

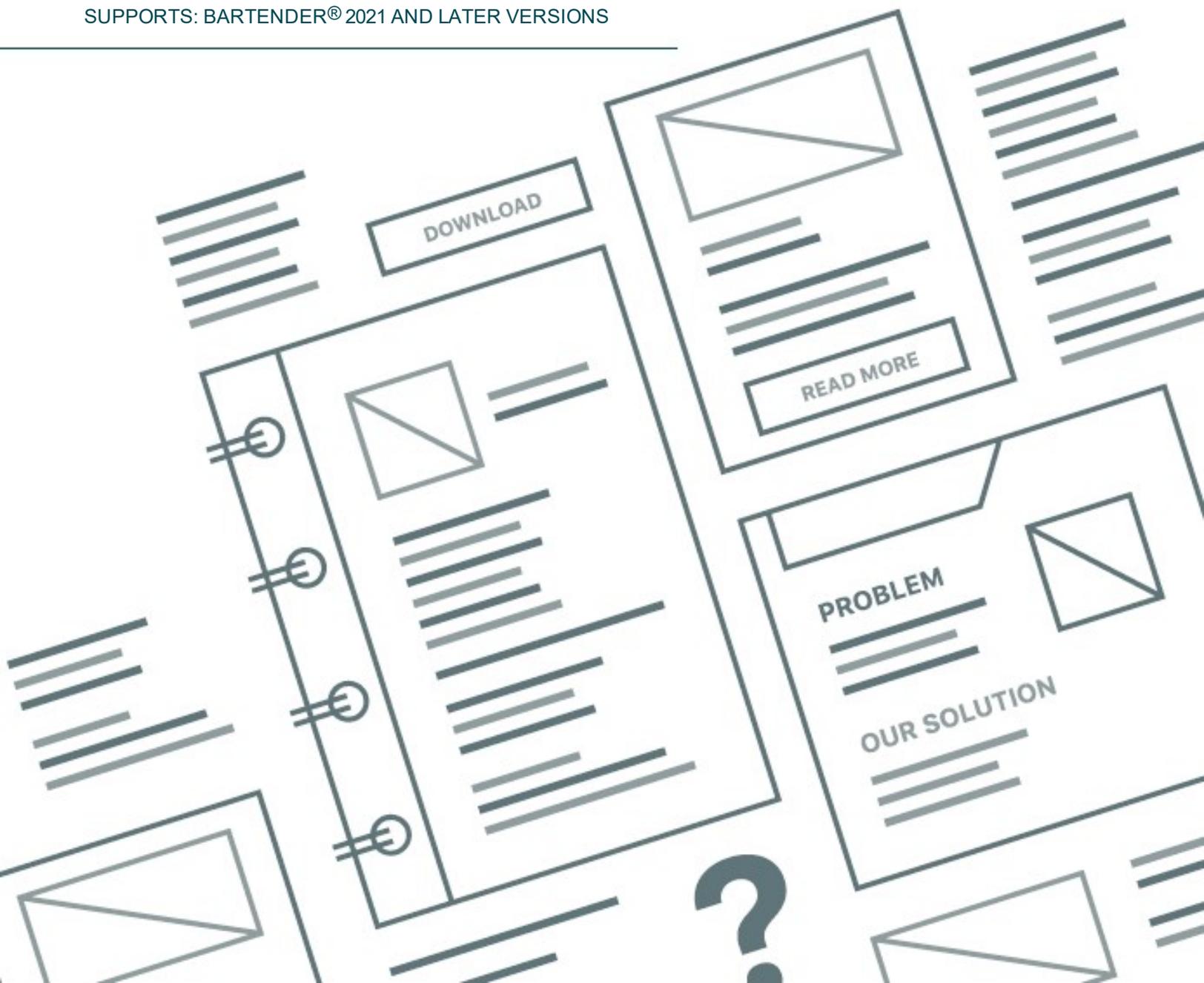
# BarTender Librarian

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INTEGRATING SECURE WORKFLOW AND REVISION  
CONTROL INTO YOUR PRODUCTION ENVIRONMENT

SUPPORTS: BARTENDER<sup>®</sup> 2021 AND LATER VERSIONS

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## Overview

Librarian is a companion application to BarTender that groups of designers, administrators, and other users can use to cooperatively and securely manage how BarTender documents, images, and other types of files are stored and revised. Librarian can help you better manage any printing system, but it is particularly valuable in highly regulated or secure environments, such as the medical, pharmaceutical, military and chemical industries.

Librarian stores files in the BarTender System Database. File check-in and check-out processes prevent users from overwriting each other's changes. Copies of all previous versions of a file are retained so that you not only have a history of who made what changes and when, but you can also retrieve copies of the previous versions and even revert a file to an older version. You can use Librarian together with Administration Console to control which users can access files in Librarian and what those users can do with the files.

