

SyFlo2 : SynthEyes Floating License Manager

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SyFlo2 is designed to flexibly and reliably float SynthEyes licenses, including traditional floating license and managed seat and managed temporary licenses.

SyFlo2 is a small command-line tool that runs on, and is node-locked to, an always-on server computer, such as a file or email server. The processor load due to syflo2 is quite small.

A small license file describes what licenses are available; syflo2 hands those licenses out to SynthEyes users while they work. (The server can go offline for short reboots without affecting running users.)

Licensing can be monitored and controlled from any web browser, or with syflo2 from the command line on the server. Some of those actions may result in a modified license file being downloaded from ssonotech.com.

This document is for system and network administrators familiar with using typed commands and administering background services. Ensuring that SynthEyes clients and the syflo2 server can communicate may also require knowledge and effort, particularly if some of the machines are running in a cloud or in different locations.

Quick Introduction to Floating Licenses

SynthEyes licenses are specified via a serial number. Standard non-floating “seat” SynthEyes serials start with SN-..., M6-..., L6-..., etc, where the prefix indicates the operating system platform and version (Intro or Pro). C6- serials are cross-platform Pro. There’s an online guide describing [how to decode SynthEyes serial numbers](#).

Floating licenses require SynthEyes serial numbers that begin FL-... Floating licenses are always cross-platform Pro licenses: they can float seamlessly across Windows, macOS, and Linux systems. A serial number can activate one and only one machine at any given time; once it is freed it can move to another machine.

SyFlo2 also distributes managed seat (FS-) and managed temporary (FT-) licenses. Managed seat licenses resemble a traditional seat license, but managed by syflo2. They don’t float freely; instead they are locked to a specific user. Managed temporary licenses are like managed seat licenses, but bought in bulk to be valid for a specific range of days — they are intended for situations where a company needs a surge of tracking capability, perhaps for some freelancers.

Rather than being installed on individual machines, floating licenses are managed by the floating license manager, a continuously-running process on one of your network servers. When a user starts SynthEyes, it requests a license (serial) from the manager; the serial will be displayed on the SynthEyes splash screen. When the user closes SynthEyes, it returns the license to the license manager. If SynthEyes or the user's machine has a problem, the license is automatically reclaimed after a few minutes.

If the license is lost, SynthEyes will pop up a license-lost dialog box then prompt the user to save the file. (If auto-save is active, the save will happen automatically.) After saving, SynthEyes will exit. The license may be lost if the connection to the server is lost for too long, or if the administrator reclaims the license from a SynthEyes instance that has been left running idly. (See the Operations Guide.)

Throughout this document, you'll notice various restrictions on how various floating license types can be configured and used. These may be enforced by technical or human methods. The restrictions are what make it possible to offer specialized license types at a lower cost than hypothetical totally unrestricted licenses would be. Your cooperation in not playing games to circumvent these limitations would be appreciated, as it will make it easier and simpler for everyone in the long run. The multitude of different usage scenarios makes it a challenge to anticipate all reasonable situations. If you have an issue with some limitation, you can contact us to discuss that.

Overview of the Installation Process

You'll first need to decide what machine to put the license server on, which is typically a high-reliability file or email server. It should meet the SynthEyes system requirements for easiest testing. (No 32-bit machines.)

The SyFlo2 server **should have outgoing external internet access**: it is required for server validation and to support routine licensing operations that require the license file to be automatically updated. The specific ports required are listed in the [Firewalls](#) section.

While the SyFlo2 server can be a physical or virtual machine (including "in the cloud"), SyFlo2 running on a virtual machine will usually **require** ongoing access to the external internet.

Here's the outline of the SyFlo2 installation and licensing process.

1. Install SynthEyes on the server and each client. (Recommended for easiest testing).
2. Remove any existing old syflo(1) install from the server.
3. Install SyFlo2 on the server.
4. Set the server's time zone to match your users.
5. Fingerprint the syflo2 installation and send to support(at)ssontech.com
6. Wait for the license file (creating the license file is a manual process that may take a day or so, depending on the timing).
7. Install the license file onto the server and each client.
8. Verify that syflo2 runs OK on the server.
9. Configure the syflo2 service to start automatically.
10. Adjust all firewalls and networking equipment to permit communications between the server and clients.
11. Test and trouble-shoot.

Please read the following sections, which detail these steps, to save you time and frustration.

Amazon AWS and Other Cloud Installations

When installing on a cloud, there are additional steps **before creating your license server**. We've put this section here to get your attention!

Recognized commercial clouds (currently: AWS) do not require syflo2 to check in with ssontech.com at startup, and therefore eliminate a possible source of license unavailability. They also do not require a stable disk UUID, so you can rebuild the server image without needing a license file refresh.

At present, syflo2 only has direct support for AWS; we may include other clouds later. Other clouds are treated as private virtual machines (VMs), requiring hot checks, but you should read through this section anyway, as the issues discussed here are relevant in other clouds.

Note: SyFlo2 supports running your workstations in the cloud, and the SyFlo2 server on your own local machine (ie to avoid always-on AWS EC2 charges). In addition to supplying SyFlo2 fingerprint information, you'll also need to supply the fully-qualified domain name of the SyFlo2 server, as seen from the AWS workstation instances, or a static public IP address for the server. You'll need to address security and network setup issues necessary for this configuration.

Creating a Stable Instance

Running syflo2 on AWS EC2 requires a stable private IPv4 DNS name (aka hostname) and MAC address for authentication, and a stable machine name and possibly external Public Ipv4 DNS name so that the SynthEyes clients can reach syflo2. Achieving that requires some care in AWS.

Before creating the syflo2 server instance, you should create a public Elastic IP address, assign it to a new Network Interface, then create the new server instance with that new Network Interface.

This precise sequence provides the stability needed for the hostname, internal and external IP addresses, and MAC address. Without these steps, AWS will change those values each time the instance is stopped and started or if you need to rebuild the server image. AWS won't let you change or delete eth0 once the instance has been created; syflo2 always looks to eth0 for configuration information. If you're already using a (shared) license server, you may be able to turn off the "destroy ENI on instance termination" checkbox.

Notes:

- While the external Elastic IP address isn't necessary if syflo2 is only serving SynthEyes clients within your VPC, it is necessary if it must serve external clients also. Setting up an Elastic IP address initially is worthwhile in case external clients (freelancers) are later necessary.
- It doesn't appear useful to set a static hostname for the syflo2 instance (eg via `hostnamectl`). It requires jumping through hoops to set the name, plus additional effort to adjust the DNS to route traffic from the clients to that name.

- If you have a FQDN set up for the instance, that will be used for external clients.
- **Advise us if you will have external public-network SynthEyes clients**, as the license file will not include that name by default.
- Resist the temptation to hand-“correct” fingerprint information. It is signed and any such attempt will be rejected. If you think that necessary, contact us about that separately.
- For current details of operating AWS, see the AWS documentation.

Security group

You'll need to set up a security group for the license server that includes the necessary TCP and UDP ports used by syflo2. See the [Firewalls](#) section below. Don't forget to open the ports for you to SSH or RDP into your server.

Note: Even though you've set up EC2 security groups, you still must configure the **firewalls** in your instance itself. For example, Windows blocks all incoming non-system communications by default: you *will* have to set that up.

