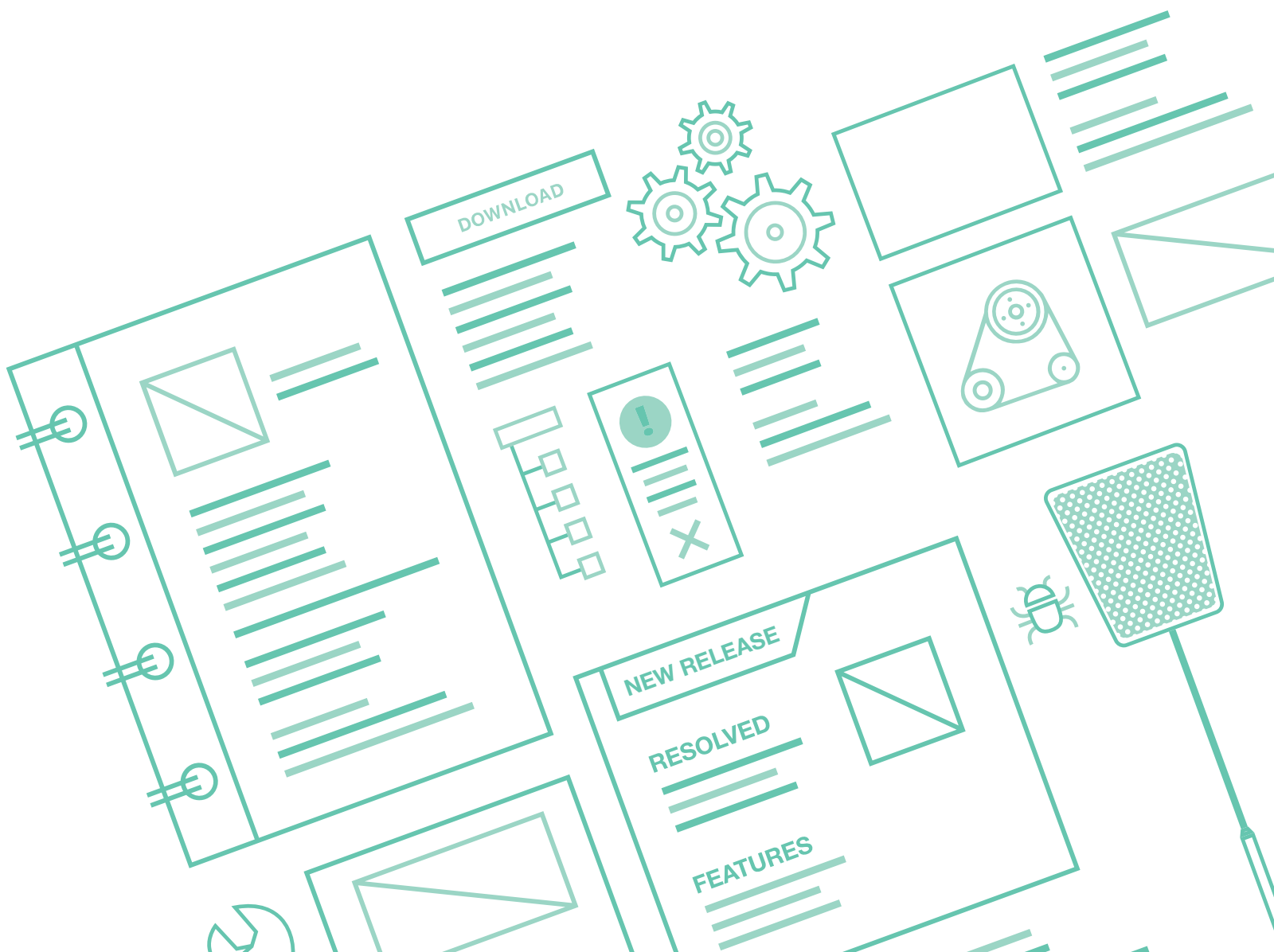


# BarTender 2021

---

## PRODUCT REFERENCE GUIDE

---



## Summary

This document provides the “standard” definition for describing BarTender editions, product features, value propositions.

<b>Version</b>	<b>Date</b>	<b>Notes</b>
1.0	October 2021	First Release (includes BarTender 2022 Preview 1)

# Contents

<b>Summary</b>	<b>2</b>
<b>Overview</b>	<b>6</b>
<b>Unique value proposition</b>	<b>6</b>
<b>BarTender capabilities</b>	<b>6</b>
Label design	7
System automation	7
System integration	7
Label workflow and production control	8
Optimized printing	8
Comprehensive document storage and management	8
Advanced label and printing security	8
Reliability and disaster recovery	9
Flexible deployment options	9
BarTender global support	9
<b>Bartender edition portfolio</b>	<b>10</b>
<b>BarTender suite companion applications</b>	<b>12</b>
<b>BarTender Starter Edition</b>	<b>14</b>
<b>Features</b>	<b>14</b>
WYSIWYG design and print (available in all BarTender editions)	14
Dynamic data (available in all BarTender editions)	15
High-performance printing using Drivers by Seagull™ (available in all BarTender editions)	16
GSI Application Identifier Data Source Wizard	16
Print job logging	17
<b>BarTender companion applications in the Starter Edition</b>	<b>17</b>
BarTender Administration Console	17
BarTender History Explorer	17
<b>BarTender Starter Edition licensing considerations</b>	<b>18</b>
<b>BarTender Professional Edition</b>	<b>19</b>
<b>Features</b>	<b>19</b>
Simplified and standardized label designs with templates that vary at print time	19
BarTender Intelligent Templates™	19
BarTender serialization	20
BarTender full color support	21
BarTender application and document security	21
Labels with data from external and embedded databases	21
BarTender external database connectivity support	21
BarTender internal database table support	22
BarTender Data Builder	22
BarTender embedded data tables	22

Standardized and automated data input for printing	22
BarTender data entry forms	22
Support for encoding technologies and more printers	23
BarTender enhanced encoding support	23
BarTender print to pdf	23
Separate access to label printing capabilities from anytime, anywhere	23
BarTender Print Station	24
BarTender Print Portal	24
<b>BarTender companion applications in the Professional Edition</b>	<b>24</b>
BarTender Administration Console	24
BarTender History Explorer	25
BarTender Data Builder	25
BarTender Print Station	25
BarTender Print Portal	25
<b>BarTender Automation Edition</b>	<b>26</b>
<b>Features</b>	<b>26</b>
Seamlessly integrate automated label and document printing with existing business systems	26
BarTender business systems integrations	26
BarTender Integration Builder	27
BarTender .NET SDK	28
Ability to automate processes associated with label printing	28
BarTender Process Builder	29
BarTender Intelligent Form controls (in BarTender Designer)	30
BarTender document-level controls (in BarTender Designer)	30
Printer code templates (in BarTender Designer)	30
Reprint options for damaged or defective labels	31
BarTender Reprint Console	31
<b>BarTender companion applications in the Automation Edition</b>	<b>31</b>
BarTender Administration Console	31
BarTender History Explorer	32
BarTender Data Builder	32
BarTender Print Station	32
BarTender Print Portal	32
BarTender Integration Builder	32
BarTender Process Builder	32
BarTender Reprint Console	32
<b>BarTender Enterprise Edition</b>	<b>33</b>
<b>Features</b>	<b>33</b>
BarTender Designer features available in the BarTender Enterprise Edition	33
Content management for centralized storage and revision control	33
BarTender Librarian	34
BarTender workflow orchestration for label lifecycle management	34
Access to printing and workflow orchestration	35
BarTender Librarian Workflow Designer	35
BarTender Print Station	35

BarTender Print Portal _____	35
BarTender Print Portal REST API _____	36
Enhanced security and access logging _____	36
Business continuity and disaster recovery support _____	36
Global operations support _____	37
Multi-language phrase support _____	37
Global database fields _____	37
Visibility and control over all Windows print service operations _____	37
BarTender Printer Maestro _____	37
<b>BarTender companion applications in the Enterprise Edition _____</b>	<b>38</b>
BarTender Administration Console _____	38
BarTender Librarian _____	39
BarTender History Explorer _____	39
BarTender Data Builder _____	39
BarTender Print Station _____	39
BarTender Print Portal _____	39
BarTender Integration Builder _____	39
BarTender Process Builder _____	40
BarTender Reprint Console _____	40
BarTender Printer Maestro _____	40
<b><i>BarTender components and services _____</i></b>	<b><i>41</i></b>
<b>BarTender system database _____</b>	<b>41</b>
<b>BarTender services _____</b>	<b>41</b>
BarTender System service _____	41
BarTender Integration service _____	41
BarTender Print Scheduler service _____	41
Printer Maestro service _____	42
<b>BarTender BTXML script language _____</b>	<b>42</b>
<b>BarTender licensing _____</b>	<b>42</b>
BarTender Licensing service _____	42

## Overview

BarTender® software by Seagull Scientific transforms data into the labels, barcodes, RFID tags, packing slips and pallet labels that drive business.

BarTender is the world's most trusted software for labeling. BarTender is adaptable and configurable, providing support and advanced capabilities for integrating with existing and future business systems.

### Unique value proposition

BarTender is for organizations of all sizes that depend on accurate label printing operations. With BarTender, small business and enterprises can turn their label design and printing into repeatable business processes.

