



# **Licensing for the Automation and Enterprise Automation Editions of BarTender**

Understanding Printer-Based Licensing  
and How to Configure Seagull License Server

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## Introduction to Printer-Based Licensing

Licensing for the Automation and Enterprise Automation editions of BarTender is managed by controlling the maximum number of *printers* that can be used. Available printers can be connected to a local computer or located anywhere on a LAN or WAN network. The Automation and Enterprise Automation editions of BarTender allow an unlimited number of users per license.

### **Available Printer Quantities**

Licenses for the Automation and Enterprise Automation editions of BarTender are available for three printers and above. These licenses allow an unlimited number of users.

### **The Seagull License Server**

Seagull License Server (SLS) enforces BarTender's printer licensing by monitoring the printers used by BarTender. It does not physically print items or communicate with printers in any way. SLS must be installed on one computer on your network in order to print with the Automation and Enterprise Automation editions of BarTender.

For more information, refer to the "Seagull License Server" topic in the BarTender help system:

[Seagull License Server](#)

### **WAN (Wide Area Network) Considerations**

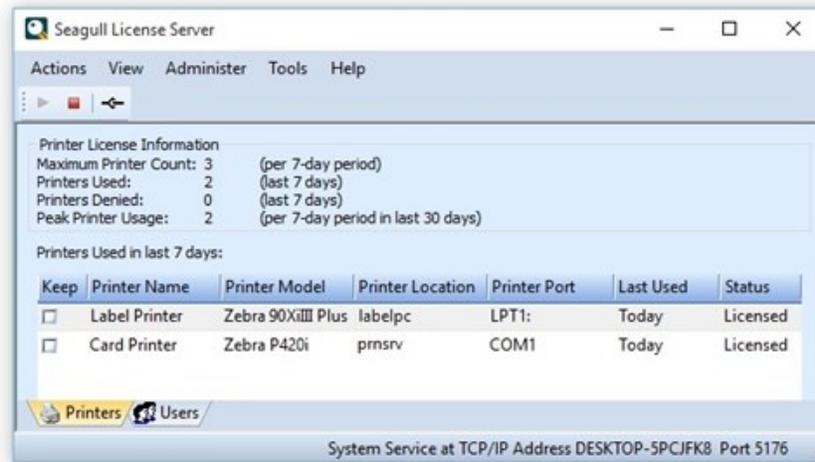
If you will be implementing a system that has BarTender communicating with SLS over a WAN, refer to the [WAN Usage Guidelines](#) chapter of this white paper.

### **Using Seagull License Server with Remote Desktop Services and Citrix XenApp**

If you will be using Citrix XenApp or Windows Remote Desktop Services, refer to the [Using Seagull License Server with Remote Desktop Services and Citrix XenApp](#) chapter of this white paper.

## How Seagull License Server Controls Printer-Based Licensing

A single copy of Seagull License Server (SLS) installed anywhere on a network can control the licensing of all the installed Automation and Enterprise Automation editions of BarTender. SLS's job is to grant or withhold permission to print. However, SLS does not physically print items or communicate with printers in any way.



SLS runs unattended on any computer on the network and performs the following functions:

- Tracks the total number of printers being used by all of the Automation and Enterprise Automation editions of BarTender installed on a network.
- Displays, logs and emails notifications of license violations.
- Authorizes print requests from copies of BarTender based on the number or printers being used.

SLS does not require either a dedicated computer or a “server” operating system. Also, you can optionally run a copy of BarTender on the same computer.

### When SLS Starts

SLS reads a “license file” to find the total number of licensed printers allowed. SLS then monitors the printer usage by all copies of BarTender installed on the network.