Syflo2 requires outbound HTTP (TCP on port 80) accesses to ssonetech.com for a number of functions to operate, ie those requiring license file updates. Similarly, SynthEyes uses HTTP operations on port 80 for auto-update and messaging functions.

Access from External SynthEyes Clients

By default, SynthEyes clients are assumed to be inside AWS with SyFlo2 in a virtual private cloud (VPC) configuration. If you need external SyFlo2 clients to be able to reach SyFlo2, **you must let us know in advance**. You'll have to assign a static external FQDN or EIP/ENI combination before running syflo2 -info to generate the fingerprint, as the fingerprint will need to include that FQDN so clients know where to find the server, and we'll need to know to include that information in the license file for clients.

Installing SyFlo2

The syflo2 license server is a simple standalone executable. SyFlo2 is delivered in a ZIP file, with separate subdirectories for Windows, OS X, and Linux. You should use the syflo2 files from the appropriate subdirectory. Read on for directions appropriate to your operating system.

Uninstall the Original SyFlo!

If it is installed, the original SyFlo service **must** be removed before installing SyFlo2 to prevent interference. They can't both be running at once. For details of the original installation, see the original SyFlo.pdf. There's a quick removal summary here.

Note: You'll need to submit a SyFlo2 fingerprint and receive a new license file; an old SyFlo(1) license file won't do anything for SyFlo2.

Windows

From the Windows Applications panel, run the original syflo uninstaller, run the syflo_uninstall.bat script, or use the Windows service manager to stop and delete the service. Delete syflo.exe to avoid confusion.

macOS

Delete the syflo executable and the syflo plist file, for example

```
rm -f /Library/LaunchDaemons/com.ssontech.syflo.plist
```

Linux

Delete the syflo executable and the syflo entry, for example

```
rm -f /etc/init.d/syflo
```

Windows Installation: by Installer

We highly recommend that you use the SyFlo2Setup.exe installer in most cases. The installer copies the required files into the normal SynthEyes install folder (C:\Program Files\Andersson Technologies LLC\SynthEyes), installs syflo2 as a Windows Service (which won't run until it has a license file), and creates a number of helpful shortcuts, described later, on Windows's Start menu, within the Andersson Technologies LLC folder.

Windows Installation: Manually

If you want to locate the files according to your own scheme, you can follow this process.

In the Windows Explorer (NOT Internet Explorer), go into the Windows folder of the material delivered with syflo2. Use notepad or your favorite text editor to open the syflo2_install.bat script, and verify/correct the location where the syflo2 executable (.exe) is to be permanently located, as needed. Then right-click the syflo2_install.bat script, select "Run As Administrator" and then grant permission for it to proceed. This script enters syflo2 into Windows's databases, so that it appears in the Windows Services manager (in the Administrative area of the Windows Control Panel).

If you like, you can create shortcuts on the desktop or start menu for flostart.bat, flostop.bat, flomonitor.bat, and SyFlo2.pdf, which correspond to the shortcuts described in the [Windows: by Installer](#) section.

macOS Installation

While the syflo2 license server executable can be installed on any convenient location on the server, we highly recommend that you **first** install **SynthEyes** on the server itself, and then copy the SyFlo2 files into SynthEyes' folder, ie /Applications/SynthEyes. This facilitates testing and later finding syflo2 again.

Linux Installation

While the syflo2 license server executable can be installed on any convenient location on the server, we highly recommend that you **first** install **SynthEyes** on the server itself, and then copy the SyFlo2 files into SynthEyes' folder, usually /opt/SynthEyes. This facilitates testing and later finding syflo2 again.

You'll need the ncurses package to run syflo2 (as you do SynthEyes, for that matter):

```
sudo yum install ncurses-compat-libs
```

or

```
sudo apt-get install libncurses5
```

(Use zypper on suse.)

Time Zone

All floating license types limit shifting the license among time zones, to prevent a license from being rotated daily around the world to different users, which gives an unfair discount to multinational companies. A license's time zone can be changed again 36 hours (1½ days) after the previous change.

The time zone is part of the server's fingerprint, as well as forming the default time zone for licenses.

Set the syflo2 server's and client machine's time zones to their normal local office time zone. See your operating system's instructions for setting the time zone. (For example, "tzutil /s "Eastern Standard Time" on Windows, or the directions to [set the timezone on an AWS EC2 AMI Linux instance.](#))

We'd appreciate it if you not try to game this, thanks.

Fingerprinting the SyFlo2 Installation

Once syflo2 is installed on the server, you should start a command line interpreter, ie Windows' Command Prompt, macOS' Terminal, or a Linux shell. Change directory (cd) to the directory syflo2 is installed in, then run this command

```
syflo2 -info (Windows) OR ./syflo2 -info (macOS and Linux)
```

Syflo2 will put the fingerprint information onto the clipboard automatically, except on Linux. **On Linux, sweep-select the syflo2 fingerprint output, then control-C or Edit/Copy.** (If you're ssh'ing from a Windows machine, use Edit/Mark from the menu on the Command Prompt icon at the top left of the window, sweep, then hit return.)

With the fingerprint on the clipboard, paste the node-lock output text and at least one of your serial numbers (for identification) to support(at)ssontech.com We use this information to generate the license data file.

Tip: Let us know if the syflo2 server will give licenses to "external" client machines that must use a different FQDN than the internal FQDN.

IMPORTANT: Use control-V/command-V paste to put the syflo2 output into the email. Do NOT attempt to retype it; the fingerprint data is checksummed to avoid errors and even slight typos will require resubmission.

DO NOT SEND SCREEN CAPTURES. We cannot use screen captures, we'll have to email you to send the plain text.

If you subsequently change the server hardware or reinstall the operating system, you'll need to re-fingerprint the server and get a new license file; see [Changing the Server](#). SynthEyes licenses will be unavailable until this process is completed.

License File Installation: Server & Client

After you have sent in your server node-lock information, you will be sent a license data file, named something like your_company.lic The license file should be placed on the syflo2 server machine in the same folder as the syflo2 executable, typically the main SynthEyes directory, ie /opt/SynthEyes, /Applications/SynthEyes, or C:\Program Files\Andersson Technologies LLC\SynthEyes. The folder and files should all be writable only by administrators and the syflo2 service.

You should test your syflo2 setup by running `syflo2 -run` at the command line to verify that it starts and runs (from within the SynthEyes directory that contains syflo2). If there is a problem, syflo2 will print a message and stop immediately. If it keeps running, it is good. Hit control-C to stop it.

The SynthEyes **clients also need access to the license file**. They pull various configuration parameters from it, and it is easier to have just one file rather than separate files for license and configuration data. Typically, the client will have a local copy of the license file. The file (or a link to it) needs to be placed in the folder with the SynthEyes executable, ie /opt/SynthEyes, /Applications/SynthEyes, or C:\Program Files\Andersson Technologies LLC\SynthEyes.

Tip #1: You can start SyFlo2 and/or SynthEyes with command line arguments -license filename (two separate arguments) that specify the exact name of the license file, for example to redirect it to a shared file on another machine.

Tip #2: You can start SyFlo2 and/or SynthEyes with an environment variable SYNTHEYES_LICENSE_FILE that contains the exact name of the license file, for example to redirect it to a shared file on another machine.