In Administration Console, you can create and edit workflows to assign to files that reside in Librarian. By doing this, you can track the progress of your files through the different steps of your publishing process. You can also use workflows to send email notifications to the users and groups who need to be notified of changes in a file's workflow state or who need to review and approve files at certain workflow steps. Librarian displays the workflow that each file is currently assigned to and the workflow step that each file is currently in, and you can use Librarian features to advance files through a workflow. For more information, refer to the *Understanding Librarian Workflows* technical document at the following Seagull Scientific website:

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

Developers can use the Librarian application program interface (API), which uses any .NET language, to check files in and out of Librarian, to revert to specific revisions of a file, and to get file information that is saved to the BarTender System Database.

Librarian is supported by the Enterprise edition of BarTender.

BarTender Librarian

File Edit View Administer Tools Help

lib://Labels

**Folders**

- Waiting for My Approval
- Checked Out To Me
- Library
- Images
- Labels

**Files**

Name	Revision	Size	Workflow	State	Folder	Last Modified
BookLabel.btw	1	112.45 KB	BarTender Documents	Producti...	lib://Labels	8/14/2020 3:35:10 PM
Device.btw	2	124.66 KB	BarTender Documents	Design	lib://Labels	8/14/2020 4:14:32 PM
DeviceRequirements.txt	1	152.00 Bytes	Text Files	Staging	lib://Labels	8/14/2020 3:40:30 PM
Energy.btw	1	631.97 KB	BarTender Documents	Design	lib://Labels	8/14/2020 3:35:10 PM
EnergyRequirements.txt	1	22.00 Bytes	Text Files	Design	lib://Labels	8/14/2020 3:40:30 PM
MasterLabel.btw	1	32.80 KB	BarTender Documents	Design	lib://Labels	8/14/2020 3:35:10 PM
MixedLoad.btw	1	32.98 KB	BarTender Documents	Design	lib://Labels	8/14/2020 3:35:10 PM
Regions.txt	1	56.00 Bytes	Text Files	Design	lib://Labels	8/14/2020 3:40:30 PM
WestRegion1.accdb	1	404.00 KB			lib://Labels	8/14/2020 3:40:30 PM

**File History**

lib://Labels/Energy.btw [View Comments](#)

Time	Action	User	State
Revision: 1			
8/14/2020 4:09:16 PM	Add Comment	DESKTO...	Design
new rule			
8/14/2020 3:35:10 PM	Add	DESKTO...	Design
new files			

**Details**

**Energy.btw**  
Revision: 1

**Document Information:**

Document: lib://Labels/Energy.btw  
 Created: 8/14/2020 3:35:10 PM  
 Created By: hug  
 Last Modified: 8/14/2020 4:09:16 PM  
 Last Modified By: hug

**Workflow Information:**

Assigned To: None  
 Workflow: BarTender Documents  
 State: Design  
 Transitions: Submit For Staging

[Details](#) [Preview](#)

# File Storage and Management

## Library Repository

Librarian securely stores BarTender documents and other types of files in its Library repository, which is a dedicated set of tables within the BarTender System Database. By using this centralized file storage location, you can easily organize and manage multiple files that would otherwise be loose on your hard drive. The process for bringing files into the Library repository and managing them is straightforward and uses traditional Windows file management techniques whenever possible.

### Configuring the BarTender System Database

The first time that you use Librarian, you are prompted to configure the BarTender System Database (if it is not already configured) by following the steps in the System Database Setup wizard. The wizard configures Microsoft SQL Server or Microsoft SQL Server Express for use by the BarTender Suite.

### Implementing a Secure Database

Any person who understands databases can use SQL Server Enterprise Manager (and other database tools) to browse and edit a SQL Server database without installing Librarian. Therefore, when you want the highest possible level of security, your systems administrator must take additional steps to prevent unauthorized users from accessing your SQL Server or SQL Server Express database by using software other than Librarian.

For more information, refer to the *BarTender Security* technical document at the following Seagull Scientific website:

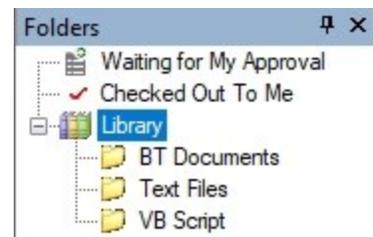
<https://www.seagullscientific.com/resources/white-papers/>

## Viewing Your Files and Folders

Librarian makes it easy to view the files and folder structure that you add to the Library repository and to view a file's revision history.

### Folders Pane

Use the **Folders** pane, which is located on the left side of the Librarian window, to view files that are currently designated in a workflow as needing your approval, view files that are currently checked out to you, and organize the files in the Library directory in any structure that you want. You can add new folders, move them, and rename them just as if they were folders in Windows Explorer. The Library directory provides a basic storage location for all of your Librarian files. This directory can be accessed by applications in the BarTender Suite.



### Files Pane

When you click a folder in the Library directory, the files that are in that folder are displayed in the **Files** pane of the main Librarian window.

The **Files** pane displays a timestamp and file size, just as the standard Windows Explorer file system does, displays how many times a file has been revised and, if the file is assigned to a workflow, displays the name of the workflow and the workflow state each file is currently in.

