

Quick Guide - OSP Software (macOS)

A guide to help you install OSP software over a macOS laptop.

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1 - Requirements

- macOS computer with a working browser, wifi connection.
- Working knowledge of navigating and using “System Preferences” and a terminal.
- 2+ GB of free storage space.

- A pair of wired/wireless headphones and/or your computer's built-in microphone and speakers.
- PHP version 7.4 or earlier. This is only required for a legacy version of the PHP/Laravel graphical user interface of OSP. You can try installing [Homebrew](#) to get this specific version, followed by this command: `brew install php@7.4`

2 - Installation Steps

1. Go to this [link to the "Binaries" folder on GitHub](#) to find and download the “.pkg” installer file.
2. Save the installer file to an easy-to-locate place in your computer, and wait for the download to complete.
3. Open the file and follow the instructions from the installation window. You may be prompted to enter your computer login password.

If you instead see a message that prevents you from opening it, such as “*OSP...pkg cannot be opened because it is from an unidentified developer*”, close the message but do not move the file to Trash.

Follow these steps below.

- a. Open “*System Preferences*”. You can find this in “*Applications*” within Finder or via Spotlight Search (command + spacebar keys).



System
Preferences.app

- b. Go to “*Security and Privacy*”.



- c. In the “*General*” tab, you should see the “*unidentified developer*” message here as well. Select the “*Open Anyway*” button.
- d. You may see a message confirming to open the installer file, such as “*macOS cannot verify the developer of...Are you sure you want to open it?*”. Select the “*Open*” button.
- e. You should now be able to see the installation window for instructions.

4. After installation is complete, open a new Terminal window. You can find the Terminal in “*Applications*” > “*Utilities*” folder within Finder or via Spotlight Search (command + spacebar keys)

5. In the terminal, type in the command **run_osp** and press enter. You may be asked to grant access to “System Events.app” and your computer’s “Microphone”. Select “Ok”. Otherwise, you should normally see five terminal tabs automatically opened, running processes, and generating messages.

If you don’t see these tabs and/or get an error message “*execution error*”: *Not authorized to send Apple events...*”, refer to [section 3 - Troubleshooting](#).

6. You would be automatically redirected to your browser, where you'll see the landing page for Node.js version of EWS (URL should be “*localhost:5000*”).

The Open Speech Platform

A Real-time, Open, Portable, Extensible Speech Lab. Visit our [website](#) to learn more.

- Researcher Page**
Includes amplification, noise and feedback parameters.
- Beamforming Task**
Manipulation of the parameters associated with OSP's adaptive beamformer
- Multi-Alternative Forced Choice (Multi-AFC) Task**
Mobile-assisted word recognition tests using minimal contrast sets.
- CoarseFit Task**
Includes amplification, noise and feedback parameters.
- Goldilocks Listener**
Includes researcher interface and end user interface
- Freping**
Includes amplification, noise and feedback parameters.
- Profile Selection**
Reset to a Prescription Profile

Optionally, you can access a legacy version of the OSP software by entering “localhost:8080” in the browser search bar.

The Open Speech Platform Webapps for research.

- Researcher Page**
Includes amplification, noise and feedback parameters.
- 4 Alternate Forced Choice (4AFC) Task**
Includes a 4AFC Task webapp in which an end user can play a sound on click and select a response from 4 options.
- Goldilocks**
Includes researcher interface and end user interface
- Ecological Momentary Assessment (EMA)**
Includes an EMA webapp, using which an end user can respond to a prompted question or set of questions.
- AB Tasks**
Includes an AB Task webapp, using which an end user can select a relationship between two presented stimuli, A and B, evaluated on a 7 point likert scale.
- Go to our website**
This is a link to the Open Speech Platform website!
- Calibration**
Calibrate the MHA device using measured values.

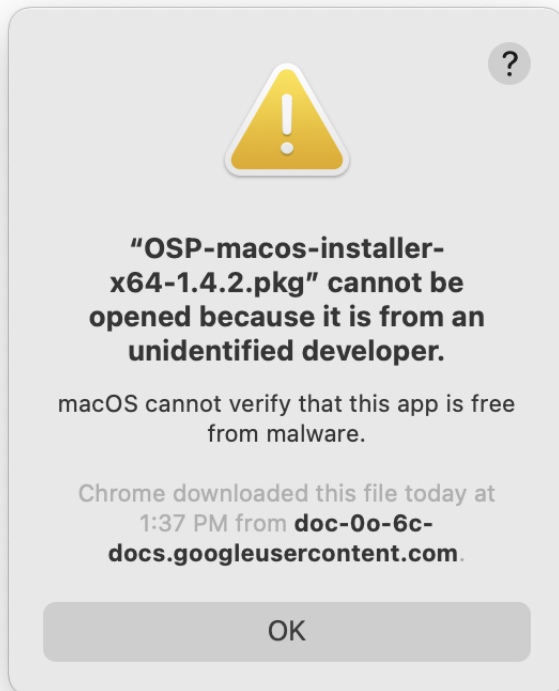
3 - Troubleshooting

This section outlines the steps to resolve possible issues with setting up your OSP software.

