

# SEQUENCHER<sup>®</sup>

## Sequencher KeyServer Guide

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### For Macintosh and Windows

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Gene Codes Corporation

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A G T C O D E S

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## OVERVIEW

The **Sequencher** KeyServer is a concurrent user license system. The system is made by Sassafras and you can either use the Gene Codes limited version for use with **Sequencher** licenses only or **Sequencher** licenses can be added to the fully licensed version of KeyServer serving your institute.

One computer is designated as the license server and manages the **Sequencher** licenses you have purchased. The server does not even need to be the same platform as the purchased licenses. For example, you can have a Windows license server and Mac-based **Sequencher** users or vice versa. In fact, you can even buy non-platform specific licenses. For example, you could buy 2 Windows-specific, 2 Mac-specific, and 3 Any licenses. This means that two licenses are reserved for Windows use only, two licenses are reserved for Mac use only, and 3 licenses may be used by Windows or Mac. Platform-specific licenses are always used first.

**Note** that the 'Any' licenses are only available for **Sequencher 5** or later.

## NAME CHANGES

If you are already familiar with Sassafras' KeyServer system, you will notice that its components have been renamed. KeyServer is now called K2Server. The Key part of the name has also been dropped from KeyReporter and K2Client. These are now called K2Reporter and K2Client. KeyConfig is now called K2Admin.

## KEYSERVER PARTS AND INSTALLATION REQUIREMENTS

There are several components to the KeyServer system:

- The KeyServer software, USB hardware key (also known as a dongle), and **Sequencher** Server licensing - these are all installed on the computer which has been designated as the license server.
  - K2Admin and K2Reporter enable the KeyServer administrator to gather information about the use of **Sequencher's** license and are optional installs.
- The K2Client client, SequencherKeyServerClient.lic, and **Sequencher** - these are installed on each computer where **Sequencher** is to run.
- Minimum required operating system: Windows 7 or later, Mac OS X 10.7 or later (Intel only).
- 1 **Sequencher** Network hardware key (plugged into either a Mac OS X or Windows computer). You should have been sent a black USB key with a green inset indicating that it contains concurrent use, network licenses. Note that if you are working on a virtualized server you will need to plug the dongle into an IP hosted USB hub.
- Download the appropriate Macintosh or Windows Sequencher-KeyServer tools from [www.genecodes.com/support/sequencher-server-download](http://www.genecodes.com/support/sequencher-server-download).

- If you simply need the Client instructions and installers, you may download the much smaller Sequencher-  
KeyServer-Client distributions for Windows or Mac OS X systems.

## Installing All the Parts

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

Step	What you need to do	Required	Where
1	Install K2Server and <b>Sequencher</b> licensing.	Required	KeyServer computer
	Install K2Admin, the administrative interface for K2Server.	Optional	KeyServer computer
	Install K2Reporter, the web report builder for K2Server.	Optional	KeyServer computer
2	Run the License Tools application to create a client license to distribute to all client computers (SequencherKeyServerClient.lic).	Required	KeyServer computer
3	Install and configure the Client software, K2Client, on all computers that will use <b>Sequencher</b> .	Required	User computer
4	Install <b>Sequencher</b> (see "Sequencher Installation Instructions" on the Support page) on all computers that will use <b>Sequencher</b> .	Required	User computer
	Launch <b>Sequencher</b> and install the <b>Sequencher</b> client license file.	Required	User computer

## SETUP LICENSE SERVER

### Before You Start

Depending on your platform of choice, choose one Windows computer (running Windows 7 or newer) or one Mac computer (running Mac OS 10.7 or newer) on your network to be your **Sequencher** License Server. This computer must remain on and connected to your network at all times in order for the client computers to be able to launch **Sequencher**. We recommend that your **Sequencher** License Server computer have a static IP address or DNS name.

Full versions of KeyServer from Sassafras will have **Sequencher** licensing capability added to the list of managed programs. You will need to shut down any running Servers before proceeding. However, the K2Server will have to be restarted before you may use the new **Sequencher** licenses.

**NOTE** If you have purchased a server.lic file from Sassafras, please make sure you have a license that supports K2Server 7.4 before running this installer. If you do NOT have the K2Server 7.4 server.lic from Sassafras, skip straight to Step 3. Add Sequencher Licensing.