Note #1: if the registration dialog appears when starting SynthEyes on a client machine, that means it does not see a license file, so the license file needs to be installed on the client.

Note #2: the SynthEyes clients need to be able to find the syflo2 server via the local DNS system using the server computer name. They will try to locate the server via a private broadcast scheme as a fallback, but that is subject to local network partitioning.

Warning: Do not use a symbolic link to the license file on the syflo2 server machine. The automatic license file update features will destroy the link. *(This is different than on the original syflo.)*

If you move the license file to a different machine or networked disk, you should consider the reliability of accessing the license file. If the license file is unavailable, the licenses themselves will be.

Configuring the SyFlo2 Service

Once you have the license file in place, and verified that `syflo2 -run` works OK, you can set up the syflo2 service. (Syflo2 will not start without a license file.)

The syflo2 server must be set up to start automatically when the machine is rebooted. The process for that depends on your operating system, with instructions provided below. The various files required are in subfolders for each operating system—ie named Windows, macOS, Linux—supplied with syflo2.

SyFlo2 should run as a daemon-type userid, **not as root** for security. That will happen automatically in most cases.

Important: The userid used by the SyFlo2 service must be able to write files in its directory, in order to be able to update the license file. (The ability to write the license file is *not enough*, because syflo2 downloads the new license file to a temporary file and moves it into place only after the download has succeeded.)

SyFlo2 Service on Windows: by Installer

SyFlo2's Windows installer tells Windows about the service and sets it up to run automatically. It also creates a few helpful shortcuts, including these to control the service.

Start SyFlo2 Service. Starts the SyFlo2 license server. You'll need to go through a UAC prompt to do so. The service won't *stay* running unless there is a valid license. See [Troubleshooting](#) as needed.

Stop SyFlo2 Service. Stops SyFlo2, ie `syflo2 -stop`. If you stop the service, all active SynthEyes licenses will time out after several minutes, unless there is a redundant configuration with two other active servers.

You can also use the Windows Services manager to start and stop the service. Access it via the start menu/Control Panel/System and Security/Administrative Tools/Services. Note that if you start or stop the service with the shortcuts, you will need to Action/Refresh to see the correct status in the Services manager; it does not auto-refresh.

If you stop the service, all active SynthEyes licenses will time out after several minutes.

SyFlo2 Service on Windows: Manually

If you didn't use the Windows installer, you should do the following steps to get the service set up.

In the Windows Explorer (NOT Internet Explorer), go into the Windows folder of the material delivered with syflo2. Use notepad or your favorite text editor to open the syflo2_install.bat script, and verify/correct the location where the syflo2 executable (.exe) is to be permanently located, as needed. Then right-click the syflo2_install.bat script, select "Run As Administrator" and then grant permission for it to proceed. This script enters syflo2 into Windows's databases, so that it appears in the Windows Services manager (in the Administrative area of the Windows Control Panel).

You can create shortcuts on the desktop or start menu for flostart.bat and flostop.bat to start and stop the service.

You can use the corresponding syflo2_uninstall.bat script to remove the syflo2 service; it does not delete the program itself, just the Windows' registry entries for the service.

SyFlo2 Service on macOS

The macOS launchd process is in charge of controlling server processes such as syflo2. You can read its manual page for background information.

Copy all the files in the macOS folder of the ZIP to /Applications/SynthEyes, or wherever you want the syflo2 service to reside.

Open the com.ssontech.syflo2.plist file with a text editor and verify that the installed location of syflo2 is correct for your system. You can also supply keys for UserName (or UID) and GroupName (or GID) to specify values for the user and group to run syflo2 for security purposes. (See `man launchd.plist`)

We'll now need to set up the syflo2 service to run automatically using launchd. The following commands to Terminal will do this:

```
cd /Applications/SynthEyes          # or wherever you have it
chmod 744 install_service.zsh uninstall_service.zsh
sudo ./install_service.zsh
./syflo2 -web                       # opens a browser window!
```

This will print service status information using launchctl. You should see "running" in there, and a web status page should open in your browser.

If you later need to delete the service, run `sudo ./uninstall_service.zsh`

SyFlo2 Service on Linux

Most modern Linux systems use systemd to handle services; a syflo2.service file for it is supplied in the Linux directory.

Service Setup

1. Edit syflo2.service to match your syflo2 installation path.

2. Edit it to set the user and group (and uncomment those lines).
3. Run the following commands:

```
sudo cp syflo2.service /etc/systemd/system
sudo chmod 744 /etc/systemd/system/syflo2.service
sudo systemctl enable syflo2
sudo systemctl start syflo2
sudo systemctl status syflo2
```

DNS Setup

The client machines must be able to locate the syflo2 server by name. If you have a mixed Linux and Windows network, it may be helpful to enable windows-based naming for SAMBA by adding "wins" to the end of the hosts: line in /etc/nsswitch.conf, see <http://www.linuxquestions.org/questions/linux-networking-3/ping-netbios-names-from-linux-samba-271336/>

If you have different internal and external hostnames (ie in cloud configurations) and want external clients to be able to access syflo2, you need to advise us of that, so that the clients know where to look. Although the fingerprint information may contain the proper external name, we will not enable this unless specifically instructed, for security.

Firewalls

Syflo and SynthEyes need to be able to communicate. Firewalls are designed to prevent certain communications. Whether a firewall is in your server, client, or network, they **must** be configured to permit SynthEyes and Syflo to communicate, in both directions! Otherwise, your setup will not and cannot work and there is no software "fix" to Syflo or SynthEyes to diagnose or work around this. Silently blocking communications is the **primary function** of firewalls, that's what they are *supposed* to do!

Windows Users! The Windows firewall is always on by default. You **will** have to open ports in it, *even if you're on an EC2 cloud* with its own firewall system.

During firewall setup, you'll need to correctly specify the designated ports numbers and protocols (UDP vs TCP), as well as direction (inbound vs outbound).

Important: You need to ensure that any firewalls are open on **both** the server and client, and **all intermediate networking equipment**. Any one of these can prevent communications between SynthEyes and SyFlo2. We cannot provide detailed support for operation of your 3rd party equipment.

Here are three different ways to look at the ports and traffic: from the syflo2 server's point of view, the SynthEyes client's point of view, and the point of view of any intermediate networking equipment. Note that firewall blocking usually blocks *incoming* traffic unless specifically configured for outgoing traffic as well.

