



# **Understanding the BarTender System Database**

# Contents

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- Overview** ..... 3
- About the BarTender System Database** ..... 4
  - BarTender System Service ..... 4
- System Database Usage by Application** ..... 5
- Setting Up the BarTender System Database** ..... 8
  - Message Logging ..... 9
  - Cache Options ..... 9
- BarTender System Database Maintenance** ..... 10
  - Types of Database Maintenance ..... 10
- BarTender System Database Security** ..... 12
  - Additional Security Options ..... 12
- System Database API** ..... 13
- Upgrading the BarTender System Database** ..... 14
  - Upgrading the BarTender System Database ..... 14
  - BarTender System Database Compatibility Issues ..... 15
- Related Documentation** ..... 16

## Overview

The *BarTender System Database* is the central data storage for applications in the BarTender Suite. It is required for most of the features that are included in the Automation and Enterprise Automation editions of BarTender. It includes data such as the following:

- Events encountered by any BarTender application (such as error messages and "pop-up" dialogs)
- Information about each print job that is sent from BarTender (such as the document that was printed and the time the job was sent)
- Security settings and permission checks that are defined in Administration Console
- Template designs and preview images (for reprinting items)
- Global data fields
- Librarian files and revision information

The default BarTender System Database uses Microsoft SQL Server Express, which is free but which has a 10 GB database size limit. If you want multiple computers to share a centralized database, or if you have a single computer logging a high volume of print jobs, you may want to use your own database server.

You do not have to set up the BarTender System Database to use BarTender Designer. However, it must be set up if you want to use other applications in the BarTender Suite, including Librarian, Reprint Console, Integration Builder, History Explorer, and Print Portal.

## About the BarTender System Database

The BarTender System Database is a central storage space and resource for BarTender and most of the companion applications. In addition, the System Database enables BarTender and the companion applications to communicate with each other. The BarTender System Database works with the BarTender System Service to store and share data.

The BarTender System Database is installed by default whenever a new instance of BarTender is installed. However, under certain circumstances, such as during an upgrade from a previous version, the BarTender System Database might not be installed in order to prevent possible compatibility issues.



The BarTender System Database is not a database that you would connect to your BarTender document to populate template objects at print time. The business databases that are used in document design often contain such data as customer names and addresses or product information, and they are "seen" only by the documents that they are connected to. The BarTender System Database is seen by all BarTender documents and by other applications in the BarTender Suite.

For more information, refer to the [System Database](#) section of the BarTender help system.

Seagull Scientific does not publicly document the BarTender System Database schema at this time, but you can use the BarTender software development kit (SDK) to retrieve data from the System Database. For more information, refer to the [Automating BarTender](#) topic in the BarTender help system and the [System Database API](#) section of this white paper.

### **BarTender System Service**

The *BarTender System Service* enables BarTender Designer and the companion applications to communicate and write to the BarTender System Database. It is used to manage BarTender application messages, print job history, and printer status. The BarTender System Service is installed automatically when you install BarTender. If you ever need to monitor or administer the service, you can do so from the **Windows Services** page of Administration Console. For more information, refer to the [Administration Console](#) section of the BarTender help system.

## System Database Usage by Application

Many applications of the BarTender Suite interact with the BarTender System Database. Some save information to the System Database, whereas others retrieve data that is stored in it. The following section describes how each application works with the BarTender System Database to provide a seamless designing, printing, and auditing environment for your business.

### BarTender Designer

BarTender Designer uses the BarTender System Database to store the following information:

- **Global data fields**, which are used to share data between multiple documents. For more information, refer to the [Using Global Data Fields](#) topic in the BarTender help system.
- **Application messages**, which can be used to audit and track the behavior of the BarTender application. For more information, refer to the [Logging Application Messages](#) topic in the BarTender help system or the Getting Started Manual.
- **Print job information**, which is used to save backups of your print jobs so that you can later retrieve or reprint them. For more information, refer to the "Database Log" section of the [Log Setup Dialog](#) topic in the BarTender help system.



BarTender Designer does not automatically save BarTender documents to the System Database. However, you can set up Librarian to automatically store saved BarTender documents to the System Database, where they are accessible to all users who have the correct permissions.