Files				
Name ▲	Revision	Size	Workflow	State
BookLabel.btw	1	112.45 KB	BarTender Documents	Production
Device.btw	2	124.66 KB	BarTender Documents	Design
DeviceRequirements.txt	1	152.00 B...	Text Files	Staging
Energy.btw	1	631.97 KB	BarTender Documents	Design
EnergyRequirements.txt	1	22.00 By...	Text Files	Design
MasterLabel.btw	1	32.80 KB	BarTender Documents	Design
MixedLoad.btw	1	32.98 KB	BarTender Documents	Design
Regions.txt	1	56.00 By...	Text Files	Design
WestRegion1.acbdb	1	404.00 KB		

## File History Pane

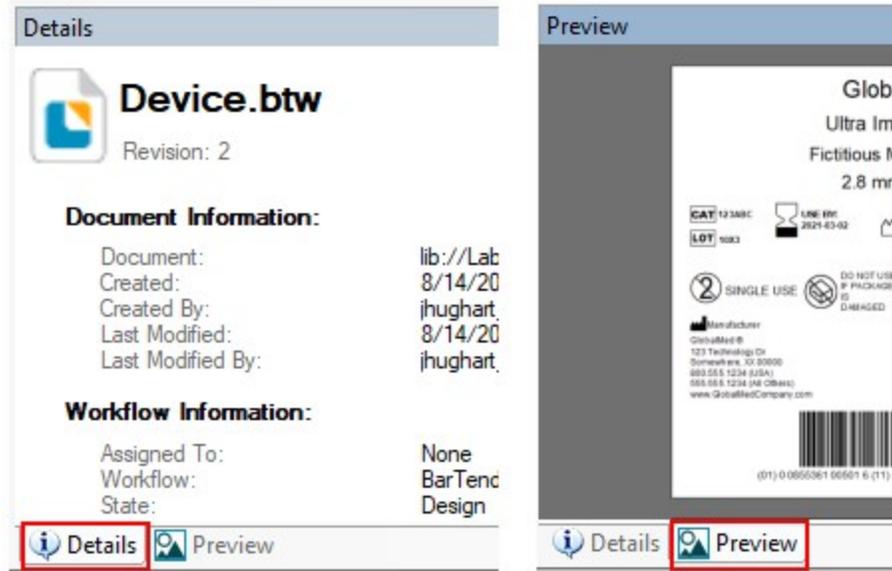
The **File History** pane displays a variety of revision history information that is not available in the Windows Explorer file system. This information includes a summary of the actions that were taken for the file for each revision (such as Add Comment and Check Out), the user who performed those actions, the comments that were logged by the user, and which workflow state the file is in if the file is assigned to a workflow.

File History			
lib://Labels/Device.btw			View Comments
Time ▼	Action	User	State
Revision: 2			
8/14/2020 4:14:32 PM	Check In	DESKTO...	Design
updates made for compliance			
Revision: 1			
8/14/2020 4:11:40 PM	Check Out	DESKTO...	Design
8/14/2020 4:09:16 PM	Add Comment	DESKTO...	Design
assigned to BT Documents workflow			
8/14/2020 3:35:10 PM	Add	DESKTO...	Design
added new files			

## Details and Preview Pane

Use the **Details** and **Preview** pane to switch between a display of information about the file that is currently selected in the **Files** pane and a preview of the selected file revision. When a file is assigned to a workflow, you can also use the **Details** pane to move the file to the next state in the workflow.

To switch between views, click the **Details** or **Preview** tab at the bottom of the pane.

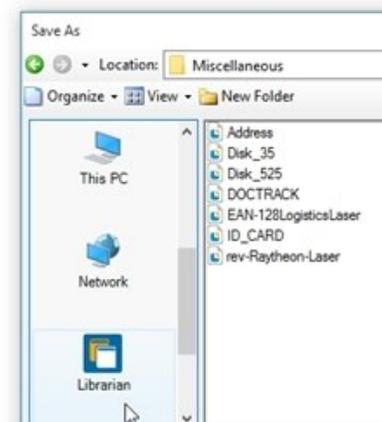


## Managing Your Files

### Adding Files to Librarian

To add files to Librarian, use one of the following methods:

- From Windows Explorer, drag a file into the **Folders** or **Files** pane.
- On the Librarian **File** menu, click **Add**. Alternatively, right-click the **Folders** or **Files** pane, and then click **Add**.
- In BarTender, when you save a document, click the Librarian icon in the **Save As** dialog, and then browse to the Library folder in which you want to save the file.



## Getting the Latest Revision

When you get the latest revision of a file, Librarian copies the last stored copy of the file in the database to a location on your hard drive. Librarian does not check out the file or make it writable on your drive. You can only view the latest changes that were made to the file.

To get the latest revision of a file, select the file in the **Files** pane, click **File**, and then click **Get Latest Revision**. Alternatively, right-click the file in the **Files** pane, and then click **Get Latest Revision**. When you do this, the **Get File(s)** dialog opens, which you can use to browse to and select a folder on your network into which you want to copy the selected file.