Syflo2 Server's Point of View				
Local Port#	Direction	Remote Port #	Protocol	Function
31821	← Incoming	31824 - ~31829	UDP	License Requests
31821	→ Outgoing	31824 - ~31829	UDP	License grants
31822	← Incoming	Ephemeral, 50000+	TCP	Syflo2 web server. Local loopback or external machines. Don't allow access from external internet!
31820	↔ Bidirectional, local inside server only!	Ephemeral, 50000+	UDP	Command line commands to live server. Used only for local communications, you might need to open a hole for that, depending on the design of your firewall. Don't allow access from external internet!
Ephemeral	→ Outgoing to ssontech.com!	80	TCP	HTTP operations to ssontech.com to update and download license files. Only the following URLs are addressed there (via http:) : /cgi-bin/syflo2qwik.php and /cgi-bin/syflo2.php

SynthEyes Client's Point of View				
Local Port#	Direction	Remote Port #	Protocol	Function
31824 - ~31829	← Incoming	31821	UDP	License grants
31824 - ~31829	→ Outgoing	31821	UDP	License Requests
Ephemeral, 50000+	→ Outgoing	31822	TCP	Syflo2 web server.
Ephemeral	→ Outgoing to ssontech.com	80 (HTTP)	TCP	Auto-update checks, messaging, and SynthEyes downloads from

				ssontech.com.
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Intermediate Generic Network Equipment Point of View				
Server-side Port Number	Direction	Client-side Port Number	Protocol	Function
31821	← Client to server	31824 - ~31829	UDP	License requests
31821	→ Server to clients	31824 - ~31829	UDP	License grants. The number of ports used here will vary based on the number of SynthEyes instances running on the machine, typically only one; maybe a second (batcher) instance.
31822	← Client to server	Ephemeral, 50000+	TCP	Syflo2 web server. Note that the client port# chosen by your browser for client to server communications will be ephemeral, ie over 50000 or so, don't limit that.
Ephemeral	→ Outgoing to ssontech.com	80 (HTTP)	TCP	HTTP operations to ssontech.com to update and download license files. Only the following URLs are addressed there (via http:) : /cgi-bin/syflo2qwik.php and /cgi-bin/syflo2.php

For example, Windows 10 Firewall blocks all incoming connections by default, and Linux machines often run the iptables firewall. You must open a "hole" in the machine's firewall for incoming UDP connections; if the firewall blocks outgoing communications from applications to your internal network, you must open a hole in the outgoing direction as well.

When operating a VPC (virtual private cloud) environment, you'll want SyFlo2 and SynthEyes machines to be able to talk on the local VPC, but don't allow these paths through to the external public internet!

In rare conditions, if these ports are already in use by some other software, or a different range is required for some reason, the licensing file can be set up to specify a different range, though this has never proven necessary. (You can move the syflo2-to-syflo2 traffic with a SYFLO_PORT environment variable for both the actual syflo2 service instance and when using syflo2 on the command line.)

Troubleshooting

Initial Setup

If you receive “No floating licenses” available from SynthEyes on your user machines, here’s a checklist to go through to diagnose the issue further. Please run through this systematically, checking each box in succession. If you need to email us for help, we’ll need you to document the results of each step.

Spoiler Alert! Nearly always, the cause of the problem is due to blocked communications between syflo2 and SynthEyes, due to firewalls on those computers or in intervening machines. Just because you don’t know about it doesn’t mean it isn’t there.

Check your Time Zones! License issuance is subject to time zone settings, see the [Time Zone section](#) in this manual. You may need to use the syflo2 web page or command line interface to assign the SynthEyes licenses to the time zone of the users, particularly with remote workers or cloud-based license servers or workstations.

Tip! Please run through the checklist before emailing, rather than emailing us your guess to why it doesn’t work. We understand the inclination to think there’s some kind of bug in syflo2 or SynthEyes instead of your networking setup, but please go with the odds and give the checklist a go. This will result in your system working sooner.

Troubleshooting Checklist

- Make sure that there is **one and only one ".lic" license file** in the folder with SyFlo2, and that it is the most recent one (check the date on the email it's from, then save the file again). Double-check if you're using links, command-line arguments, or environment variables to redirect the license file.
- Check if the SyFlo2 process is running on the server, for example with `ps -a` or with the task manager (set to examine **all** processes). If it is already running, you can jump ahead to the step to check the `syflo2 -list` output.
- Verify that `syflo2` starts OK (if it is not running) with `syflo2 -run` from a command prompt (from the SynthEyes/SyFlo2 directory). If it won't start, it will print an error message, usually that this is not the right server (if so, you'll need to email us with the `new syflo2 -info` output and a form, see [Changing the Server](#)). If it starts, it will just sit there, appearing hung, that's good, that's what it does in the background, ie sit there by itself serving licenses. Use control-C to close it.
- Start the `syflo2` service and verify that it is running. (See Configuring the SyFlo2 service, this depends on the operating system.)
- Check the `syflo2 -list` output from a command prompt to make sure that there are licenses available.
- Start SynthEyes on the server and make sure it runs. (Only possible if the `syflo2` server computer meets the SynthEyes requirements... ie supports AVX instructions.)
- If SynthEyes produces a registration dialog, then you have not installed a license file for SynthEyes and need to do so.
- If SynthEyes says that no license is available, it sees the license file, but like it says, no license is available. Typically this means that firewalls or routers are blocking access on the server.
- Verify that the version of SynthEyes that you have installed and want to run is earlier than the floating licenses. For example, a FL-2203-... serial number cannot run a SynthEyes 2206 version: a FL-2206 or later serial is required. See <https://www.ssontech.com/serial.html> for information about serials.
- Once SynthEyes runs on the server, we'll move on to the client (user) machine...
- From a command prompt on the client machine, type `ping my_server` where `my_server` is the name of your `syflo2` server, ie the first quoted field in the server's `syflo2 -info` output. You should get a "pinging my_server" response that includes the IP address, followed by several reply lines. If the host is not found, that is bad: your DNS systems must be capable of locating the server by name from each of the clients. You should also verify that the IP address is the correct one on your local network, not someone else's!
- Make sure there is one and only one ".lic" license file in the SynthEyes folder on the client, the most recent one.

- ❑ Make sure that the timezone setting of the server matches the timezone setting of the client machines. If they are different, [assign the timezone](#) of the SynthEyes licenses to the time zone of the user machines.
- ❑ Typically, problems at this stage mean you need to fix the firewall on the client machine, or perhaps in intermediate network equipment.
- ❑ Try to start SynthEyes on a client, then **immediately** check the `syflo2 -list` status of the server, to see if it has allocated a license to the client.
- ❑ If no license has been allocated, check the firewall on the **server**, as communications from SynthEyes to syflo2 are blocked. (Most firewalls block *incoming* traffic). See the section on [Firewalls](#) for information about what ports need to be open.
- ❑ If a license has been allocated, SynthEyes to syflo2 communications are OK, but syflo2 to SynthEyes communications are blocked, so check the firewall on the **client**.
- ❑ If you believe firewalls are OK on both the server and the client, you may have network equipment (routers) between the server and client. SynthEyes should be running on the server also. Install SynthEyes and the license file on a laptop, make sure it's firewall is open, and plug the laptop into your various routers starting from the one the server is attached to, verifying that you can acquire it there. You can then move it to successive routing boxes to identify which has firewalls that need to be identified.
- ❑ Further diagnosis will require installing Wireshark on server, client, and maybe that laptop, to see what's happening to the packets!

For any further assistance with floating licensing, always include:

- **the output of `syflo2 -info`!** (Often this shows that it no longer matches the original values, ie that the server has been changed.)
- full version information for the server's and client's operating systems,
- version information for the installed SynthEyes and syflo2,
- the timestamp of the email from us containing the license file,
- a checkbox-by-checkbox description of your results from the troubleshooting steps above,
- a statement, based on the checklist, about in which direction communication is blocked.