### Librarian

Librarian, BarTender's native revision control system, uses the BarTender System Database to store its files. Files that are stored in Librarian can be accessed from applications in the BarTender Suite, including BarTender Designer, Batch Maker, Print Station, Integration Builder, and Print Portal.



You must set up the BarTender System Database in order to edit any files that are stored in Librarian, even if the application that generated the file does not require the BarTender System Database.

Librarian is available with the Enterprise Automation edition of BarTender. For more information, refer to the [Librarian](#) section of the BarTender help system or the **Librarian** white paper:

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

## Administration Console

Administration Console enables administrators to control and customize important aspects of BarTender, such as security, integrations, and Windows services. Administration Console is also where you install, set up, configure, and maintain the BarTender System Database. Security options can be stored in the BarTender System Database or in a shared or local file.

For more information, refer to the [Administration Console](#) section of the BarTender help system.

## Integration Builder

Use BarTender Integration Builder to create highly customizable integrations that let you seamlessly connect BarTender's printing capabilities with virtually any enterprise business operation.

Integration Builder uses the BarTender System Database to store integration messages and any cloud storage file system configurations.

For more information, refer to the [Integration Builder](#) section of the BarTender help system.

## History Explorer

History Explorer provides an easy-to-use and customizable interface that enables you to monitor information that is stored in the BarTender System Database and to reprint items that may have been lost or damaged. History Explorer draws the information that it displays from the BarTender System Database. You can view the following information:

- Messages that are generated by applications in the BarTender Suite
- BarTender print jobs that are listed by printer, document, or computer, including canceled and failed jobs
- Printer Maestro print jobs, printer events, and inventory events
- Security permission checks by action, user, and computer, including denied permission requests



To view the information, you might need to enable logging for each type of information that you want to view. For more information about how to configure BarTender's logging options, refer to the History Explorer white paper.

For more information, refer to the [History Explorer](#) section of the BarTender help system or the **History Explorer** white paper:

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

## Reprint Console

Reprint Console accesses information in the BarTender System Database to process and reprint items that may have been lost or damaged. To view the information or to use Reprint Console, you must first enable logging for print job information.

For more information, refer to the [Reprint Console](#) section of the BarTender help system or the **Reprint Console** white paper:

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

## Printer Maestro

Printer Maestro provides a convenient way to monitor the printers and print jobs on your network. Additionally, it contains tools to help track your printing-related inventory items, such as toner, labels, print heads, and memory. Printer Maestro uses the Printer Maestro Service to gather this information, and you can configure the application to store this data in the BarTender System Database.

For more information, refer to the [Printer Maestro](#) section of the BarTender help system or the **Printer Maestro** white paper:

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

## Print Station

Print Station simplifies the printing of existing BarTender documents, which enables you to quickly locate and print your documents. Using Print Station eliminates the need to open and print documents through BarTender or through external application integration. Print Station does not store data in the BarTender System Database. It uses the BarTender System Database only if it references a file that is stored in Librarian.

For more information, refer to the [Print Station](#) section of the BarTender help system or the **Print Station** white paper:

