Understanding the BarTender System Database

Contents

Overview

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

- Events encountered by any BarTender application (such as error messages and "pop up" dialogs)
- Information about each print job sent from BarTender (such as the document that was printed, along with the time the job was sent)
- Security settings and permission checks 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 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 allows 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.

> NOTE: 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 used in document design often contain such data as customer names and addresses, or product information, and are only "seen" by the documents that they are connected to. The BarTender System Database is seen by all BarTender documents, as well as 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 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* allows BarTender Designer and the Companion Applications to communicate and write to the BarTender System Database. It is used for managing 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 book in 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, while 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 design, printing and auditing environment for your business.

BarTender Designer

BarTender Designer uses the BarTender System Database to store:

- **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 you can later retrieve and/or reprint them. For more information, refer to the "Database Log" section of the Log Setup Dialog topic in the BarTender help system.

  Note: 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 will be accessible to all users with the correct permissions.

Librarian

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

  NOTE: You *must* have set up the BarTender System Database in order to edit any files 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 book of the BarTender help system or the Librarian white paper.

Administration Console

Administration Console allows 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 to a shared or local file.

For more information, refer to the Administration Console book of the BarTender help system.

Integration Builder

BarTender Integration Builder allows you 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 as well as any cloud storage file system configurations.

For more information, refer to the Integration Builder book of the BarTender help system.

History Explorer

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

- Messages generated by applications in the BarTender Suite
- BarTender print jobs 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

  NOTE: In order to view the information, you may need to enable logging for each type of information you wish to view. Detailed instructions on configuring BarTender's logging options are available in the History Explorer white paper.

For more information, refer to the History Explorer book of the BarTender help system or the History Explorer white paper.

Reprint Console

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

For more information, refer to the Reprint Console book of the BarTender help system or the Reprint Console white paper.

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 book of the BarTender help system or the Printer Maestro white paper.

Print Station

Print Station simplifies the printing of existing BarTender documents, allowing 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 only uses the BarTender System Database if referencing a file stored in Librarian.

For more information, refer to the Print Station book of the BarTender help system or the Print Station white paper.

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 (or WPS). Using BarTender Print Portal, users can print documents simply by browsing to a web page 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 book of the BarTender help system or the BarTender Print Portal white paper.

Setting Up the BarTender System Database

When you first install BarTender, you can install the BarTender System Database directly from the installer when you run the **System Database Setup Wizard.** If it was not installed at that time, or if you wish to install another BarTender System Database, you can run the wizard from the **System Database** node of **Administration Console.**
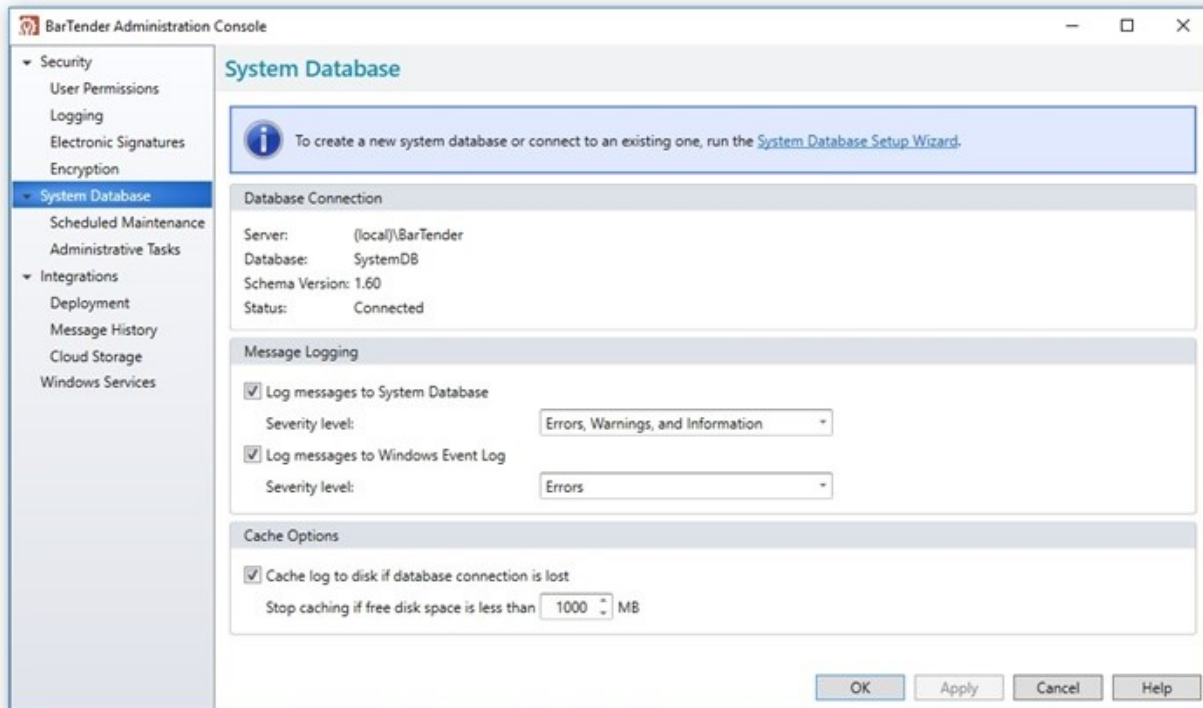
During setup, you will be given the option to use Microsoft SQL Server or Microsoft SQL Express. If you are creating a centralized System Database that will be used by multiple users, choose Microsoft SQL Server, as SQL Express has size limitations. BarTender requires SQL Server 2005 Service Pack 2 (SP2) or greater.