Previously Working Systems

If you suddenly encounter problems with a previously-working system, your first step should be to re-run `syflo2 -info` and compare its output to the data in the email containing your license data. (This often causes people to remember that they just rebuilt their server.) If the data is different you'll need to contact us for a new license file, see [Changing the Server](#).

Note: If you receive "No license available," check the server's license status page to confirm the situation. If SynthEyes instance crashes without any Imminent Crash dialog, the license will not be available for several minutes, until its reservation times out. Alternatively, you can use the "syflo2 -release" command or release on the web page to hasten the process. **Please follow our [crash-reporting process](#)!**

If the syflo2 information is still valid, check your system for changes to the firewall configuration and startup process, to verify that syflo2 is still being started automatically. If you've recently changed or updated network routers, you may have to open the UDP ports in them. Otherwise, you should run through the troubleshooting steps above to localize the issue.

Using Wireshark

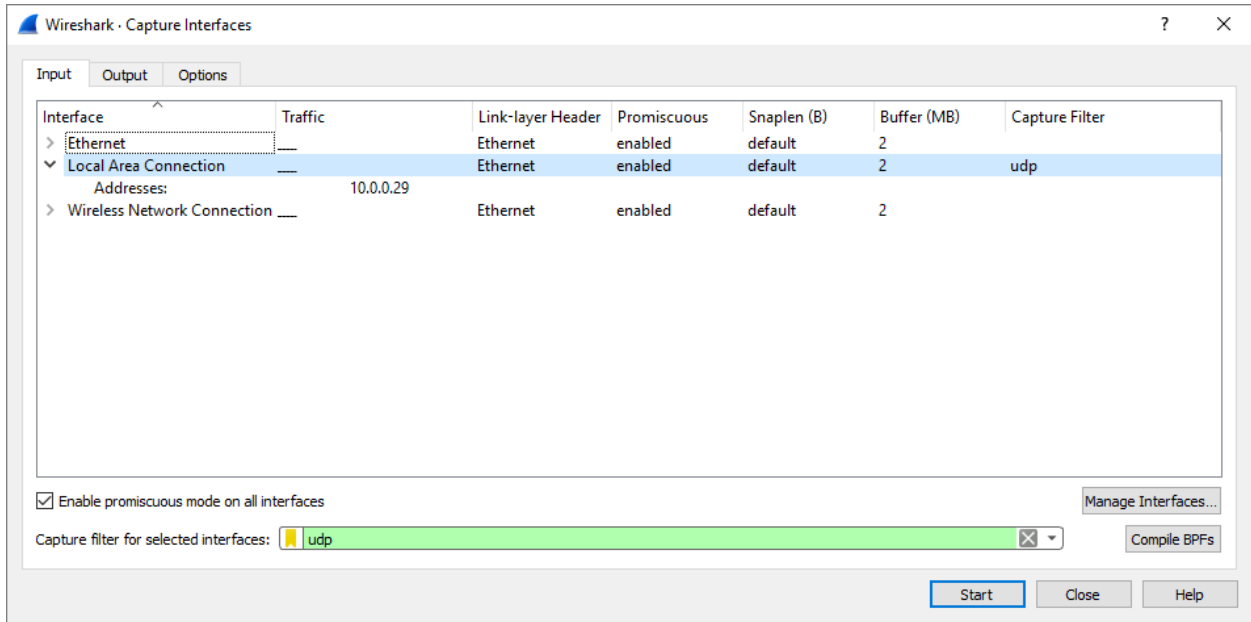
If your server is running fine, and you can start SynthEyes on it, but you can't start SynthEyes from one or more other machines, and you've run through the diagnostic steps above, it will be necessary to use a network monitoring tool to help identify the problem.

Note: SyFlo2 and SynthEyes rely on your network for communications; if your network isn't working we can't just "fix it" for you. Neither SynthEyes nor SyFlo2 can diagnose issues in your network, by definition! It's like sending a snail-mail letter: if a letter is sent but doesn't arrive, you can only ask the postal system to determine what happened.

In order to help you diagnose your network, we provide this guide, using the popular open-source network monitoring tool wireshark (<https://www.wireshark.org>).

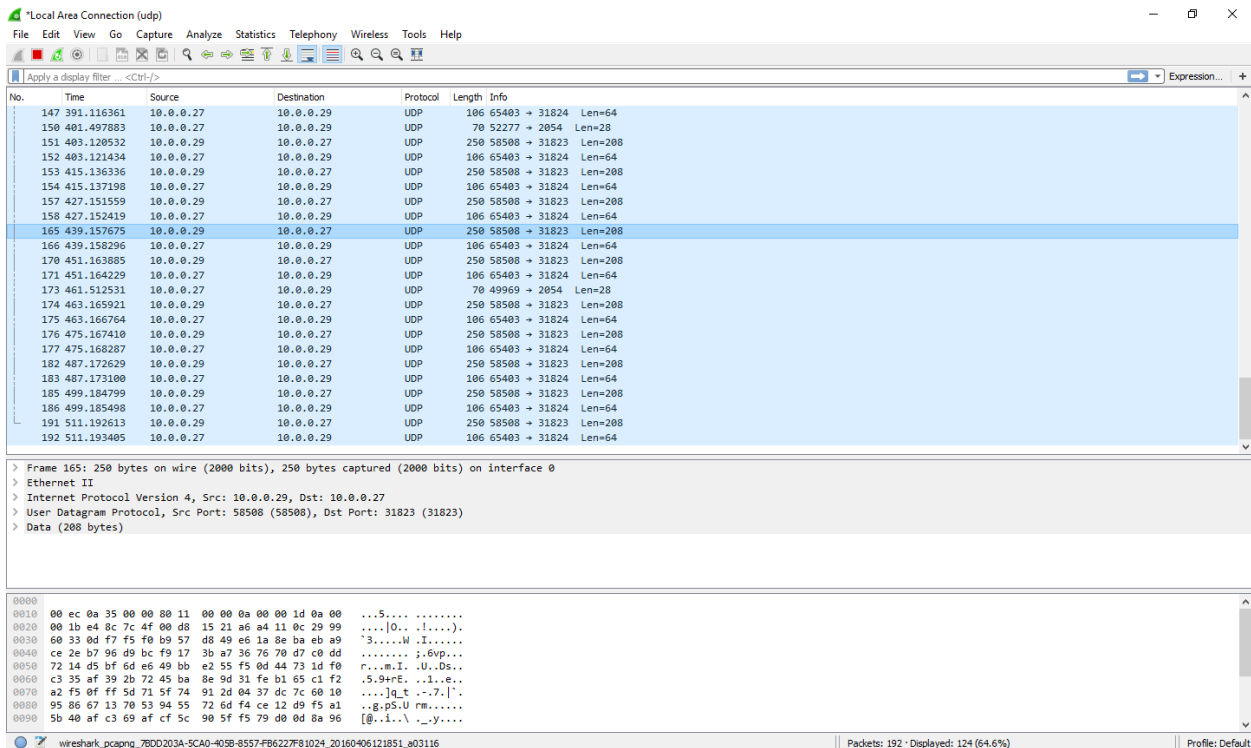
Wireshark is available for Windows, Mac, and Linux. For starters, we recommend installing it on the client (SynthEyes) machine, or a suitable test machine.

