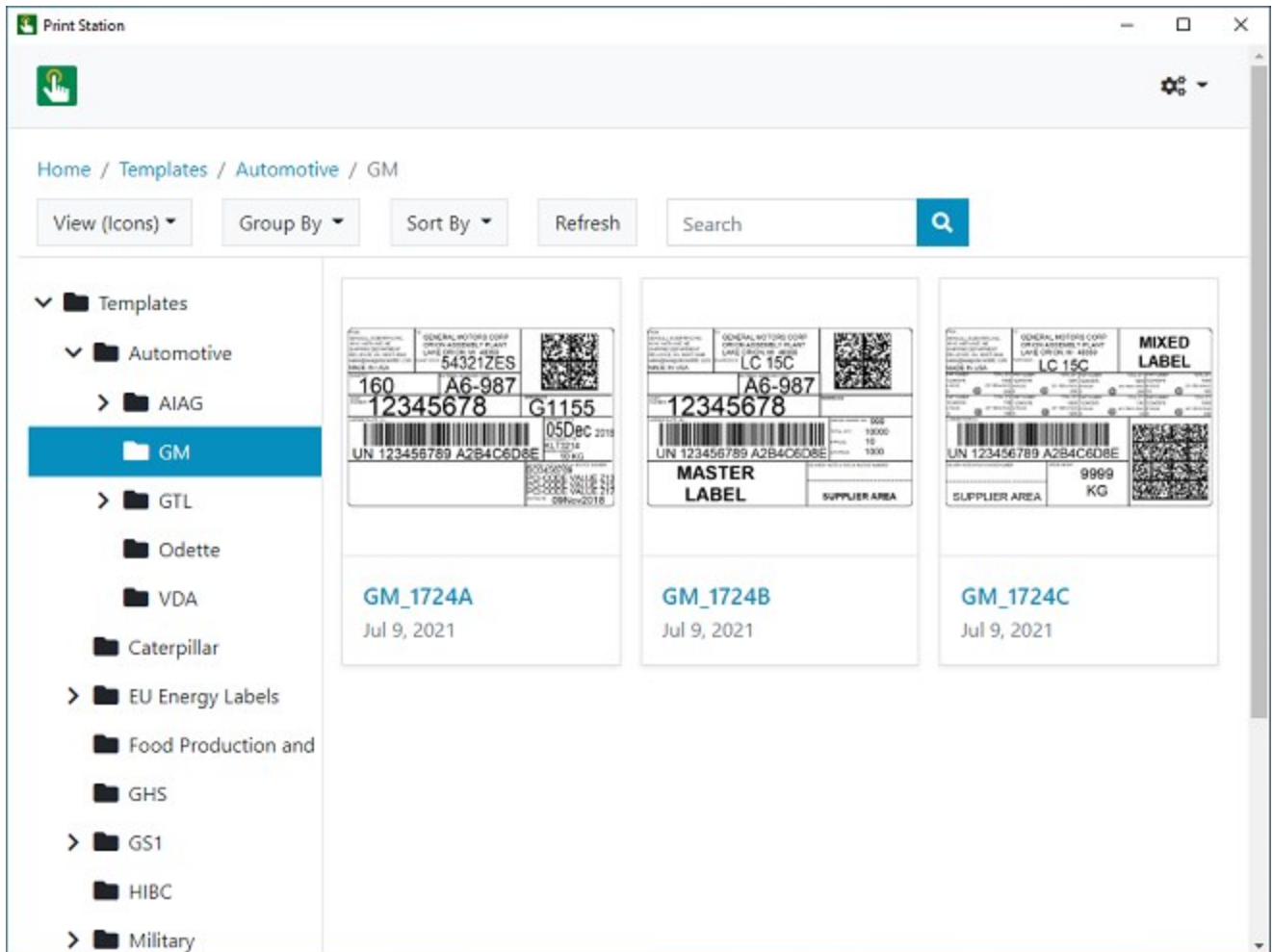# BarTender® 2022

WHAT'S NEW

Contents

About BarTender 2022

With BarTender® software by Seagull Scientific, organizations around the world can improve safety, security, efficiency, and compliance by creating and automating the printing of labels, barcodes, RFID tags, plastic cards, and more. Thousands of companies in manufacturing, chemicals, health care, food and beverage, aerospace, pharmaceuticals, supply chain/logistics, and other industries trust BarTender with the labeling and marking processes that keep their businesses running.

With the release of BarTender 2022, Seagull Scientific continues to enhance your design and printing experience and provide easier ways to manage and administer your print operations. This document describes the most significant features that were added or improved in BarTender 2022.

Print Station Redesign

Print Station is redesigned to have a modern user interface and streamlined functionality. The redesign is modeled after BarTender Print Portal and has near parity with its features.

You can run Print Station on any computer that has BarTender installed. It can access files on any local or network directory after you add these directories as root folders by using the Administrative Setup page.

The new design continues to provide the features that you want in a click-and-print environment. You can use the modern interface to easily find and open the BarTender documents that you want, select a printer to send the print job to, and enter data into the data entry form as applicable at print time. You can also quickly locate and run Process Builder process files and BTXML script files.

Users can look for the file that they want by using familiar folder navigation. Grouping and sorting options are added to make it easier to organize your folders and files and to find the file that you need. Users can group by author, categories, tags, or products, and sort by name, date created, or date modified. Users can use the Search bar at the top of the Print Station window to enter all or part of a file name to locate a document, or enter a file name extension to locate a particular type of file.
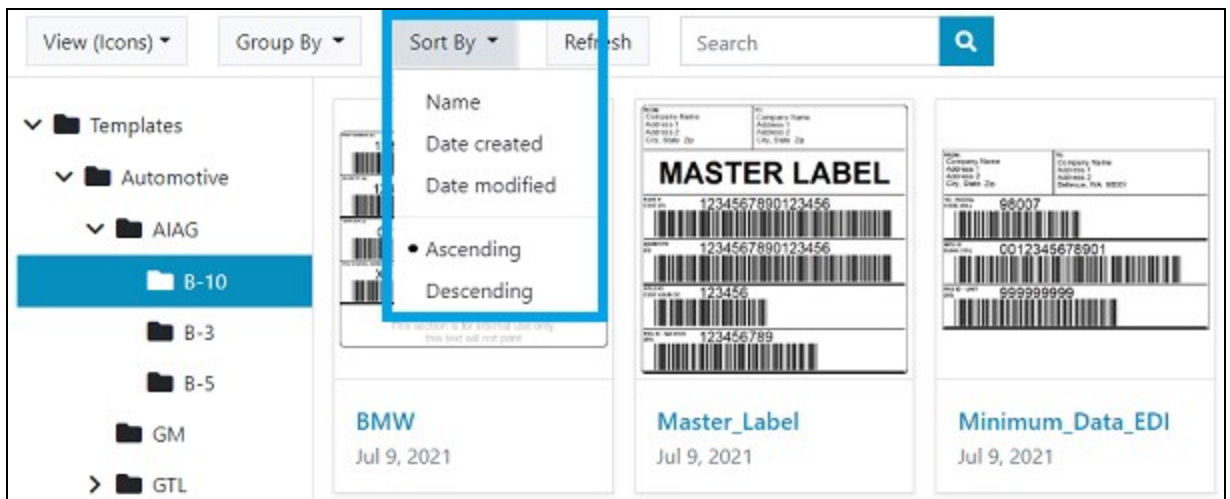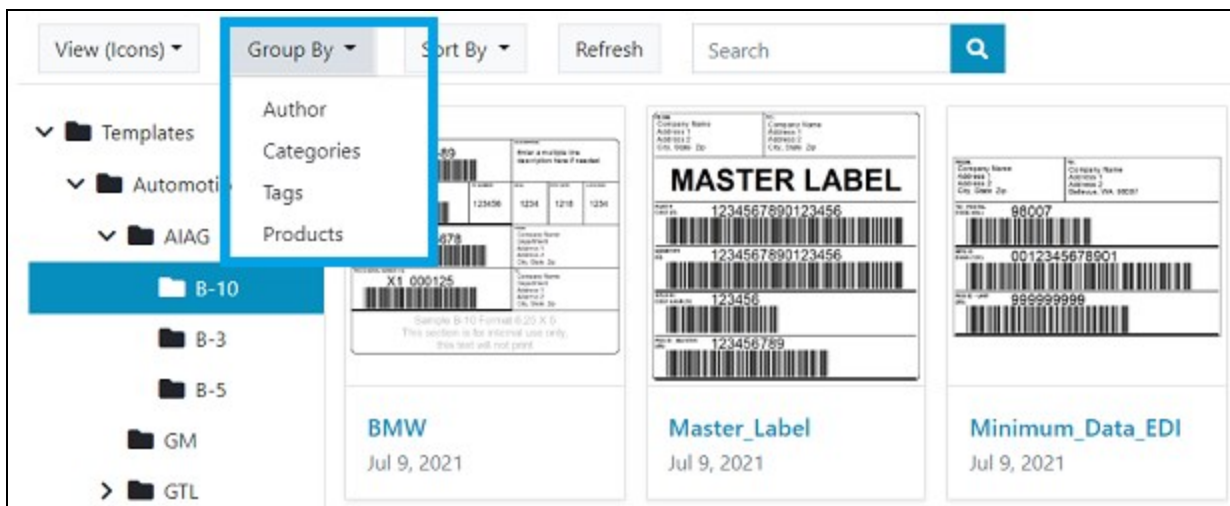
Users can also specify different colors for individual folders by using the new **Folder Color** option.
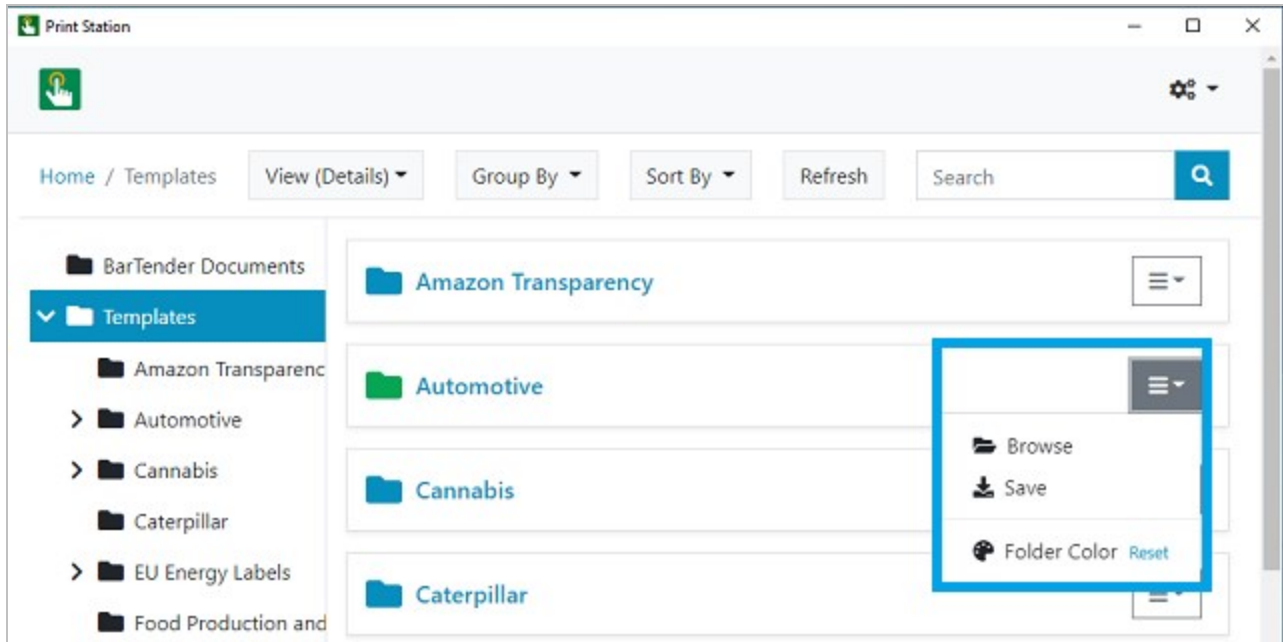
File Information