### When a Copy of BarTender Starts

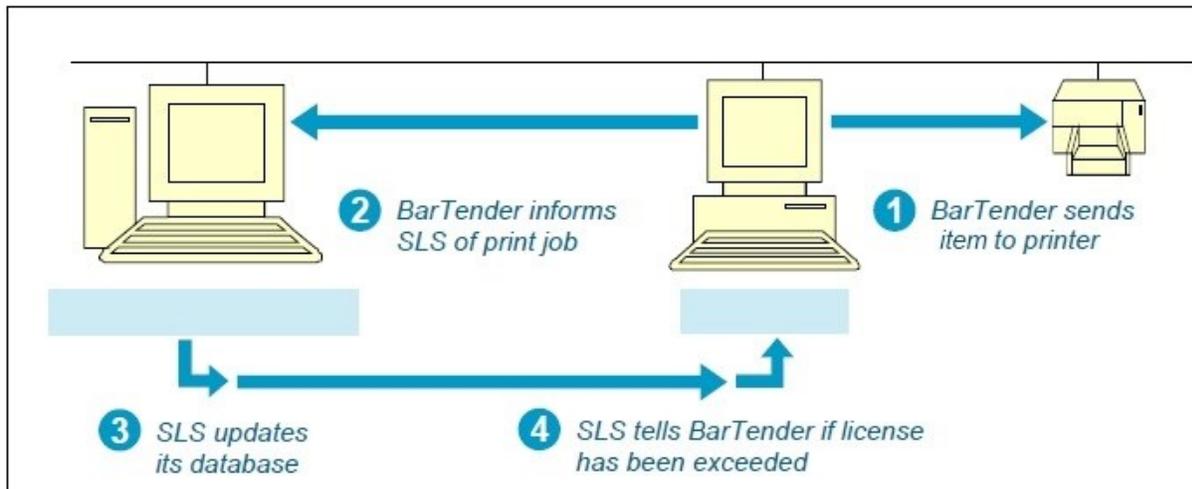
BarTender looks for SLS running on the network in order to establish communication support for future print requests.

### When BarTender Prints

Each time BarTender starts a print job, SLS updates the list of printers that have been used in the past 7 days.

## Details on Print Jobs and Printer License Management

When BarTender starts a print job:



1. BarTender outputs the print job using the local or network printer driver installed on the workstation. To maximize performance, the print job is normally initiated without waiting for any communication with SLS.
2. At the same time that the print job is transmitted, BarTender also sends a message to SLS telling it the printer's name, model, location and printer port.
3. SLS adds the printer to the used printer list if the printer is not already in the list. If it is in the list, then SLS updates its **Last Used** field.
4. SLS updates its list of the total number of printers used and printers available. If the new total of used printers exceeds the allowable limit, then SLS enters into a grace period and notifies BarTender. (For details, refer to the [License Violation Handling](#) section of this white paper.)

A printer that has been added to the used printers list remains there until it has not been used for 7 days, at which point it is automatically removed.



SLS uses the printer model, location and port as its criteria for distinguishing printers. Thus, the printer name is not the criterion.

## ***License Violation Handling***

To maximize printing performance, BarTender normally starts print jobs without waiting to hear back from Seagull License Server (SLS). However, once BarTender receives notification from SLS that one of the license limits has been exceeded (see below), BarTender will from then on wait to hear back from SLS that the license violation has been cleared up before any more print jobs can be started. Thereafter, BarTender will once again use the faster method of starting print jobs before it hears back from SLS.

### **Printer Limit Exceeded**

Once the number of used printers has already reached the maximum limit specified by an Automation or Enterprise Automation edition license and SLS receives a message that BarTender is attempting to use a printer not already in the Used Printer list, SLS will enter into the “30-day, Printer Limit Exceeded Grace Period.” (See the section [SLS's 30-day Printer Limit Exceeded Grace Period](#), below, for more details.)

If that grace period expires, Then SLS will continue to allow print jobs to the other printers on the Used Printer list, but will deny print jobs to additional printers.

### **Seagull License Server Not Found**

If SLS is not found by an Automation or Enterprise Automation edition of BarTender when a print job is attempted, BarTender will enter into the “72-hour SLS Connectivity Grace Period.” (See the section "BarTender's 72-hour SLS -Connectivity Grace Period", below, for more details.)

## ***BarTender's 72-hour SLS-Connectivity Grace Period***

In the event that BarTender is suddenly unable to communicate with SLS, BarTender does not immediately lose the ability to print. Instead, a 72 hour “grace period” begins counting down so that you can have time to resolve the problem without losing the ability to design templates or print items. (The “grace period” only applies to loss of communication with SLS and not to printer and user license limits being exceeded. That condition has its own separate grace period. See the section [SLS's 30-day Printer Limit Exceeded Grace Period](#), below, for more details.)

This grace period feature was introduced with BarTender 9.01 SR4.