BarTender is built from the ground up to support the complexities of any-scale deployments. It's the labeling software standard for the world's most dynamic supply chains and manufacturing operations in every industry — from aerospace and automotive to chemical and pharmaceutical, from food and beverage to retail and medical devices.

When compared to other labeling solutions, BarTender is more powerful and easier to use.

BarTender offers:

- More built-in and advanced functionality throughout the labeling process.
- Flexible integration ranging from no-coding integration by non-developers to deep integration using .NET SDKs and REST APIs.
- Customer success through an extensive network of value-add partners

### BarTender capabilities

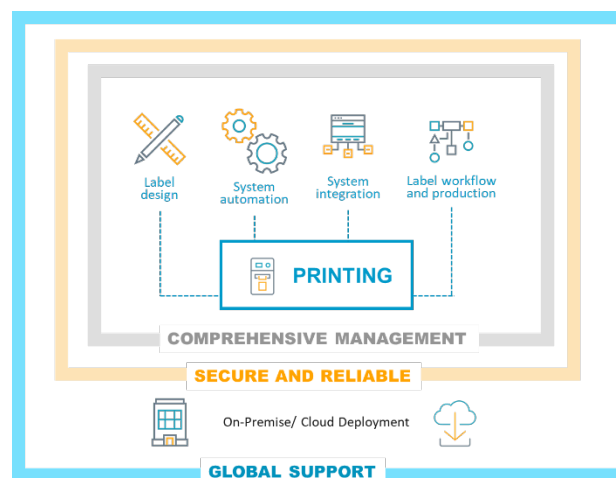


Figure 1 BarTender capabilities

## Label design

---

BarTender includes an intuitive, robust application for designing and printing commercial-quality labels, badges, RFID tags, cards, posters and more. Label and document designers can leverage data entry forms and BarTender's Intelligent Templates™ to standardize and simplify the label printing experience. BarTender includes:

- A 100% WYSIWYG interface for advanced and straightforward label design without the need for additional scripting
- 400 preformatted, ready-to-use barcode components based on 105 barcode 1D and 2D symbologies and more than a dozen barcode standards
- Support for more than 70 graphic formats, including AI, PNG, JPG, BMP, TIF, EPS and GIF
- 50+ drawing shapes that can be resized, reshaped and colored in just about any way imaginable
- Over 160 predefined label templates from common industries and use cases
- Predefined printer stock settings for over 23 suppliers
- 19 configurable form controls and eight form-level actions available to designers for responsive data entry forms

## System automation

---

BarTender system automation provides a robust set of automation tools that reduce or eliminate manual intervention in the label printing process. With BarTender system automation, enterprises can reduce errors and streamline printing operations by creating and executing scripts that perform repetitive tasks. BarTender system automation uses a simple “event/action” concept where designers can specify actions BarTender performs when predefined events occur. BarTender Process Builder provides a no-code way for designers to create scripts that automate repetitive steps associated with label printing. For example, users can build a process to print documents or perform other actions, such as sending an email message or writing to a database. BarTender offers:

- An intuitive Process Builder application makes it easy for designers to automate repetitive tasks with process automation scripts
- A pre-built library of over 80 commonly performed automation actions
- Execution of automation scripts written in PowerShell, BarTender XML (BTXML) and shell commands (running operating system commands and third-party utilities)

## System integration

---

BarTender System integration seamlessly connects BarTender's printing capabilities with virtually any enterprise business operation, including ERP, MES, WMS and custom-made systems. BarTender's system integration includes a powerful no-code Integration Builder application, support for the broadest range of integration methods, connectors to the industry's most used databases and data file types and a run-time process to execute integrations automatically. BarTender also includes a rich set of REST APIs and a .NET SDK for organizations looking to integrate label printing with existing business systems. BarTender includes:

- An intuitive Integration Builder application that makes it easy for designers to configure integrations between BarTender and any business system
- Support for eight integration methods, including time schedules, web services, databases, email, message queues, files, network sockets and serial ports
- A pre-built library of over 70 commonly performed integration actions
- Over 20 supported native databases and data file connection types

## Label workflow and production control

---

Workflows and production controls standardize and document label design, label approval, label deployment and label use — a crucial capability for organizations in highly regulated industries with stringent traceability and compliance requirements.

BarTender provides a comprehensive workflow system that includes a workflow designer and user tools to review and approve workflow steps.

- A visual workflow designer makes it easy for users to define label review and approval workflows
- Authorized users can review, approve, deploy and use labels from any web browser or dedicated print stations

## Optimized printing

---

BarTender can print labels and documents to any device with a Windows printer driver. Additionally, BarTender includes support for optimized Drivers by Seagull™ — enhanced printer drivers for over 6,800 commercial label printers and output devices providing the highest printing and access to advanced printer features — available as separate downloads from Seagull Scientific.

## Comprehensive document storage and management

---

BarTender provides a comprehensive centralized environment for monitoring and managing templates and documents across sites and continents, whether in a single facility, in geographically distributed plants, in the cloud or on-premises.

- BarTender Librarian label document management system provides a secure central repository of label templates and documents
- Revision control and audit trails

## Advanced label and printing security

---

With BarTender security, administrators and label designers can create built-in protections to guard against unauthorized or inadvertent label modification and printing.

- Secure document access with role-based security and user permissions
- Electronic signatures
- Document encryption and access controls
- Printing access controls



## **Reliability and disaster recovery**

---

Label printing is often a mission-critical capability requiring 24/7/365 availability. With BarTender, advanced, always-on high-availability options, enterprises can deploy the BarTender License Server in redundant high-availability configurations designed to be fault-tolerant.

## **Flexible deployment options**

---

The BarTender architecture is flexible, allowing deployment on-premises, in public, private and hybrid cloud environments. Authorized users can select and print labels and documents from any location using any device with a modern web browser or dedicated Windows workstations.

## **BarTender global support**

---

Seagull Scientific's global support ensures that users get the most out of their software investment from small businesses to large enterprises.

- Guaranteed initial reply times during business hours
- An industry-first Service Level Target initiative, establishing support deliverable objectives and reporting

## Bartender edition portfolio

BarTender is available in four editions, each addressing increasing needs.

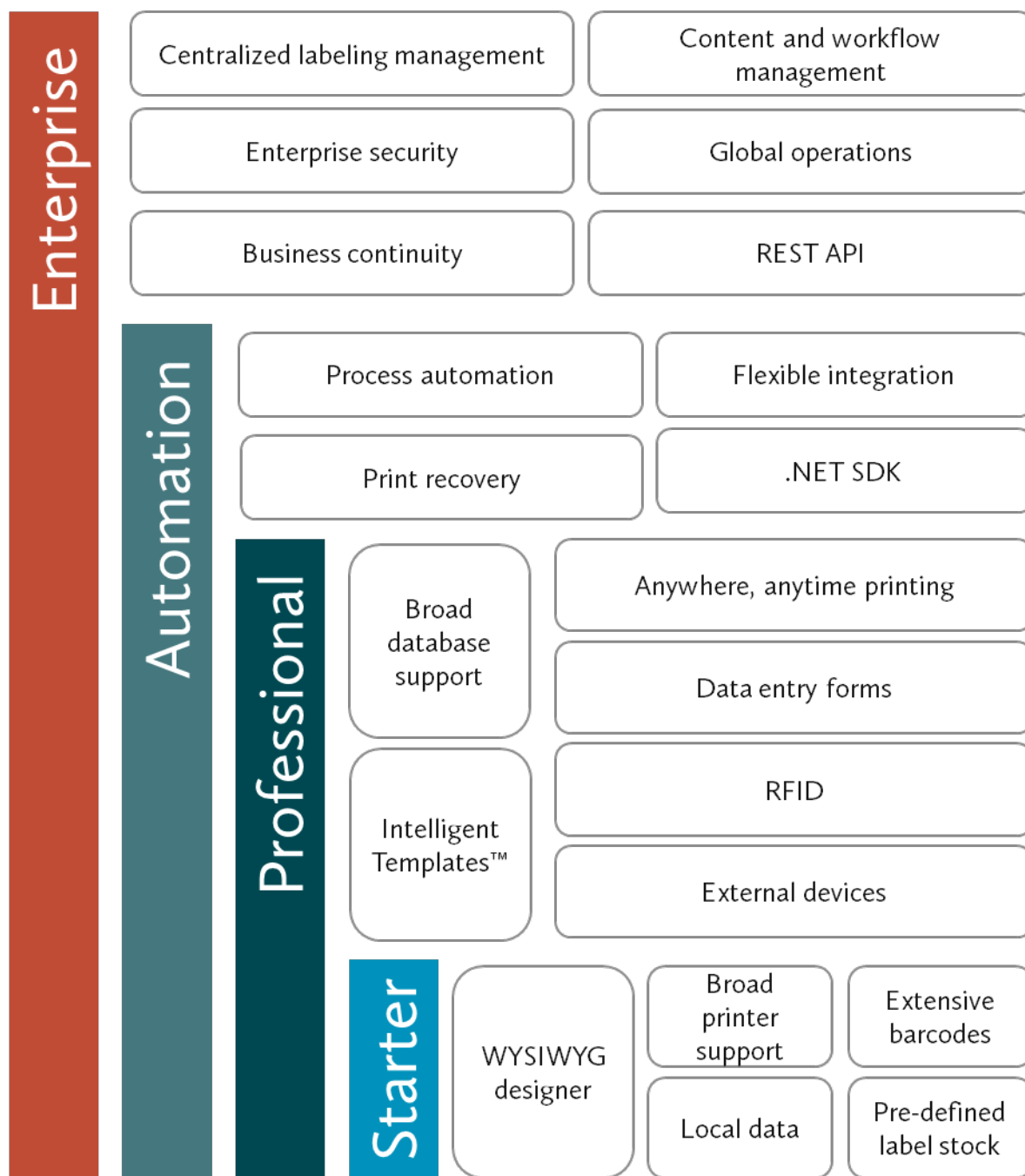


Figure 2 - BarTender edition capabilities

**BarTender Starter Edition** provides basic business label design and printing with easy-to-use design tools and essential printing management. BarTender Starter Edition includes features to address three requirements:

- An easy-to-use tool to design and print commercial-quality labels containing industry-standard barcodes
- Ability to manually print labels using local spreadsheet data
- Printing that seamlessly works with specialized label printers and label stock

**BarTender Professional Edition** provides **dynamic business printing**, enabling sophisticated label and card designs that leverage content from databases, spreadsheets and other files. With the Professional Edition, organizations of any size can operationalize their label design and printing operations.

BarTender Professional Edition adds support for features to address five additional requirements:

- Support for complex label designs that vary at print time
- Data from a wide variety of sources (local databases, external databases and cloud data services)
- Input and output device diversity (scanners, weight scales and cameras, RFID tags, smartcard, magnetic stripe card printers)
- Standardized printing workstation separated from label design and maintenance
- Anywhere, anytime printing from any device using a modern web browser<sup>1</sup>

**BarTender Automation Edition** provides **efficient automated printing** for businesses integrating their business systems (ERP, MES, WMS and custom-made systems) and label printing operations.

BarTender Automation Edition adds support for features to address three additional requirements:

- Flexible integration — without coding — between business systems and printing operations
- Process automation to reduce and eliminate manual operations from the label printing process
- Label reprint for automated print runs where label output may be defective, damaged or lost

**BarTender Enterprise Edition** provides comprehensive **enterprise-wide label management and printing**, adding the security, traceability, reliability and centralized control required by production label printing operations. BarTender Enterprise Edition is meant for organizations of all sizes who need:

- Reliable 24/7/365 label and document printing operations
- Visibility and control over the document design and maintenance process
- Traceability and logging to meet compliance or regulatory requirements
- Multi-site or globally distributed print operations that are centrally managed
- Web application integration using RESTful web services
- Advanced security to control access to design and print applications, documents and processes
- Redundant high-availability configurations providing business continuity

---

<sup>1</sup> BarTender 2022 Preview 1

## BarTender suite companion applications

The BarTender suite includes the BarTender Designer application, ten additional companion applications and two developer resources. During a standard installation, BarTender installs the BarTender Designer application and all companion applications. Each BarTender edition includes support for a unique set of BarTender companion applications and edition-specific features within a companion application.

Description	Starter	Professional	Automation	Enterprise
<b>BarTender Administration Console</b> is used by administrators to control and configure important aspects of BarTender, such as printers, database connections, application integrations, security, licensing, logging and other local services used by BarTender.	✓	✓	✓	✓
<b>BarTender History Explorer</b> displays BarTender status messages (print jobs, application messages, security permission checks and inventory levels). In higher editions, it can reprint labels.	✓ <sup>2</sup>	✓ <sup>3</sup>	✓ <sup>4</sup>	✓ <sup>5</sup>
<b>BarTender Data Builder</b> is used to create and manage BarTender embedded database tables.		✓	✓	✓
<b>BarTender Print Station</b> is a stand-alone application used to browse and quickly print BarTender files.		✓	✓	✓
<b>BarTender Print Portal</b> is a web-based service that users can use to browse and quickly print BarTender files from any modern web browser.		✓ <sup>6</sup>	✓ <sup>7</sup>	✓
<b>BarTender Integration Builder</b> is used to implement highly configurable integrations that seamlessly connect the printing capabilities of BarTender to virtually any enterprise business operation or process without the need for programming.			✓	✓
<b>BarTender Process Builder</b> is a stand-alone application that creates customizable process files that run one or more actions in sequence.			✓	✓
<b>BarTender Reprint Console</b> provides an easy-to-use and configurable interface used to view, select and reprint labels.			✓	✓

<sup>2</sup> Starter Edition logs seven (7) days of BarTender Suite messages and print jobs

<sup>3</sup> Professional Edition logs seven (7) days of BarTender Suite messages, print job and security permission checks

<sup>4</sup> Automation Edition logs seven (7) days of BarTender Suite messages, print job, security permission checks and can reprint labels and documents

<sup>5</sup> Enterprise Edition logs unlimited days of BarTender Suite messages, Printer Maestro messages, print jobs, security permission checks and can reprint labels and documents

<sup>6</sup> BarTender 2022 Preview 1

<sup>7</sup> BarTender 2022 Preview 1

Description	Starter	Professional	Automation	Enterprise
<b>BarTender .NET SDK</b> allows enterprises to build custom applications or web front ends to improve print operations performance and efficiency.			✓	✓
Developers can use the <b>BarTender Print Portal REST API</b> to automate Print Portal tasks and integrate Print Portal with other applications.			✓	✓
<b>BarTender Librarian</b> is a content management application that designers, administrators and other users can use to manage BarTender documents collaboratively and securely.				✓
<b>BarTender Printer Maestro</b> application provides a convenient way to monitor printers, print jobs and printing-related inventory items, such as toner, print media, print heads and memory.				✓

Figure 3 - BarTender companion applications

## BarTender Starter Edition

**BarTender Starter Edition** provides **business label design and printing** with easy-to-use design tools, allowing users to design and print commercial labels quickly and easily. New users can be up and running in minutes using BarTender's intuitive design tools, wizards and extensive library of sample label templates.

### Features

#### WYSIWYG design and print (available in all BarTender editions)



BarTender Designer is the primary application within the BarTender suite. BarTender Designer is a single, easy-to-use purpose-built label and document design application. BarTender Designer simplifies and accelerates the commercial label design process by providing all the tools needed by designers of any experience level. Template designers use BarTender Designer to create templates and associate template objects with dynamic data. Additionally, print operators or designers use BarTender Designer to print labels and documents.

<b>Benefit:</b>	BarTender Designer replaces complex general-purpose graphic design applications with a data-aware application built specifically for commercial label design and printing. Designers of any experience level can quickly create and print compelling labels and documents for commercial use.
-----------------	---

BarTender Designer includes all the tools a label designer needs to create commercial labels and documents (badges, signs, posters and more). BarTender Designer includes over 400 preformatted, ready-to-use barcode components based on 105 barcode symbologies and more than a dozen barcode standards.

Features	Description
<b>WYSIWYG template design</b>	Familiar Office-like tool that makes it easy to design label templates for commercial labels and documents
<b>New Document Wizard</b>	An easy-to-follow wizard ensures proper document settings for hundreds of predefined label formats, printer stock by manufacturer part number, printer setup and printing performance.
<b>Unmatched barcode support</b>	BarTender includes over 400 preformatted, ready-to-use barcode components based on 105 barcode symbologies and more than a dozen barcode standards
<b>Fonts</b>	Support for OpenType, TrueType, Symbol Font characters and native printer-based fonts
<b>Text formatting</b>	Familiar, Word-like tools for you to visually create and format text
<b>Transformed Text</b>	Add flair to your text objects with a variety of effects, such as fading, inflating, slanting, and more
<b>Shapes and lines</b>	Choose from over 50 shapes and 100 line/style combinations
<b>Dynamic text and object wrapping</b>	Create dynamic text that wraps inside and around shapes, objects, document borders and more

Features	Description
<b>Graphics and images</b>	Import more than 70 graphic formats, including AI, PNG, JPG, BMP, TIF, EPS and GIF
<b>Symbols</b>	Choose from a wide variety of included symbols and industry-based symbol fonts
<b>Tables and grids</b>	Create tables and grids to organize text, barcodes, images and other objects
<b>White-on-black printing</b>	Switch objects from black-on-white to white-on-black printing with a single click
<b>Amazon Transparency</b>	Create Amazon Transparency product serialization codes that help identify individual units and proactively prevent counterfeits

### Dynamic data (available in all BarTender editions)

BarTender includes tools and capabilities to dynamically place data directly into any barcode, text object, table object or encoder object. Examples include serialized numbers (numbers that increment or decrement), dates and times. Most label documents include data that changes between labels or print jobs. In addition, users often store data, such as customer records or product information, in files outside of BarTender.