Print Station displays file names, comments and file information for each BarTender document. The comment that is displayed is the one that is specified for the document in BarTender Designer by using the **Comments** tab of the **BarTender Document Options** dialog.
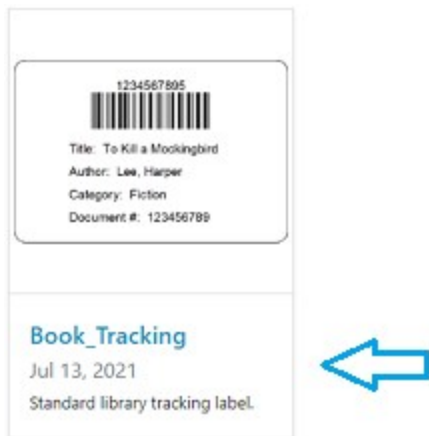
Printing

When you set up Print Station, you can choose how much control users have over printing a document. One click (or tap, in a touchscreen environment) on a document can do either of the following:

- Immediately send the document to the printer together with the default printer settings
- Display a print dialog that users can use to modify certain print settings (such as the printer to use or the number of copies to print) before they run the print job

In either case, users can easily print any document that appears in the Print Station window with one click or tap. If a BarTender document uses data entry forms or query prompts, these dialogs appear in Print Station when the user starts a print job.

Print Station also supports the following features to help with printing tasks:

- **Repeat data entry until cancelled**: Print Station supports the **Repeat data entry until cancelled** print option in the **Print** dialog in BarTender Designer. This option specifies that when a print job is complete, a new print job is automatically run. This means that you need not manually restart a print job when you run multiple consecutive print jobs that use the same BarTender document.
- **Form-level actions**: Print Station supports the form-level actions that are configured in BarTender. These actions help you to manage forms and print jobs and to communicate information to print operators at print time. For example, you can configure actions to reset or clear form data, continue or cancel a print job, display a message, and more.

Security

You can use one or more of the following methods to ensure the security of printing activities and administration settings.

Grant or deny user permissions in Administration Console

You can use Administration Console to grant or deny user permissions to prevent unauthorized access to and administration of Print Station. To do this, use the **Print Station** section of the **User Permissions** page in Administration Console.
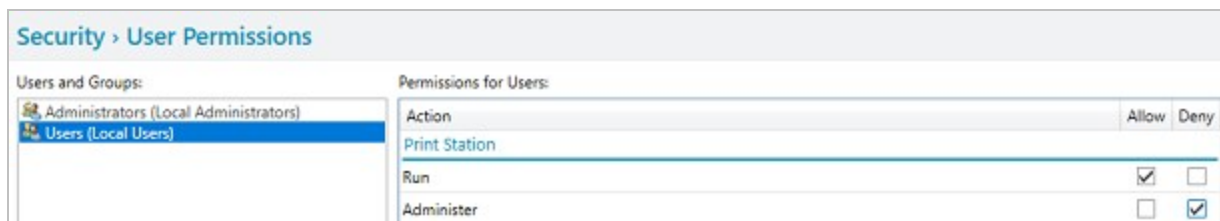
Configure security by using the Administrative Setup page

You can access additional Print Station security settings by using the **Administrative Setup** page. You open this page by clicking the ⚙ ▾ icon on the Print Station interface and then clicking **Administrative Setup**.
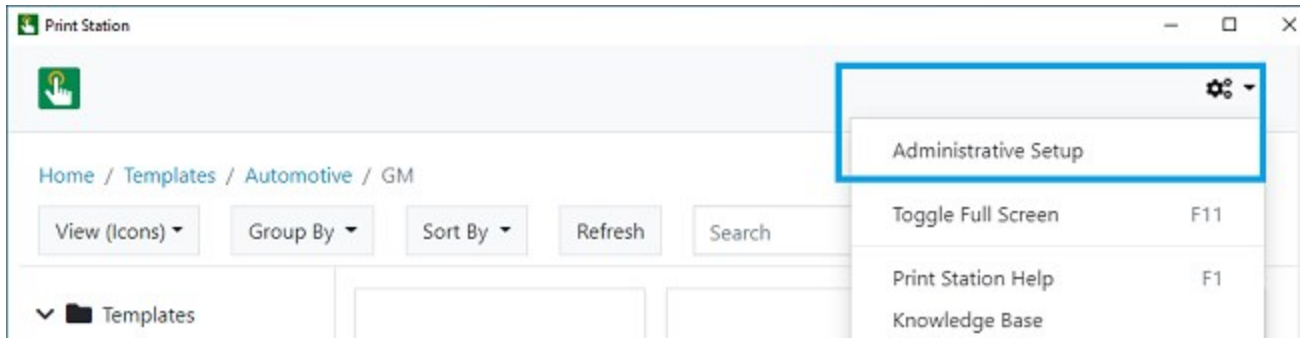
By using the **Administrative Setup** page, you can specify one or more of the following security options for the folders that are available in Print Station.

Configure folder visibility

When you configure folder visibility, you specify the users that you want to be able to see a root folder.


Configure password protection

You can also configure a password for the Print Station **Administrative Setup** page when you want to ensure that users cannot modify the Print Station configuration settings. When you do this, users can print items but cannot access the Administrative Setup page unless they supply the password.
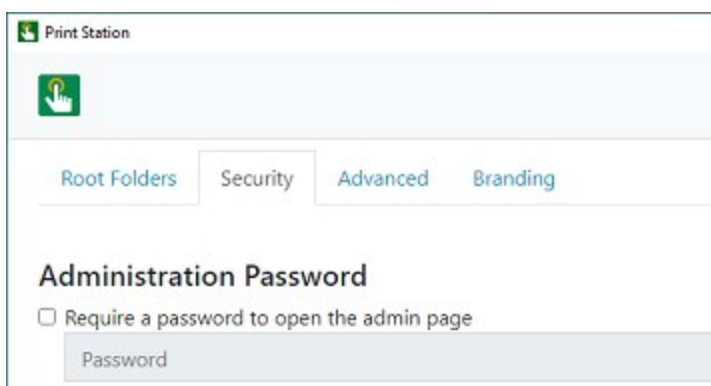
Custom Corporate Branding

