



White Paper

# BarTender Enterprise Licensing

Understanding Enterprise Edition  
Licensing and How to Configure the  
Seagull Scientific License Server

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## **Introduction to Enterprise Licensing**

This document applies to Enterprise editions of BarTender only.

Licensing for the Enterprise 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. Enterprise editions of BarTender allow an unlimited number of users per license.

**“Print-Only” Licensing.** In contrast to the “unlimited” users described above, the “Print-Only” Enterprise editions of BarTender allow only one user.

### ***Available Printer Quantities***

Licenses for Enterprise editions of BarTender are available for as few as 3 printers and as many as 8,000. These licenses allow an unlimited number of users. (“Print-only” licenses are also available that allow one user and three printers.)

### ***The Seagull License Server***

The Seagull License Server (SLS) that comes with the Enterprise editions is Seagull’s tool for monitoring BarTender and enforcing printer licenses. Seagull License Server’s only job is license enforcement – it does not physically print labels or communicate with printers in any way.

### ***We Recommend one License Server per LAN***

After years of extensive enterprise experience, we caution against use of the License Server across WAN links. We recommend that you instead install separate Enterprise licenses on each individual LAN. Although a single SLS on a WAN can communicate over multiple routers to multiple LANs, this configuration leaves your enterprise labeling solution more vulnerable to downtime and performance limitations due to any WAN communication problems you may experience. For more detail, please read the chapter [\*WAN Usage Guidelines\*](#).

## **How the Seagull License Server Controls Enterprise Licensing**

### ***Overview***

A single copy of Seagull License Server (SLS) installed anywhere on a network can control the licensing of all the installed Enterprise editions of BarTender. Seagull License Server’s job is to grant or withhold permission to print. However, SLS does not physically print labels 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 Enterprise editions of BarTender installed on a network.
- Tracks the total number of users attempting to use Print-Only Enterprise editions on a network.
- Logs or e-mails notifications of license violations.
- Notifies running copies of BarTender of any license violations.

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.

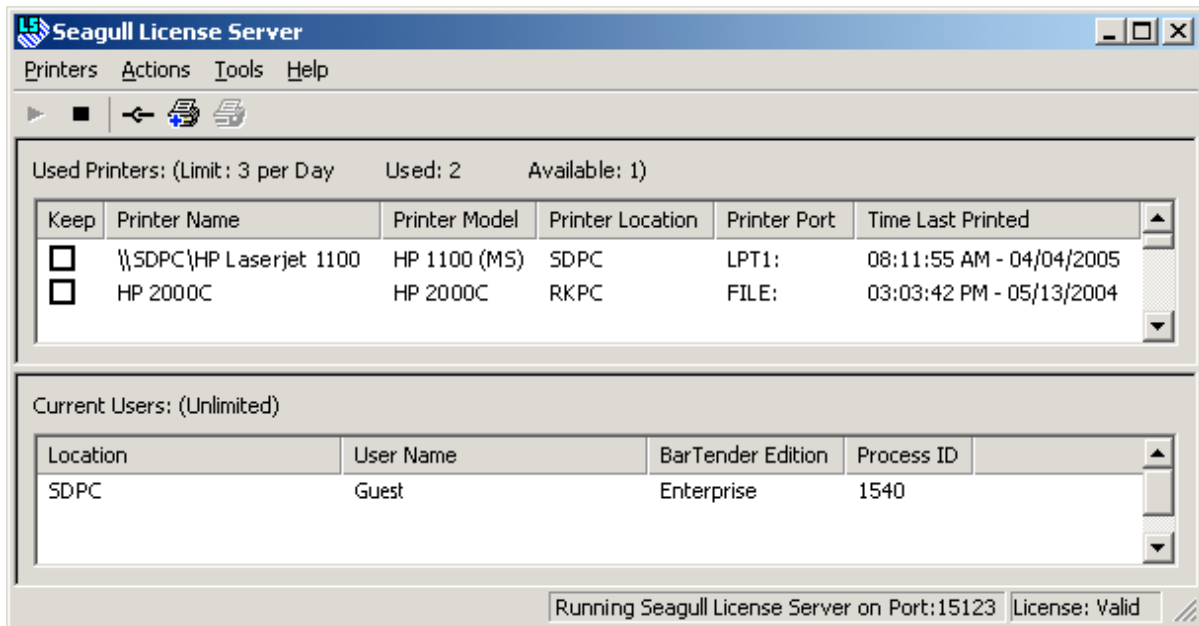


Figure 1: The Seagull License Server Main Screen

### **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 a Seagull License Server 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 24 hours. If a print job is attempted once the printer limit has been exceeded, then the user is notified of the “license violation” and future print jobs to that printer are prevented until the violation is cleared up. It is also a license violation if BarTender cannot find SLS on the network.