<b>Benefit:</b>	Designers can easily create label templates containing data that varies between print runs with a point and click interface.
-----------------	--

Feature	Description
<b>Simple serialization</b>	Assign a unique identification number to each printed item in a series, increasing or decreasing the value by increments of one (1)
<b>Date and time</b>	Dynamically populate date and time fields using values provided by Windows or clock-enabled printers
<b>Data validation and processing</b>	Specify data validation rules for fields and either automatically correct data or issue warnings
<b>Concatenate data</b>	Create text and barcode objects that combine information from multiple data sources
<b>Database Setup Wizard for basic database connectivity</b>	Import data from local Excel or RFC 4180 standard CSV files
<b>NOTE: While the following features are available in all BarTender editions, BarTender Starter Edition will only support basic database connections to Excel or RFC 4180 standard CSV files.</b>	
<b>Named database connections</b>	Identify commonly used database connections by name, allowing easy reuse in multiple label template designs
<b>Database filters</b>	Search and filter database records, selecting records that you want to print
<b>Dynamic graphics and images</b>	Automatically add images or graphics for printing based on selected database records or queries

## High-performance printing using Drivers by Seagull™ (available in all BarTender editions)

The whole purpose of a specialized labeling solution is to produce and print accurate and timely labels and marks. BarTender supports any printing device/mechanism that has a Windows driver. Further, BarTender users who install Seagull Scientific's Drivers by Seagull™ can use high-performance printing features that are not typically accessible in standard Windows printer drivers. Drivers by Seagull™ — the gold standard for label printing drivers — includes support for over 6,800 commercial label printers. BarTender and Drivers by Seagull™ users maximize their return on investment (ROI) for printers by taking full advantage of native printer capabilities.

**Benefit:** BarTender and Drivers by Seagull™ improve print speed by taking full advantage of printer-based features such as serialization, barcodes, real-time clock, static data and graphic caching. Printer owners fully exploit their printer investments by using built-in optimizations provided by their printer suppliers.

Feature	Description
<b>Drivers by Seagull™</b>	Drivers by Seagull™ expand on Windows printing architecture by improving print speeds and providing access to advanced printer features such as serialization, barcodes, real-time clock, static data and graphic caching. Drivers are available for over 6,800 commercial label printers.
<b>Print optimizations</b>	When the printer supports optimizations, BarTender and Drivers by Seagull™ send text, barcode and graphic formatting commands to the printer at the beginning of a print job. After that, only the variable character data for each item is sent to printers.
<b>Printer configuration and diagnostics</b>	Using Drivers by Seagull™, you can perform printer management functions that otherwise require you to use the printer's front panel or custom programs from the printer manufacturer.
<b>Advanced media handling</b>	Drivers by Seagull™ support a variety of actions taken at specified intervals in the print job. For example, in a print job, you can define printer actions — such as cutting the label stock or detecting label removal.
<b>Print productivity</b>	Print labels and documents to any Windows printer driver
<b>On-demand and batch printing</b>	Print labels and documents on-demand or batch together using one or more BarTender templates
<b>Print preview</b>	Review your dynamic print jobs on-screen before printing

## GS1 Application Identifier Data Source Wizard

The GS1 Application Identifier Data Source Wizard makes it easy to construct barcodes with application identifiers (AIs) and field separator characters inserted correctly. An AI is a number at the beginning of a data field that identifies how the data that follows is interpreted. In some cases, it also specifies the length of the data. The GS1 General Specifications standard defines numerous AIs, such as serial number or expiration date.



## Print job logging

---

BarTender logs application information messages, warnings and errors in the BarTender System Database and/or text files. In a logged message, BarTender also saves relevant information about the message, such as the time it occurred, the user's response, the message severity and the computer in use. Later, you can view and audit these logs to evaluate how BarTender performs or identify common user errors within the application. In the Starter Edition, text logging is configured in the BarTender Designer application.

## BarTender companion applications in the Starter Edition

Only two companion applications are enabled in the Starter Edition: BarTender Administration Console and BarTender History Explorer.

### BarTender Administration Console

---



BarTender Administration Console application is used to control and configure important aspects of BarTender, such as printers, database connections, application integrations, security, licensing, logging and other local services used by BarTender.

Not all BarTender Administration Console features are active in BarTender Starter Edition.

In BarTender Starter Edition, Administration Console users can:

- Setup printers, view printer or fax properties, edit printing preferences, specify redirection and failover settings, specify advanced driver settings and manage default printer management for each installed printer
- Manage BarTender licenses and the BarTender License Server
- View, start, stop and restart all the services that BarTender applications rely on to function correctly, including:
  - BarTender Print Scheduler Service, which manages BarTender print engines and intelligently assigns print jobs to them while maximizing performance and maintaining print order
  - BarTender System Service, which manages the logging of information to the BarTender System Database and the reprinting of documents
  - BarTender Licensing Service, which manages BarTender licenses on the network
  - The Windows Print Spooler, which enables applications to print documents by using Windows printer drivers

### BarTender History Explorer

---



BarTender History Explorer is the companion application displaying information stored in the BarTender System Database, including print jobs, application messages, security permission checks and inventory levels. In addition, History Explorer provides an easy-to-use and customizable interface that you can use to monitor data in the BarTender System Database

BarTender History Explorer, when BarTender is operating as a Starter Edition, logs up to seven (7) days of BarTender suite messages and print job log entries.

### BarTender Starter Edition licensing considerations

BarTender uses printer-based licensing to control the maximum number of printers BarTender supports. Available printers can be connected to a local computer or located anywhere on a LAN or WAN network. BarTender Starter Edition supports a maximum of three (3) printers.

## BarTender Professional Edition

BarTender Professional Edition provides **dynamic business printing** with data entry forms, Intelligent Templates™, database connectivity, security, encoding and on-demand printing. BarTender Professional Edition is for organizations small and large that need to standardize and operationalize their label printing operations.

BarTender Professional Edition includes all the features and capabilities present in the BarTender Starter Edition. Unlike the BarTender Starter Edition, the BarTender Professional Edition can support an unlimited number of licensed printers.

BarTender Professional Edition adds features centered around five requirements:

- Simplified and standardized label designs with templates that vary at print time
- Labels with data from external and embedded databases
- Standardized and automated data input for ad hoc printing
- Support for encoding technologies and more printers
- Separate access to label design and label printing capabilities from anytime, anywhere

### Features

#### **Simplified and standardized label designs with templates that vary at print time**

---

The following features are enabled in BarTender Designer with a BarTender Professional Edition application license:

- Intelligent Templates™
- Advanced serialization
- Full color support
- Application and document security
- GS1 Application Identifier Wizard
- External database connectivity
- Internal database support
- Data Entry Forms
- Enhanced printing and encoding support

#### **BarTender Intelligent Templates™**

---

BarTender Intelligent Templates™ increase the productivity of label designers and print operators by reducing the design and maintenance of individual label templates. Users with hundreds of existing label templates can reduce the files they manage to just a handful of flexible documents. Intelligent Templates™ automatically trigger the printing of design layers and even specified objects based on a single data source, database field, or multiple conditions — all without scripting. With Intelligent Templates™, BarTender can adjust on the fly to handle changes in the data source or label “look and feel.” Print operators do not need to pre-sort or stage print output by data or label type — critical when the production environment is a blend of different products, configurations, brands or customers.

**Benefit:** BarTender Intelligent Templates™ eliminates the need to create and maintain hundreds of separate templates.

Feature	Description
<b>Label templates</b>	Design and automation tools that leverage data to reduce the number of label files you manage
<b>Layers</b>	Template objects may be stacked, hidden and reordered when created on uniquely identifiable layers
<b>Conditional printing</b>	Create data-driven automation rules that specify when different objects, layers or templates in your document will visibly print or become hidden
<b>Template selector</b>	Conditionally print one or more specific templates when multiple templates are available in a document
<b>Suppression</b>	Ignore the content of a data source under certain conditions
<b>Automatic face detection and cropping</b>	Automated image capture creates perfectly cropped photos for ID badges and card printing
<b>Scriptable object properties</b>	Modify the look and feel of template objects by using powerful Visual Basic scripts
<b>Data sourced color</b>	Dynamically change the color of a template object using values stored in database fields

## BarTender serialization

Many industries, including pharmaceutical, food and medical device manufacturers, use serial numbers and serialization schemes to track their products after leaving the factory or packaging plant. BarTender Professional Edition supports advanced capabilities to add serialization to text, barcode and encoder objects.

Feature	Description
<b>Custom methods</b>	Use alphabetic, numeric, alphanumeric, hexadecimal or custom serialization sequences
<b>Configurable values</b>	Set serial number values using predefined constants, database fields or shared named data sources
<b>Print controls</b>	Control how many serial numbers or copies per serial number are printed
<b>Serialization frequency</b>	Define serialization based on events and data changes
<b>Multiple data sources</b>	Build complex sequencing patterns using data from multiple data sources
<b>Full color support</b>	Design commercial quality labels using PANTONE and data sourced colors
<b>Role-based security</b>	Assign user and group permissions to applications and functions using Windows Active Directory users and groups, or local Windows users
<b>Document and print password</b>	Require a password to design and/or print a document
<b>Visual Basic scripting</b>	Create scripts for custom data processing

## BarTender full color support

---

BarTender Designer Color Picker makes it easy to design and reuse colors throughout BarTender documents. The Professional Edition includes support for PANTONE® color selection.

## BarTender application and document security

---

BarTender includes application-based security measures that are easy to activate and require little administrator input or continued administration. BarTender Professional Edition adds three security measures to secure the design and print environment.