- You cannot open the installer file to continue installation from step 3 of “[Installation Steps](#)”. [Refer to section 3.1.](#)
- You cannot open multiple terminal tabs needed for OSP. [Refer to section 3.2.](#)
- You encounter an error when starting up the PHP/Laravel version of OSP “Deprecated: Method ReflectionParameter::getClass()...” [Refer to section 3.3.](#)

3.1 - Can't Open Installer File

You may see an “unidentified developer” message that prevents you from continuing the installation. This would mean you need to change permissions on your computer to allow the installer to run.

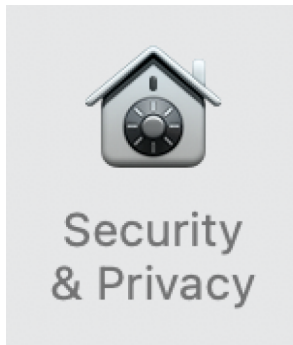


1. Find and open “*System Preferences*” either from “*Applications*” within Finder or via Spotlight Search (command + spacebar keys).

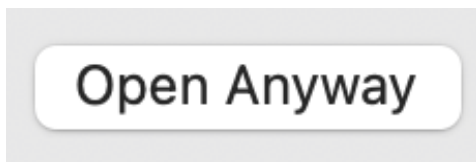
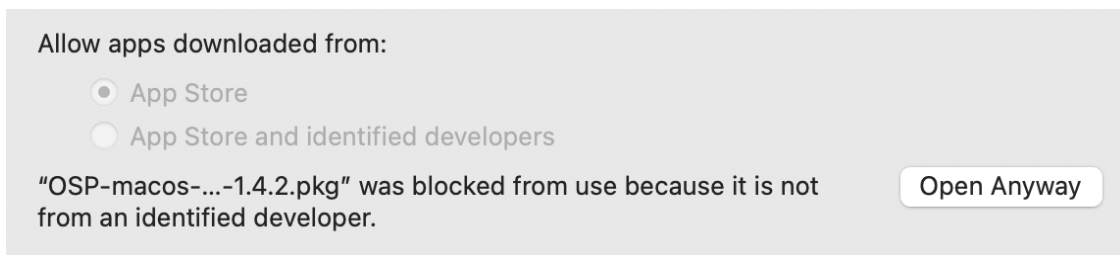


System
Preferences.app

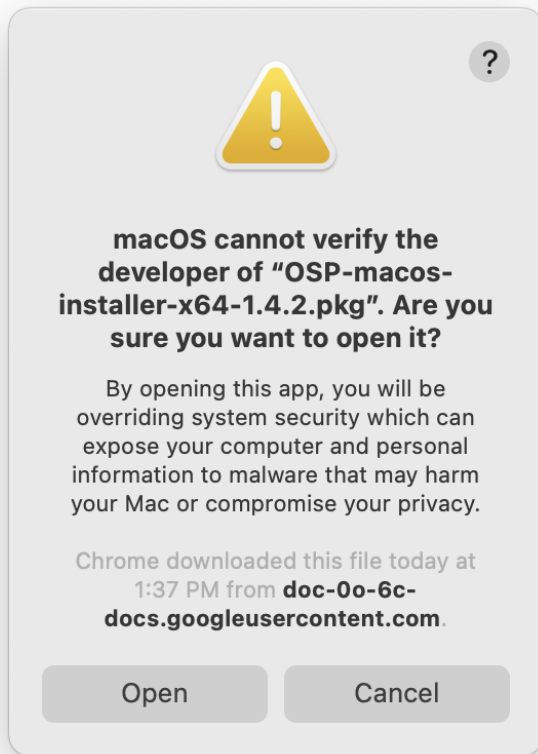
2. From System Preferences, select “Security & Privacy”.