- Download, install, and start wireshark.
- Click Capture/Capture Options (ie Capture Options on the Capture menu), causing that dialog to appear.
- Click (once) to select the main network interface, ie the one that leads to the server.
- Click the main interface's disclosure triangle, to expose its IP address information. Write down this client's IP address for later use: four numbers separated by a dot, such as 10.0.0.29
- In the Capture Filter field at the bottom of the dialog, enter "udp" (without the quotes), to select just UDP packets. (SyFlo2 and SynthEyes communicate via the UDP protocol).



- Click Start on the Capture Options dialog.
- With wireshark active, go try to start SynthEyes (which presumably won't start, so do it several times for good measure).
- Click Capture/Stop
- Click File/Save and save the captured packets as a pcapng file for *possible* sending to us later. (Most likely there won't be much interesting to send!)

Here's what a capture of a running SynthEyes session looks like:



In the listing above, you can see the SynthEyes client, at IP address 10.0.0.29, sending 208-byte request packets to the SyFlo2 server at 10.0.0.27 port 31823. The server then quickly sends back a 64-byte response packet to the client at 31824. That handshake repeats every 12 seconds. (Note: this is test data; in your system, the IP addresses will be different, the port numbers will typically be 31821 and 31824, and the handshake will occur only every two minutes.)

The actual contents of the data packets are irrelevant for diagnosing what is happening: we're just looking for the packets to be flying around, and to what IP addresses. You will notice that there are other miscellaneous packets mixed in, with other lengths, protocols, and port numbers. You should ignore those.

So here's what to look for.

On the SynthEyes Client

Do you see the outgoing packets? You'll see this client's IP address in the Source column (you wrote it down in the instructions above), a protocol of UDP, Length column of 250, and Info column of something like "58508 → 31821 Len=208" (The first number is random, though it will stay the same.)

If you don't see outgoing packets at all, then verify that your Wireshark is set up right. Remove the UDP capture filter on Capture/Capture Options, begin capturing, and try some internet browsing or remote file access, to make sure you see packets at all.

If your Wireshark is good but there are no packets when starting SynthEyes (and it comes back and says no license is available), then you have a firewall or sandbox blocking SynthEyes on that machine; you need to turn it off or at least open it up for UDP ports 31820-31829. (Rare possibility: you have multiple network interfaces on the machine, and the packet is being sent to a different network!)

Once you've identified the outgoing packets, look for the server's IP address in the Destination column. (You could get it from pinging the server from the client as well.)

Now look for the packets coming back from the server to the client. They will have the client's IP address as the Destination address and Info of something like "65403 → 31824 Len=64" (again that first number is random).

If you see the response packet coming back from the server, check the **Source** IP address. It must be the same IP address that SynthEyes sent the request to, ie the earlier Destination address. ***If the response is from a different IP address than the source was sent to, it will be ignored***, and that is why no license is available.

If you have correctly-addressed packets coming back from the server, but SynthEyes doesn't start, check again for a firewall or sandboxing on the client; permit internet access by SynthEyes and be sure UDP ports 31820-31829 are open.

If you're quadruply sure that there's no firewall present, check again that the installed version of SynthEyes can be activated by the serials being managed by SyFlo2.

On the SyFlo2 Server

If SynthEyes is sending packets to SyFlo2, but (on the client) you don't see packets coming back from the server, you're going to need to install Wireshark on the server, and see what is happening there.

First, on the server, you should verify that you see the packets arriving from the client, with a Source of the client, and a Info column like "58508 → 31821 Len=208".

If you don't see the packets arriving, you've got a networking problem (see the next section).

If you see the request packets arriving, but no responses, you need to first verify 100% that SyFlo2 is running on the server (for example with `syflo2 -list`).

Then, you need to find the firewall and open it up for UDP ports 31820-31829.

Once you see the response packets going back out, verify that they have the same Source IP address as the Destination IP address coming in, and that that IP address is the same as you get for the server from the client using ping. The only known reason this might be a problem would be if you have multiple interface cards on the same computer attached to the same network.

Also verify that the Destination of the outgoing response packets is the same as the Source of the incoming request packet. (Should always be the case.)

Once you see packets going out of the SyFlo2 server with the correct Source and Destination address, if they aren't arriving at the client, and so SynthEyes doesn't start, then where are they going?

In the Network

If you have packets confirmed sent from SynthEyes that aren't received by SyFlo2, or confirmed sent by SyFlo2 and not received by SynthEyes, then you have a problem in your network: one of your pieces of networking gear is dropping the UDP packets, ie has its own firewall active.

To diagnose what is happening, you will have to inventory the networking gear that a packet must pass through to get from SynthEyes to SyFlo2 and back. The results of pinging the server from the client can help you see what's in there, for routers but not simple hubs.

To help diagnose the entire path, you should install SynthEyes onto a portable machine (laptop or otherwise). Then, physically connect it (no wi-fi) to hubs in different parts of the network (on each side of each piece of gear), to determine exactly where the packets are disappearing. You should start by plugging into the same hub as the server, where SynthEyes should start (if necessary check what is happening with Wireshark on both ends). You can then move it further and further from the server, one piece of routing gear at a time, verifying that it still works, until you reach someplace where it doesn't.

You'll then need to open up the 31820-31829 UDP ports on that last piece of equipment. You'll need to consult your equipment's manual for that.

Ongoing Operations Guide

Monitoring Server/License Status

Syflo can produce various status and logging information. Usually you'll use the web browser interface, accessed at http://your_server_name:31822/ or <http://127.0.0.1:31822/> on the server itself. You can open it from the command line with `syflo2 -web`. Note that syflo2 can also produce status listings in various text formats, from human readable to tab-delimited to JSON to XML.

Here's what the web interface looks like for a rather busy license file that includes floating, managed seat (FS-), and managed temporary (FT-) licenses. Look for the single active license (showing the current SynthEyes version), the variety of license and timezone reservations, and the associated times until those can be changed (for FS- and FT- licenses).

When a SynthEyes batcher instance is active on a machine, you'll see the machine name followed by /B (batcher only) or /AB (interactive + batcher).

Various data-entry fields at the bottom allow the reservations to be updated, licenses to be released, and new SynthEyes license orders to be claimed.

SynthEyes License Server 2.0.0

Owner: Andersson Technologies LLC

Running on: JUNA

Current time: 2021-11-23 16:11:34

Issued (Local): 2021-11-23 16:11:03 GMT-05

Issued (UTC): 2021-11-23 21:11:03 Rev. BL

Uptime: 2.4 hours

In use: 1 of 18 licenses (6%)

Availability: 9 of 18 licenses (50%)

Serial Breakdown:

Serial	Machine	Version	User	Used for	Locked for	Timezone (hrs)	TZ locked for	Starts/Expires
FL-2207-1001	----		Greg+			GMT-05		
FL-2207-1002	----		Frank+			GMT-05		
FL-2207-1003	----		----			(GMT-05)		
FL-2207-1004	JUNA*	2108.1053	Russ	0h24m		GMT-05		
FL-2207-1005	----		----			GMT-05		
FL-2208-1234	----		Robert+			(GMT-05)		
FL-2208-1235	----		----			GMT-05		
FS-2111-1000	----		----			(GMT-05)		
FS-2111-1001	----		Tom+			(GMT-05)		
FT-2111-1000	----		Samantha+			(GMT-05)		(expired)
FT-2111-1001	----		Sandy+			GMT-05		(expired)
FT-2111-1002	----		----			GMT-05		(expired)
FT-2201-1504	----		----			(GMT-05)		Expire: 61.1 days
FT-2201-1505	----		Warren+		168.0 hrs	(GMT-05)		Expire: 61.1 days
FT-2201-1506	----		----			(GMT-05)		Expire: 61.1 days
FT-2201-1507	----		Harry+		167.7 hrs	(GMT-05)	167.7h	Expire: 61.1 days
FT-2201-1508	----		----			(GMT-05)		Expire: 61.1 days
FT-2201-1509	----		----			GMT+03	168.0h	Expire: 61.1 days

*: this serial is reserved for this specific machine

+: this serial is reserved for this specific user

Reserve for

Release the license The current owner will stop with 'No license available'.