> **NOTE:** You will need to purchase and install Microsoft SQL Server to run the BarTender System Database.

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
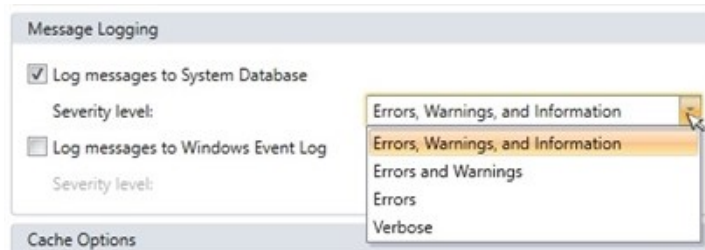
System Database messages can be viewed in History Explorer. For more information, refer to the History Explorer book in the BarTender help system.

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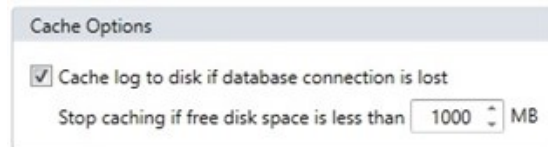
While this option can minimize data loss if the database connection is disconnected and not immediately restored, the cached data can use a large amount of memory or even fill your hard drive. This is more likely in large production environments, or in the case of an unexpected long-term connection loss.

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 stating the available disk space limitations and warning that future print data will be lost.
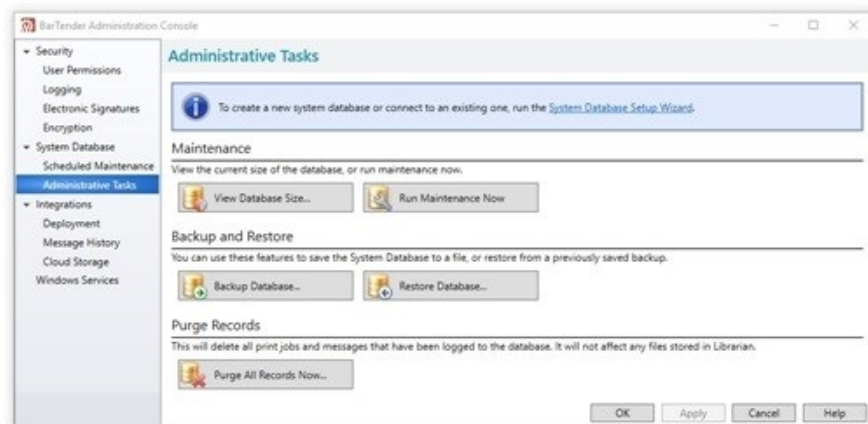
BarTender System Database Maintenance