Print Station now supports replacing the default Print Station branding with your company's branding. By using the new **Branding** property page on the Print Station **Administrative Setup** page, you can replace the Print Station icon with your company logo (or other image) and change the colors of items in the user interface to your company's branded colors.
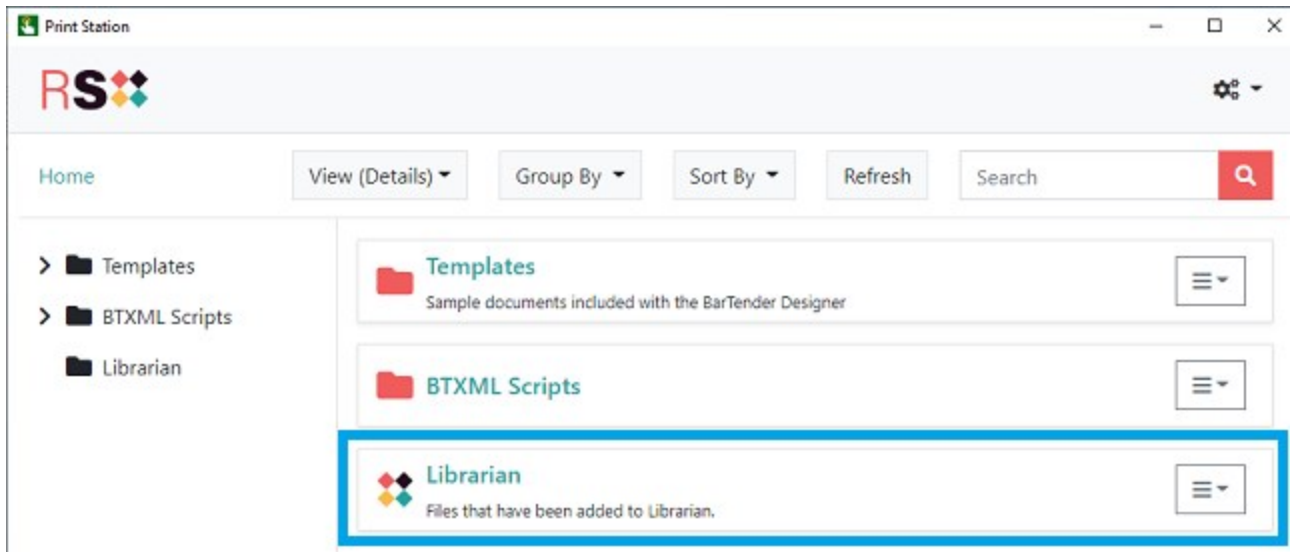
The following image shows the default Print Station branding.
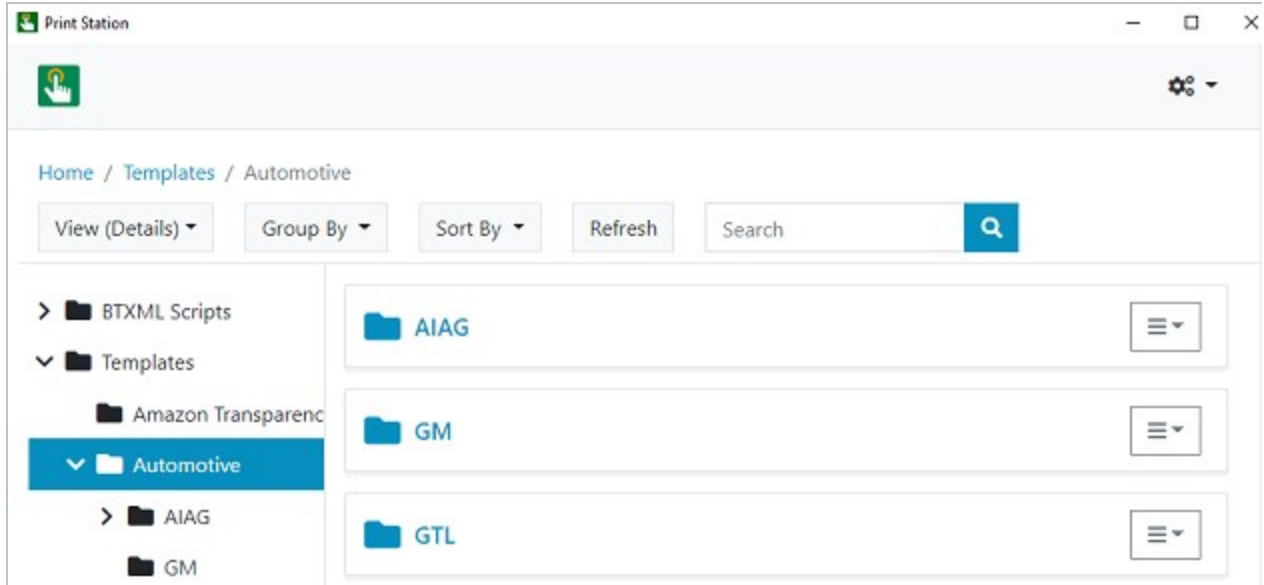
The following image shows an example of custom branding.
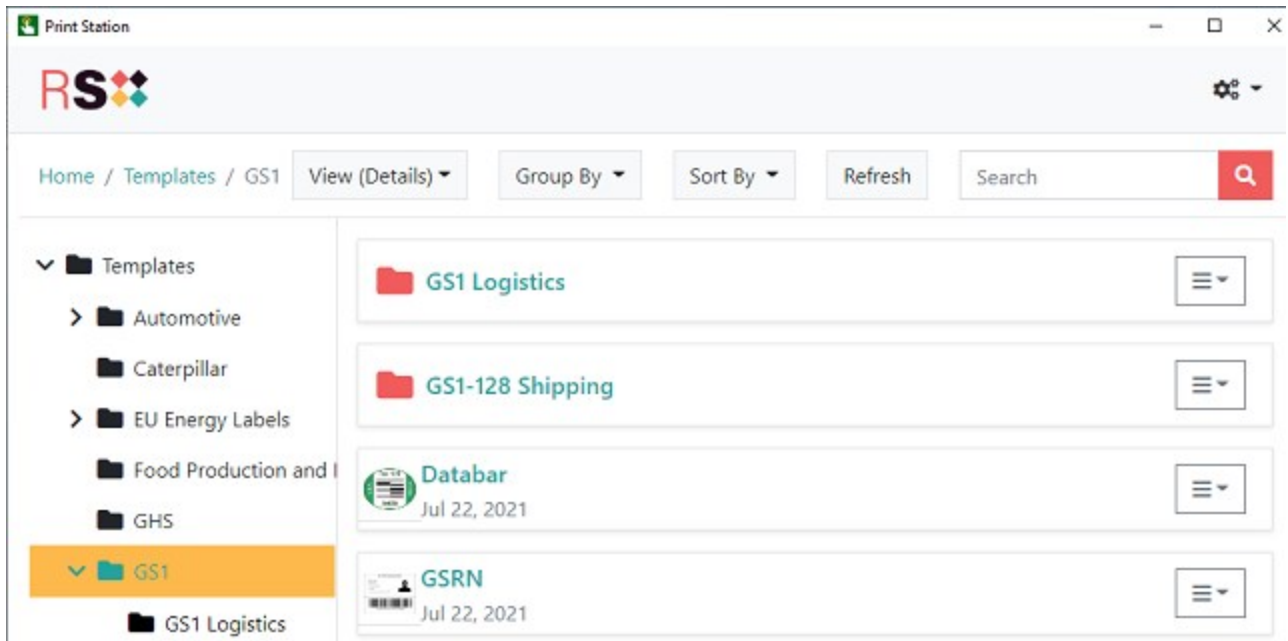
You can also specify a custom image for any root folder, as shown in the following example.

## *Integration with Librarian (BarTender Enterprise Edition)*

Librarian is the companion application in the BarTender suite that provides a content management system for your BarTender documents in BarTender Enterprise edition. When you use Librarian, you create a secure central repository of documents, including a revision history that tracks all the changes to the document design and all the user comments for each revision. You can also use Librarian workflows to easily manage a document's status from first draft to final published state.

With BarTender Enterprise edition, Librarian information for a document is accessed from the document's menu options in Print Station.
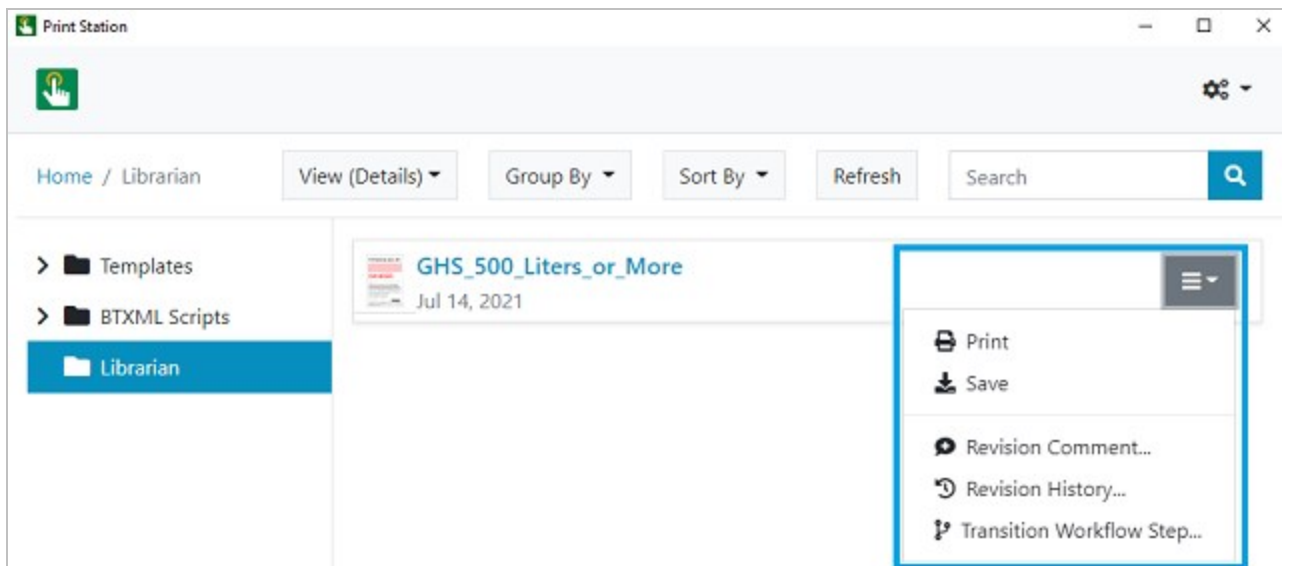
By using the menu options provided, you can add a comment to a selected document revision, view a documents revision history and compare revisions, and transition a document to its next workflow state.