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

## BarTender Print Portal

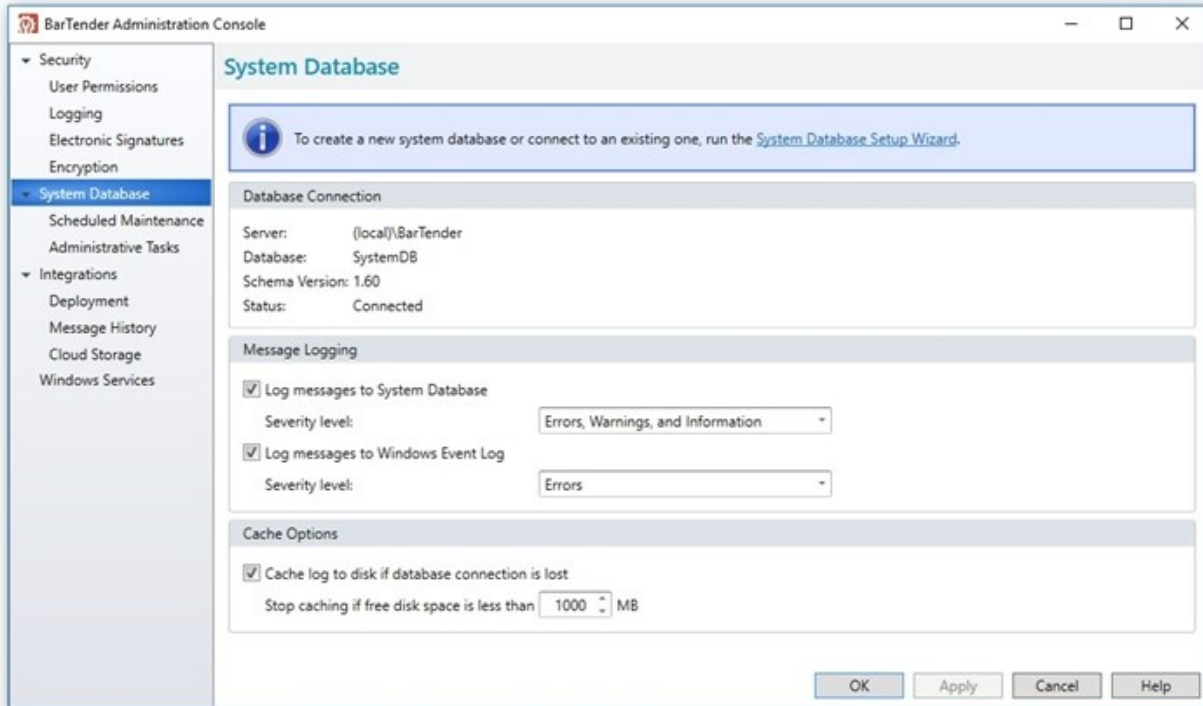
BarTender Print Portal is a web-based interface for selecting and printing BarTender documents. Prior to BarTender 2016, this application was called Web Print Server (WPS). By using BarTender Print Portal, users can print documents simply by browsing to a web page that is hosted by a server that has BarTender installed. BarTender Print Portal stores all of its application settings in the BarTender System Database.

For more information, refer to the [Print Portal](#) section of the BarTender help system or the **BarTender Print Portal** white paper:

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

## Setting Up the BarTender System Database

When you first install BarTender, you can install the BarTender System Database directly from the installer by running the System Database Setup Wizard. If the System Database was not installed at that time, or if you want to install another BarTender System Database, you can run the wizard from the **System Database** node of Administration Console.



During setup, you are given the option to use Microsoft SQL Server or Microsoft SQL Server Express. If you are creating a centralized System Database that is used by multiple users, we recommend that you choose SQL Server, because SQL Server Express has size limitations. BarTender requires Microsoft SQL Server 2005 Service Pack 2 (SP2) or a later version.



If you choose to use SQL Server to run the BarTender System Database, you will need to purchase and install it.

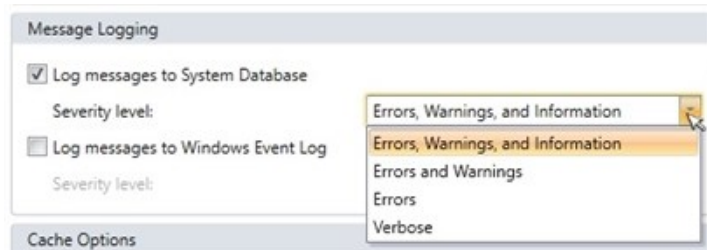
For more information, refer to the [Setting Up the BarTender System Database](#) topic in the BarTender help system.



## Message Logging

You can optionally enable the BarTender System Database to log the messages that it generates about itself. These messages include:

- Database maintenance updates
- Backup reports
- Purge and restore reports
- System errors and warnings



You can view System Database messages in History Explorer. For more information, refer to the [History Explorer](#) section of the BarTender help system.

## Cache Options

If the connection to the BarTender System Database is lost for any reason, the BarTender System Service can cache print job data to an external file until the connection is restored.