## Checking Files In and Out

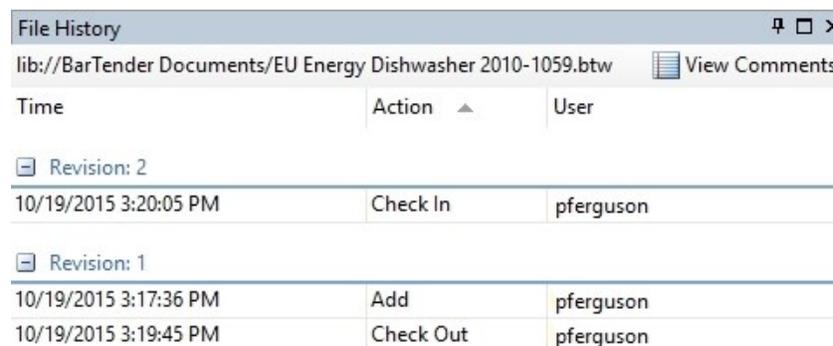
When files are stored loose on a hard drive, users can accidentally (or deliberately) open and edit files that other users are currently working on. This creates confusion and increases the possibility that one user might overwrite another user's changes. Librarian solves this problem with its check-in and check-out functionality. When a user checks out the file, the file is writable only for that user. All other users are prevented from editing the file until the original user checks the file back in to the library.

When a file is checked out, a red check mark (✓) is displayed. When it is checked in, a yellow lock (🔒) is displayed.



Name	Revision	Size	Last Modified
🔒 EU Energy Dishwasher 2010-1059.btw	2	371.97 KB	10/19/2015 3...
✓ EU Energy Electric Condenser Dryer 20...	1	622.88 KB	10/19/2015 3...
🔒 EU Energy Electric Vented Dryer 2012-0...	1	606.49 KB	10/19/2015 3...

You can see who has a file checked out by using the file's **Properties** dialog or by viewing the **User** column in the **File History** pane. When users check out a file, their name appears next to the **Check Out** action.



Time	Action	User
Revision: 2		
10/19/2015 3:20:05 PM	Check In	pferguson
Revision: 1		
10/19/2015 3:17:36 PM	Add	pferguson
10/19/2015 3:19:45 PM	Check Out	pferguson

If you accidentally check out a file and want to check it back in without saving any changes, select the file, and then click **Undo Check Out** on the **File** menu. Alternatively, right-click the file, and then click **Undo Check Out**. Any changes that you made are discarded, and the file reverts to the state that it was in before you checked it out.

## Deleting, Restoring, and Purging Files or Folders

To delete a file or folder from Librarian means to remove it from the Library folder and the Librarian user interface. When you delete a file, it cannot be modified, checked out, or checked in, and when you delete a folder, all of the subfolders and files that it contains are also deleted. However, the deleted file or folder (and its contents) does remain in the BarTender System Database and can later be restored.

After you delete an item, you can purge it, which removes it from the BarTender System Database altogether. When you purge a deleted file or folder, you remove all history of the deleted item. This operation cannot be reversed. Purged items cannot be restored.

To delete an item from the Library, select the item, and then click **Delete** on the **File** menu. Alternatively, right-click the item, and then click **Delete**. You can also select the item and then press **Delete** on your keyboard.

To see deleted items, click **Show Deleted Items** on the **View** menu. When you do this, all previously deleted folders and files are shown with faded file type icons.



Name	Revision	Size	Last Modified
 EU Energy Fridg 7 2010-1060.btw	1	356.04 KB	10/19/2015 3...
 EU Energy Gas Dryer 2012-0392.btw	1	603.15 KB	10/19/2015 3...
 EU Energy Television & 2010-1062-201	1	359.15 KB	10/19/2015 3...

To restore a previously deleted item, select the item that you want, and then click **Undelete** on the **File** menu. Alternatively, right-click the item, and then click **Undelete**. After you do this, the file or folder is restored to the Library, and you can continue to manage it as before.

## Workflows in Librarian

A *workflow* is a series of steps that define the life cycle of a BarTender document or other file. For a file that is stored in Librarian, a workflow is a series of states and transitions between the states that the file progresses through. These workflows can help you automate your business processes, such as reviewing template designs or approving documents for production, and track the status of your files from start to finish.

In BarTender 2021, workflow design functionality is moved from Librarian to Administration Console. When you click **Workflow & Rules Setup** on the **Administer** menu in Librarian, Administration Console opens to the **Librarian Setup** page, where you can create and manage your workflows.