1. Choose a computer that you can leave running.
2. If setting up a license server on Windows:
  - 2.1. Configure the power options to never turn the hard disks off.
  - 2.2. Download the [Sequencher-KeyServer for Windows \[ZIP\]](http://www.genecodes.com/support/sequencher-server-download) from the Gene Codes website at [www.genecodes.com/support/sequencher-server-download](http://www.genecodes.com/support/sequencher-server-download) to a folder on your local computer.
  - 2.3. Double-click to open the downloaded **Sequencher-KeyServer.zip** file and choose **Extract all** to unzip the Sequencher-KeyServer folder. Choose a folder on your local computer to unzip to.
  - 2.4. Open the local unzipped Sequencher-KeyServer folder and double-click on **KeyServer Setup Tool** to launch the **KeyServer Setup Tool** application. The application will open to the **Server Install** tab.
3. If setting up a license server on Mac:
  - 3.1. Launch **System Preferences** from the  menu and choose **Energy Saver**. Change the **Sleep setting** to **Never**.
  - 3.2. Download [Sequencher-KeyServer for Mac \[DMG\]](http://www.genecodes.com/support/sequencher-server-download) from the Gene Codes website at: [www.genecodes.com/support/sequencher-server-download](http://www.genecodes.com/support/sequencher-server-download)
  - 3.3. Double-click on the downloaded **Sequencher-KeyServer.dmg** file.
  - 3.4. Double-click on the **KeyServer Setup Tool** icon to launch the **KeyServer Setup Tool** application. The application will open to the **Server Install** tab.

As soon as the KeyServer Setup Tool is launched, the application will analyze the current status of all 4 steps and report results in the status boxes. If the current installation is already acceptable, then the step will be marked as **Completed**. Similarly, if the current configuration is not usable, then the step will be marked as **Required**. Each step has detailed information available by clicking on the **More Info...** button.



## Step 1. Setup Server

The installer will search for an installed version of KeyServer. If the step is already marked **Completed**, then an installed version has been found so you can proceed to Step 2. We highly recommend that you update an installed version of KeyServer, but it is not mandatory.

1. Click **Install** under Step 1 to install the KeyServer components.
2. Click **OK** to shutdown the currently running KeyServer if one is running.
3. On Mac, in the installer, click on **Continue** and then **Continue** again, then **Install**. Enter an Administrator password when prompted.

If you already have an installed version of KeyServer, the KeyServer data files will be updated. Please accept the defaults.

1. Click **Start** to begin analysing the KeyServer Data Folder.
2. Click **OK** to close the KSdbConsist dialog. Also click **OK** to close the 'Old Server Folder Renamed' and the 'KeyServer Installed' windows if they appear.

3. Finally on Mac, click on the **Close** button to dismiss the **Install K2Server** dialog.

When the KeyServer installation is complete, the **Sequencher** License Server application will update the status of Step 1 and mark it as **Completed**.

## Step 2. Check License Key

When you have installed both the **Sequencher** network key and the Sentinel drivers, the installer will report the number of licenses programmed on the key and the version of the installed driver. If your license count is already displayed and the Check License Key step is already marked **Completed**, then you do not need to update your drivers.

1. Unplug any USB **Sequencher** keys.
2. Click **Install** to launch the Sentinel Hardware Key Drivers installer on Windows or the Sentinel System Driver on Mac. Accept all of the installer's defaults entering an Administrator password on Mac when prompted. Click **Finish** on Windows or **Close** on Mac when the installation is completed. You may be prompted to restart your computer if older drivers must be removed.
3. Plug in the USB **Sequencher** Network key. The status box should display licensing information for your hardware key.

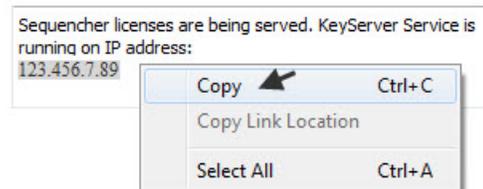
## Step 3. Add Sequencher Licensing

1. Click **Install** to add (or update) the **Sequencher** licenses to KeyServer.
2. On Mac, click on **Continue** and then **Install**. Enter an Administrator password when prompted and then click on **Close**.
3. It may be necessary to shutdown your running KeyServer to update existing licensing files. Click **OK** if prompted.

## Step 4. Start Serving Sequencher

In order to complete the installation process, KeyServer must be started *after* the **Sequencher** license installation to enable the new licenses. **If you can't interrupt a currently running KeyServer**, you may continue to run your KeyServer in its older configuration. When you restart the KeyServer at a more convenient time, or when you restart the computer, the new licenses will become available.

1. Click **Start** (or **Restart**) to begin serving **Sequencher**. You may be prompted to start the server and enter an Administrator password if installing on Mac.



Be sure to note the IP address of the computer where you installed KeyServer. You may select the text in the message box and double-click to Copy it. You'll need this address to configure K2Client on each **Sequencher** Client computer.

KeyServer will automatically start running whenever you start your computer.