Feature	Description
<b>Print-only passwords</b>	At an application level, require a password to perform any action other than print. Print-only passwords cause BarTender Designer to automatically start in “print-only” mode to prevent accidental design changes
<b>Document passwords</b>	At a document level, protect specific aspects of selected BarTender documents from malicious or accidental modification and optionally prevent unauthorized printing
<b>User and Group permissions</b>	Control — allow or limit — which aspects of BarTender a user or group can access

## Labels with data from external and embedded databases

---

### *BarTender external database connectivity support*

With BarTender database support, BarTender can populate labels using data stored in external data sources at print time, separating the label design from the data printed on the label.

<b>Benefit:</b>	BarTender external database integration connects BarTender to the critical business data needed for accurate label production, eliminating manual data entry, reducing errors and improving efficiency.
-----------------	---

Feature	Description
<b>Database setup wizard</b>	Tool to enable connections to a variety of relational databases and data file types
<b>Online service connectivity</b>	Connect to Google Sheets, Microsoft Excel online and QuickBooks online
<b>External database connectivity</b>	Connect document designs to over 20 data sources including text files, XML, JSON, Microsoft Excel, Microsoft Access, Microsoft SQL Server, Oracle, Firebird, IBM DB2, IBM Informix, Microsoft Azure SQL, MySQL, MariaDB, PostgreSQL, SAP IDoc, SAP HANA <sup>8</sup> , OLE DB and OLE ODBC to print dynamically
<b>Write back to databases</b>	Write back to SQL-based databases to keep track of printed records, serial numbers and much more

---

<sup>8</sup> BarTender 2022 Preview 1

## **BarTender internal database table support**

With BarTender internal database table support, users can create and manage database tables with records and fields linked to BarTender objects and conditionally accessed at print time.

**Benefit:** BarTender internal database table support eliminates the need for external database access for text and images used in labels, reducing complexity and improving designer and operator efficiency.

Feature	Description
<b>BarTender Data Builder</b>	Build and manage a local database without the need for external applications like Excel or Access
<b>Embedded data tables</b>	Create database tables that travel with BarTender document designs
<b>Database sourced tables</b>	Easily create label templates containing tables that draw their data from a database or external file

### **BarTender Data Builder**



Data Builder is the companion application in the BarTender suite used to create and manage BarTender embedded database tables, which can include the following items:

- One or more data tables that include text, numbers, images, dates or times
- One or more phrase libraries — specialized data tables — containing frequently used text content (Enterprise Edition only)

With Data Builder, users create data tables containing text, images and phrases used in label and document templates. Data Builder eliminates the need for external applications (text editors, Microsoft Access, Microsoft Excel and others). Users connect to database tables in BarTender Designer, importing data into a BarTender document or any other application in the BarTender suite where a database connection is used.

Data tables built with the Data Builder application are shareable between BarTender documents.

### **BarTender embedded data tables**

BarTender embedded data tables are database tables built using BarTender Designer. BarTender embedded data tables become part of a specific BarTender document.

Data tables built with the BarTender Designer embedded data table editor are not shareable between BarTender documents.

## **Standardized and automated data input for printing**

---

### **BarTender data entry forms**

BarTender data entry forms provide a structured user interface for standardized label and document printing. Users access data entry forms to select or enter data required for the label or document at print time.

**Benefit:** With BarTender data entry forms, designers can create dynamic, easily accessible forms that standardize the data capture and label print process.

Feature	Description
<b>Powerful form controls</b>	Make data input and selection easy by leveraging over 15 highly configurable form controls
<b>Keyboard and mouse input</b>	Use keyboard and mouse commands to select or enter data into forms at print time
<b>Data validation</b>	Reduce user input errors by introducing data validation and error checking
<b>Database record selection</b>	Select or query the correct database records at print time using helpful form controls
<b>Scanner input</b>	Use a barcode scanner to input information to data-entry forms at print time
<b>Weighing scale input</b>	Populate the weight of an item at print time by connecting your weighing scale to BarTender
<b>Image capture</b>	Capture images at print time for ID cards or event badge printing
<b>Kiosk mode</b>	Lockdown specific data entry forms for print operators

## Support for encoding technologies and more printers

### *BarTender enhanced encoding support*

With BarTender labeling software, creating an RFID tag, a magnetic stripe or a smartcard is just as easy as printing a barcode label.

**Benefit:** When the corresponding Drivers by Seagull™ are installed, BarTender supports several RFID, magnetic stripe and smartcard standards on capable printers — making it easy to produce identification labels containing encoded information.

### *BarTender print to pdf*

BarTender software can generate electronic documents, such as PDFs (by BarTender’s PDF engine or others) and Microsoft’s MS XPS Writer. BarTender treats all electronic document printing as if it were printing to a physical printer, using one of the available printer licenses. A printer license can support the electronic printing of up to 2,000 items or “labels” per seven-day period. This feature is available for Professional and above editions.

## Separate access to label printing capabilities from anytime, anywhere

In many environments, print operators work at different stations than label designers or users require access to printing from remote locations. In addition to the main BarTender Designer application, BarTender Professional Edition includes two applications providing dedicated printing services — BarTender Print Station application for printing from Windows-based workstations and BarTender Print Portal service for printing from devices running a modern web browser — either local or remote.

Print Portal and Print Station share the same look and feel, delivering a similar printing experience to users printing from any device, anywhere.

### **BarTender Print Station**

BarTender Professional Edition includes the Print Station companion application — a simple, efficient interface for selecting and printing BarTender documents.



Print Station provides a user-friendly interface for selecting and printing BarTender documents. When you use Print Station, you eliminate the need to open and print documents through BarTender or external applications. Print Station runs on a Windows workstation and has access to locally installed devices — weighing scales, for example — and local Windows printer permissions.

BarTender Print Station's simple interface makes it easy for users to do the following:

- Find and print BarTender documents using groups, sorting and search
- View document comments and file information
- Preview BarTender documents as they are printed
- Print documents with a single click
- Access printing from a kiosk (Windows 10 kiosk mode)
- Custom corporate branding

### **BarTender Print Portal**



BarTender Print Portal is a web-based application that provides an interface that makes it quick and easy to locate and print BarTender documents. Users can print documents by browsing to the web page URL hosted by a server that has BarTender installed. Because Print Portal runs on top of the Windows IIS web server, you can access BarTender documents from any modern browser connected to the network. Using Print Portal, anyone can print BarTender documents remotely, no matter what kind of device, operating system, or modern web browser is being used.

BarTender Print Portal supports:

- Find and print BarTender documents using groups, sorting and search
- Print documents with a single click
- Secure printing from any operating system or device
- Driverless printing — no printer drivers required on the server
- Print to PDF support
- Custom branding (logo and colors) to reflect the host organization
- Custom corporate branding

## **BarTender companion applications in the Professional Edition**

### **BarTender Administration Console**

---

Not all BarTender Administration Console features are active in BarTender Professional Edition.



In BarTender Professional Edition, Administration Console users can:

- Setup printers, view printer or fax properties, edit printing preferences, specify redirection and failover settings, specify advanced driver settings, and manage default printer management for each installed printer
- Manage BarTender licenses and the BarTender License Server
- View, start, stop and restart all the services that BarTender applications rely on to function correctly, including:
  - BarTender Print Scheduler Service, which manages BarTender print engines and intelligently assigns print jobs to them while maximizing performance and maintaining print order
  - BarTender System Service, which manages the logging of information to the BarTender System Database and the reprinting of documents
  - BarTender Licensing Service, which manages BarTender licenses on the network
  - The Windows Print Spooler, which enables applications to print documents by using Windows printer drivers

The following security features are enabled in the BarTender Administration Console with a BarTender Professional Edition application license:

- Role-based security
- Turn on/off document design and/or and printing passwords

### **BarTender History Explorer**

---

BarTender History Explorer logs seven (7) days of BarTender Suite messages, print jobs, and security permission checks in the Professional Edition.

### **BarTender Data Builder**

---

Designers use Data Builder to create and manage BarTender embedded database tables.

### **BarTender Print Station**

---

Print Station provides a user-friendly interface for selecting and printing BarTender documents.

### **BarTender Print Portal**

---

Print Portal is a web printing service used by local and remote users to find and print labels and documents from a modern web browser.

## BarTender Automation Edition

**BarTender Automation Edition** provides **efficient automated printing** for enterprises integrating label printing with business applications and fully automating their label and document printing operations. BarTender Automation Edition includes tools that enable production-oriented printing driven by process and task automation, business system integration and printing resilience.

BarTender Automation includes all features and capabilities present in BarTender Starter Edition and BarTender Professional Edition. BarTender Automation Edition adds features centered around three requirements:

- Seamlessly integrate automated label and document printing with existing business systems
- Ability to automate tasks and processes associated with label printing
- Reprint options for damaged or defective labels

### Features

BarTender Automation includes all the features and capabilities present in BarTender Starter Edition and BarTender Professional Edition.

### Seamlessly integrate automated label and document printing with existing business systems

---

#### *BarTender business systems integrations*

BarTender business systems integrations streamline print operations with straightforward integration between enterprise applications and label print operations.

<b>Benefit:</b>	BarTender business system integration ties enterprise applications and data — ERP, MES, WMS or homegrown systems — to label printing functions. BarTender business system integration supports mission-critical print processes, increases labeling accuracy and improves efficiencies throughout the label printing process.
-----------------	---

With BarTender integrations, you can access data from external systems and run tasks automatically without ever needing to start BarTender Designer or any other application.