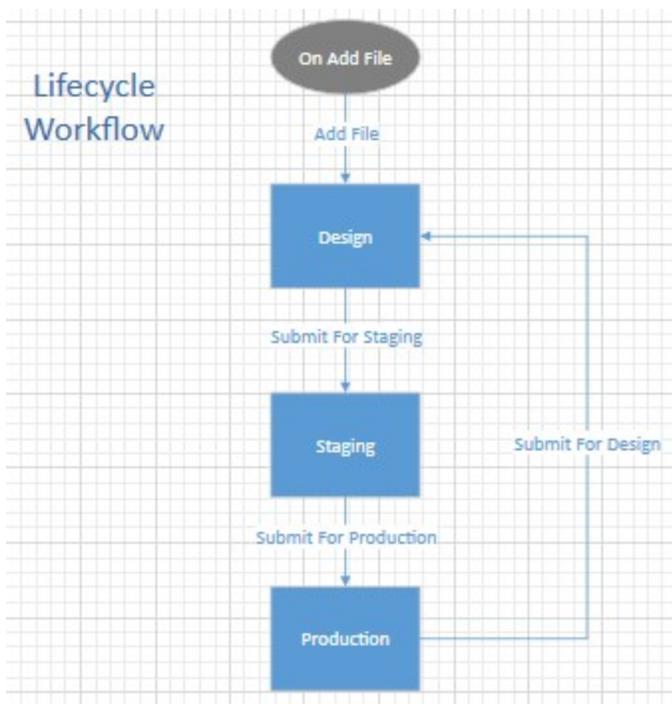


When you upgrade to BarTender 2021 or a later version from a previous version of BarTender, any existing workflows that were created in the previous version are retained. Use the **Librarian Setup** page in Administration Console to access and modify these workflows.

### Creating and Configuring Workflows

Beginning in BarTender 2021, you use Administration Console to configure workflows (by using the Workflow Designer) and to apply them to the files that you want (by creating workflow rules). You can then use Librarian features to send files through the workflow progression.

Workflows consist of states that you create and customize (for example, Design, Staging, and Production) and transitions between these states that you create and customize (for example, Submit For Staging and Submit For Production), as illustrated in the following image, which shows the Workflow Designer design canvas.



For each state and transition, you can specify the users or groups that you want to have access to the file for viewing, editing, and moving to the next stage. For example, you might want to limit access to files that are in a Design state to only members of your design team and specify further that only certain members of that team have permissions to send a file from Design to Staging.

You can also configure email notification messages to be sent to specific recipients when you want a file to be reviewed and approved by others at various stages in its workflow life cycle. For example, you might want an email notification to be sent to the lead designer who is responsible for the decision to approve the file and then use the Submit For Staging transition to move it to the Staging state.

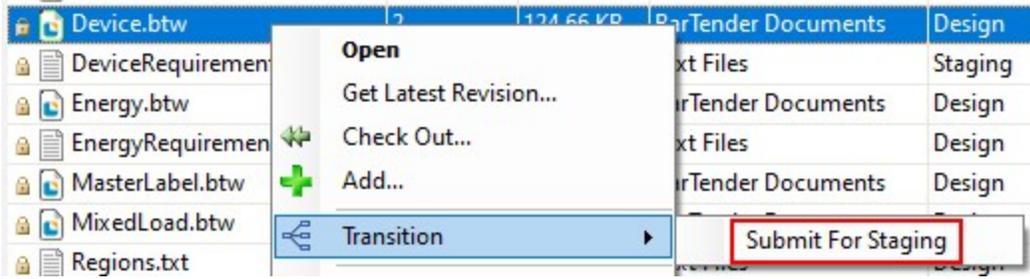
For more information, refer to the *Understanding Librarian Workflows* technical document at the following Seagull Scientific website:

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

### **Using Workflows in Librarian**

When files are assigned to a workflow, the name of the workflow and the workflow state that the file is currently in are displayed in the **Files**, **File History**, and **Details** panes. When you have permissions to access the files at one or more stages in the workflow, you can move a file from its current workflow state to the next state. To do this, use one of the following methods:

- In the **Files** or **File History** pane, right-click the file, point to **Transition**, and then click the transition step that you want.



- In the **Details** pane, click the transition step that you want in the **Workflow Information** area.

**Workflow Information:**

Assigned To: None  
Workflow: BarTender Documents  
State: Design  
Transitions: Submit For Staging

## Librarian API

By using the Librarian API, you can develop custom applications, in any .NET language, that use the primary functions of Librarian to embed revision control and workflow settings in your environment. You can use the Librarian API to check files in and out of Librarian, revert to specific revisions of a file, and get file information that is saved to the BarTender System Database.

### Beginning a Visual Studio Project



We recommend that your development environment use Microsoft Visual Studio 2019 and Microsoft .NET Framework version 4.7 or later versions.

To begin a project in Visual Studio, follow these steps:

1. On the **File** menu, click **New**, and then click **Project**.
2. In the **Project Types** panel, under either the **Visual C#** or the **Visual Basic** node, click **Windows**.
3. In the **Templates** pane, click **Windows Application**.
4. Name the project, and then click **OK**.
5. After you create the project, add a reference to `Seagull.BarTender.Print`.
6. In the **Solution Explorer** pane, right-click the **References** node, and then click **Add Reference**.
7. In the **Add Reference** window, click the **.NET** tab, select **Seagull.BarTender.Print**, and then click **OK**.
8. Verify that the project can build and compile by pressing `Ctrl+Shift+B` on your keyboard. If this operation is successful, you are ready to begin your project.

### Using the Librarian API

#### Adding Files

When you add a file to Librarian, users on the network can access the file from the BarTender System Database. Subsequent changes to the file are also recorded to the system database, which means that users can revert to or track previous changes.