Revision Comment: Opens the **Revision Comment** dialog, which you can use to add a comment to the selected document revision.
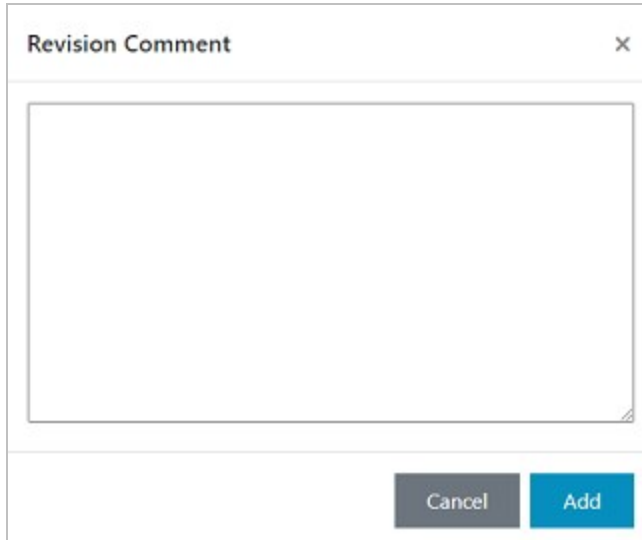
Revision History: Opens the **Revision History** page, which you can use to view and compare different versions of the selected document.
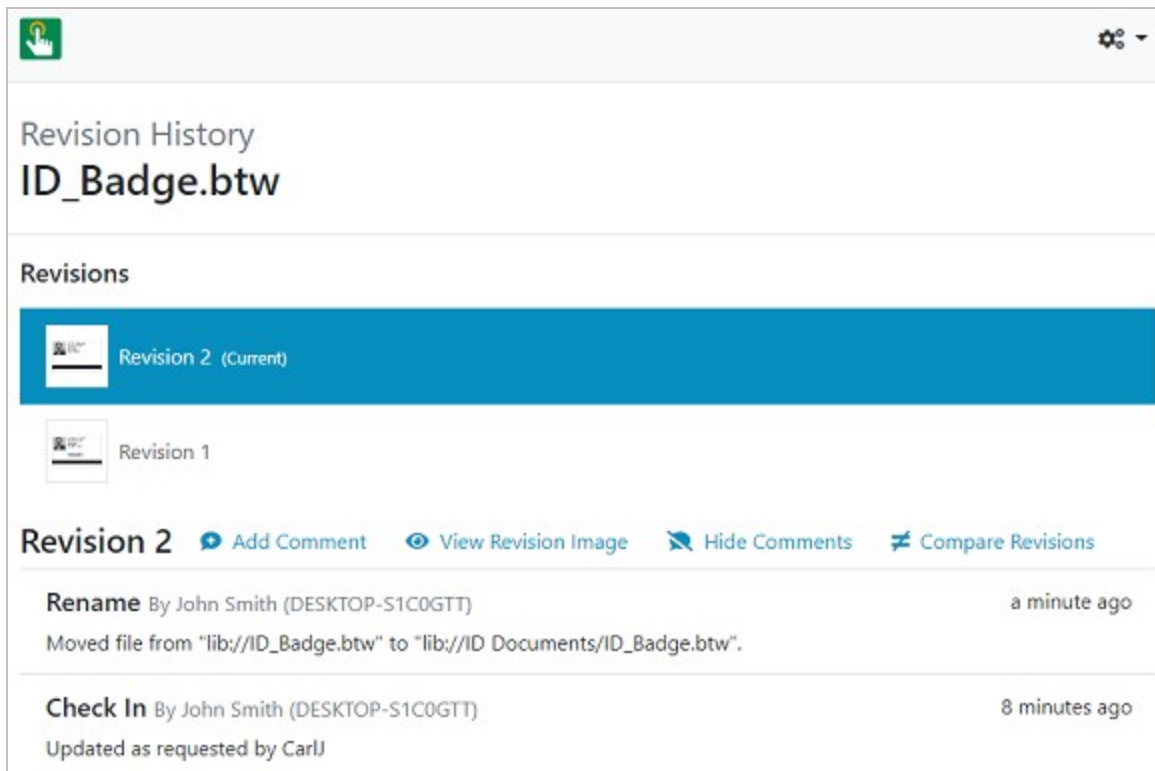
Transition Workflow Step: Opens the **Transition Workflow Step** dialog, which you can use (when you have the correct permissions) to transition the document from one workflow state to the next.
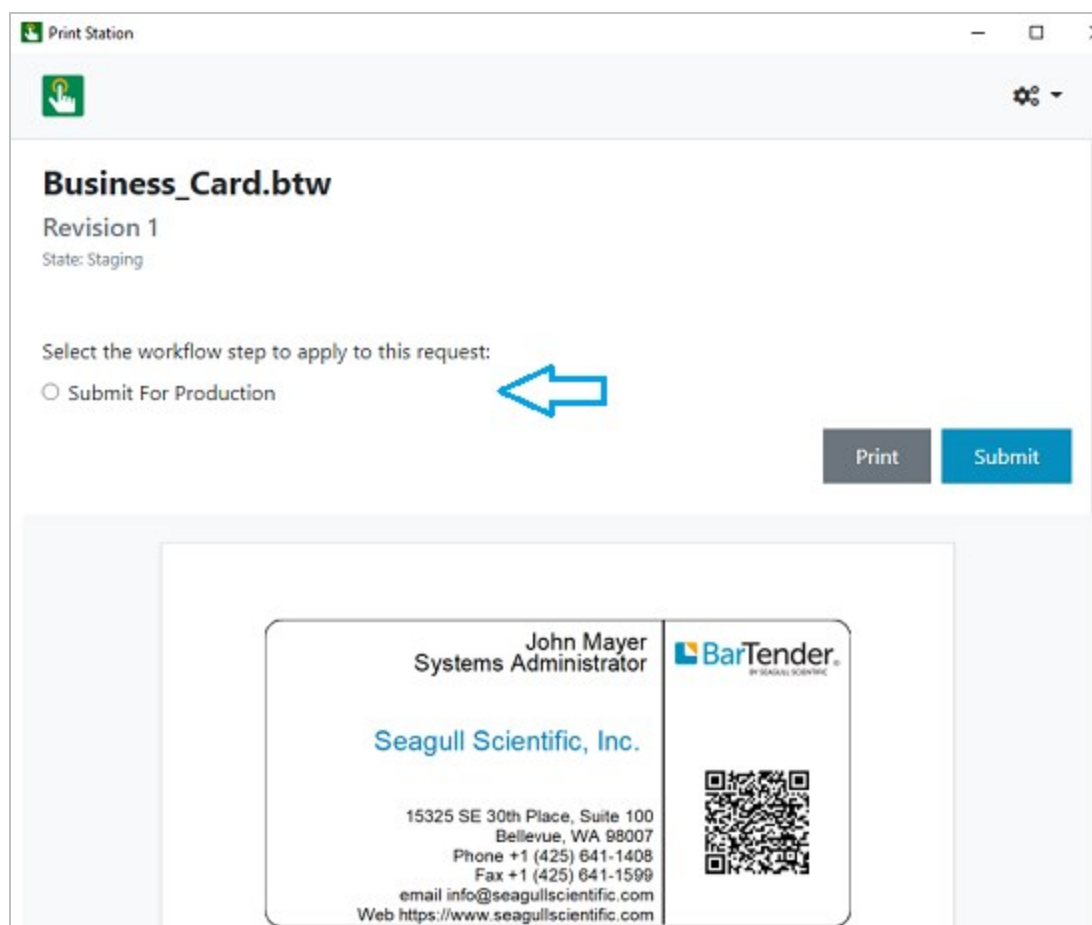
Any changes that are made in Print Station (such as adding a comment or changing a workflow state) are automatically updated in Librarian, and vice versa.

Kiosk Support by Using Microsoft Kiosk Mode for Windows 10

In BarTender 2022, Print Station now supports kiosk mode (in which an application is locked into a dedicated full-screen view) by running Microsoft Kiosk mode for Windows 10.

When you run Microsoft Kiosk mode, the application starts automatically in full-screen view when the kiosk account signs in, and the user is prevented from performing any external operations on the device outside of the kiosk interface.

For more information about Microsoft Kiosk Mode for Windows 10, refer to the following Microsoft web page:

https://docs.microsoft.com/en-us/windows/configuration/kiosk-single-app

Print Portal Improvements

BarTender 2022 introduces several new options and features in Print Portal for both users and administrators to customize the interface and printing experience.

Available in BarTender Professional and Automation Editions

Print Portal is now supported in BarTender Professional and Automation editions for web-enabled printing from any browser on any device.

BarTender Enterprise edition is required for the following Print Portal features:

- Librarian integration
- Print Portal Authentication

New Security Property Page and Settings

Security settings that were previously found on the **Advanced** property page are moved to a new **Security** property page. Those existing settings include the following:

- Authentication options
- Administration password options

The new **Security** property page also has new settings available so that you can turn off the following features:

- **Print quantity:** Specifies that the quantity selection in the **Print** page is locked to the quantity that is specified in the BarTender document.
- **Document search:** Specifies that the search bar is removed from the Print Portal user interface.
- **Print preview:** Specifies that the **Preview** button is removed from the **Print** page.
- **Change view options:** Specifies that the **View**, **Group By**, and **Sort By** filtering options are unavailable on the **Home** page.
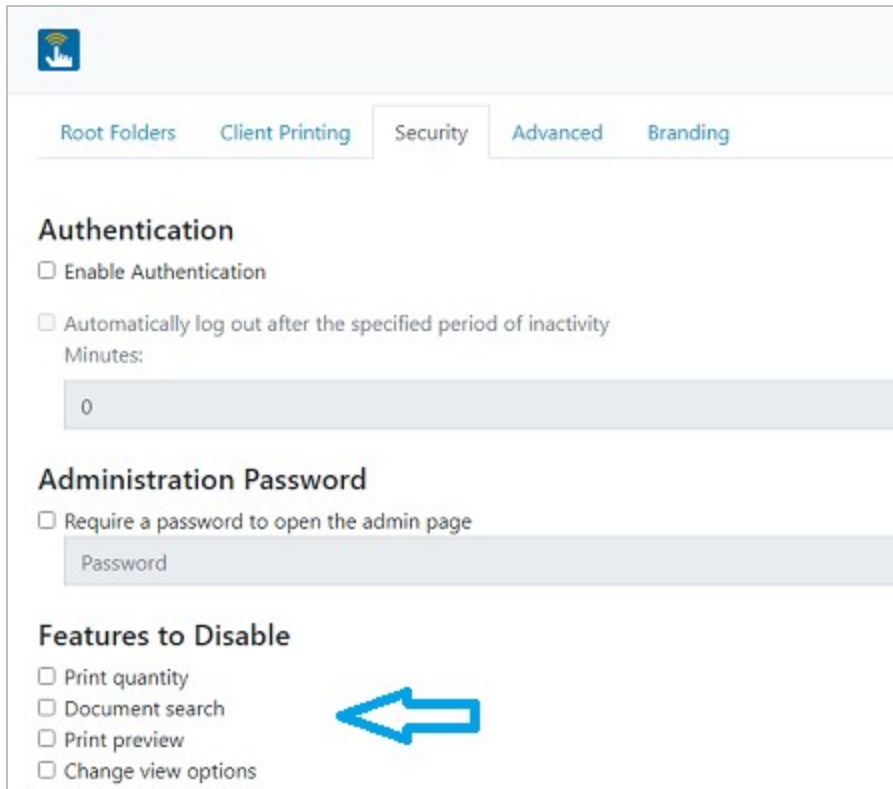
New Options on the Advanced Property Page

New options on the **Advanced** property page let you specify whether you want the Print Portal interface to show folders in the document selection pane and to show the folder navigator. You can also specify the behavior that you want to occur when a user clicks a document in the document selection pane.

- **Show folders in browser**: Specifies that Print Portal displays folders in the document selection pane on the Home page.
- **Show folder navigator**: Specifies that Print Portal displays the left navigation pane on the Home page.
- **When a document is selected**: Specifies how Print Portal behaves when a document is selected.

Root Folder Custom Images

Administrators can make it easier to find the root folders that users need by specifying a custom image to use instead of the default folder icon.

User-specified Folder Colors

Users can use the new Folder Color option to specify custom folder colors in the Print Portal document browser pane to personalize their own experience. As with grouping and sorting options, assigning colors to folders can help users more quickly locate the files that they need.
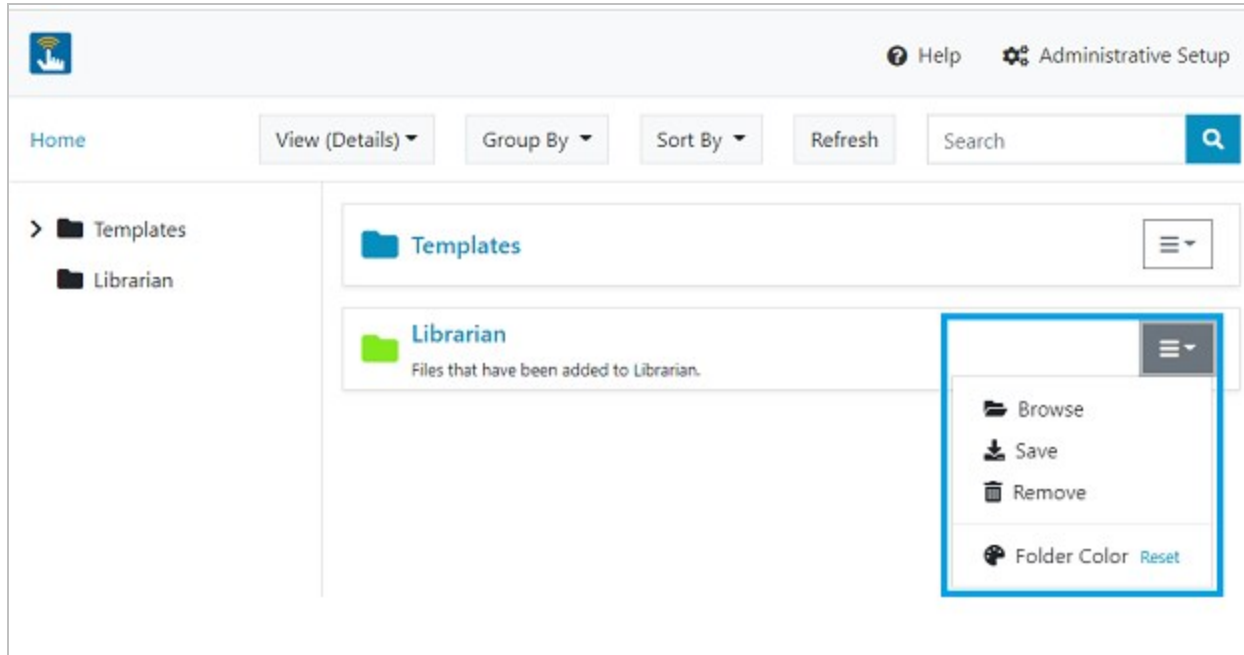
Librarian Workflow Electronic Signature Support

BarTender 2022 introduces support for electronic signatures on Librarian workflow transitions. When a workflow transition is configured to require an electronic signature, users are prompted to enter their user name and password when they cause the transition to move the file to another state in the workflow.