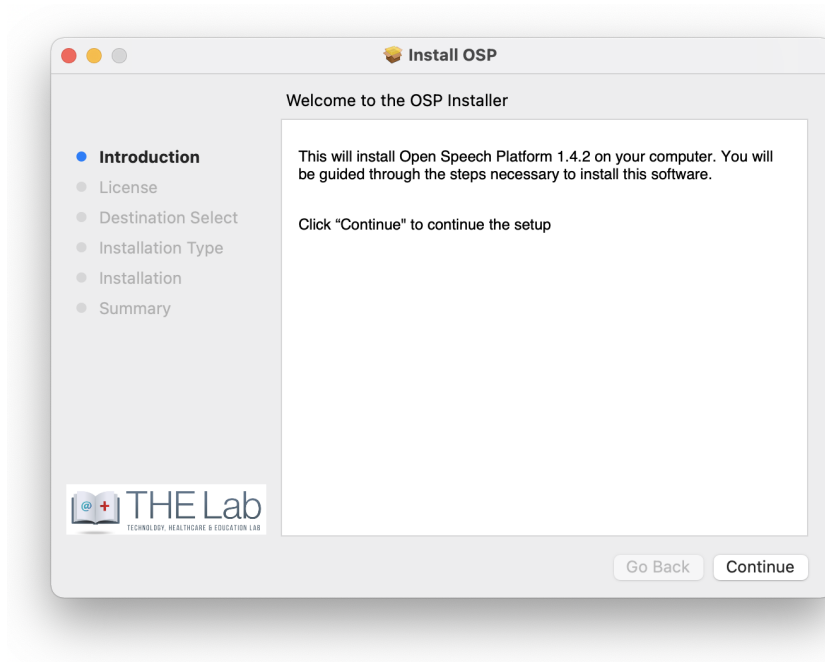
3. Within “General”, you should see the “unidentified developer” message here as well. Select “Open Anyway”.



4. You will be asked to confirm opening the file. Select “Open”.



5. You should see this installer window opened. Proceed to Step 4 of the “[Installation Steps](#)”.



3.2 - Can't Open Multiple Terminal Tabs

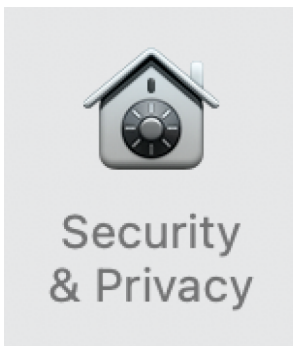
If the five terminal tabs don't open when you enter the **run_osp** command, you will need to double check the permissions granted.

6. Find and open “*System Preferences*” either from “*Applications*” within Finder or via Spotlight Search (command + spacebar keys).