Claim order number:

SynthEyes and Syflo2 ©2021 [Andersson Technologies LLC](#).

[SyFlo2 Documentation](#)



Reserving Licenses

Managed seat and temporary licenses (serial numbers) must be assigned to a specific user in order to function. You can also reserve FL- floating licenses for a specific user or physical machine for your administrative purposes.

For all license types, that may be accomplished via the web interface's Reserve...Go! controls, or via syflo2's command line interface.

When reserving a serial for a user, set the middle control to user, and the exact user name in the blank field before Go! The FS- and FT- managed license types can only be moved to a different user after seven days; see the "Locked for" column for a countdown. There is a five minute grace period to correct mistakes.

Important: Generic user names are not acceptable for FS- and FT- licenses; the names must be user-specific, typically from a single sign-on system such as Active Directory.

Tip: After clicking Go!, a new license file will be generated, downloaded, and installed. The web status page won't show *existing active users* in the listing until their machines check in with the new license file... which may result in their being assigned to a different license.

To reserve a FL- floating license for a specific physical machine, the machine must already be running SynthEyes using *some* license. Set the web controls to Reserve (the serial) for machine and click Go!

Note: FS- and FT- licenses can also be assigned to specific physical machines, but doing so requires that you have a FL- floating license to run on the machine initially.

Assigning Time Zones

Normally, licenses must be used within the same time zone as the server itself. However, you can assign the time zone of any serial number to a different time zone, for example to accommodate one or more remote workers.

To do that, use "Reserve (a serial) for timezone" and enter the time zone as a positive or negative number of hours versus GMT/UTC/CUT, for example Eastern Standard Time (EST) is -5.

Important: Don't enter a "time zone name" like PDT, be sure to use the difference in hours. (Fractional hours are OK when your time zone requires it, eg India's IST.)

For all license types, following a five minute grace period, the time zone can only be changed again after a 1½ day (36 hour) delay.

Releasing Licenses

Sometimes you may need to use SynthEyes when all licenses are in use. If some other user opened SynthEyes and then headed out to lunch or home for the day, you may want to recover the license from that user. If Bob is the user whose license you wish to reclaim, you can set SyFlo2's web interface to Bob's serial number in

Release the license (*Bob's serial#*) The current owner will stop with 'No license available.' Go!

and then click Go! next to it.

Or, you can use the command

```
syflo2 -release bob
```

From the command line, you can specify the license to be released with a user name, machine name, or serial number.

Either way, the license will be withdrawn from Bob's SynthEyes instance and it will immediately become available to other users. Bob's SynthEyes will receive a license-lost error.

Releasing a license should be approached with caution, as it will immediately stop any auto-track or solve operations that Bob may have wanted to complete unattended. Bob will still be able to save the results obtained up to that point.

You may also want to release a license if SynthEyes crashes. It will be released automatically in a few minutes when SynthEyes doesn't check in, but you can use a release command to do so immediately.

Important: Please report all SynthEyes crashes to support@... with a full description so that the crash can be eliminated in future builds! See <https://www.ssontech.com/faqs/crash.html>

Adding New SynthEyes Machines

When you add a new SynthEyes client machine of any operating system, you need to do the following:

1. If you already have a SynthEyes installer, skip to step 6.
2. Locate your login information, from the *most recent* license email that contained your license .lic file.
3. Log into the Customer-Only Support area of ssontech.com. Licenses have support for one year after purchase, so if you can't log in, or you can't find your login information, contact support for assistance.
4. Locate any serial number from your SynthEyes purchase email or most-recent renewal.
5. Download SynthEyes from the Customer-Only area, using your serial number. (Archive the installer.)
6. Install SynthEyes on the new machine.
7. Copy the license (.lic) file from the license file email or syflo2 server into the client's SynthEyes folder: /opt/SynthEyes, /Applications/SynthEyes, or C:\Program Files\Andersson Technologies LLC\SynthEyes.
8. Adjust the firewall or antivirus, if any, on the machine.
9. Test (see [Troubleshooting](#) as needed)

Adding or Renewing Licenses

If you purchase additional licenses or renew your existing ones, you'll need an updated license file that reflects that. You can get it quickly and automatically by claiming the order from your SyFlo2 server's web page or via the `syflo2 -claim` command.

To do that, you'll need the full order "number" from the post-order SynthEyes License Information or SynthEyes Invoice emails. Note that the order number starts with a date/time stamp and continues all the way through a purchaser-name section, so the order "number" includes text as well! Enter that whole thing (but not "Order #") and click Go!

SyFlo2 will contact `ssontech.com`, assign that order's licenses to your server, download an updated license file, and immediately start serving the new licenses. You (the `syflo2` administrators on file for your server) will also receive a confirming email with the updated license file and Customer-Only area information.

Tip: When a new license file is downloaded and installed automatically, existing users are unaffected, though they won't appear in the status display for a little while, when they re-verify their license assignment.

Tip: If you purchase *additional* licenses, you can save time when the original licenses come up for renewal by renewing *all* of your licenses at once. Pricing for licenses being renewed early will be pro-rated based on remaining support. This way you won't have to do another transaction later, and it prevents problems from having old serial numbers and newer SynthEyes builds. (Old serials can't activate newer builds.)

If you install an updated license file manually, `syflo2` should immediately notice that and begin serving it. A `syflo2` or server restart is needed only in the event of exceptional technical changes.

Changing the Server

In the event of hardware failure or software changes on the server that are sufficient to change the `syflo2 -info` output so that the server no longer runs (see Troubleshooting), you'll need to request a new license file.

Please email `support@ssontech.com` with:

- the reason why a new license file is requested,
- the output of `syflo2 -info` from the new/revised server (**TEXT, no screen captures!**),
- a signed copy of the Floating License Replacement Request **page** at the end of this document (get the License File Version from your license file email or `syflo2 -list` if this is a pre-planned move), and
- a subject line of "Floating license replacement (URGENT)"

Omitting any of these items will increase the time required to restore the server.

If the server has moved (ie its name has changed), then you **must** update the license file on the clients so that they know where to find the syflo2 server.

SyFlo2 Updates

SyFlo2 itself may be updated from time to time to fix problems and add features. There will be a message in the SyFlo2 web status page when a newer version is available. You can download it through the Customer-Only area.

You will probably need to stop the running service before copying the new syflo2 to its installed location. Then restart the service or reboot the server.

