

# SEQUENCHER<sup>®</sup>

## Sequencher Server Guide

---

For Macintosh and Windows

Gene Codes Corporation

T C A G E N E  
A G T C O D E S

Gene Codes Corporation

775 Technology Drive, Ann Arbor, MI 48108 USA

1.800.497.4939 (USA) +1.734.769.7249 (elsewhere)

+1.734.769.7074 (fax)

[www.genecodes.com](http://www.genecodes.com) [gcinfo@genecodes.com](mailto:gcinfo@genecodes.com)

# Table of Contents

Sequencher Server Network Overview .....	3
Description.....	3
Installing all the Parts .....	3
Installation Requirements .....	4
Setup Sequencher Server.....	4
Getting Started.....	4
Get License Files.....	5
Request a license for your server .....	5
Create a client license file.....	5
Install Sequencher Server* on Mac OS X.....	6
Install the License File .....	6
Start Serving Sequencher .....	6
Install Sequencher Server* on Windows .....	7
Install the License File .....	7
Start Serving Sequencher .....	7
Installing the Client License.....	8
Installing a New Server License .....	8
Reprise License Server Administration .....	8
Start Using a New License File (Reread/Restart Servers) .....	9
Appendix .....	10
Firewalls.....	10
About Client Licenses.....	10

## Sequencher Server Network Overview

### DESCRIPTION

The Sequencher Server is a concurrent user floating license system. Gene Codes provides you with Reprise License Management Software for use with Sequencher licenses.

In this system, one computer on your network is designated as a 'Sequencher Server'. The operating system of this Sequencher License Server machine is independent from the type of Sequencher licenses you've purchased. Windows Sequencher Servers can provide Sequencher licenses for both Mac and Windows clients and vice versa. To create a Sequencher Server, you need to install the server software and a license file. While the license for Sequencher Server may be installed on either Mac OS X or Windows, the Sequencher licenses may not be interchangeable between platforms. You may purchase Windows-specific licenses, Macintosh-specific licenses, or a license that works on either. For instance, a single network might have 2 Mac, 1 Windows, and 3 Dual platform licenses. This would mean that 2 licenses are reserved for use on Macintosh only, 1 license is reserved for Windows-only use, and the 3 remaining licenses may be used on any client machine. Please note that Sequencher versions older than 5.2 cannot be served by an RLM-based Sequencher Server—you may go to our Legacy Support web page, [www.genecodes.com/support/legacy-support](http://www.genecodes.com/support/legacy-support), for the older Sequencher Server.

The Sequencher Server requires a license file that locks it to run on a particular computer. Once you choose a host computer, a license file will be created specifically for that machine. You will also need to install a license on each client computer to obtain a license over the network and run Sequencher. Sequencher Server limits the number of concurrent users, not the number of clients. The same client license may be installed on as many computers as you'd like, including the Sequencher Server host machine.

Each time you launch Sequencher, the following events take place:

1. Sequencher searches for a locally installed standalone license. If one is found, Sequencher launches.
2. If no standalone license is found, Sequencher searches for a client license that identifies where the Sequencher Server is installed in order to locate a floating license over the network. The Server then checks the number of available licenses, and if one is available, Sequencher launches. Platform-specific licenses will be used first.

### INSTALLING ALL THE PARTS

The Sequencher Server is made up of 3 parts: rlm server, genecodes server, and a Sequencher Server license file. The rlm server controls the license management and is installed to run automatically whenever the computer is started. It, in turn, automatically starts up the genecodes server (rlm can manage multiple companies' Servers, but genecodes is the only one you need to deliver Sequencher licenses). And the Sequencher Server license file dictates the count and kind of Sequencher licenses that will be available.

The installation instructions below will guide you through setting up Sequencher network licensing:

1. Run the License Tools to collect licensing data for the Sequencher Server machine. Send the licensing data to Gene Codes to obtain your Sequencher Server license file.
2. Install Sequencher Server.
3. Install the Sequencher Server license file.
4. Reread/Restart Servers to start serving your licenses (or just restart the computer).