You add a BarTender file to the Library repository by calling the Library class **AddFile** method. The following sample C# code shows how to add a file to Librarian.

```
Library library = new Library();
LibrarianFile file = library.AddFile("lib://Formats/Address.btw",
@"C:\Users\Administrator\Documents\Address.btw", "Added Address.btw to the
library.");
```

The first parameter that is passed in the **AddFile** method is the file name and the path of the folder where you want to save your document. The second parameter specifies the path and file

name of the file to add, and the third parameter is the comment that describes the addition of the file into the Library.

The Library class provides an overload for the **AddFile** method to specify additional advanced options for adding a file.

### Checking In Files

You can check a file in to the Library repository by using the LibrarianFile **CheckIn** method, which retrieves a file from a specified location on your computer and saves it to a folder in the Library.

Several overloads exist for the **CheckIn** method. The simplest overload requires the path and file name of the file on your computer and a comment that describes the changes that were made to the file. The following sample C# code shows how to check in a file to the **Formats** directory of the Library.

```
Library library = new Library();
LibrarianFile file = library.GetFile("lib://Formats/Address.btw");
int revisionNumber = file.CheckIn
(@"C:\Users\Administrator\Documents\Address.btw", "Modified the label design.");
```

The first parameter in the **CheckIn** method specifies where to retrieve the file on your computer. The second parameter specifies a comment that describes the changes that were made to the file while it was checked out. Additional parameters can specify advanced check-in options.

### Checking Out Files

You can check out a file from the Library repository by using the LibrarianFile **CheckOut** method, which saves the file to a specified location on your computer and makes the file available for editing.

Several overloads exist for the **CheckOut** method. The simplest overload requires only the path and file name of the location where you want to save the file. The following sample C# code shows how to check out a file from the Library.

```
Library library = new Library();
LibrarianFile file = library.GetFile("lib://Formats/Address.btw");
file.CheckOut(@"C:\Users\Administrator\AppData\Local\Temp\Address.btw");
```

The first parameter in the **CheckOut** method specifies where to save the file. Additional parameters can specify advanced check-out options.

### Displaying Folder Contents

In Librarian, files and folders are stored in folders that consist of a single root directory and its subdirectories. The root directory is the Library folder. This directory can contain subdirectories that you create, such as "Templates" or "Images." Each subdirectory can contain any number of subdirectories.

You can list the contents of a directory in Librarian by using the LibrarianFile Name and/or Path properties together with an iteration statement, such as a For loop. The following sample C# code shows how to display a list of files in a directory that is stored in Librarian.

```

Library library = new Library();
LibrarianFolder folder = library.GetFolder("lib://Templates");

// Iterate through the subfolders
StringBuilder listingBuilder = new StringBuilder();
foreach (LibrarianFolder subfolder in folder.Folders)
    listingBuilder.AppendFormat("Folder\t{0}\t{1}\tChildren: {2}\n",
        subfolder.Name, subfolder.Path, subfolder.Children.Count);

// Iterate through the files in the directory
for each (LibrarianFile file in folder.Files)
    listingBuilder.AppendFormat("File\t{0}\t{1}\tRevision: {2}\n", file.Name,
        file.Path, file.RevisionNumber);

// Display the contents of the folder
System.Windows.Forms.MessageBox.Show(listingBuilder.ToString(), string.Format
("Folder Contents ({0})", folder.Path));

```

In this example, a list of subdirectories and files is saved to a list of strings that is called `listingBuilder`. After the list is populated with the contents of a directory, the name, path, and/or revision number of each subdirectory or file is displayed in a message box.

For more information, refer to the **Librarian API** section in the *Automation with the BarTender .NET SDK* book of the BarTender help system.

## Security

To implement a secure printing system, you must make sure that the user permissions that are specified in Administration Console allow only authorized users to access Librarian, the Workflow Designer, and the files that are saved in Librarian folders.



Prior to BarTender 2021, permissions that allowed users to assign or change a file's workflow state were also specified on the **User Permissions** property page in Administration Console. Beginning in BarTender 2021, file state and transition permissions are set by using the Workflow Designer. For more information, refer to the [Workflows in Librarian](#) chapter of this technical document.

### Librarian Permissions in Administration Console

In Administration Console, you can set permissions for the actions that are associated with Librarian in the **Librarian** section of the **User Permissions** list. For each action, you can specify either **Allow** or **Deny** for the user or group that is currently selected in the **Users and Groups** pane.

The screenshot shows the BarTender Administration Console interface. The left sidebar contains a navigation menu with the following items: Printer Setup, File Locations, Database Connections (expanded), SAP IDoc Definitions, Data Providers, Integrations (expanded), Deployment, Servers, Message History, Cloud Storage, Security (expanded), and User Permissions (selected). The main content area is titled "Security > User Permissions". It is divided into two panes: "Users and Groups" and "Permissions for John Smith".