Warning: Due to an omission in macOS's security software, you should remove the currently-installed syflo2 file before copying the new syflo2 to that installation location. Otherwise, macOS gets its signals crossed and will incorrectly refuse to run the new version until the machine is rebooted.

Interfacing SyFlo2 with Other Software

You may wish to monitor or control SyFlo2 from other management software. There are two basic approaches to that: via the HTTP web server, or by using syflo2 as a command line interface.

***IMPORTANT*:** SyFlo2 does not impose any access security of its own; any user who can reach the HTTP service or run syflo2 commands can do whatever they want. Use firewall rules and login security to restrict access as appropriate to your situation.

HTTP Status Monitoring

You can access SyFlo2 status information with a HTTP GET to the local machine on <http://127.0.0.1:31822> or the FQDN equivalent. Status information is available in several formats from different sub-URLs:

/json	A JSON version of the license status (-list).
/xml	An XML version of the license status.
/simple	A simplified tabular version of the license status, with only the per-license information.
/plain	A plain-text version of the license status.

NOTE: SyFlo2 does not repeatedly re-write a generic status file like syflo did. That approach didn't make sense for SSD disk drives.

Controlling SyFlo2 via HTTP Post

You can control SyFlo2 by simulating user button pushes to SyFlo2's HTTP web page. Use an HTTP PUT to the local machine at <http://127.0.0.1:31822> or the FQDN equivalent. Current commands are listed; you can verify against the web page's View Source. Use standard POST url-encoding for the arguments.

- Check for an updated license.]: **checknow=1**

- Reserve a license: **reservation=1**, **serial**=(partial serial#), **target**= [user | timezone | machine | noone], **keyed**=[username | timezone | machine name] (depending on target).
- Release a license: **release=1**, **serial**=(partial serial#)
- Claim an order: **claimorder=1**, **ordernumber**=(full order#)

Command-Line Interfacing

Management software can run syflo2 commands on the server to accomplish desired tasks, perhaps using `rsh` or a small interface service. Status information can be obtained in various formats, or license operations can be initiated. See the [Command-Line Reference](#) below for the available commands. Note that syflo2 serves not only as the server, operating in the background, but also as interface software, when running from the command line.

Command-Line Reference

The syflo2 tool can be used to control the operation of the server process via a terminal command window. Keep in mind that if you shut down the server, connected SynthEyes users will begin to lose their licenses in a few minutes!

- about Print version and copyright information
- checknow Check immediately for an updated license file (and syflo). If a new license file is available, it is downloaded and installed, and the syflo2 server restarts. (Syflo2 *service* must be running!)
- claim order_id Use this after placing an online order to add or renew/upgrade floating licenses. Order_id is the full order id from the order acknowledgement page or emails and must be complete and exact. The new serials will be merged to your server's license file, and the new file automatically downloaded and installed.
- doc Open online syflo2 documentation in your web browser. Aliases: -docs, -document, ... anything starting with -doc.
- help (or -?) Print list of commands.
- html Output an html version of -list information to stdout.
- info (or -fingerprint) Output the fingerprint information for identifying this server.
- json Output a JSON version of -list information to stdout.
- license filename Optionally specifies the exact full filename of the license file (instead of having SyFlo2 search for it in its folder). If the license file is moved, these arguments must be used on every command. The SYNTHEYES_LICENSE_FILE environment variable may be more helpful for this reason.
- list List the SyFlo2 per-license server status as text. See -html, -json, -simple, -xml too.

- log *filename* Set the log file (overriding any in the license file), enabling logging. Can be used with -run as the server is being started, or by itself to change the logfile on an already-running syflo2.
- monitor Repeatedly updates syflo2 -list every 10 seconds.
- port *n* Sets the command port# to something other than the default - use BEFORE any operation. Set the SYFLO_PORT environment variable to save typing.
- release *XXX* Release the license assigned to the machine with this serial, user, or machine name, which is active but inaccessible or dead. If it is running, it will stop with a 'No license available' error message.
- reserve *serial clear* Clears a reservation on this serial number.
- reserve *serial machine machinename* Request that the (FL-) serial number be reserved for use on the given machine. The machine must currently be running SynthEyes so that it is listed in syflo2 -list, as that complete information will be used to identify the machine. Note that whether the reservation is granted or not is subject to various business and technical conditions determined by the online system; an updated license file will be downloaded if the operation succeeds. FS- and FT- serial reservations may only be moved once a week (168 hour hold time) with a 5 minute grace period to fix mistakes.
- reserve *serial user username* Request that the serial number be reserved for the given user. **Be sure to double-check the user name**, as FS- and FT- serial reservations may only be moved once a week (168 hour hold time), with a 5 minute grace period to fix mistakes. Note that whether the reservation is granted or not is subject to various business and technical conditions determined by the online system; an updated license file will be downloaded if the operation succeeds.
- reserve *serial timezone tzhrs* Request that this serial number be moved to the given timezone (instead of that of the server). The timezone is specified as an offset from GMT/UTC in hours (excluding any daylight saving time), for example "-5" for GMT-05, ie EST. (A fractional value may be necessary for some locales.) Or specify 'server' or 'default' to have it match the server. The timezone can only be changed once every 36 hours (1½ days), with a 5 minute grace period to fix mistakes.
- restart Restart the syflo2 process. NOT RECOMMENDED if syflo2 is running as a service: use your operating system's service manager to do this instead. This command will cause your system's service manager to lose track of the running syflo2 process.
- run Run this process as the server (typically "syflo2 -run &"). Normally, it will sit there, apparently hung doing nothing, but it's silently serving licenses as it does normally in the background. If there's a problem, especially at startup, it will print an error message.

- simple Output an simple tabular text version of per-serial -list information to stdout.
- slowrun *Internal use: Run this process as the server after a small delay.*
- start Start a background server on this machine *as the current user*. Note that the Windows's Services panel starts it as a special services user, and will get confused if you use this.
- status Show the syflo2 server's status. This is one line with the machine name, active and total serial number counts, uptime, and license file issue date. Produces no output (after a short delay) if syflo2 service is not running. May be useful for syflo2 VM health monitoring.
- stop Stop syflo2 on this server.
- verbose Put more information in the logfile (uses a default name if none set).
- version Bare SyFlo2 version string.
- xml Output an XML version of the -list information to stdout.

Usually, you will not need to use these command-line controls past the initial configuration, to retrieve the node information.

SynthEyes Floating License Replacement Request

License File Owner: _____

License File Version: _____

The above organization agrees to the following: to uninstall or replace (if a new file is offered for the same server) the license file listed above within 3 days of signing this agreement, to delete the license data file from the organization's servers to the extent practical, and to not recover, reinstall, or reuse the license file in any fashion at any future time for any reason.

By signing below you warrant that you agree to the terms above and to the SynthEyes license agreement, and that you have the authority to sign on behalf of your organization, such as an officer of the company or Head of IT.

Signed: _____

Name: _____

Title: _____

Date: _____

Please print this page and sign. If signing electronically, separate this page: *do not send a copy of the entire SyFlo2 manual.*

IMPORTANT: If you are changing servers, please be sure to include the output of "syflo2 -info" from the new server as text, *not a screen capture*, when submitting this form.