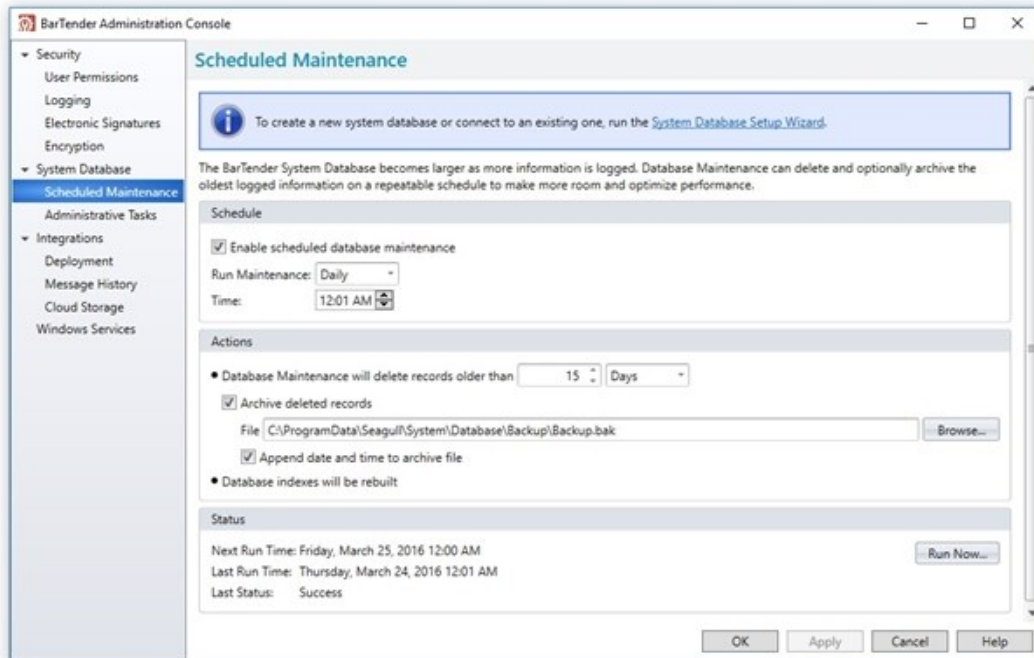


Although this option can minimize data loss if the database connection is disconnected and not immediately restored, the cached data can use a large amount of memory or even fill your hard drive. This is more likely in large production environments or in the case of an unexpected long-term connection loss.

To prevent the BarTender System Service from using all of the available disk space on the computer for caching purposes, you can reserve a minimum amount of disk space that cannot be used for caching. When the file cache reaches the defined reserve minimum, caching stops, and the BarTender System Service sends an error message to the event log that states the available disk space limitations and also sends a warning that future print data will be lost.

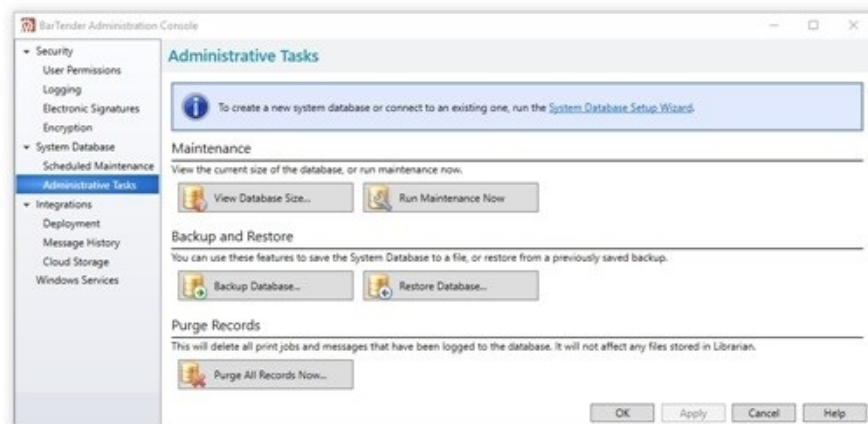
## BarTender System Database Maintenance

The BarTender System Database can become very large over time, storing old records that you no longer need. This can slow BarTender System Database performance and take up large amounts of disk space. When you use database maintenance, you can schedule your oldest logged information to be regularly archived.



## Types of Database Maintenance

At times, you may find it necessary to manually administer your database. You can use Administration Console to perform a number of administrative tasks to help you maintain the BarTender System Database.