For customers who must meet regulatory requirements, such as those that are required by the United States Food and Drug Administration (FDA), this feature ensures that they can, when the transition occurs, authenticate users and log evidence that users are who they say they are.

You can enable electronic signatures for a workflow transition on the **General** tab of the **Transition** property pane for the transition that you want. To do this, click to select the **Prompt for signature** check box.

Electronic signatures require that the user name and password be entered regardless of whether the user was already granted the appropriate permissions to transition the workflow. To log electronic signature requests to the system database, you must enable message logging on the Administration Console **System Database** page. After you enable electronic signatures for a workflow transition and enable message logging, you can use the **Security: Permissions Checks** view in History Explorer to audit the list of "Workflow Transition" permission checks that are made.

Expanded Database Options

BarTender 2022 introduces support for a new database type and improvements in database connectivity.

SAP HANA Database Connection

In BarTender 2022, BarTender applications now support database connections to SAP HANA 2.0 SPS 03 and later versions.

SAP HANA is an in-memory, column-oriented, relational database management system. Its primary function is to store and retrieve data as requested by an application. BarTender supports both on-premise and cloud SAP HANA connections.

You can connect to your SAP HANA database by using the Database Setup wizard.
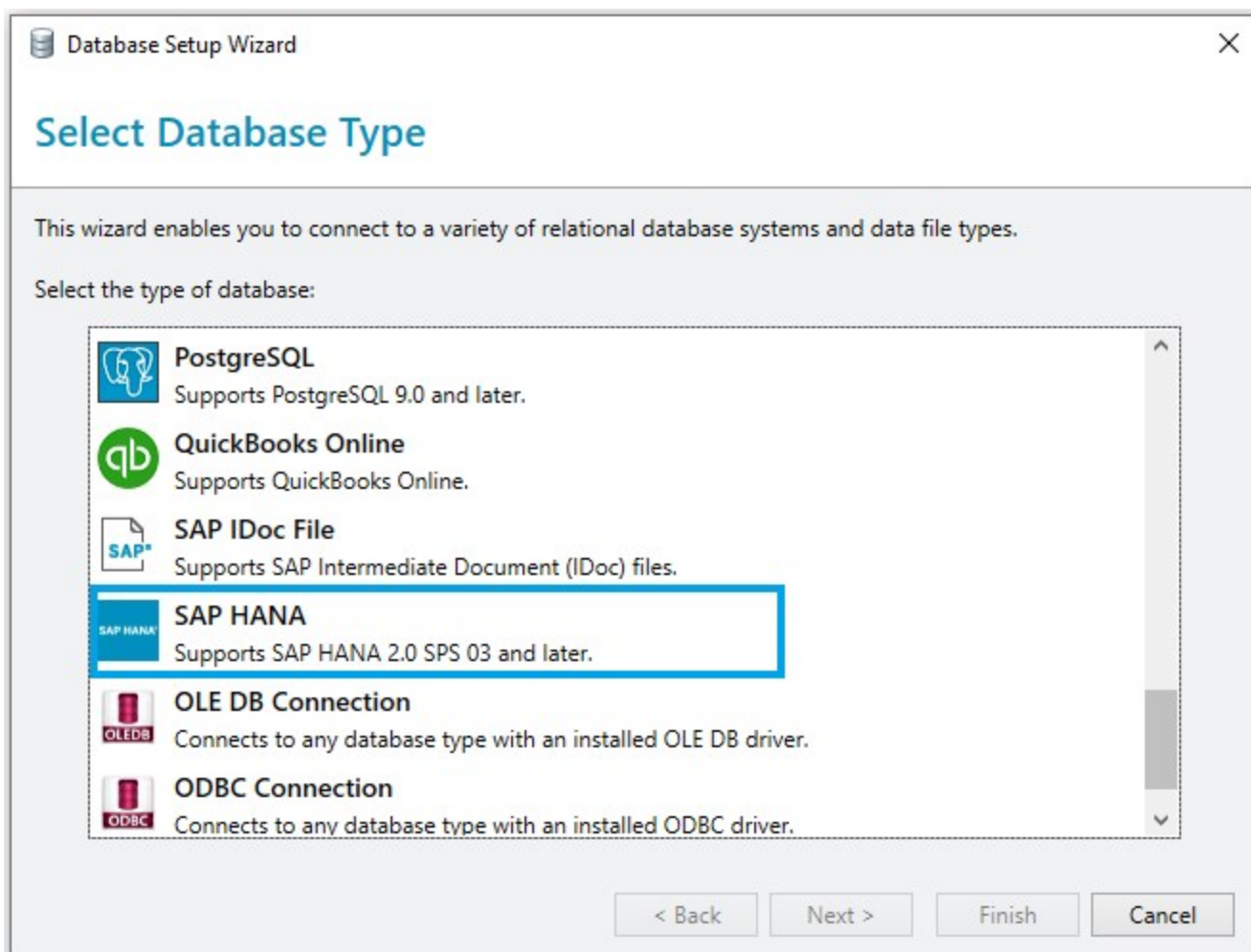
Import or Export Database Connection Configuration Files

With BarTender 2022, you can now use a database connection configuration file to apply a custom configuration to a new or existing database connection. To do this, you export a configuration from

one BarTender document to an XML file that you can then use in another BarTender document.

Exported files contain all the configuration information, including filters, sort order, records-per-item data, and database joins, for all the databases in a single connection. After you export a database connection configuration file, you can use it to create a new database connection for a document when you use the Database Setup wizard for the first time. Or, you can import the file to an existing database connection; when you do this, existing configuration settings are replaced by the settings in the imported file.

You can import and export database connection configurations by using the new toolbar options on the **Database Setup** dialog, as follows:

⬇ Opens the **Save File** dialog so that you can export the database connection configuration to an XML file.