## 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.

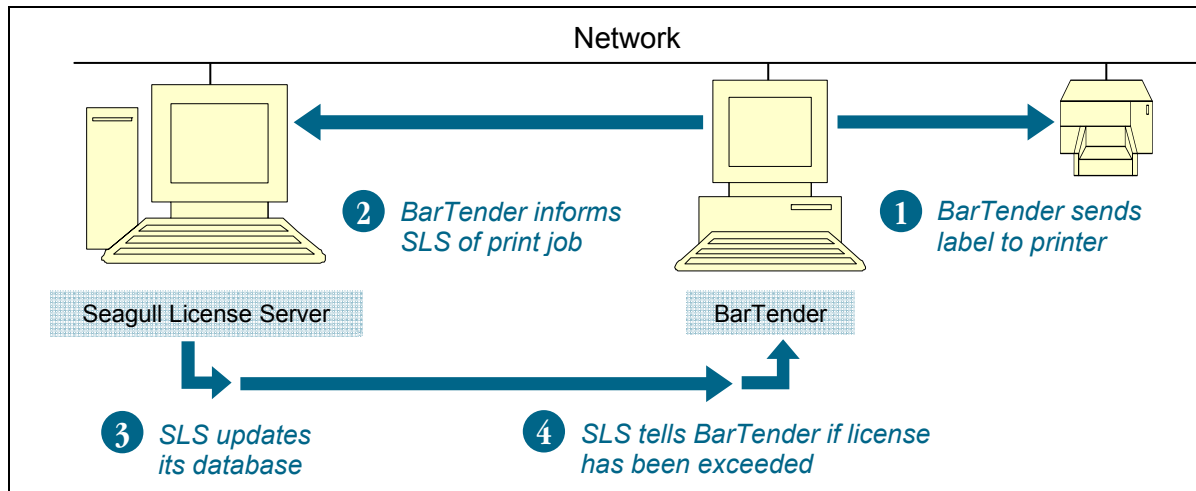


Figure 2: Sequence of Events when BarTender Prints

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 **Time Last Printed** field.

Keep	Printer Name	Printer Model	Printer Location	Printer Port	Time Last Printed
<input type="checkbox"/>	Shipping Printer	Datamax W-8306	SNPC	c:\output.pn	06:20:25 AM - 02/26/2001
<input type="checkbox"/>	Intermec 3100	Intermec 3100	SNPC	c:\output.pn	06:20:27 AM - 02/26/2001
<input type="checkbox"/>	Datamax DMX 400	Datamax DMX 400	SNPC	c:\output.pn	06:20:25 AM - 02/26/2001
<input type="checkbox"/>	\\FP01\ZPL105S	Zebra 105S (203 dpi)	FP01	\\FP01\ZPL105S	10:34:59 AM - 02/25/2001
<input type="checkbox"/>	EasyCoder 4420	EasyCoder 4420	D95NTSP4	COM1:	10:39:22 AM - 02/26/2001

Figure 3: Used Printers List

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 informs BarTender of the license violation. (See the section [License Violation Handling](#), below, for more details.)

A printer that has been added to the **Used Printers** list remains there until it is either not used for 24 hours, at which point it is automatically removed, or a user takes it out with the **Remove Printer** function.

**Note:** 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 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 Enterprise license and SLS receives a message that BarTender is attempting to use a printer not already in the **Used Printer** list, SLS will notify that copy of BarTender that the license limit has been exceeded. BarTender will then generate a notification about the license violation and refuse to print to that printer until the violation has been cleared up. (SLS will continue to allow print jobs to the other printers on the **Used Printer** list.)

#### ***User Limit Exceeded***

Although most license packages for Enterprise editions of BarTender allow unlimited users, the special "Print-Only" Enterprise editions allow only one user and three printers. (A user running multiple copies of BarTender on one computer is only counted as a single user.)