Please note: In the event there is already an rlm server running on the system managing the licenses for some other programs, Sequencher licensing should be added to that server rather than installing a second rlm server with the Sequencher Server installer. Add the genecodes server and the Sequencher Server license file to your rlm folder. The genecodes server application may be found in the bin folder inside the downloaded Sequencher Server Admin archive.


#### INSTALLATION REQUIREMENTS

- Minimum Operating Systems: Mac OS X 10.5.8 (intel only) or Windows XP SP3.
- Virtual machines as Servers are not supported.
- Download the appropriate Macintosh or Windows Sequencher Server from [www.genecodes.com/support/sequencher-server-download](http://www.genecodes.com/support/sequencher-server-download) – includes the Sequencher Server Installer, the License Tools utility, and links to server administration tools and instructions.

## Setup Sequencher Server

#### GETTING STARTED

Choose one Mac OS X or Windows computer on your network to be your Sequencher Server. This computer must remain on and connected to your network at all times in order for the client machines to be able to launch Sequencher. You may choose either. We recommend that your Sequencher Server machine have a static IP address or DNS hostname.

1. Choose a computer that you can leave running. On Mac OS X, Launch System Preferences from the  menu and choose Energy Saver. Change the Sleep setting to Never. On Windows, configure the power options to never turn the hard disks off.
2. Download [Sequencher Server for Mac \[DMG\]](#) or [Sequencher Server for Windows \[ZIP\]](#) from the Gene Codes website at: [www.genecodes.com/support/sequencher-server-download](http://www.genecodes.com/support/sequencher-server-download)
3. Double-click to open the downloaded SequencherServerAdmin.dmg file. Or double-click to open the downloaded SequencherServerAdmin.zip file and choose Extract all files to unzip the Sequencher Server Admin folder.

## GET LICENSE FILES

In order to serve network licenses to Sequencher, you will need two different license files. One, the SequencherServer license file is installed on the server, and the second SequencherClient license file must be installed on every computer where Sequencher will run.

### Request a license for your server



1. Double-click to launch License Tools.
2. If you have purchased a new Network license and received a 16-digit Activation Key, type or it into the "Enter Activation Key" field and click on the **"New License..."** button.

Enter Activation Key: <input type="text" value="1234-1234-1234-1234"/>	<input type="button" value="New License..."/>
--	---

3. If this is an upgrade to an older KeyServer installation (with a hardware key plugged in), click on the **"Upgrade License..."** button.

Both Upgrade and New license buttons will create a SequencherLicenseRequest file on your Desktop.

4. Email the SequencherLicenseRequest file to [ActivateMe@genecodes.com](mailto:ActivateMe@genecodes.com). You may click on the [ActivateMe@genecodes.com](mailto:ActivateMe@genecodes.com) link to create an email message to send to Gene Codes. Attach the SequencherLicenseRequest file to the email before sending.

The license data will be used to generate a license file for this host machine. The license file will be emailed back to you.

### Create a client license file

Sequencher uses the address specified in its SequencherClient.lic license to request a license from the Sequencher Server. You may use License Tools to create this license file with your server's address in it. The Server Address for this machine will be filled in automatically. *Note: you may edit the Server Address to use the DNS hostname if you prefer. Also if you plan to use a non-default port number, simply type it in after the address—i.e 192.2.2.2 5053.*

5. Click on the **"Create Client License..."** button and save the SequencherClient.lic file.

<b>Create a Sequencher network client license.</b>	
You must install this client license file on each Sequencher client computer.	
Server Address	<input type="text" value="IP address or hostname (autofilled with IP)"/> <input type="button" value="Create Client License..."/>

You'll need to copy this SequencherClient.lic file and install it on each client computer in order to access network licenses from this Sequencher Server. Please see **INSTALLING THE CLIENT** for instructions.