⬆ Opens the **Open File** dialog so that you can import a saved database connection configuration file. When you use this option, existing configuration settings are replaced by the settings in the imported file.
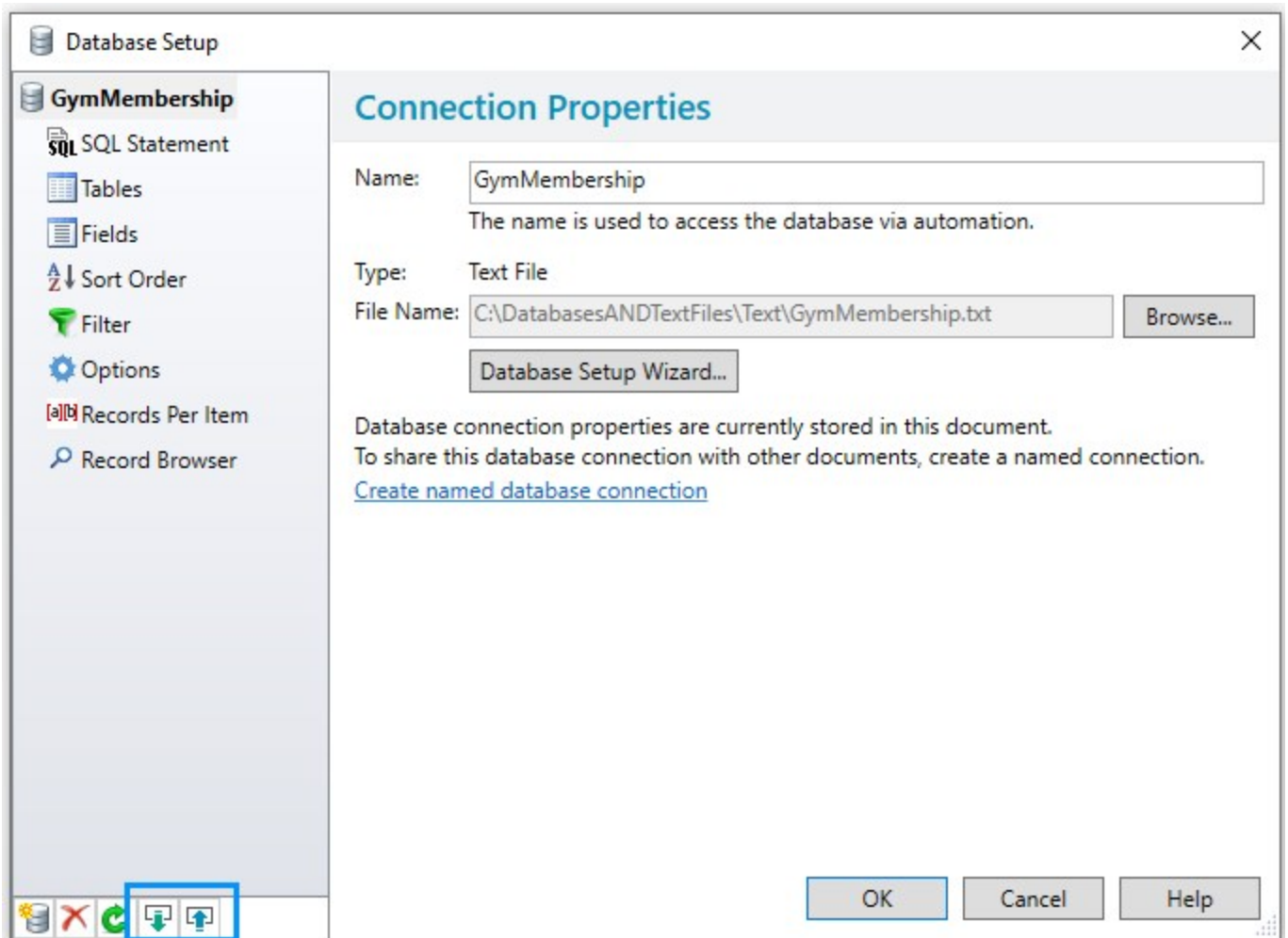
When you want to create a new database connection for a document when you use the Database Setup wizard for the first time, you can select the new **Import From File** option directly from the wizard.
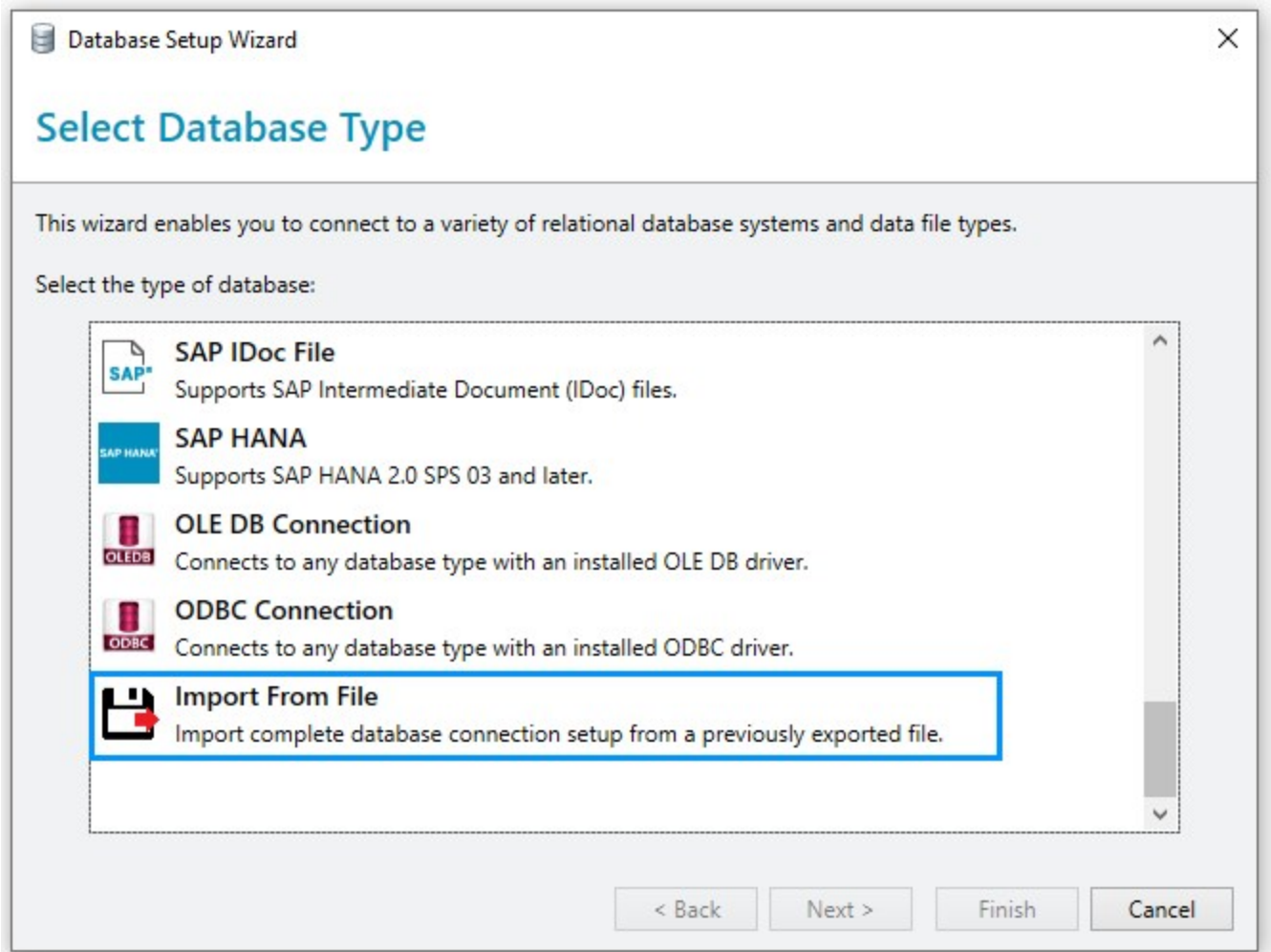
Improved Database Performance

In BarTender 2022, there is improved performance in Database Setup record browsing with a more responsive interface, as well as improved performance in BarTender Designer responsiveness when retrieving database field names.

In addition, the **Database Setup** dialog's **Filter** page and **Record Browser** page are now improved to open and load the database asynchronously, allowing the user to quickly start creating a database filter while the grid view is being loaded.

REST API Improvements

BarTender 2022 continues to build support for automation by using REST APIs.

New BarTender REST API

BarTender 2022 introduces the BarTender REST API for automating your system on a non-Windows platform or across your network. The BarTender REST API provides REST endpoints that you can use to run a variety of actions by using the YAML or JSON file format or an existing legacy BTXML script, and it supports many types of programming languages, including C#, Java, Perl, and Python.

The actions that are available in the BarTender REST API include the same actions that you can run in BarTender Designer, Integration Builder, and Process Builder, but the REST API provides a solution for running these actions programmatically.

To use the BarTender REST API, you must be running the Automation or Enterprise edition of BarTender 2022.

Supported Technologies

The BarTender REST API uses the same BarTender Integration service and Print Scheduler service that are used by Integration Builder and Process Builder. Communication with the server occurs over port 5159.

For sending scripts and receiving responses, the API supports data payloads in JSON, YAML, and BTXML formats. A YAML reference document is included in the BarTender installation.

The API supports the following technologies:

- Cross-Origin Resource Sharing (CORS) so that the REST endpoints can be accessed from websites that originate anywhere
- Several authentication schemes, including Basic Authentication, Integrated Authentication (Microsoft Negotiate), and Windows Challenge/Response (NTLM)
- Secure HTTPS

You can use one of several popular tools, such as Insomnia and Postman, to access the API endpoints to design and test your code.

Accessing API Documentation

BarTender provides complete documentation for the API endpoints together with examples of actions in YAML, JSON, and BTXML formats. You can view this documentation after you install BarTender by using ReDoc, which is included in the BarTender installation file.

ReDoc provides a three-pane responsive layout that includes the following panes:

- A left pane that contains a search bar and navigation menu
- A central pane that contains the documentation
- A right pane that contains request and response examples

To access the BarTender REST API documentation, visit the following web page on a computer that has BarTender 2022 installed:

http://localhost:5159/api/actions/reference/

For a list of the actions that are supported by the BarTender REST API, refer to the **Available BarTender REST API Actions** topic in the BarTender help system that is installed with BarTender 2022. This help topic also provides a link to the *Actions YAML Reference*, which provides the YAML file format for the supported API actions.

HTTPS Support for REST APIs

BarTender 2022 now supports HTTPS for the BarTender REST API and the Print Portal REST API. You can now add your existing or new HTTPS certificate to the server and enable HTTPS.

Integration Builder and Action Improvements

BarTender 2022 continues to improve Integration Builder and the actions that you can add to integration files, process files, and BarTender documents and data entry forms.

New Action: Workflow Transition

BarTender 2022 includes the new Workflow Transition action. This action causes a Librarian file that is assigned to a workflow to transition from one workflow state to another.

Detection of Librarian Workflow State Changes

The following integration type and actions now support Librarian workflow state changes as event detection options:

- File integration (on the **File Detection** property page)
- Read File action
- Wait for File action

When you select Librarian for the **Source** property, the detection options now specifically monitor for workflow state changes for the source file, as follows:

- **File Created**: Specifies that the integration or action monitors for a file to be created. This event can be detected only after the created file has been moved to a published state or after the file is initially created in a published state.
- **File Changed**: Specifies that the integration or action monitors for a file to be changed. This event can be detected only when the changed file is in a published state.
- **Workflow State Changed to**: Specifies that the integration or action monitors for a file's workflow state to be changed to the specified state. This event can be detected only when the specified target state is a published state.

Web Service Integration: Service Communication Improvement

A new **Maximum Connections** setting is available on the Web Service integration's **Service** property page. By using this setting, you can avoid a service crash situation by restricting the maximum number of concurrent web requests that are made by the action. You can increase or decrease the allowable concurrent web requests based on your specific business environment.

Relative Path Support for Integrations and Actions

BarTender 2022 introduces new ways to specify file paths in integrations and actions.
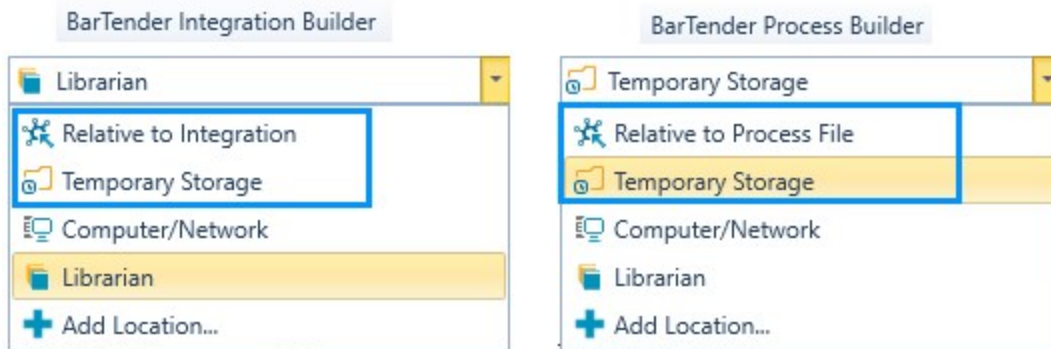

- **Relative to Integration**: You can use **Relative to Integration** to specify file paths that are relative to the folder where the Integration Builder file resides. *Available only in Integration Builder.*

- **Relative to Process File**: You can use **Relative to Process File** to specify file paths that are relative to the folder where the Process Builder file resides. *Available only in Process Builder.*

- **Temporary Storage**: You can use **Temporary Storage** when you want to write to or read from files that are in a temporary storage location. BarTender manages the files in the temporary storage location so that each user has their own isolated space for temporary files. The files in the temporary storage location are removed automatically when they are no longer in use. *Available in Integration Builder, Process Builder, and BarTender Designer.*