**Users and Groups:**

- Administrators (Local Ad
- John Smith (DESKTOP-S**
- Users (Local Users)

**Permissions for John Smith:**

Action	Allow	Deny
<b>Librarian</b>		
Run	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Administer	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Edit Existing Comments	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Edit Files	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Full File Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Open Published Files	<input checked="" type="checkbox"/>	<input type="checkbox"/>

For Librarian, you can configure the following permissions in the **Librarian** permissions list:

- **Run:** Allows users to run Librarian. Users who have only the **Run** permission can view files and file history information.
- **Administer:** Allows users to use the Librarian **Administer** menu to access the **System Setup** dialog and the Workflow Designer and to purge deleted Librarian files.



This permission should be granted only to users who require the highest level of administrative control for Librarian and the Workflow Designer.

- **Edit Existing Comments:** Allows users to edit comments that were logged when someone checked a file in, renamed a file, or performed some other action on it.
- **Edit Files:** Allows users to perform the following actions:
  - Add comments to a file
  - Add files to the library
  - Check in files
  - Check out files
  - Revert files to previous revisions
  - Open files that are stored in the Library repository
- **Full File Control:** Allows users to perform all the **Edit Files** actions and also move, rename, delete, and restore files in the Library repository.
- **Open Published Files:** Allows users to open files that are in a published state.

### Workflow and Rules Permissions in Administration Console

In Administration Console, you set permissions for the actions that are associated with the Workflow Designer in the **Librarian: Workflow and Rules** section of the **User Permissions** list. For each action, you can specify either **Allow** or **Deny** for the user or group that is currently selected in the **Users and Groups** pane.

The screenshot shows the BarTender Administration Console interface. The left sidebar contains a navigation menu with categories like Printer Setup, Database Connections, Integrations, and Security. The 'Security' category is expanded, and 'User Permissions' is selected. The main content area is titled 'Security > User Permissions'. It features a 'Users and Groups' pane on the left with a list of users, including 'John Smith (DESKTOP-S...)' which is highlighted. To the right, the 'Permissions for John Smith:' section contains a table with columns for 'Action', 'Allow', and 'Deny'. The table lists permissions for 'Librarian: Workflow and Rules' and 'Print Station'.

Action	Allow	Deny
<b>Librarian: Workflow and Rules</b>		
Add workflows	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Add, edit, and delete rules	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Modify workflows	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remove workflows	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Print Station</b>		
Run	<input checked="" type="checkbox"/>	<input type="checkbox"/>

For the Workflow Designer, you can configure the following permissions in the **Librarian: Workflow and Rules** permissions list:

- **Add workflows:** Allows users to create new workflows.
- **Add, edit, and delete rules:** Allows users to add, edit, and delete workflow rules.
- **Modify workflows:** Allows users to edit existing workflows.
- **Remove workflows:** Allows users to delete existing workflows.

### **BarTender Permissions in Administration Console that Apply to Librarian**

The BarTender permissions section of Administration Console includes the following permissions that apply to Librarian:

- **Print Published Documents:** Allows BarTender users to print the latest published revision of a document that is stored in Librarian. When you authorize a user to print documents, you also grant permission to print published documents.



Because a file can be assigned to a workflow only if it is kept in Librarian, files that are stored loose on a hard drive rather than in Librarian can never be assigned a published workflow state. Therefore, when you deny BarTender users the **Print Published Documents** permission, you prevent them from even opening documents from their individual hard drives. This can prevent users from loading, creating, and printing unauthorized documents.

- **Print Unpublished Documents:** Allows BarTender users to print unpublished documents that are stored in Librarian and all documents that are stored loose on a computer or the network. The **Print Unpublished Documents** permission includes permission to **Print Published Documents**.



Users who are denied this permission can only open documents that are both stored in Librarian and in a published state.

For more information about the **Published** property, refer to the [Workflows in Librarian](#) section of this technical document.

### **Organizing Users and Groups According to Their Functional Roles**

When you plan the Librarian file states and Administration Console permissions that your file management system will use, we recommend that you sort users into their functional roles and then configure their permissions accordingly. For example, you might sort users into File Designers, File

Editors, Print Operators, and Publishers groups and then grant different types of permissions to each group.

When your organization has multiple users who perform similar functional roles, it is easier to organize them into domain user groups so that you can manage all of the group's permissions at one time instead of separately defining permission settings for each individual user.

## **Advanced Security**

More advanced techniques that you can use to create and implement a secure file publishing workflow within Librarian include the following.

### **Electronic Signatures**

To improve the security in your publishing system, you can use the Administration Console **Electronic Signatures** page to specify that users must enter an electronic signature (user credentials) to perform actions that are listed in the **Librarian** section and the **Librarian: Workflow and Rules** section.

### **Logging**

By using the Administration Console **Logging** page, you can specify that user requests to perform actions that are listed in the **Librarian** section and the **Librarian: Workflow and Rules** section are logged to the BarTender System Database. Then, you can review which users have requested to perform which actions.

### **Document Encryption**

By using the Administration Console **Document Encryption** page, you can encrypt individual BarTender documents. Note that encryption is an advanced security technique that has certain risks that you must guard against. For more information, refer to the [Document Encryption Page](#) topic in the BarTender help system.