## Warning - Firewalls

You may have a firewall that blocks KeyServer from working. Firewall rules must be configured on the KeyServer host to allow communication with its clients. The port that needs to be opened is **UDP 19283**. Please see your System Administrator.

## ACTIVATE YOUR SEQUENCHER KEYSERVER CLIENT LICENSE FILE

Once you have received your activation key (KS-xxxx-xxxx-xxxx-xxxx) from Gene Codes, you can automatically create a client license file. This file needs to be installed on each client computer that will be running **Sequencher**. You must be logged onto the license server computer to generate this license.

1. On the license server computer, make sure your Network hardware key is plugged in. To start the **Sequencher** license server application on Windows, open the Sequencher-KeyServer folder and double-click on **KeyServer Setup Tool**. To start the **Sequencher** license server application on Mac, double-click on the Sequencher-KeyServer dmg to open it and then double-click on the **KeyServer Setup Tool**. Click on the **Client Install** tab.
2. Click on the **Launch License Tools** button under **Create Client License to Distribute**.
3. Click on the **KeyServer Client** tab.
4. Enter the KeyServer activation key provided to you by Gene Codes in the **Enter Activation Key** field. It will be in the form of KS-xxxx-xxxx-xxxx-xxxx.
5. Click on **Create Client License...**
6. On the **Save Client License File** dialog, click **Save**. The client license file will be saved to the Desktop by default and be named SequencherKeyServerClient.lic.
7. Distribute this file to all client computers where **Sequencher** will be run.

## INSTALL AND CONFIGURE THE KEYSERVER CLIENT

The Client software, K2Client, is the same for both **Sequencher** KeyServer and the Full version of KeyServer by Sassafras. Before you install the Client software, you must know that the server is up and running. You must also know the static IP address of the Server or DNS name. Any number of computers may have the client software installed but only one can be running at a time for each purchased license. You must add both K2Client and **Sequencher** software to any computer you plan to serve **Sequencher** licenses to including the computer the KeyServer is running on if that's desirable. You must also obtain and install a **Sequencher** client license file (SequencherKeyServerClient.lic) on each of those computers.

## Installing the K2Client

Clicking on the **Install** button adds the KeyAccess icon to the Control Panel on Windows and the KeyAccess preference pane to System Preferences on Mac. Previously installed versions of K2Client will be updated. Once installed, the KeyAccess process on Mac and the KeyAccess service on Windows will automatically start and connect

to the specified KeyServer. *On 64 bit operating systems, several restarts may be required to complete the installation.*

NOTE: you must have Administrative Privileges in order to install K2Client on Mac. At the end of the client install, you'll be prompted to Restart your computer.

1. On Windows only:
  - 1.1. From the **Client Install** tab, click on the Add KeyAccess Client **Install** button.
  - 1.2. On 64 bit Windows systems, you'll be warned that a restart will be required. Click **OK** if it's ok to continue with the installation at this time.
  - 1.3. If a client is currently running, a message to that affect will appear. Click on the **OK** button.
  - 1.4. Click **Install** and **Finish**.
2. On Mac only:
  - 2.1. From the **Client Install** tab, click on the Add KeyAccess Client **Install** button.
  - 2.2. Accept the default settings. You'll be prompted to enter an Administrator's username and password.
  - 2.3. Enter the IP address or DNS name of the KeyServer when prompted and click **OK**.
  - 2.4. Click on the **Close** button.

K2Client will start running and logon to KeyServer whenever you start your computer.

## Reconfigure the K2Client

K2Client is configured and running immediately after installation. You should not need to reconfigure it.

If you do need to change the KeyServer Address, or test the connection to KeyServer, you can use the KeyAccess Preference Pane on Mac, or the KeyAccess icon on the Control Panel on Windows, or the **Configure** button on the KeyServer Client Setup Tool.

1. On Mac:
  - 1.1. Launch **System Preferences** from the  menu and choose **KeyAccess**.
  - 1.2. Or, launch the **KeyServer Setup Tool** and click on the Reconfigure KeyAccess Client **Configure** button.
2. On Windows:
  - 2.1. Launch **Control Panel** and choose **KeyAccess**.
  - 2.2. Or, launch the **KeyServer Setup Tool** and click on the **Configure** button.
3. On Mac or Windows, enter the new address and click on the **Logon** button. Click on the **KeyVerify** button to test the connection.

## Install Sequencer and Your Client License

In order to run **Sequencer**, you must install it and obtain a client license file from your **Sequencer** license administrator. After launching **Sequencer**, install the license.

The SequencherKeyServerClient.lic file must be created on your server computer using License Tools. The License Tools application and instructions are included in the Sequencher-KeyServer dmg (for Mac) or the Sequencher-KeyServer zip (for Windows) available for download at [www.genecodes.com/support/sequencher-server-download](http://www.genecodes.com/support/sequencher-server-download).