- **Deleting records:** You can configure the BarTender System Database to delete records that are older than a specified date. You can optionally archive old records or delete them from the system.
- **Archiving records:** If you click to select **Archive deleted records**, you can specify a file where your archived records are stored. You can save them to the default location or browse to another location on your computer or network. You can optionally append the date and time to the archived file.
- **Viewing the database:** Click **View Database Size** to see a detailed view of the current database size and data allocation.
- **Backing up the database:** Click **Backup Database** to save the contents of the BarTender System Database to a \*.bak file at any time. You can save the file to the default location or browse to another location on your computer or network. You can optionally append the date and time to the archived file.
- **Restoring the database:** Click **Restore Database** to specify an archived \*.bak file to restore.
- **Purging the database:** Click **Purge All Records Now** to delete all information that has been logged to the BarTender System Database, including print job information, application messages, and other events. This option does not delete files that are stored in Librarian, global data fields, or other configuration information. We recommend that you back up your database before purging.
- **Running maintenance now:** After you have set up a database maintenance schedule, you can choose to manually run maintenance whenever you want. Click **Run Now** on the **Scheduled Maintenance** page, or click **Run Maintenance Now** on the **Administrative Tasks** page.

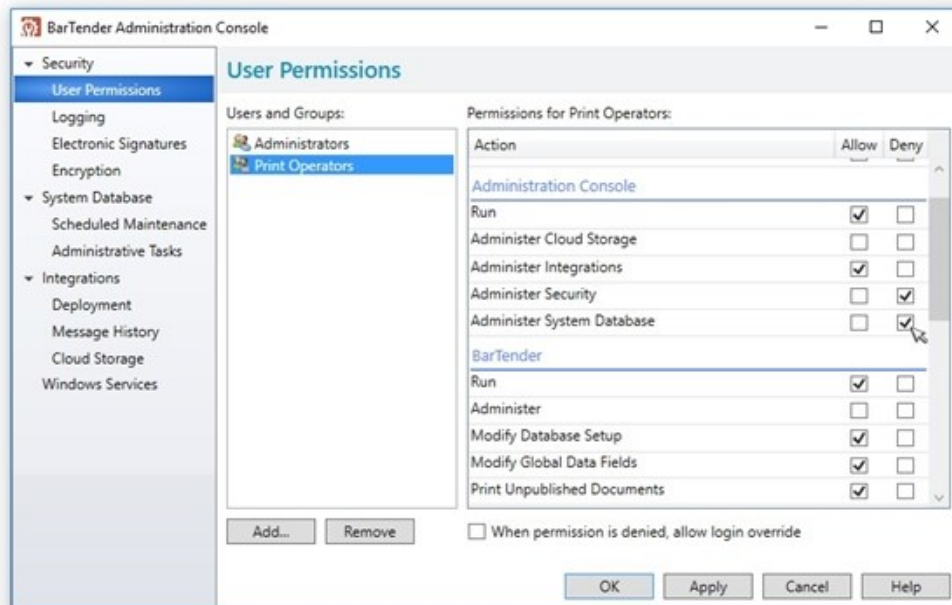
For more information, refer to the [Performing Database Maintenance](#) topic in the BarTender help system.

## BarTender System Database Security

When you set up the BarTender System Database, you are given the option to select an authentication type for securing access to it. If you select Windows authentication, access to the BarTender System Database can be defined by Windows user accounts or groups. If you select SQL Server authentication, access to the BarTender System Database is restricted by a user account that is defined in SQL Server Management Studio. In either case, a user who tries to modify the BarTender System Database that is installed on that computer will be asked for user credentials in order to proceed. Without the required authentication rights, the user will be unable to modify the database.

### Additional Security Options

Non-technical employees can inadvertently wreak havoc on the BarTender System Database. The easiest way to prevent this is to use the Administration Console Security platform to deny access to users or groups that do not regularly maintain or administer the BarTender System Database.



You can restrict access by using the following permissions:

- The **Administer System Database** permission under **Administration Console** controls access to the **System Database** node of Administration Console. When users are denied this permission, they are unable to maintain or administer any BarTender System Database that is connected to this computer.
- The **Administer** permission under **System Database Setup** restricts users from creating a new BarTender System Database or from connecting to an existing one.

For more information, refer to the [Defining User Permissions](#) topic in the BarTender help system.

## System Database API

The System Database application program interface (API), which is part of the BarTender.NET SDK, provides access to information that is stored in the BarTender System Database. By using the System Database API, developers can easily connect to a BarTender System Database and search for, retrieve, and filter the data that is stored on it. This provides quick access to detailed information about the following:

- BarTender Suite application messages
- BarTender print jobs
- Printer Maestro print jobs
- Printer Maestro events
- Printer Maestro inventory
- Security permission checks

To use the System Database API, you must have the Automation or Enterprise Automation edition of BarTender installed.