### **Purpose of the “SLS-Connectivity Grace Period” Feature**

Seagull License Server is very easy to install and has proven to be extremely stable in the field. However, some types of system failures are beyond our control. For example, it is possible that the server hosting SLS might experience a hardware failure. Or, a network failure might occur that prevents communication between BarTender and SLS. Although events such as these are rare, the fact is that BarTender cannot differentiate these events from an attempt to use an improperly licensed copy of BarTender. This “grace period” ensures that mission critical production can continue without interruption. Because SLS is so easy to install and doesn't even require a true “server,” 72 hours (3 full days) should be enough time for any true owner of BarTender to get communications with SLS reestablished before printing truly becomes disabled.

## **Enabling of the “SLS-Connectivity Grace Period” Feature for New Installs**

After any Automation or Enterprise Automation edition of BarTender is first installed, it must contact and receive authorization from SLS before BarTender can print at all. After BarTender successfully contacts SLS, the 72-hour grace period feature becomes available. (We are just referring here to the grace period being available, not actually starting a grace period countdown, as described below.)

## **Initiating a “SLS-Connectivity Grace Period” Countdown**

Regardless of the source of the connectivity failure between BarTender and SLS, once a copy of BarTender on which the grace period feature is available loses contact with SLS, a 72-hour grace period countdown begins. Except for some notifications that may be generated, BarTender continues to function normally during the grace period.

## **When the SLS Connection Is Restored**

The restoration of the connection between BarTender and SLS can be detected by BarTender at any of the normal times that it checks for SLS:

- An attempt to print
- An attempt to export a printer code template

In addition, BarTender does enough periodic polling of SLS that, even without any of the above events occurring, BarTender will eventually detect the restored connection and reset the grace period countdown “clock.” Thereafter, if the connection with SLS is again lost, a full 72-hour grace period countdown will again be available.

## **When the Grace Period Expires**

If no communication with SLS is made for 72 hours after a copy of BarTender begins the grace period countdown, a variety of BarTender functions become disabled, including printing to a connected or remote printer, printing to a file, and exporting printer code templates. (Once connection with SLS is restored, BarTender will once again function without any limitations.)

## **The Timing of Grace Period Notifications**

When loss of communication with SLS causes your copy of BarTender to begin the grace period countdown, BarTender will not generate warning notifications with every print job. You will receive the notifications at the following times:

- At the start of the grace period, after which you have three days of normal operation remaining
- With two days remaining before the grace period ends
- With one day remaining
- With one hour remaining

You will also receive a notification if and when communication with SLS is restored.

## **Enabling Grace Period Notifications when Automating BarTender**

If you are running BarTender manually, you will receive any grace period notifications as pop-up dialogs. (There is nothing to “enable.”) However, when you run BarTender automatically under the control of other software, all pop-up dialogs are disabled. Therefore, in order for you to even know that a grace period countdown has begun, you would need to have configured BarTender to log the messages or send them to you using email. (An email is strongly recommended, as it ensures that you get prompt notification of an SLS communication outage. Otherwise, you might not realize that the SLS connection had failed until your printing rights were actually suspended.)

## **SLS's 30-day Printer-Limit-Exceeded Grace Period**

It can sometimes be easy to exceed your maximum allowable printer license count for legitimate reasons. For example, suppose that you brought 10 new printers into a printing operation that was already running close to its maximum allowable printer count. You wouldn't want to have print jobs denied just because you disconnected old printers that you no longer needed (or that had failed) and started using new printers. With SLS, you have a 30-day printer license grace period that gives you plenty of time to complete any printer upgrades and/or (if necessary) purchase a BarTender license that allows use of more printers.

This grace period feature was introduced with BarTender 9.3.

### **Initiating the Printer-Limit-Exceeded Grace Period**

The 30-day grace period is automatically initiated any time you use more printers than your printer license count allows. The main console screen of the Seagull License Server (SLS) will display a message that you have 30 days to correct the problem. In addition, if the Alert Setup option has been properly configured (which is strongly recommended), an email message will be sent out notifying an IT manager (or other target) of the license violation. Follow up emails will be sent once per day until the issue is resolved.

When activating Seagull License Server (SLS), the last page of the Activation Wizard provides you with an Alert Setup option and informs you of the importance of using it.