## Install Sequencher Server\* on Mac OS X

1. Double-click the Sequencher Server application to begin installation.
2. Click **Continue** and **Install** buttons.
3. Provide an Administrator's name and password in the Authentication dialog and click **Install Software**.



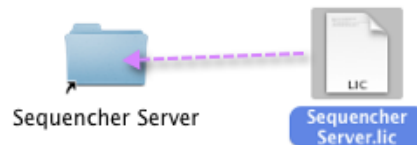
A Sequencher Server folder has been added to Applications and com.genecodes.rlm.plist is installed in Library/LaunchDaemons. This file will run Sequencher Server whenever the machine is started.

*\*In the event there is already an rlm server running on the system managing the licenses for some other programs, Sequencher licensing should be added to that server rather than installing a second rlm server with the Sequencher Server installer. Add the genecodes server and the Sequencher Server license file to your rlm folder. The genecodes server application may be found in the bin folder inside the downloaded SequencherServerAdmin archive.*

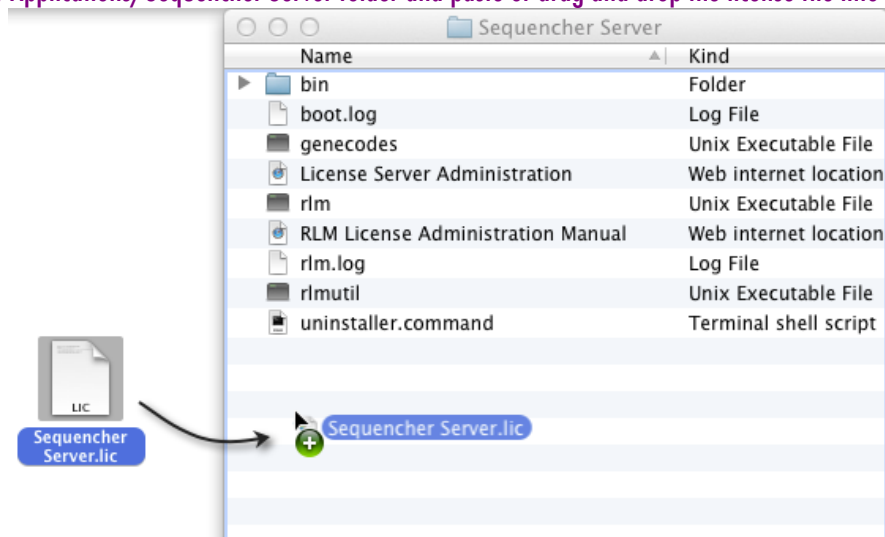
### INSTALL THE LICENSE FILE

4. Once you have received your Sequencher Server license file, drag and drop the file onto the Sequencher Server alias in the open disk image window.

**3. Drag and drop your license file here:**  
(you need a copy of the license in this folder)



Or open the /Applications/Sequencher Server folder and paste or drag and drop the license file into it.



### START SERVING SEQUENCHER

5. **Restart\*** the computer to start serving Sequencher licenses.

*\*If you'd prefer not to Restart and/or want to learn more about managing the rlm and genecodes servers and licenses, then please read the Reprise License Server Administration section on Page 10 of this guide: Start Using a New License File (Reread/Restart Servers).*

## Install Sequencher Server\* on Windows

Note that you have to have Administrator privileges to run this installer.

1. Double-click SequencherServer.exe to begin installation.
2. Click **Next** and **Install** buttons to accept all of the default settings during installation.

The installer creates a Sequencher Server folder in Program Files\Gene Codes or Program Files(x86)\Gene Codes on 64bit systems). It also installs the rlm Windows Service that will automatically start Sequencher Server whenever the machine is started.

*\*In the event there is already an rlm server running on the system managing the licenses for some other programs, Sequencher licensing should be added to that server rather than installing a second rlm server with the Sequencher Server installer. Add the genecodes.exe server and the Sequencher Server license file to your rlm folder. The genecodes.exe server may be found in the bin folder inside the downloaded SequencherServerAdmin archive.*

### INSTALL THE LICENSE FILE

3. Once you have received your Sequencher Server license file, navigate to and open the folder Program Files(x86)\Gene Codes\Sequencher Server. Drag and drop or copy the Sequencher Server license file into the Sequencher Server folder.