By using **Relative to Integration**, you can easily specify a file that is stored along with the Integration Builder file.
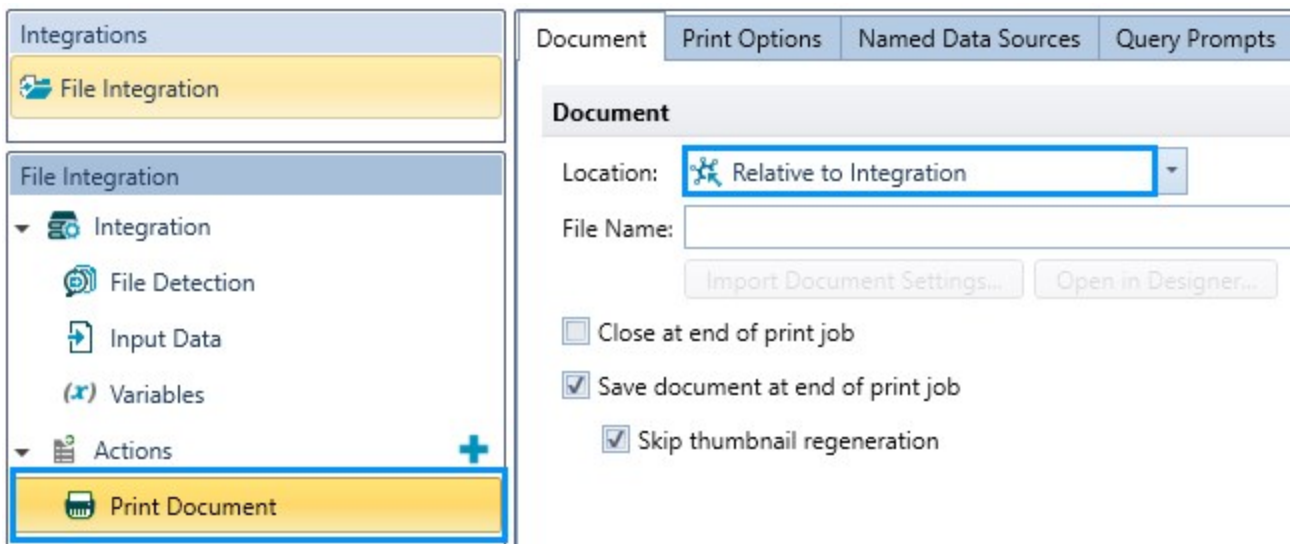
Or, you can specify a folder for integrations or actions to access.
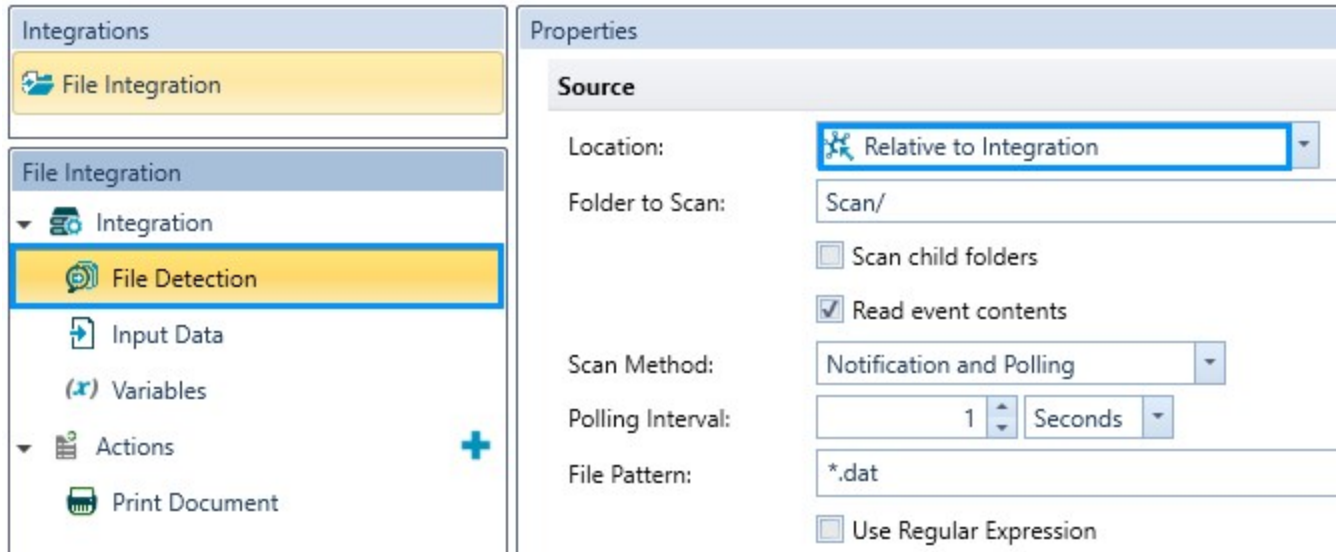
You can also write data to a file in the new **Temporary Storage** location.
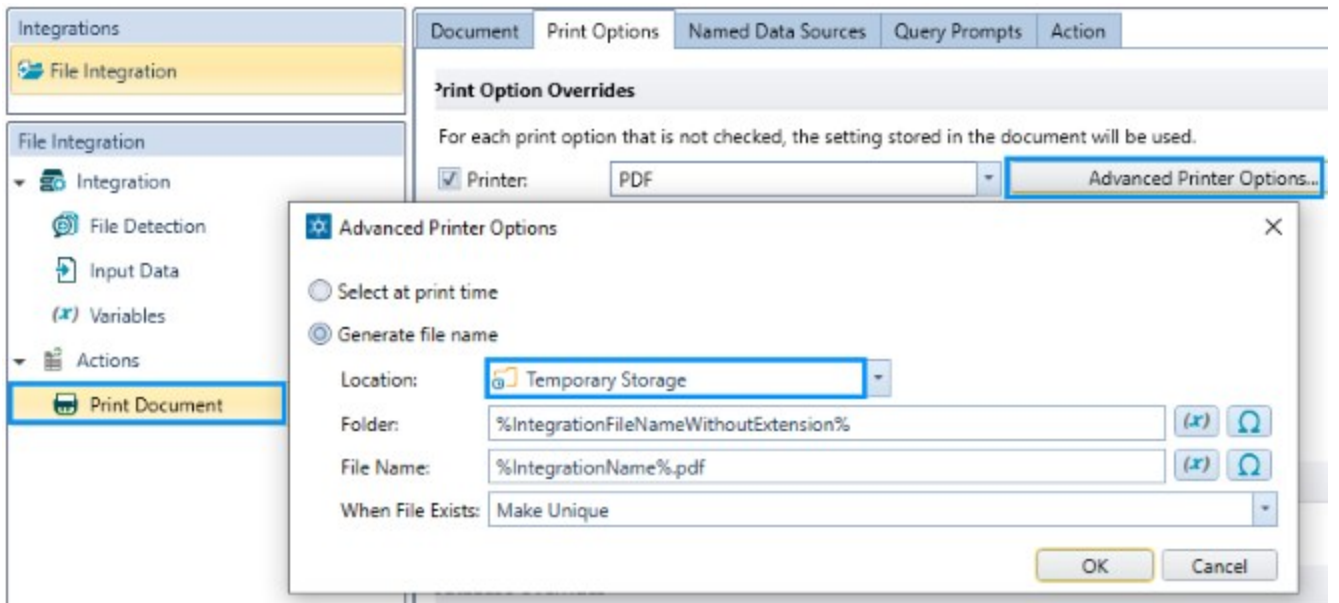
Then, you can use the file in subsequent actions, such as to send the file as an email attachment.
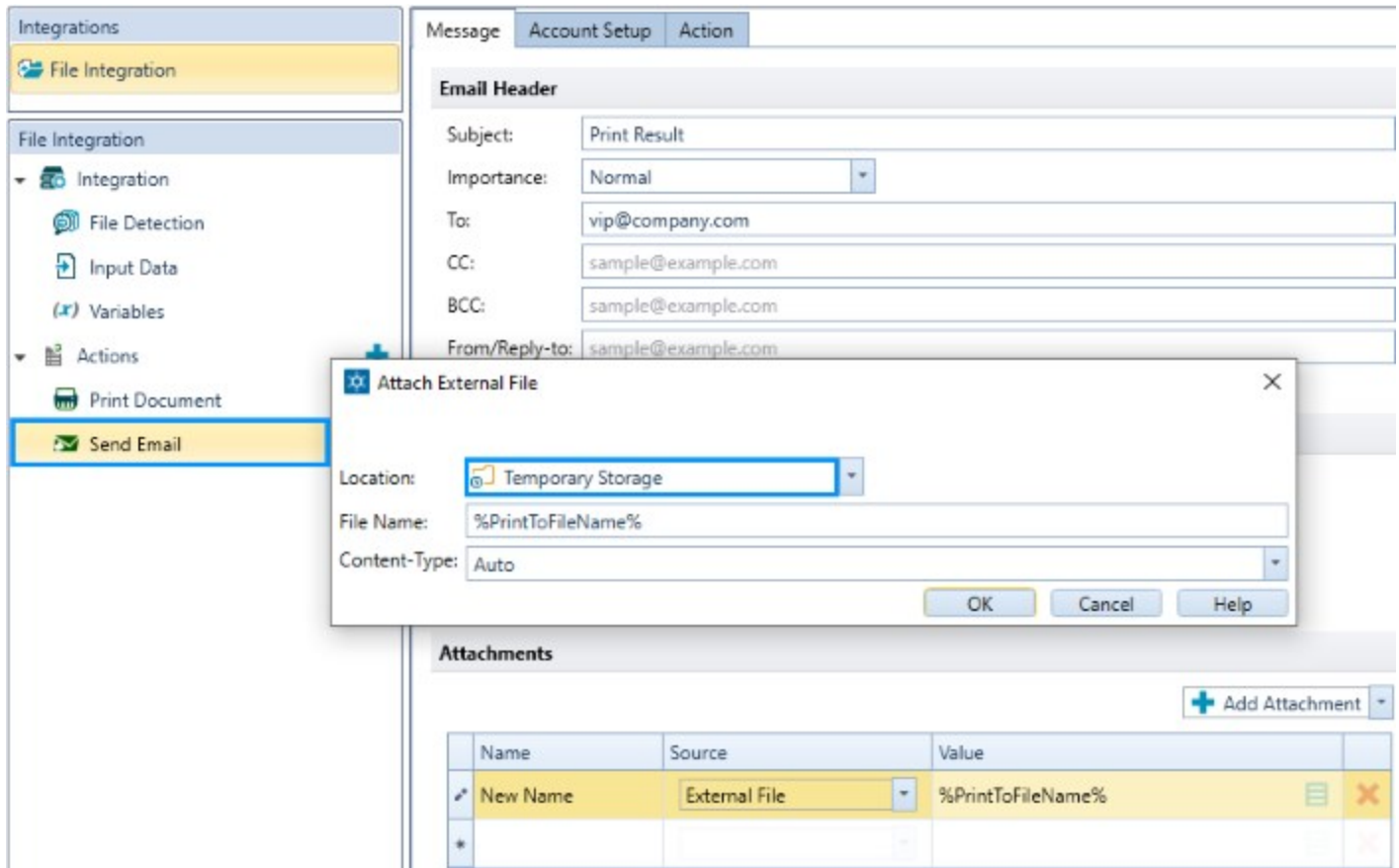
When you specify user credentials for integrations and actions, the **Temporary Storage** location is dedicated to that specific user, which ensures that sensitive data is visible only to limited integrations or actions.