### **Temporary Access to Twice as Many Printers!**

During the 30-day Printer-Limit-Exceeded Grace Period (or until you resolve your problem), SLS will temporarily allow for double the normally-allowed number of printers. This fully addresses the worst-case scenario of all of the printers failing in a printing operation and every single one of them needing to be replaced. (This is obviously a very unlikely scenario. However, since the recently-used printers list in SLS can no longer be modified or deleted, this is the best way to ensure that it is not possible for properly-licensed BarTender users to ever be denied even a single print job.)

### **Resetting the Grace Period**

Ending your printer license violation is very straight-forward:

*You simply have to go 7 consecutive days without using more printers than your BarTender license normally allows.*

Once you return to compliance with your printer license for 7 days, SLS will respond with a message on its main console screen and will (if the Alert Setup option was properly set up) send out a similar message by email. Thereafter, a new 30-day grace period is available if you happen to again exceed your maximum allowable number of printers.

### **Expiration of the Grace Period**

If you go a full 30 days without resuming compliance with your printer license, you will be informed that your grace period has expired by a message on the main console screen in SLS, and by daily emails. SLS will at that time also begin denying print jobs, starting with BarTender print jobs sent to the least recently used printers. (You continue to have access to the full number of printers that your BarTender printer license allows, but only the most recently used printers. This is the best way to provide you with a quick and easy return to compliance with your license.)

### **Notification of the Grace Period**

In order for you to know that a Printer-Limit-Exceeded Grace Period has begun, you need to either look at SLS, as it will display a warning in its main window, or configure SLS to log the messages or send them to you using email. (An email is strongly recommended, as it ensures that you get prompt notification. Otherwise, you might not realize that the printer limit has been exceeded until after printing rights are actually suspended.)

## **Running the Seagull License Server**

SLS runs unattended as either an application or a Windows system service. Moreover, SLS can perform remote administration for another SLS running on the network.

### ***SLS Run as an Application***

SLS can be started and run as a standard Windows desktop application. When run in this mode, SLS will exit when the user closes the application or logs out.

### ***SLS Run as a System Service***

Users also have the option of running SLS as an operating system “service.” When run in this way, it can be configured to run automatically when the operating system starts. There is no need for any user to log onto the machine, and the SLS user interface need not be running.

### ***SLS Remote Administration Interface***

The SLS application can be run as a remote administration interface to a copy of SLS already running somewhere else on the network. For more information, see the online help in SLS.

## WAN Usage Guidelines

BarTender can perform a variety of important network functions on both LANs (local area networks) and WANs (wide area networks). This includes:

- Outputting to printers
- Reading files
- Accessing databases
- Communicating with Seagull License Server (SLS)

However, when communicating across a wide area network (WAN), you must be aware of some potential challenges. In particular, the available speed and reliability of many WANs can cause unacceptable performance problems that are simply beyond BarTender's control. For example:

- Having BarTender installed on multiple LANs but communicating with a single Seagull License Server across a WAN could leave an entire building of BarTender users unable to print if a WAN link fails for more than 72 hours.
- Certain standard database operations, including some queries, can become unacceptably slow when bridging data sources across a WAN.

### ***A Real World Comparison***

When you browse the Internet, the pages you view probably display quickly on most days. However, some days the connection may be very slow and sometimes it may not work at all. Typically, Technical Support at your Internet provider will simply suggest that you “try again later” in the day. Similarly, if you call Seagull for help with WAN performance problems, we will have no way to assist you.

### ***How WAN Performance Affects Use of Seagull License Server***

The Automation and Enterprise Automation editions of BarTender communicate with Seagull License Server at various times to confirm that BarTender use complies with its license. Complications introduced by WAN usage include:

- Firewalls may need to have settings changed to allow this type of communication.
- If a router between a LAN and WAN malfunctions, any BarTenders installed on the associated LAN will not be able to “see” the Seagull License Server if it is located on another LAN. BarTender has a 72 hour grace period to deal with minor interruptions, but an extended interruption will interfere with the ability to print.
- WAN links based on Internet connections can easily introduce the same intermittent performance problems seen when browsing the Internet. Even true “private” WAN links are still more susceptible to performance problems than conventional LAN connections.

Your system administrator should be your best expert on the reliability and performance capabilities of your WAN. You may choose to equip each LAN with its own, dedicated Seagull License Server. This may give you a faster and more fault-tolerant printing system compared to using a single SLS across an entire WAN.

**Example:** Assume you have 30 printers that you wish to use on three different LANs.

**Solution:** You could install three separate “10 printer” licenses of BarTender Automation edition or Enterprise Automation edition (one for each LAN), instead of a single “30 printer” license for the WAN.