### START SERVING SEQUENCHER

4. Restart\* the computer to start serving Sequencher licenses.

If you'd prefer not to Restart and/or want to learn more about managing the rlm and genecodes servers and licenses, then please read the Reprise License Server Administration section on Page 9 of this guide: [START USING A NEW LICENSE FILE \(Reread/Restart Servers\)](#).

## Installing the Client License

You must install a client license file on each computer where Sequencher will be run.

1. Sequencher Server must be installed **and** running on the Sequencher Server machine.
2. Install Sequencher on each client machine.
3. Launch Sequencher.

When Sequencher starts without an installed valid license, the License Sequencher dialog will open.

4. Click the **Browse** button and choose the SequencherClient.lic file\* created in GET LICENSE FILES.
5. Click **Install** to install the file and Sequencher will request a license from the specified server.

\*If you try to Browse to the Sequencher Client license file and you cannot see it or select it in the file browser, the most likely problem is a hidden .txt extension. Right-click on the license file (in Windows Explorer or OS X Finder) and choose Properties (Win) or Get Info (OS X). If there is a .txt extension, delete it and make sure the extension is .lic. This will make the file visible and selectable in the Sequencher File Browser dialog. Repeat steps 4 and 5 above.


For more information about the client license, please see Appendix: ABOUT CLIENT LICENSES

## Installing a New Server License

Your license is permanent and will always work for the version of Sequencher purchased as well as any updates released within a year. Newer versions will require a maintenance contract and a new license file. Or, you may wish to change the number of network licenses at your site for which we'll send you a new license file. There is no need to re-install Sequencher Server. Simply replace the old file with the new one following INSTALL THE LICENSE FILE and START SERVING SEQUENCHER.

## Reprise License Server Administration

The Reprise License Server Administration web interface allows you to perform status and administration functions on the rlm server. It may be run on any computer on the network by typing the address of the Sequencher Server machine into a browser. On the Sequencher Server machine itself, you may use the address `localhost:5054`. You may, however, administer the server from any computer as long as you know the correct address. For instance, if the IP address of the Sequencher Server machine was 123.123.2.42, then the address to use in the browser would be `123.123.2.42:5054` using the format: `<hostname>:<port>`. By default, the web interface is run on port 5054. The images displayed below were created on Mac using the web browser Safari, but the same commands and views would be available using Internet Explorer, Chrome, or Firefox.

This section of the Sequencher Server Guide contains information on a small subset of the features available from the web interface. For detailed information on using other capabilities, please refer to the RLM Manual, which may be accessed from the  button on the left sidebar, or from the RLM License Administration Manual web location shortcut in the installed Sequencher Server folder.



## START USING A NEW LICENSE FILE (REREAD/RESTART SERVERS)

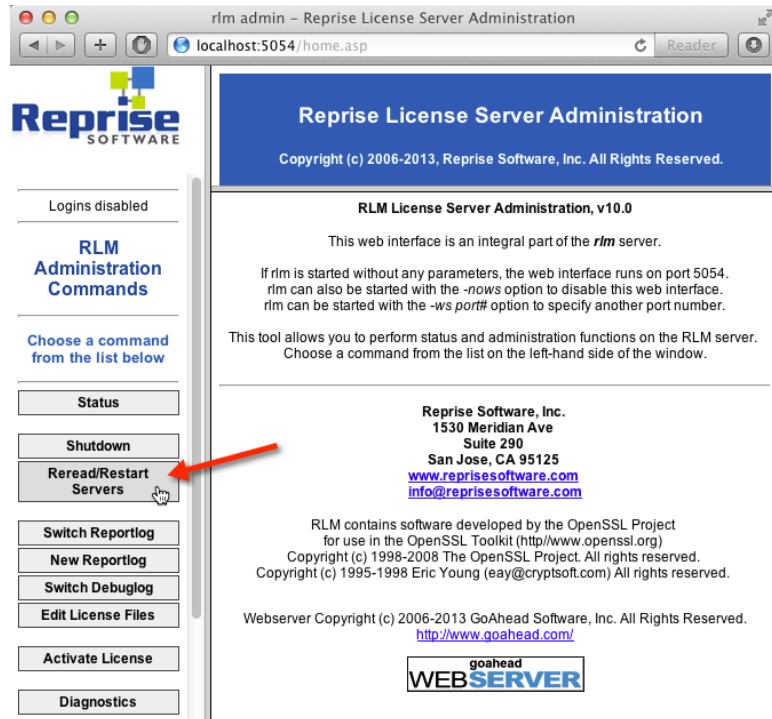
If you have installed a new Sequencher Server license file, you may choose to perform a Reread/Restart rather than restarting the Sequencher Server Machine.