Three BarTender applications are involved in the design and deployment of an application integration:

- BarTender Designer is used to create the document layout and configure the variable data fields updated through the integration
- BarTender Integration Builder is used to build, configure and test integrations
- BarTender Administration Console is used to deploy, monitor and manage integrations using the BarTender Integration Service

## BarTender Integration Builder



BarTender Integration Builder is used to configure integrations that seamlessly connect the printing capabilities of BarTender to virtually any enterprise business operation or process without the need for programming. When you create an integration, you define a trigger event that you want the BarTender Integration Service to monitor. When a trigger event occurs, the BarTender Integration Service performs the actions you configured in Integration Builder.

With BarTender’s configurable and robust application integration features, you can automatically perform integration tasks, including:

- Initiate the print process automatically at “trigger” events, such as a database modification, the arrival of an email message, a saved file, or a web service request
- Connect to and communicate with clients over TCP/IP, UDP or HTTP
- Perform basic file operations, such as move, rename, delete, or copy
- Integrate directly with business systems, including enterprise resource planning (ERP), warehouse management systems (WMS) or manufacturing execution systems (MES).

For example, suppose that your ERP system routinely saves a data file to a specific network folder location or a cloud data store. Using Integration Builder, you configure an integration that monitors the folder and automatically performs one or specified actions when a new file arrives. Actions can include data transformation, document printing, email generation, and many others.

Feature	Description
<b>Integrate with business systems</b>	Seamlessly integrate automated label and document printing with any business system (ERP, WMS, or MES), including SAP, Oracle, Infor, Körber, Microsoft Dynamics, Epicor, NetSuite, Sage and more.
<b>Integration actions</b>	Enable label printing, database queries, network communications and much more with over 70 action types
<b>Integrate using standard data formats</b>	Use standard data structures and formats such as XML, JSON, SAP IDoc, Oracle XML, ASCII & Unicode coded text-based data for data interchange
<b>Run integration actions using multiple methods and sources</b>	Files on any supported file system including local, network and cloud-based folder locations (Amazon S3, Dropbox, FTP/SFTP)
	Bidirectional TCP or UDP network socket
	Data RS-232 Serial COM port
	Email reception and print according to received email contents
	RESTful web services to exchange data in real-time to run actions
	Microsoft Message Queue according to a time schedule or posted message
	SQL database or data file field changes
Defined time schedule	

## BarTender .NET SDK



For advanced process automation and integration scenarios, the BarTender .NET SDK allows enterprises to build custom applications or web front ends to improve print operations performance and efficiency.

<b>Benefit:</b>	Enterprises can develop custom applications that automate BarTender operations, integrate with existing business processes, reduce manual operator interaction and improve print operations' performance and efficiency.
-----------------	--

The .NET SDK includes a set of APIs, example projects and documentation on controlling most aspects of BarTender programmatically using modern Windows programming. The .NET SDK includes the following APIs:

- Print Engine API: a set of classes to launch and control a single BarTender print engine
- Print Scheduler API: a set of classes to programmatically control the Print Scheduler Windows service of the BarTender software
- Librarian API: a set of classes to perform content management and revision control programmatically (instead of using BarTender Librarian and its workflow designer capability)
- System Database API: a set of classes providing access to log data (for generating reports) and reprint of logged print jobs

## Ability to automate processes associated with label printing

---

BarTender process automation is a collection of tools and capabilities used to simplify and streamline print operations. With BarTender process automation, designers and developers can:

- Create process files — using a no-code process builder — to automate repetitive print-related workflows and tasks
- Improve print accuracy and efficiency with intelligent forms and documents that automatically perform tasks and actions
- Build templates for portable printers and terminals that merge user input information into the final printed output

<b>Benefit:</b>	BarTender process automation improves print operations accuracy and consistency, reduces print process time and eliminates manual process errors.
-----------------	---

Feature	Description
<b>BarTender Process Builder</b>	An easy graphical UI to build label and document printing processes without the need for application development
<b>Intelligent form controls</b>	Intelligent forms trigger processes and actions based on user selections or predefined events
<b>Document-level actions</b>	Automatically perform tasks or actions when the status of a document changes
<b>Printer code templates</b>	Create exportable printer code templates used by print systems and applications that merge local data into final documents sent to printers.

### **BarTender Process Builder**



Process Builder is a stand-alone companion application used to create customizable process files that run one or more actions in sequence to automate repetitive operations. Additionally, Process Builder can be used as an alternative to programming interfaces such as the Microsoft .NET Framework SDK, the command line interface, or BarTender XML (BTXML) scripts. The supported actions for Process Builder include many of the same actions that are available in Integration Builder.

BarTender Process Builder process files can execute various actions on multiple BarTender documents in a single operation. BarTender process file actions include:

- Print actions to print BarTender documents or execute BTXML scripts
- Transformation actions to manipulate data associated with a print job or process
- Input actions to read data or files
- Output actions to send information elsewhere (write files, send emails, send a web service request, send data to a serial port or network socket, add a message to a message queue)
- Execute actions to control process execution flow
- File actions to manipulate files and folders
- Database actions to handle database record sets

You can use a process file when an event in a business process requires repetitive steps. For example, whenever an order is received, you might need to:

- Print one copy of DocumentA.btw to printer X
- Print one copy of DocumentB.btw to printer Y
- Insert a record into a database
- Send a task completion email

With a BarTender process file, each time an order is received, you can automatically open and print the documents, update the database and send a task completion email—all in one operation.

### ***BarTender Intelligent Form controls (in BarTender Designer)***

Designers can use Intelligent Form controls to create sophisticated automated print operations without coding. With Intelligent Form controls, actions or groups of actions can be associated with forms when they are opened, closed after data has been entered or canceled. Actions can include:

- Transform actions that manipulate data
- Input actions that read data from a directory, file, port or socket
- Output actions that write or send data elsewhere or display a message or web page
- Execute actions to control the flow of actions
- File actions to manipulate files and folders
- Database actions to interact with databases
- Form actions to manage forms and print jobs

### ***BarTender document-level controls (in BarTender Designer)***

Like Intelligent Form controls, document-level controls associate actions or groups of actions when document events occur. Events include the start, completion or cancellation of a print job and the reading of file records and data entry completion. Document-level actions allow designers to create sophisticated automated print operations without coding. Actions can include:

- Transform actions that manipulate data
- Input actions that read data from a directory, file, port or socket
- Output actions that write or send data elsewhere or display a message or web page
- Execute actions to control the processing flow of the document, including shell and PowerShell commands
- File actions to manipulate files and folders
- Database actions to interact with databases
- Form actions to manage forms and print jobs

### ***Printer code templates (in BarTender Designer)***

In some printing situations, portable devices or terminals are used to print items. These portable devices and terminals typically merge user input information, such as lot number and expiration date, into the printer code for a template and then send the completed printer code directly to the printer. Other systems might use software printing applications that merge user information into the printer code for an item. These applications might be running on a non-Windows computer. Taken collectively, these devices and merge applications are called “print systems.”

With the Automation Edition of BarTender, you can create a document template and then export the document to a printer code template — a data file containing printer commands and placeholders for data on your template. You can then merge and print the printer code template by using your print system.

## Reprint options for damaged or defective labels

---

BarTender print recovery provides print operators peace of mind. With BarTender print recovery, printed output can be reprinted on-demand — a critical requirement for highly automated environments when print problems are discovered or encountered hours or days after the original print run is executed.

<b>Benefit:</b>	For unforeseen problems discovered after the original print run, print operators can rerun completed jobs without recreating the original data. BarTender print recovery provides print operators peace of mind, knowing that time-dependent output can be recovered and reprinted on-demand.
-----------------	---

In the Automation Edition, BarTender includes two methods to access print history and reprint jobs: BarTender History Explorer and BarTender Reprint Console.

### *BarTender Reprint Console*



The Reprint Console companion application provides an easy-to-use and configurable interface that compliance and production managers can use to view, select and reprint items that might have been lost or damaged. A BarTender Automation license allows unlimited reprints of print jobs logged over the preceding seven days.

## BarTender companion applications in the Automation Edition

### BarTender Administration Console

---

Not all BarTender Administration Console features are active in BarTender Automation Edition.

In BarTender Automation Edition, Administration Console users can:

- Setup printers, view printer or fax properties, edit printing preferences, specify redirection and failover settings, specify advanced driver settings, and manage default printer management for each installed printer
- Manage BarTender licenses and the BarTender License Server
- View, start, stop and restart all the services that BarTender applications rely on to function correctly, including:
  - BarTender Print Scheduler Service, which manages BarTender print engines and intelligently assigns print jobs to them while maximizing performance and maintaining print order
  - BarTender System Service, which manages the logging of information to the BarTender System Database and the reprinting of documents
  - BarTender Licensing Service, which manages BarTender licenses on the network
  - The Windows Print Spooler, which enables applications to print documents by using Windows printer drivers
  - BarTender Integration Service, which enables execution and management of BarTender integrations
- Deploy, start and stop integrations that are running on a server

- Monitor integrations, including integration status, type and run time
- Define cloud storage locations for integrations
- Define print job logging parameters for reprint
- Set permissions and permission check logging (up to seven days) for BarTender companion applications
  - Log BarTender activity for auditing purposes
- Administer role-based security
- Turn on/off document design and/or and printing passwords

---

## BarTender History Explorer

---

BarTender History Explorer in the Automation Edition logs up to seven (7) days of suite messages, print job logs and security permission checks. Additionally, the History Explorer supports reprinting of print jobs that are logged.