1. Copy your SequencherKeyServerClient.lic to your computer (we recommend the Desktop).
2. Launching **Sequencher** without a license will open the **Sequencher** License Manager. If it doesn't open automatically, you may choose the **Sequencher License Manager...** command from the **Sequencher** menu on Mac or from the **Help** menu on Windows.
3. Select the **Activate Sequencher** button followed by the **Install License...** button, browse to your license file location, select your license file, and click on the **Install** button to install the license. Select **Start Sequencher** to launch **Sequencher** or **Quit** if you don't wish to launch **Sequencher** at this time.

Please refer to the "Sequencher Installation Guide" for Mac or Windows on our website Support page at <http://www.genecodes.com/support> for more detailed information on installing **Sequencher** and installing license files.

## INSTALLING THE OPTIONAL ADMINISTRATION TOOLS

K2Admin is the Administrative interface for KeyServer. Installation of this Admin tool is not necessary for running a **Sequencher** License network, but it does allow you to monitor and control the KeyServer process. K2Reporter is a web-based report generator for KeyServer. Installation of this Reporter tool is not necessary for running a **Sequencher** License network, but it will allow you to create a variety of reports on the usage of licenses and computers which used them. Like the K2Client client software, K2Admin may be installed on any computer on your network to administer KeyServer. K2Reporter should be installed on the same computer as KeyServer.

Both K2Configure and K2Reporter are available from the Sequencher-KeyServer zip file on Windows and from the Sequencher-KeyServer dmg file on Mac. If you have not already downloaded the tools, they are available on the Gene Codes website at <http://www.genecodes.com/support/sequencher-server-download>.

## Install K2Admin or K2Reporter

1. On Windows, open the **Sequencher-KeyServer** folder and double-click on **KeyServer Setup Tool** to start the **KeyServer Setup Tool** application.
2. On Mac, double-click on the **Sequencher-KeyServer dmg** and then on the **KeyServer Setup Tool** icon to start the **KeyServer Setup Tool** application.
3. Click on the **Administrative Tools** tab.
4. Click on **Install** to launch the K2Admin installer to add KeyConfigure or the K2Reporter installer to add KeyReporter to this computer.
5. Please accept all of the installer defaults. On Mac, enter an Administrator password when prompted and **Start** the KeyReporter application if desired.

## Running K2Admin

Test an Admin connection to KeyServer. KeyServer needs to be installed and running first. K2Admin may be installed on any computer on the network. For more information, please see: <http://www.sassafras.com>.

1. Launch KeyConfigure in Applications\Sassafras K2\Admin folder on Mac or keycfg32 in Program Files\SassafrasK2\Admin folder on 32 bit Windows OS's, and in Program Files (x86)\SassafrasK2\Admin folder on 64 bit Windows os's.
2. In the top-most field, enter the IP address (or DNS name) of the computer hosting the KeyServer process. Login using the account name "Administrator" with the default password "Sassafras" (first letter capitalized).
3. Click **OK** and **OK** again.

KeyConfigure will bring up three windows named Computers, Products, and Policies. These three windows display the basic building blocks for the configuration of software auditing, license management, and report generation.

## Running K2Reporter

KeyServer needs to be installed and running first. KeyServer and KeyReporter should be installed on the same computer. Go to <http://www.sassafras.com/hrl/7.4/keyreporter.html> for more information on configuring KeyReporter, scheduling automatic reports, or running in non-default locations.

1. Launch **KeyConfigure** and when prompted by KeyReporter Setup, click **Next** and then **Done**. Launch your default or favourite web browser. In the navigation toolbar, enter the IP address of the KeyServer computer (the URL will look like <http://123.456.0.1:80/login> and you will need to know the port that the KeyReporter service is on. In this case, it is on port 80.). You can ask your IT department to set up a DNS name if you prefer.
2. Log in using account name "**Administrator**" with default password "**Sassafras**" (first letter capitalized). Hit the **Enter** key.
3. Click on the **Builder** tab to see a list of available reports. Most but not all of these reports are available with the Gene Codes limited KeyServer license.

4. Under **List Reports**, double-click on **List (PLCY)** and then click on the **Run** command button at the far right of the window. A properly installed **Sequencher** License Server will list **Sequencher** for Macintosh and **Sequencher** for Windows along with their license counts.
5. Click on the **Dashboard** tab. To add a Dashboard widget, click on the **+** button on the right-hand side of the screen and click on the **computer** tag. Click on the **Add** button for the **Capacity** widget. The widget will now be added to your permanent dashboard. Choose **Save Dashboard** from the **Settings** drop-down menu, which will be colored red until you select a menu item from it.