

# macOS Testing and Diagnostics

## About

This page describes basic testing and diagnostics of FreeSWITCH™ on macOS. It is part of the FreeSWITCH™ [macOS](#) documentation.

- 1 [Testing FreeSWITCH](#)
  - 1.1 [Startup FreeSWITCH](#)
    - 1.1.1 [Startup From the Command Line](#)
  - 1.2 [Test the FreeSWITCH™ Command Prompt](#)
  - 1.3 [Test A Phone](#)
  - 1.4 [Test Two Phones](#)
  - 1.5 [Test Additional Phones](#)
  - 1.6 [Shutdown FreeSWITCH™](#)
  - 1.7 [What Next?](#)
- 2 [Diagnosing Problems](#)
  - 2.1 [FreeSWITCH™ Diagnostic Tools](#)
  - 2.2 [TCP and SIP Diagnostic Tools](#)
  - 2.3 [macOS Diagnostic Tools](#)

## Testing FreeSWITCH

Before testing FreeSWITCH™ verify that the installation was completed normally. If using macFI open the installation log folder on the desktop then open the "make" log and scroll to the bottom. If there are errors they must be resolved. If you performed a manual installation each step should have been checked before proceeding to the next step.

### Startup FreeSWITCH

Regardless of how FreeSWITCH™ was installed it can be started from the command line or from macFI by selecting the "Test FreeSWITCH" option.

#### Startup From the Command Line

Start FreeSWITCH™ in a Terminal window using these commands:

```
cd /usr/local/freeswitch/bin
./freeswitch
```

There are many startup messages ending with some text boxes containing the names of the developers.

### Test the FreeSWITCH™ Command Prompt

After all startup messages are displayed a command prompt appears, messages may continue as the prompt remains. Try a few FreeSWITCH™ commands:

```
version
status
sofia status
```

If the commands return responses FreeSWITCH™ is working and you can continue with the next step.

### Test A Phone

Test using a physical SIP phone or soft phone such as [Bria Desktop](#) or [Bria for iPhone](#), or search the macOS App Store for "SIP" for a free download of Telephone. Then follow these steps:

- Setup the phone using the IP address of the Mac FreeSWITCH™ is running on as the server address. If macFI was used, it displayed this address after installation.
- Set the phones server port to 5060
- Set the phone's user ID to 1000 and the password to 1234.
- Once the phone is registered dial 9198, a song will play using test tones.

## Test Two Phones

To establish a connection between phones, a second phone must be setup as follows:

- Setup the phone as above except use 1001 as the user ID.
- Once the phone is registered dial 1000 from 1001 or dial 1001 from 1000 and answer the call.

## Test Additional Phones

User IDs 1000-1019 with password 1234 are pre-configured so up to 20 phones can be tested. To experience the potential of FreeSWITCH™ perform some functions found in [Test Calls](#).

## Shutdown FreeSWITCH™

Issue the following command in the FreeSWITCH™ Terminal window:

```
shutdown
```

## What Next?

Once FreeSWITCH™ has been tested it's time to customize macOS. The [macOS Customization](#) instructions will keep you busy!

## Diagnosing Problems

If there is a problem you may need to provide diagnostic information to the developers. For instance, to see if your phones are registered during testing using the following command:

```
sofia status profile internal reg
```

## FreeSWITCH™ Diagnostic Tools

There is a limited [Troubleshooting Freeswitch](#) and [Troubleshooting Debugging](#) information page available on the wiki. However, if you report a problem you will be asked for traces and log options. It will help to have them in advance if possible so you should become familiar with some of the following debugging commands:

```
reloadxml
log 7
console loglevel debug
sofia loglevel all 9
sofia profile profname(external..) siptrace on/off
sofia status [profilename]
sofia global siptrace on
sofia reload
sofia profile <name> restart
nat_map status
nat_map reinit
fsctl debug_level 1

fsctl send_sighup # <- To force the freeswitch.log file to segment.
```

## TCP and SIP Diagnostic Tools

You may be asked for traces of the actual network data on the lan connection. The most common tools for this purpose are:

- Packet trace - Find information on how to perform it on macOS [here](#).
- Wireshark - Great network tool to examine TCP and SIP data. Download the macOS version [here](#). Note: You should install the Wireshark application in the Applications folder and you must run Wireshark as root so it must be run from Terminal, see line below. A "Wireshark folder" was also created to hold other Wireshark supplied items.

```
sudo /Applications/Wireshark.app/Contents/MacOS/Wireshark
```

## macOS Diagnostic Tools

All of these tools are supplied with macOS.

- CPU and memory utilization - Run the Activity Monitor in Applications/Utilities
- Find source paths to running processes - Open Terminal and type the command:

```
PS -hax
```

- Detailed resource usage dynamically updated - Open Terminal and type the command (-u sorts by processor utilization):

```
top  
top -u
```

To terminate press control+z.

---