For more information, refer to the following topics in the BarTender help system:

- [System Database](#)
- [Automating BarTender](#)

If you have installed the BarTender .NET SDK, you can find more information in the SDK help system.

## Upgrading the BarTender System Database

Seagull Scientific regularly release two types of software updates:

- *Service releases* include bug fixes and minor feature upgrades. These updates are always free and require only that you download the latest version from our website and install it over the existing BarTender installation. Usually, a service release does not require you to upgrade the BarTender System Database.
- *Full version upgrades* include new features and updated software architecture as needed to meet the evolving needs of Seagull Scientific customers. A full version upgrade requires that you also upgrade the BarTender System Database.

### Upgrading the BarTender System Database

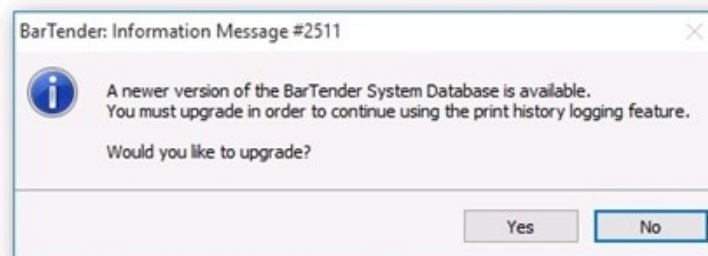
After you upgrade BarTender, the new version cannot connect and log information to an older version of the BarTender System Database. To continue logging information and/or using Librarian, you must also update the BarTender System Database.



In most cases, older versions of BarTender can log information to a new BarTender System Database schema. However, under some circumstances, older versions of BarTender might be unable to log information or use an upgraded BarTender System Database. Before you upgrade, we strongly recommend that you do the following:

- Refer to the "Backwards Compatibility" section of the **BarTender Version Upgrades** white paper to ensure that you do not lose any of your current database data or settings.
- Create a backup of your current BarTender System Database.

The first time that you start BarTender after an upgrade, you are prompted to upgrade the BarTender System Database.



To start the BarTender System Database wizard and upgrade the database, click **Yes**.

## BarTender System Database Compatibility Issues

When you upgrade BarTender, the new version cannot connect and log information to an older version of the BarTender System Database. To continue logging information and/or using Librarian, you must upgrade the BarTender System Database at the same time that you upgrade BarTender.



We strongly recommend that you create a backup of your current System Database before you upgrade to a new version. To do this, click **Administrative Tasks** under the **System Database** node in Administration Console, or use your own system database tool. However, do not restore the backup of a previous BarTender System Database version to a newer System Database version. Doing so reverts the database schema to the previous version's schema, and newer versions of BarTender cannot log information to the older database.

Additional compatibility issues might exist between older and newer versions of the BarTender System Database itself and between older versions of BarTender and new versions of the BarTender System Database, as follows:

### Older and Newer Version of the BarTender System Database

Some backwards-compatibility issues have been found when the BarTender System Database is upgraded, and you might not be able to access the older version's data in the upgraded database. Before you upgrade, be sure to create a backup of your System Database to preserve the data in the event that it cannot be accessed after the upgrade.

For more information about these issues, refer to the **Understanding the BarTender System Database** white paper:

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

### Older Versions of BarTender and Newer Versions of the BarTender System Database

If your environment is configured to use Librarian and you are running an older version of BarTender, you cannot retrieve data or write to the BarTender System Database of a newer version of BarTender. (This is a consideration only if you are running multiple versions of BarTender on the same network.)

To avoid this scenario, after you upgrade to a new version of BarTender and the BarTender System Database, you must also upgrade any other BarTender installations that are connected to that database.

For more information, refer to the **BarTender Version Upgrades** white paper:

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

## Related Documentation

### White Papers and Manuals

- What's New in BarTender 2016
- Administration Console
- BarTender Version Upgrades
- History Explorer
- Integrating with BarTender Integration Builder
- Librarian
- Reprint Console

For downloadable versions, visit:

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

### BarTender Help System

- [System Database](#)
- [Setting Up the BarTender System Database](#)
- [Performing Database Maintenance](#)