The BarTender System Database can become very large over time, storing old records that you no longer need. This can slow the BarTender System Database down, and take up large amounts of disk space. By enabling Database Maintenance, you can schedule your oldest logged information to be regularly archived.
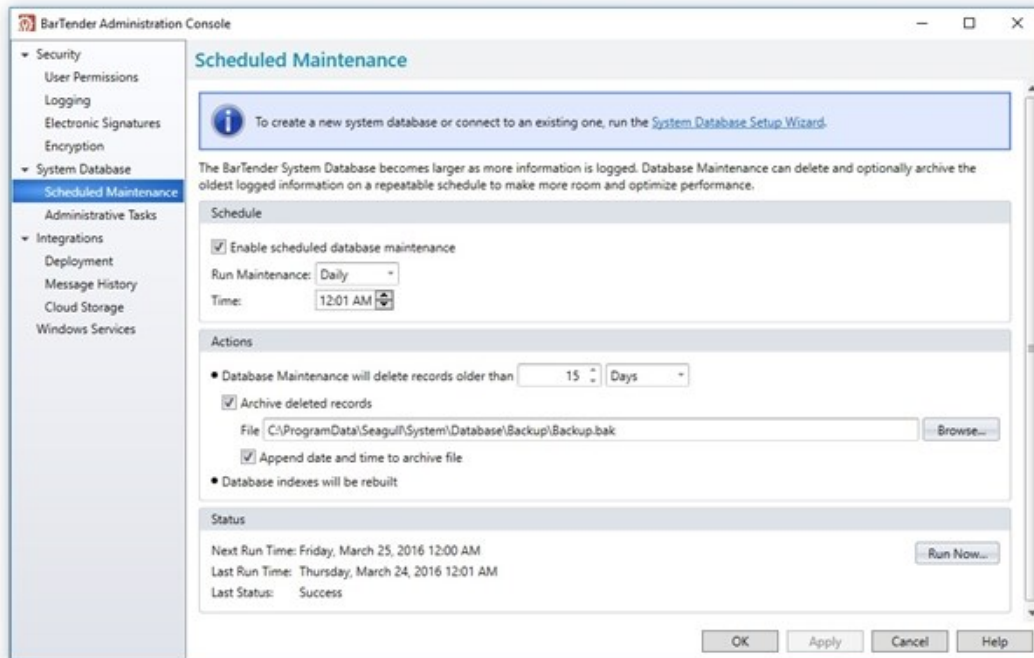
Types of Database Maintenance

At times, you may find it necessary to manually administer your database. Administration Console lets you 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 older than a specified date. You can optionally archive old records, or simply delete them from the system.

- **Archiving records**: If you enable **Archive deleted records**, you can select a file where your archived records will be 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 archive 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 select 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. It does not delete files 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 **Run Maintenance Now** on the **Administrative Tasks** page.
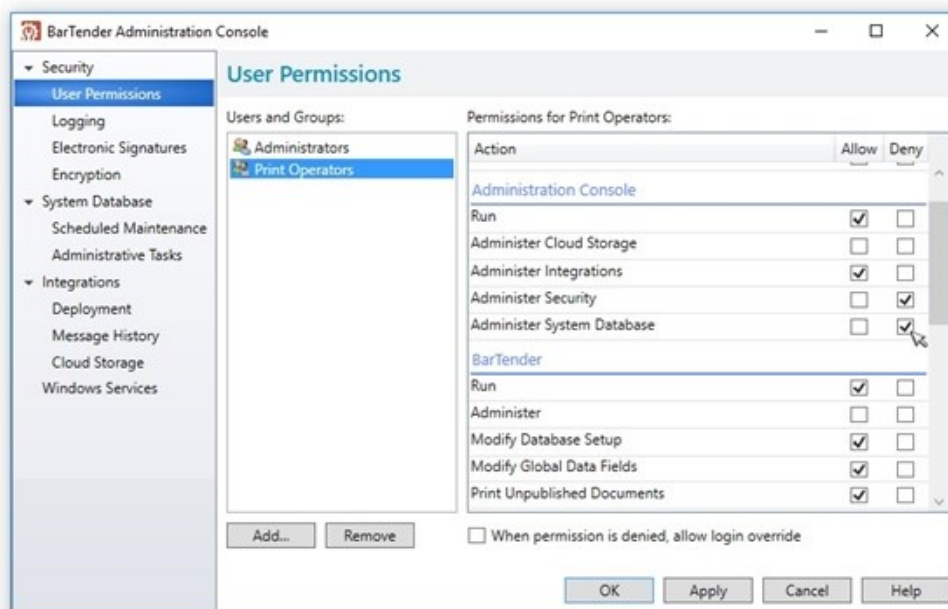
For more information, refer to the [Performing Database Maintenance](#) topic in the BarTender help system.