---

## BarTender Data Builder

---

Designers use Data Builder to create and manage BarTender embedded database tables.

---

## BarTender Print Station

---

BarTender Print Station, when BarTender is operating as an Automation Edition, can run process files that you created using BarTender Process Builder, legacy Batch Maker files, and BarTender XML (BTXML) script files.

---

## BarTender Print Portal

---

Print Portal is a web printing service used by local and remote users to find and print labels and documents from a modern web browser.

---

## BarTender Integration Builder

---

BarTender Integration Builder is used to implement integrations that seamlessly connect the printing capabilities of BarTender to enterprise business applications without the need for programming.

---

## BarTender Process Builder

---

Process Builder creates customizable process files that run one or more actions in sequence to automate repetitive operations.

---

## BarTender Reprint Console

---

Reprint Console provides an easy-to-use and configurable interface to view, select and reprint items that might have been lost or damaged. BarTender Reprint Console in the Automation Edition can reprint up to seven (7) days of print jobs.



## BarTender Enterprise Edition

**BarTender Enterprise Edition** provides **comprehensive enterprise-wide printing** with centralized management, workflow orchestration and revision control, REST API integration, auditing, web and mobile printing, and added security. BarTender Enterprise Edition includes:

- Content management for centralized storage and revision control
- Workflow orchestration for label lifecycle management
- Web-enabled access to printing and workflow orchestration
- Enhanced security and access logging
- Business continuity and disaster recovery support
- Global operations support
- Visibility and control over all Windows print service operations

### Features

BarTender Enterprise includes all the features and capabilities present in BarTender Starter Edition, BarTender Professional Edition and BarTender Automation Edition.

#### BarTender Designer features available in the BarTender Enterprise Edition

---

The following features are enabled in BarTender Designer with a BarTender Enterprise Edition application license:

- Phrase library editor for embedded data tables
- Global access to data fields stored in a central database

#### Content management for centralized storage and revision control

---

BarTender Librarian content management creates a more controlled, consistent and precise label printing environment for enterprises. BarTender Librarian content management allows groups of designers, administrators and other users to manage how BarTender documents and files are stored and revised.

**Benefit:** BarTender Librarian allows teams to securely manage BarTender documents and files cooperatively, adding lifecycle management and revision control to the label design and production process.

Feature	Description
<b>BarTender Librarian</b>	Track and manage the entire organization's label templates with a single document management application
<b>Centralized document storage</b>	Store BarTender documents in a centralized storage location
<b>Template files and revision control</b>	Manage revisions across the organization — roll out changes in an instant to all users

## BarTender Librarian



BarTender Librarian is a content management application that groups of designers, administrators and other users can use to manage BarTender documents cooperatively and securely. Librarian can help you better manage any printing system, but it is particularly valuable in regulated or secure environments, such as the medical, pharmaceutical, aerospace and chemical industries.

When you use Librarian, you store files in a centralized database rather than “loose” in the file systems of various computers, so files are easier to track and manage. File check-in and check-out processes prevent users from overwriting each other's changes. You can use revision control to retain copies of all previous versions of a file so that you not only have a history of who made what changes and when, but you can also retrieve copies of the earlier versions and even revert a file to an older version. You can use Librarian and Administration Console to control which users can access files in Librarian and what those users can do with the files.

## BarTender workflow orchestration for label lifecycle management

---

For organizations who require control and traceability of label design and printing processes — industries with regulatory compliance mandates, for example — BarTender workflow orchestration enables a controlled and tracked label printing environment. Workflows consist of states that you configure (for example, Design, Staging, and Production) and transitions between these states that you update (Submit for Staging and Submit for Production). You can specify the users or groups you want to access the file for viewing, editing, and moving to the next stage for each state and transition.

<b>Benefit:</b>	BarTender workflow orchestration allows teams to define, manage and track the lifecycle of labels and documents.
-----------------	--

In BarTender, three applications manage orchestration:

- BarTender Administration Console Workflow Designer is used to configure workflows and apply them to the files you want (by creating workflow rules)
- BarTender Librarian is a dedicated application used to send files through the workflow progression.
- BarTender Print Portal enables web-based access to orchestration workflows.

Feature	Description
<b>Define workflow team</b>	Increase team accountability during the label revision and publishing process
<b>Workflow designer</b>	Speed up label design, review and production process with drag and drop, visual workflow designer
<b>Workflow email alerts</b>	Send notification email messages to specified users and groups whenever a file goes through a particular transition or enters a particular state
<b>Print Station support</b>	Streamline workflows by facilitating document review and approval processes from a dedicated print application
<b>Print Portal support</b>	Streamline workflows by facilitating online document review and approval processes

## Access to printing and workflow orchestration

---

With BarTender, label designers and print operators can securely access printing and workflow orchestration from Print Station, Print Portal or REST APIs. Workflows can help organizations automate business processes, such as reviewing label designs or approving documents for production. With workflows, organizations can:

- Create representations of the life cycle for all files
- Track the status of files from start to finish
- Send notifications to users and groups when a file changes
- Limit the users who have access to the file at each stage in its life cycle
- Create branches at decision points

### ***BarTender Librarian Workflow Designer***

The Workflow Designer, accessed from the Librarian Setup page in the BarTender Administration Console, creates comprehensive labeling workflow processes for BarTender documents and files stored in BarTender Librarian. The drag-and-drop graphical user interface makes it easy to create workflows that specify the states that a document can be in, such as “Design,” “Review,” or “Production.”

### ***BarTender Print Station***

BarTender Print Station<sup>9</sup> in the Enterprise Edition adds Librarian integration to view and manage revision history and workflow states. Additionally, root folders — folders Print Station uses to display available documents — can be stored in a Librarian folder.

### ***BarTender Print Portal***

Print Portal is a web printing service used by local and remote users to find and print labels and documents from a modern web browser. BarTender Print Portal in the Enterprise Edition adds support for:

- Librarian integration to view and manage revision history and workflow states
- Windows authentication and single sign-on (SSO) using Microsoft Internet Information Services (IIS) and Active Directory Federation Services (AD FS)<sup>10</sup>

---

<sup>9</sup> BarTender 2022 Preview 1

<sup>10</sup> Not supported on Windows 10 Home Edition

## BarTender Print Portal REST API



Developers can use the Print Portal REST API to automate Print Portal tasks and integrate Print Portal with other applications. A REST API is a software architectural style for acquiring and manipulating textual representations of the content of web resources.

The Print Portal REST API makes it possible for you to automate the following tasks:

- Perform authentication
- List and enumerate root folders
- List and enumerate folders and files per root folder
- List and enumerate printers
- Print documents

Print Portal contains a REST API specification system called Swagger. Swagger can be considered a REST API help system that explains each function and an execution environment for testing requests. Automation of Print Portal tasks, using the Print Portal REST API, should be performed by programmers familiar with REST APIs and JavaScript Object Notation (JSON) format.

### Enhanced security and access logging

---

BarTender enterprise security adds measures to meet access, protection, logging, and complete audit trail requirements for organizations in regulated industries or organizations concerned about security breaches. Enterprises can detect access attempts, require per-document user authentication and encrypt BarTender documents to secure the BarTender environment from unauthorized modification and use.

<b>Benefit:</b>	BarTender enterprise security provides additional protection and record-keeping functions, including complete audit trail capture often required in regulated industries and compliance use cases.
-----------------	--

Feature	Description
<b>Electronic signatures</b>	Require an electronic signature (or user login credentials) before users can perform BarTender actions
<b>Document encryption</b>	Fully encrypt BarTender documents to stop unauthorized access, sharing or distribution
<b>Logging permission checks</b>	Log permission checks to detect unauthorized access BarTender document or application access attempts

### Business continuity and disaster recovery support

---

BarTender supports a licensing server redundancy solution that provides automatic failover to keep print production environments running seamlessly if one license server fails. License servers can be configured in a backup relationship that uses two servers or a triad relationship that uses three. If a BarTender client cannot reach the primary server for any reason, the client automatically connects instead to the other servers in the relationship.

## Global operations support

---

### ***Multi-language phrase support***

Phrase Libraries are specialized data tables containing frequently used content, including multi-lingual text. A BarTender document can connect to a phrase library, dynamically move the translated phrases and text into the label design and print the translated fields at print time. The Phrase library editor is available in BarTender Designer (for libraries accessible only in a single document) and BarTender Data Builder (globally sharable libraries). The Phrase library editor includes an auto-translate capability to convert phrases into over 140 languages and import or export comma-separated value (CSV) or Translation Memory Exchange (TMX) files.

### ***Global database fields***

A global data field is a data source stored in the BarTender System Database, making the data source available to any document opened in an instance of BarTender connected to the same System Database. To use global data fields, you must first configure the BarTender System Database.