Barcode Updates

BarTender 2022 includes the following updates for barcodes.

Support for GS1 Version 21 and 22 specifications

Updates are made to support the following GS1 Version 21 specification updates:

- An update to the Global Model Number (GMN) to support regulatory requirements for Basic UDI-DI in the context of unique identification (UDI) for medical devices
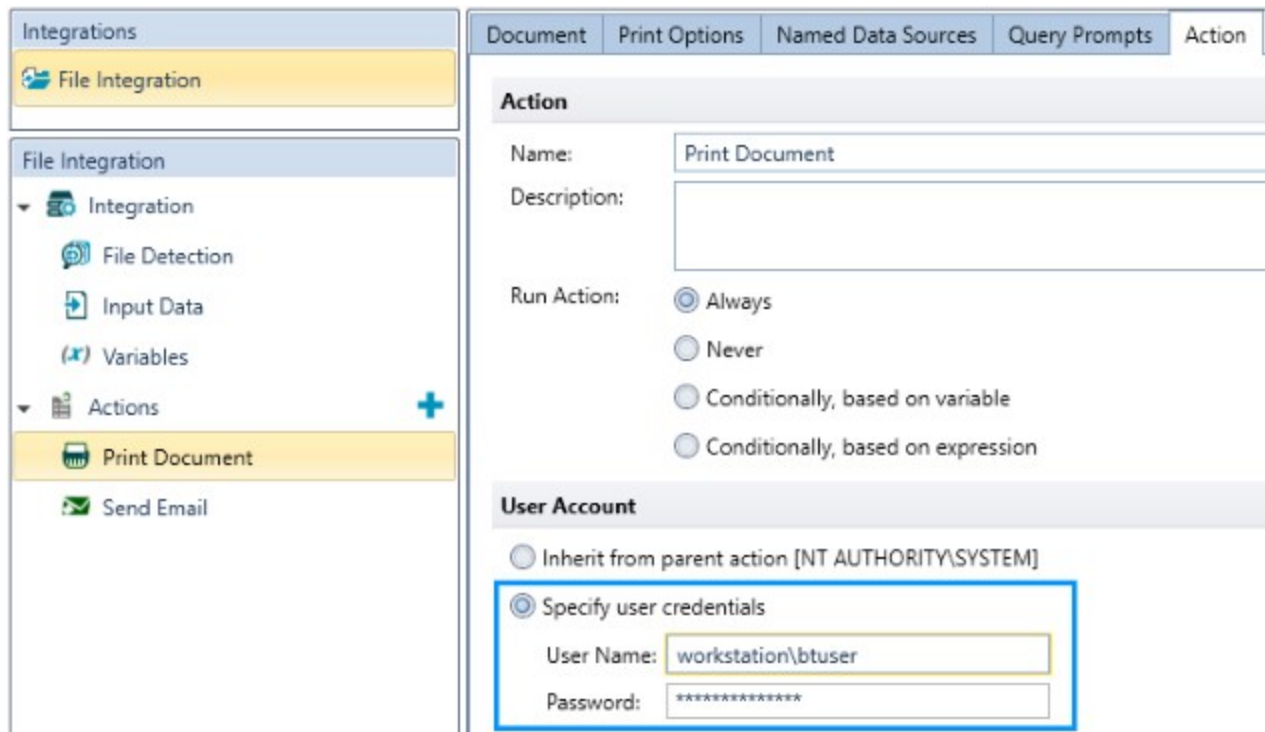- Updates to multiple sections to expand the use of the Global Model Number to all sectors, which requires GS1 General Assembly ratification as it impacts a GS1 identification key

GS1 Application Identifiers (AIs) are updated to the GS1 version 21 and 22 specifications, adding AI 235, AI 395n, AI 417, AI 4300~4326, AI 7040, and AI 715.

RFID Improvements

Minor updates have been made to improve usability with current RFID standards, including the following:

- Added the following new RFID formats:
    - ITIP-110
    - ITIP-212
- Improved the usability of the application family identifier (AFI).
- Removed obsolete formats that were previously marked as deprecated.

Licensing Wizard: Proxy Authentication Support

The BarTender Licensing wizard now includes support for proxy authentication. If your network uses a proxy server and authentication is required, you can now specify those credentials in the licensing wizard. No action is needed on this page of the wizard if your network does not use a proxy server that requires authentication.

Preview of Omron Industrial Automation Label Verification Support

BarTender 2022 introduces preview support for the V275 Series in-line verifier and print quality inspection system by Omron Industrial Automation. When you integrate BarTender with the Omron V275 Series label verification system, you can make sure that your labels are compliant with regulations and quality requirements at the point of label production. A label verifier system provides both quality inspection and barcode verification by scanning the printed label and checking the image for accuracy.

You can configure BarTender to preview this new feature after you install a printer in your network that supports the Omron V275 verifier system.

Preview of Digimarc Barcode Support

BarTender 2022 introduces demonstration support for the Digimarc Barcode technology.

Digimarc offers a proprietary digital watermark technology that is called "Digimarc Barcode." Digimarc Barcode is a method of encoding data (typically, GS1 data) as a watermark in the form of a pattern of tiny dots or squares. This pattern is printed invisibly onto the background of thermal-printed product packaging or labels, so that the data is unobtrusively repeated over the entire surface of the printed item. The pattern is then read by Digimarc-enabled handheld barcode scanners, in-counter scanners, industrial vision systems and mobile devices.

So that you can use the Digimarc technology, BarTender provides a new watermark object. Use this object to place a watermark version of a barcode symbol onto the background of your template. You can also add a corresponding visible barcode symbol that carries the same data as the watermark.
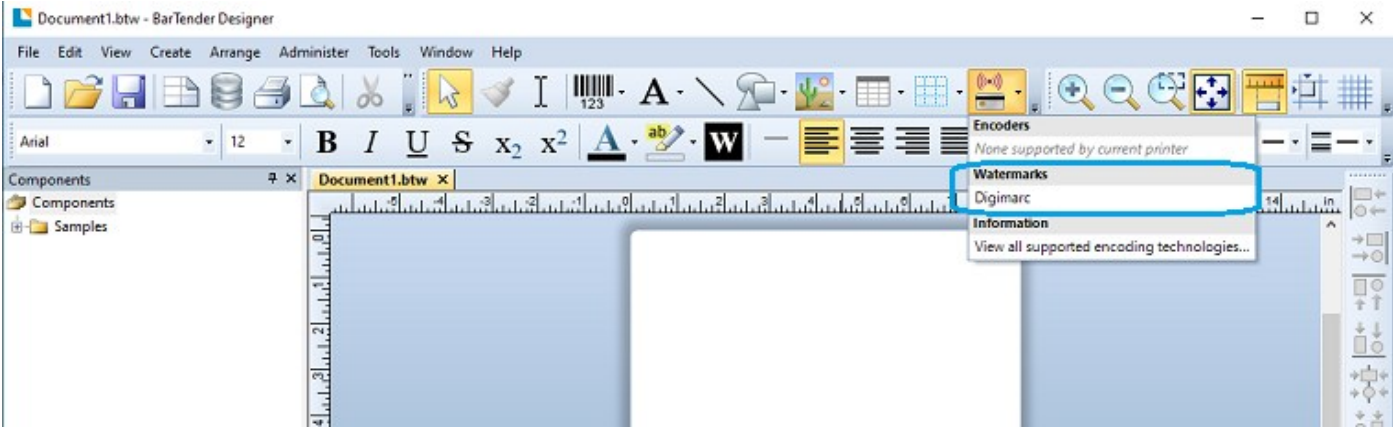
After you add a Digimarc Barcode watermark to the template, the object is displayed in the design area adjacent to the template, and the watermark dots are displayed on the template.
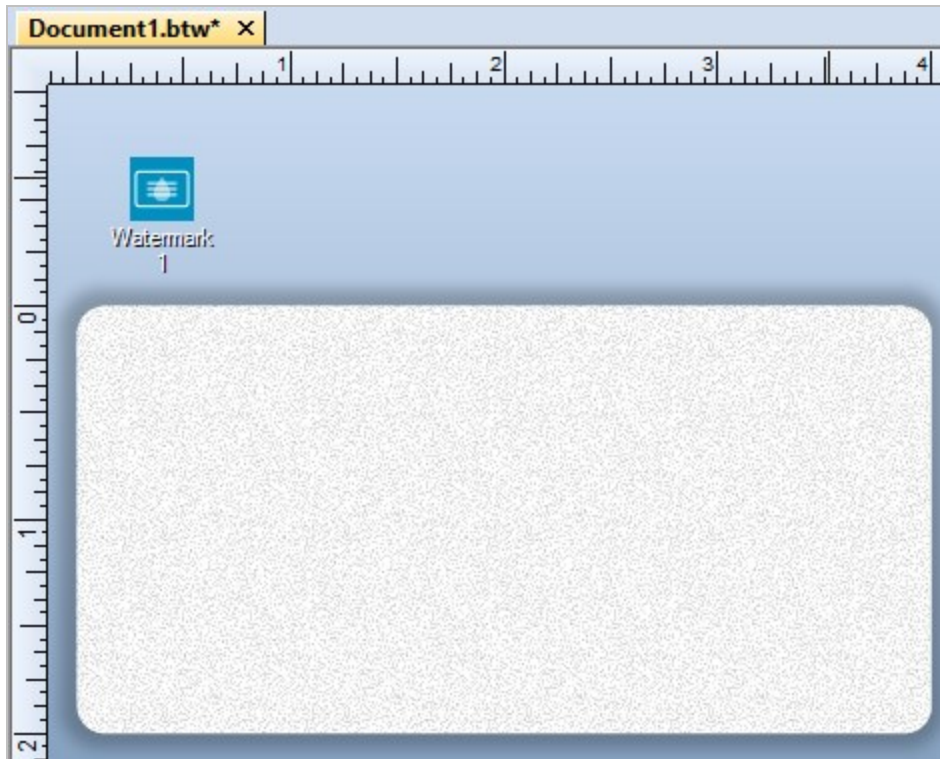
For BarTender 2022, Digimarc Barcode is provided for demonstration purposes only. The following sample Embedded Data data sources are available:

- GTIN-14 (00850026654141)
- Fixed GTN-8 for UPC-E (08541402)

Related Documentation

Technical Documents

- *Administration Console*
- *Print Station*
- *BarTender 2022 Print Portal*
- *BarTender Librarian*
- *Understanding Librarian Workflows*
- *Using GS1 Application Identifiers*

To view and download technical documents, visit:

https://www.seagullscientific.com/resources/white-papers/

Manuals

- *Getting Started with BarTender*
  https://support.seagullscientific.com/hc/en-us/categories/200267887

BarTender Help System

- Administration Console
- Librarian

Other Resources

Please visit the BarTender website at *https://www.seagullscientific.com*.

![BarTender by Seagull Scientific logo]