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 defined in SQL Server Management Studio. In either case, anyone attempting to modify the BarTender System Database installed on that computer will be asked for user credentials in order to proceed. Without the required authentication rights, they 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 Administration Console's Security platform to deny access to users and/or groups that do not regularly maintain or administer the BarTender System Database.

You can restrict access using the following permissions:

- The **Administer System Database** permission under **Administration Console** controls access to the **System Database** node of Administration Console. By denying users this permission, they will be unable to maintain or administer any BarTender System Database 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 API (application program interface), part of the BarTender.NET SDK, provides access to information stored in the BarTender System Database. Using the System Database API, developers can easily connect to a BarTender System Database and search for, retrieve, and filter the data stored on it. This provides quick access to detailed information about:

- 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 edition of BarTender or better 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.
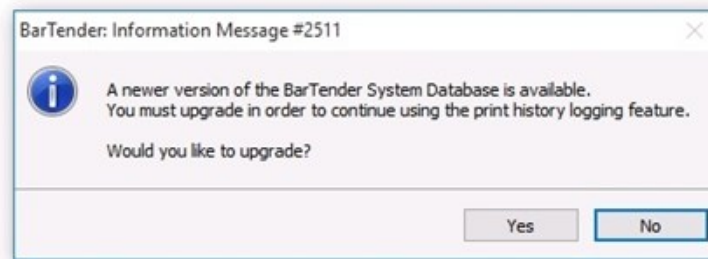
Upgrading the BarTender System Database

There are two types of software releases that Seagull Scientific regularly publishes:

- **Service releases**, which include bug fixes and minor feature upgrades, and can be downloaded for free. These updates only require that you download the latest version from our website and install over the existing installation of BarTender. Usually, a service release will not require you to upgrade the BarTender System Database.

- **Full version upgrades**, which contain brand new features, and must be purchased. A full version upgrade requires that you also upgrade the BarTender System Database.

Upgrading the BarTender System Database

Once you upgrade BarTender, the new version will be unable to connect and log 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. The first time you launch BarTender following an upgrade, you will be prompted to upgrade the BarTender System Database.

Click **Yes** to launch the **BarTender System Database Wizard** and upgrade the database.

BarTender System Database Compatibility Issues

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 may be unable to log information or use an upgraded BarTender System Database.

Older Versions of BarTender with Newer Versions of the BarTender System Database

If your environment is set up to use Librarian and you are running an older version of BarTender, you will be unable to retrieve data or write to a BarTender System Database of a newer version. This is only a consideration if you are running multiple versions of BarTender on the same network.

You can preserve the contents of the old BarTender System Database by backing it up from the **System Database** node of Administration Console, or by using your own system database tool. However, this will only preserve your data, and does not solve the issue--BarTender will still be unable to log to the updated BarTender System Database. If you update the BarTender System Database, we strongly suggest that you also upgrade any BarTender installations connected to that database.

For more information on backing up the BarTender System Database, refer to the System Database topic in the Administration Console book of the BarTender help system.

Older Versions of the BarTender System Database with Newer Versions of BarTender

When you upgrade BarTender, the new version will be unable to connect and log to an older version of the BarTender System Database. To continue logging information and/or using Librarian, you must update the BarTender System Database at the same time you update BarTender.

> WARNING: You can restore a previous version's backup on a newer database install, but this will revert the database schema back to the previous version's. If this occurs, any newer versions of BarTender won't be able to log to the older database. Therefore, you should upgrade everything at once, or don't upgrade at all.

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

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:

http://www.seagullscientific.com/support/white-papers

BarTender Help System

- System Database
- Setting Up the BarTender System Database
- Performing Database Maintenance