### **Controlling the Printing of Unpublished Documents**

A security risk occurs any time that a user prints an unpublished (and therefore unauthorized) BarTender document. Therefore, you should grant the **Print Unpublished Documents** permission only on an as-needed basis.

Also, to guard against the possibility that unauthorized users might use someone else's computer to print unpublished BarTender documents, you may want to require that users enter electronic signatures before they can print. When you do this, you also create a log of the authorized users who printed unpublished documents and when the print jobs occurred.

## Appendix A: Integrating Librarian with BarTender and Companion Applications

You can use files that are stored in Librarian in many of the companion applications that are included in the BarTender Suite. This appendix describes how each application can work with Librarian in your production environment.

### Administration Console

Use the Administration Console **Librarian** and **Librarian: Workflow and Rules** permissions to control whether users can do the following:

- Edit existing comments in a document that is stored in Librarian
- Edit files that are stored in Librarian
- Have full file control over files that are stored in Librarian
- Open published files that are stored in Librarian
- Change workflow states

For more information, refer to the [Security](#) section of this technical document.

### BarTender

When you work in a BarTender document, you can use BarTender Designer to access related files, such as databases or images, that are stored in Librarian.

### Integration Builder

Integrations can be saved to and opened from the Library, and Integration Builder can refer to files that are stored in the Library.

#### Librarian Syntax and Integration Builder

The referencing syntax that Librarian uses can be used in Integration Builder to refer to a file from a command prompt. Integration Builder can use Librarian syntax with BarTender XML (BTXML) script, which is used when you run commands from within Integration Builder that start and control BarTender print jobs.

For more information about Librarian syntax, refer to [Appendix B: Syntax for Referencing Files in the Library](#).

### Print Portal

When you integrate Librarian with Print Portal, you can use Print Portal functionality to facilitate online document review and approval processes that are integrated with email notifications. For example, this means that you can specify users whom you want to review your document when it reaches a particular step in a workflow and then send them an email notification message that includes a **Review and Approve** button. When your reviewers click this button, the BarTender document opens in Print Portal, where they can view the document and then reject or approve it.

To integrate Librarian with Print Portal, you specify the Print Portal URL on the **Librarian Setup** page in Administration Console. For more information, refer to the *Understanding Librarian Workflows* technical document at the following Seagull Scientific website:

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

### ***Print Station***

You can select a Librarian folder to be the root folder for Print Station. This is the folder that Print Station uses to display the documents that are available to be printed.

### ***Process Builder***

You can save BarTender process files, which have the \*.btproc file name extension, in the Library and edit them by using Process Builder. Additionally, process files can refer to BarTender documents that are stored in the Library.

### ***Reprint Console and History Explorer***

Reprint Console and History Explorer interact with Librarian indirectly via BarTender. BarTender documents that you view and/or reprint by using these applications can reside in the Librarian database.

For more information about the companion applications, refer to their corresponding technical documents:

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

## Appendix B: Syntax for Referencing Files in the Library

Librarian provides a syntax for referencing files in the Library, similar to the standard syntax for referencing files on a hard drive.

### Review of Standard Windows Syntax

Because Windows users typically use their mouse to click through folders and subfolders to find files, they may not remember that the file path syntax that Windows uses is the following.

```
C:\<path>\<filename>
```

For example, to open a BarTender document, you might reference it by using the following syntax.

```
C:\MyTemplates\ShippingLabel.btw
```

### Referencing Files in the Library

The syntax for referencing files in the Library more closely resembles an Internet location than a hard drive location. The syntax is as follows.

```
lib://<path>/<filename>
```

This Internet-style URL uses forward slash marks instead of backslashes, and the “lib://” at the beginning is always required to reference files in the Library. Therefore, when you access a file in the Library, you use the following file reference syntax.

```
lib://MyTemplates/ShippingLabel.btw
```

Library files can be referenced by using one of the following methods:

- On the BarTender or Librarian **File** menu, click **Open**, and then enter the text string for the file that you want to reference in the **File Name** field.
- In Process Builder, click the **Administration** tab, click **Open**, and then enter the text string for the process file that you want to reference in the **File Name** field.
- In Print Station, enter the text string for the file that you want to print in the **Search** field.
- Run BarTender by using command-line parameters. The following sample command instructs BarTender to open a document from the Library and then start a print job.

```
bartender.exe /F="lib://templates/shipping/overnight.btw" /P
```

- Run a print job that requires BarTender to read data-sourced graphics while printing.
- Run a BarTender XML script.
- In Integration Builder, run commands that start and control BarTender print jobs.

For more information about how Librarian interacts with BarTender and the companion applications, see [Appendix A: Integrating Librarian with BarTender and Companion Applications](#).

## Related Documentation

### Technical Documents

- *BarTender System Security*
- *Revision Control*
- *Administration Console*
- *Understanding Librarian Workflows*

To view and download technical documents, visit:

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

### Manuals

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

### BarTender Help System

- [Librarian](#)
- [Librarian Setup](#)

### Other Resources

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