## Visibility and control over all Windows print service operations

---

### ***BarTender Printer Maestro***



The Printer Maestro application provides a convenient way to monitor printers, print jobs and printing-related inventory items, such as toner, print media, print heads and memory. Printer Maestro can send email notifications, instant messages, or text messages for various events, including printer errors or warnings and inventory use thresholds.

Printer Maestro can be used to:

- View inventory information for printer-related items
- View and manage the computers on the network that are running the Printer Maestro service
- View and manage local and remote printers on the network
- View information related to active print jobs
- Reprint print jobs stored in the BarTender database
- View historical print job-related information, messages and warnings

## BarTender companion applications in the Enterprise Edition

### BarTender Administration Console

---

In BarTender Enterprise Edition, Administration Console users can:

- Setup printers, view printer or fax properties, edit printing preferences, specify redirection and failover settings, specify advanced driver settings, and manage default printer management for each installed printer
- Manage BarTender licenses and the BarTender License Server
- View, start, stop and restart all the services that BarTender applications rely on to function correctly, including:
  - BarTender Print Scheduler Service, which manages BarTender print engines and intelligently assigns print jobs to them while maximizing performance and maintaining print order
  - BarTender System Service, which manages the logging of information to the BarTender System Database and the reprinting of documents
  - BarTender Licensing Service, which manages BarTender licenses on the network
  - The Windows Print Spooler, which enables applications to print documents by using Windows printer drivers
  - BarTender Integration Service, which enables execution and management of BarTender integrations
  - BarTender Printer Maestro, which monitors local printer status and enables network printer management
- Deploy, start and stop integrations that are running on a server
- Monitor integrations, including integration status, type and run time
- Define cloud storage locations for integrations
- Define print job logging parameters for reprint
- Set permissions and permission check logging (unlimited) for BarTender companion applications
  - Log BarTender activity for auditing purposes
- Setup redundant license server relationships
- Set permissions and logging options for Print Portal
- Administer and manage a centralized BarTender System Database
- Create Librarian workflows and workflow rules
- Administer role-based security
- Turn on/off document design and/or and printing passwords
- Set electronic signature policies
- Set document encryption policies

---

## BarTender Librarian

---

BarTender Librarian is a content management application that groups of designers, administrators and other users can use to manage BarTender documents cooperatively and securely

---

## BarTender History Explorer

---

BarTender History Explorer in the Enterprise Edition can centrally log an unlimited days' worth of BarTender suite messages, including print job history and security permission checks from all networked BarTender installations. Additionally, with BarTender History Explorer, users can view and reprint any logged print job. BarTender documents that you view and/or reprint can reside in the Librarian database.

---

## BarTender Data Builder

---

BarTender Data Builder in the Enterprise Edition can be used to create Phrase libraries.

---

## BarTender Print Station

---

BarTender Print Station<sup>11</sup> in the Enterprise Edition adds Librarian integration to view and manage revision history and workflow states. Additionally, root folders — folders Print Station uses to display available documents — can be stored in a Librarian folder.

---

## BarTender Print Portal

---

Print Portal is a web printing service used by local and remote users to find and print labels and documents from a modern web browser. BarTender Print Portal in the Enterprise Edition adds support for:

- Librarian integration to view and manage revision history and workflow states
- Windows authentication and single sign-on (SSO) using Microsoft Internet Information Services (IIS) and Active Directory Federation Services (AD FS)<sup>12</sup>
- REST API to programmatically automate Print Portal tasks

---

## BarTender Integration Builder

---

BarTender Integration Builder is used to implement integrations that seamlessly connect the printing capabilities of BarTender to enterprise business applications without the need for programming. In the BarTender Enterprise Edition, BarTender Integration Builder can open and save integrations in a Librarian folder.

---

<sup>11</sup> BarTender 2022 Preview 1

<sup>12</sup> Not supported on Windows 10 Home Edition

## **BarTender Process Builder**

---

Process Builder creates customizable process files that run one or more actions in sequence to automate repetitive operations. In the BarTender Enterprise Edition, you can save BarTender process files in a Librarian folder and edit them using Process Builder. Additionally, process files can refer to BarTender documents stored in a BarTender Librarian folder.

## **BarTender Reprint Console**

---

Reprint Console provides an easy-to-use and configurable interface to view, select and reprint items that might have been lost or damaged. In the BarTender Enterprise Edition, there is no limit to the number of days' history that Reprint Console can access. Additionally, BarTender documents that you view and/or reprint can reside in the Librarian library.

## **BarTender Printer Maestro**

---

Printer Maestro provides a convenient way to monitor printers, print jobs and printing-related inventory items (such as toner, print media, print heads and memory.)



## BarTender components and services

In addition to BarTender companion applications, BarTender includes these standard components and services.

### BarTender system database

BarTender system database is the central data store for the Enterprise Edition and the local storage for other editions. It is required for most of the features included in the Automation and Enterprise Editions of BarTender. It stores data such as the following:

- Events encountered by any BarTender application, such as error messages and dialogs
- Information about each print job that is sent from BarTender, such as the document that was printed and the time when 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

### BarTender services

#### BarTender System service

---

BarTender System service manages the logging of information to the BarTender System Database and the reprinting of documents. It manages BarTender application messages, print job history and printer status. It is automatically installed when BarTender is installed and communication to the BarTender System Database is enabled for BarTender Designer and companion applications.

#### BarTender Integration service

---

BarTender Integration service is the core windows service running on the BarTender Print Server. The Integration Service monitors for integration trigger events. When it detects a trigger event, it runs actions in response, such as transforming data and printing a BarTender document with that data. In the case of a file event, the data to be processed might be gathered from the file itself. In the case of a TCP/IP request or a serial port event, the data might be gathered from what is sent over that connection.

#### BarTender Print Scheduler service

---

BarTender Print Scheduler service manages BarTender print engines — instances of BarTender Designer automatically launched without a user interface — and intelligently assigns jobs to them while maximizing performance and maintaining print order and serialization. BarTender Print Scheduler Service uses a single pool of print engines so that resources are used efficiently. The Print Scheduler Service ensures the following:

- Jobs printed to a specific printer always come out of that printer in the order the requests were received.
- When documents contain embedded data that can change, such as serialized counters, they are bound to a single print engine to ensure that they are printed in the correct order.

## Printer Maestro service

---

The Printer Maestro service monitors local printer status, captures print job verification information and enables network printer management.

## BarTender BTXML script language

BarTender XML (BTXML) script is an XML schema created to work with BarTender. BTXML script is used to control and automate BarTender and print jobs. Third-party programmers can use BTXML to integrate BarTender into their applications to run BarTender and print jobs. BTXML script uses an XML-style format to communicate with BarTender to process print jobs. BarTender processes the code and then performs the task that the code defines.

Developers can create BTXML scripts as a script or as a file and then send them to BarTender by using any of the following methods:

- Integration Builder integration files
- Process Builder process files
- BarTender .NET SDK

## BarTender licensing

BarTender is licensed on a per printer basis. The maximum number of printers depends on the number of purchased printer licenses.

BarTender allows an unlimited number of licensed printers, except for the BarTender Starter Edition, which is limited to a maximum of three printers. Available printers can be connected to a local computer or located anywhere on a LAN or WAN network.

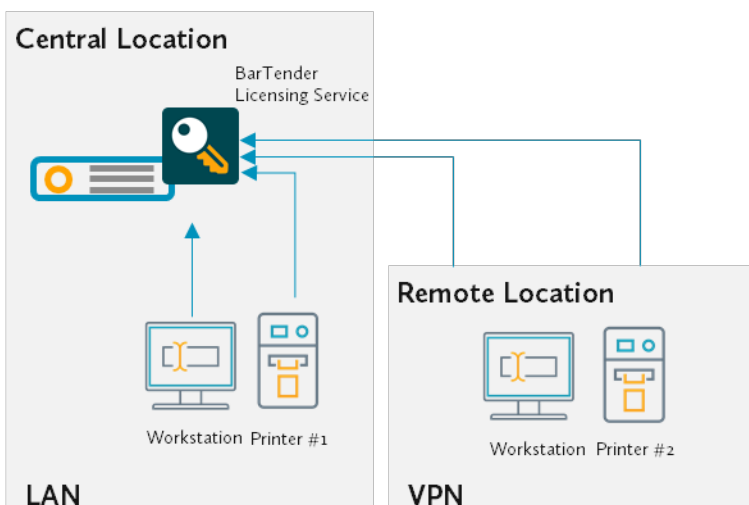
All editions of BarTender allow an unlimited number of users per license.

More details on Printer-based licensing can be found in the [BarTender Printer-Based Licensing Technical Document](#).

## BarTender Licensing service

---

BarTender Licensing service (BLS) is a Windows system service that runs unattended and enforces printer licensing by monitoring the printers that BarTender uses. It does not print items or communicate with printers in any way. BLS must be installed on at least one computer on the network to print BarTender documents.



Unlimited Users and Workstations licensed by total number of printers

BarTender Licensing Service (BLS) runs unattended on any computer on the network and performs the following functions:

- Monitors and tracks all printing activity by all copies of BarTender installed on a network, keeping track of the total number of printers that are being used
- Authorizes BarTender print requests based on the number of printers that are being used.

BLS does not require either a dedicated computer or a server operating system. You can optionally run a copy of BarTender on the same computer as the licensing service.