1. Double-click on License Server Administration to open a browser to the web interface of the rlm server.

This shortcut opens the address [localhost:5054](http://localhost:5054), which works because we are running it on the same machine as the installed Sequencher Server. This webservice is part of rlm. If you've just installed Sequencher Server on Windows and haven't restarted, then rlm may not be running. You may right-click on Start Sequencher Server.bat in the Sequencher Server folder and choose Run as Administrator to start the service, or start it from the Services program.

2. Click Reread/Restart Servers

3. Click the REREAD/RESTART button



4. Click the Status button in the left-hand sidebar.

The server should be ready to serve Sequencher licenses. You may check the licenses by clicking the genecodes button under ISV Servers, Server Status:

ISV Servers										
Name	port	Running	Restarts	Server Status	License Usage	Debug Log	REREAD	OPTIONS	TRANSFER	SHUTDOWN
genecodes	55244	Yes	0	genecodes	genecodes	genecodes	genecodes	genecodes	genecodes	genecodes

## Appendix

### FIREWALLS

You may have a firewall that blocks rlm from working. Firewall rules must be configured on the Sequencher Server host to allow communication with its clients. The ports that need to be opened are 5053 and 5054. Please see your System Administrator.

### ABOUT CLIENT LICENSES

Setting up Sequencher to use a network, floating license requires defining the IP address or DNS host name of the Sequencher Server machine in the Sequencher Client license file. And the file extension must be .lic (a .txt extension will not work). The following is provided for troubleshooting and informative purposes.

The SequencherClient.lic license file contains a single line:

```
HOST hostname port
```

Replace *hostname* with name or IP address of the *Sequencher Server computer*. The hostname is the computer's name on the network. The default port for Sequencher Server communication is 5053. Replace *port* with the port rlm is configured to use (it can be left blank for the default 5053). This will always be 5053 unless your System Administrator hand-configured a different setup.

Examples:

HOST JanesMacPro	The port # is not listed so it's assumed to be 5053.
HOST JanesMacPro 5053	This is equivalent to the first example.
HOST 123.123.2.42	If you use an IP address as the <i>hostname</i> make sure it's a static address. If it's dynamic, then the server may be assigned a different IP when restarted and Sequencher won't have the right address.
HOST localhost or HOST 127.0.0.1	Either of these lines in a client license file will tell Sequencher to look for a network license from the machine it's running on. This will always work for running Sequencher on the Sequencher Sever machine.

A note about running Sequencher on the same machine as Sequencher Server. A SequencherClient.lic file is included in the bin folder of the SequencherServerAdmin download. It contains the line `HOST localhost`. You can always use hostname "localhost" on the Server machine for both OS X and Windows.

A note about host names on OS X: You will find the hostname in System Preferences Sharing in the Computer Name field. OS X appends .local to the computer's name when referring to itself. If the Computer Name is JanesMacPro, for instance, other computers on the network will see licenses served from hostname "JanesMacPro". But if you're actually asking JanesMacPro to find itself, then you must use "JanesMacPro.local" instead. This is a Mac-only issue.