One copy of Seagull License Server (and associated Product Key Code) comes with each BarTender Automation or Enterprise Automation license.

### ***Technical Support for WAN Usage***

BarTender and Seagull License Server are fully tested and qualified for wide area network use. Unfortunately, Seagull is not able to assist you in diagnosing WAN problems should they occur.

## Using Seagull License Server with Remote Desktop Services and Citrix XenApp

You can install BarTender in both Windows Remote Desktop Services and Citrix XenApp environments. Windows Remote Desktop Services is a component of Microsoft Windows that enables you to connect to and control a remote computer or virtual machine (VM) over a network connection, and it can be used with BarTender for automation purposes. Citrix XenApp is a thin client that you can use with Windows Remote Desktop Services to enable you to connect to corporate applications.

Running BarTender in these environments is supported. However, if you are using an Automation edition of BarTender with Windows RDS or with Citrix XenApp, you may encounter issues in which duplicate printers appear when you reboot your virtual desktop. Seagull License Server counts these duplicate printers as licensed printers, which may cause false printer license violations.

To prevent Seagull License Server from over-counting printers when you are using an Automation edition of BarTender with Windows RDS or with Citrix XenApp, it is recommended that you install the Seagull License Server (SLS) Remote Assistant.

### *Using SLS Remote Assistant to Manage Printer Licensing*

Seagull License Server identifies unique printers by processing information received from the printer itself. For locally installed printers, this information includes the printer model and port; for network printers, this includes the printer's IP address and TCP port.

However in Citrix XenApp and Windows Remote Desktop Services environments, Seagull License Server is unable to retrieve some of this information from the server, including the port or IP address. If the printer is using a universal driver, it is not even possible to obtain the printer model of the printer in use. Without this information, when a printer is used from multiple clients, Seagull License Server may not recognize it as a single printer. This will cause the printer to be listed in Seagull License Server multiple times, effectively reducing the number of printers available in your license.

The Seagull License Server (SLS) Remote Assistant is a software utility that you can install on remote clients to prevent Seagull License Server from over-counting printers when you are using Citrix XenApp or Windows Remote Desktop Services. The SLS Remote Assistant obtains detailed information directly from the printers that are installed on the client computer. Each time a print request is initiated from a client, Seagull License Server requests this information from the SLS Remote Assistant. Using the additional print information that the SLS Remote Assistant provides, Seagull License Server can accurately differentiate between printers based on the printer model, port, and IP address.

### *Installing the SLS Remote Assistant*

The SLS Remote Assistant must be downloaded and installed on each client computer. The number of times that the SLS Remote Assistant must be installed on each client differs depending on whether you are using a Citrix XenApp environment or a Remote Desktop Services environment:

- In a Citrix XenApp environment, you install the SLS Remote Assistant just one time on the client computer. The client can then be used by multiple users.

- In a Remote Desktop Services environment, you install the SLS Remote Assistant on the client computer for each user who will use the client machine.

You can download the SLS Remote Assistant installer package directly from the Seagull Scientific website or from your BarTender installation CD.

In addition to installing the SLS Remote Assistant by running the installer package on the client, system administrators can install the SLS Remote Assistant on multiple computers across the network with minimal to no user interface by using a silent install command along with their own deployment scripts and software.



If you plan to use Citrix XenApp, you must install and run Citrix Receiver before you install the SLS Remote Assistant. Specifically, you must install Citrix Independent Computer Architecture (ICA) virtual channel version 12.0 or later. You can download Citrix Receiver directly from the following Citrix website:  
<http://www.citrix.com/go/receiver.html>

For more information about using BarTender in Windows Remote Desktop Services and Citrix XenApp environments, and for complete installation instructions for the SLS Remote Assistant, refer to the "Using BarTender with Remote Desktop Services and Citrix XenApp" white paper:

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

## Related Documentation

### White Papers and Manuals

- Getting Started with BarTender
- BarTender Software Activation
- BarTender Version Upgrades
- Silent Install
- Using BarTender with Remote Desktop Services and Citrix XenApp

For downloadable versions, visit:

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

### BarTender Help System

- [Installing BarTender](#)
- [Managing Your Automation License](#)
- [Seagull License Server](#)
- [Licensing Setup Dialog](#)