If a second user attempts to use a "Print-Only" Enterprise edition of BarTender, SLS will notify that user's copy of BarTender that the license limit has been exceeded. That copy of BarTender will then generate a notification about the license violation and refuse to print until the violation has been cleared up.

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

If SLS is not found by an Enterprise edition of BarTender when a print job is attempted, the 72-hour "grace period" countdown for a license verification failure begins. (Brand new installations that have never found SLS will not print at all. Please see the next section for more details.)

## ***Grace Period for License Verification Failure***

### ***Overview***

In the event that BarTender is suddenly unable to communicate with Seagull License Server (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 produce labels. (The “grace period” only applies to loss of communication with SLS and not to printer and user license limits being exceeded, as described in the previous section.)

The grace period feature was first introduced with build 2561 of BarTender version 9.01. First published on February 12<sup>th</sup>, 2009, this publish was designated BarTender 9.01 Service Release 4 (or “SR4”). If you have an earlier version of BarTender 9.0 or 9.01, you can download a free upgrade from our web site.

### ***Purpose of the “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. The “grace period” ensures that mission critical label 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 “Grace Period” Feature for New Installs***

After any Enterprise edition of BarTender is first installed, it must contact and receive authorization from SLS before BarTender can print at all. After BarTender receives successful authorizations from SLS at the beginning of four consecutive print jobs, the 72-hour grace period feature becomes enabled. (We are just referring here to enabling the feature, not actually starting a grace period countdown, as described below.)

### ***Initiating a “Grace Period” Countdown***

Whether the cause is a failure of the computer hosting SLS or a network failure, once a copy of BarTender on which the grace period feature has been enabled 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 preview a print job
- An attempt to export all or part of a label image
- 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, print previewing, and exporting images or 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.)

### **To Enable the Logging of Grace Period Notifications**

- Under the **Tools** menu in BarTender, select **Log Setup**.
- By configuring settings on the appropriate tab, specify logging to either the BarTender system database or a text file.

### **To Enable the E-mailing of Grace Period Notifications**

- Under the **Tools** menu in BarTender, select **Alert Setup**.
- Check **Enable E-Mail**.
- Configure the email settings as appropriate for your network.

## ***LAN vs. WAN Usage***

WAN Users: Please read the chapter [WAN Usage Guidelines](#) found at the end of this white paper.

## ***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.
- 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 *Enterprise* and *RFID Enterprise* 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.

- Although Seagull License Server employs special techniques to prevent print jobs from being delayed, if the license checking process is delayed long enough to “time out” waiting for a License Server response, print jobs can eventually be interrupted and subsequent print jobs delayed until reliable communications have been reestablished.
- 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.

### ***Use Separate Seagull License Servers for Maximum Enterprise Reliability***

Your system administrator should be your best expert on the reliability and performance capabilities of your WAN. In general, however, we strongly recommend that you equip each LAN with its own, dedicated Seagull License Server. This will give you a faster and much more fault-tolerant label 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.

**Preferred Solution:** We would recommend three separate “10 printer” licenses of BarTender *Enterprise* (one for each LAN), instead of a single “30 printer” license for the WAN.

Note that one Seagull License Server (and associated Product Key Code) comes with each BarTender *Enterprise* 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. Our *official* recommendation continues to be use of a single Seagull License Server on each individual LAN.

## Available Seagull White Papers

### General White Papers

- The Advantage of Drivers by Seagull
- Choosing the Right BarTender Edition
- Label System Security

### Companion Applications

- Printer Maestro, Part 1: Enterprise Print Management
- BarTender Security Center
- BarTender Web Print Server

### Recent Upgrades

- What's New in the Latest BarTender

### Integration White Papers

- Integration Overview
- Commander
- Commander Examples
- BarTender's .NET SDKs
- BarTender's ActiveX Automation Interface
- Exporting Printer Code Templates
- Using BarTender with Terminal Services and Citrix MetaFrame
- XML Integration with Oracle's WMS and MSCA

### Integration With SAP

- SAP Integration Methods
- Reading SAP IDocs
- SAP Auto Infrastructure Integration with BarTender

### Miscellaneous White Papers

- BarTender Enterprise Licensing
- Printing International Characters Using BarTender
- BarTender Software Activation
- Using BarTender's Application Identifier Wizard
- Optimizing Label Printing Performance
- Status Monitor Overview
- Silent Install

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