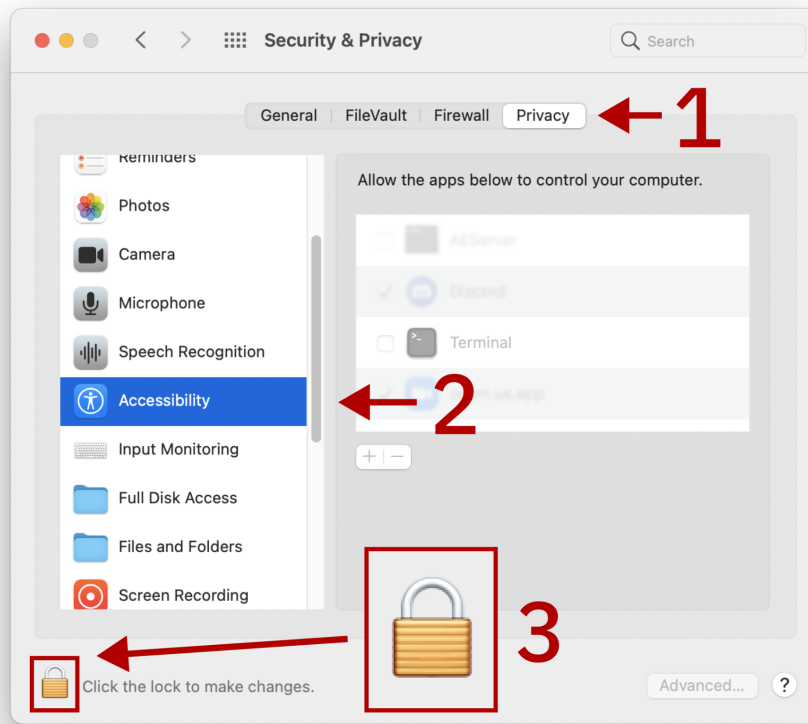


System
Preferences.app

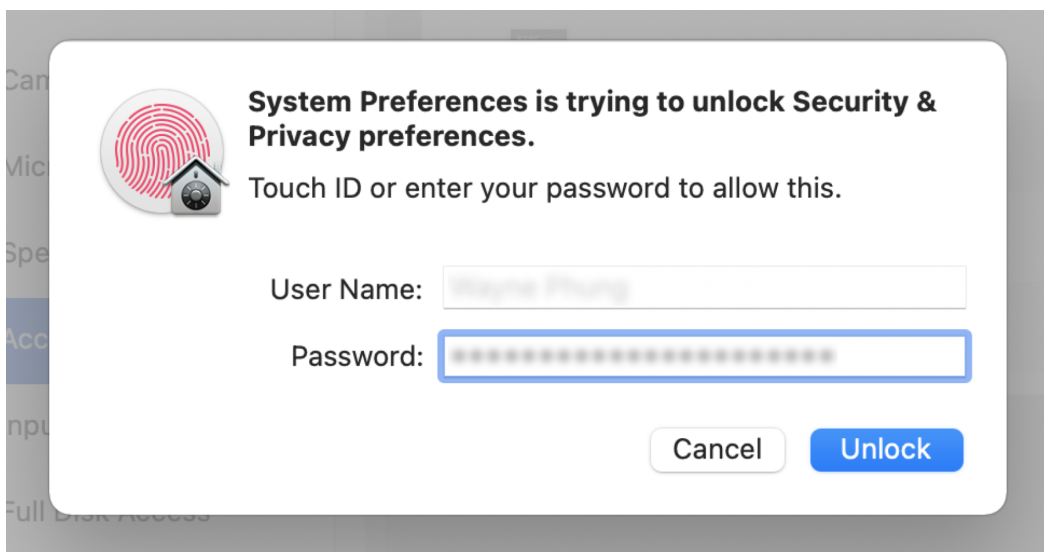
7. From System Preferences, select “Security & Privacy”.



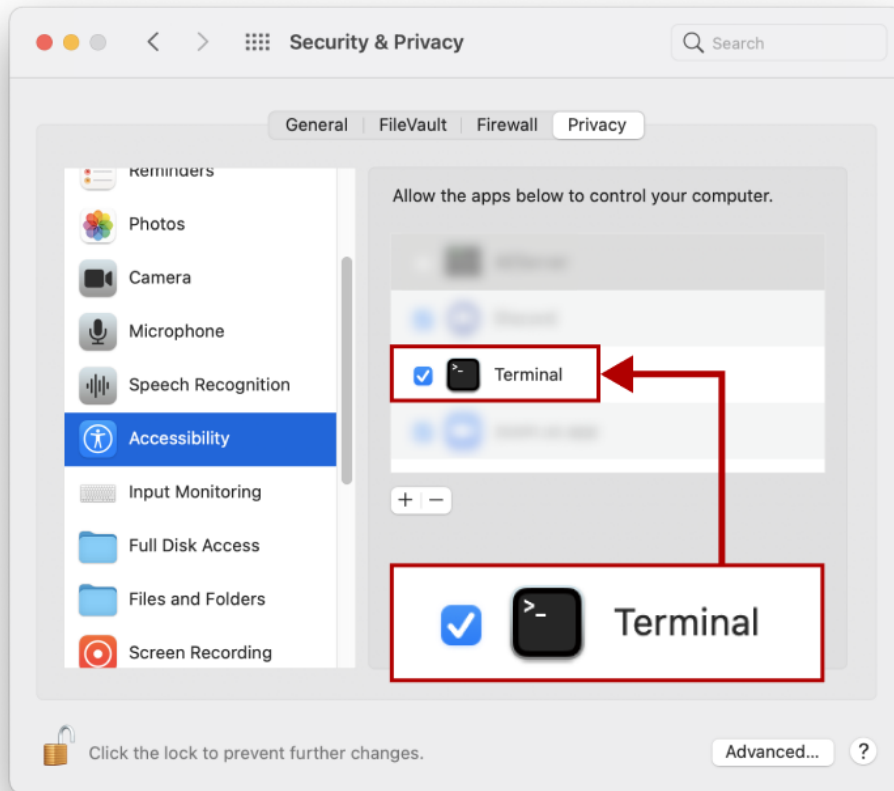
8. Go to “Privacy”. On the left sidebar, scroll down to “Accessibility”, then click on the lock icon at the bottom.



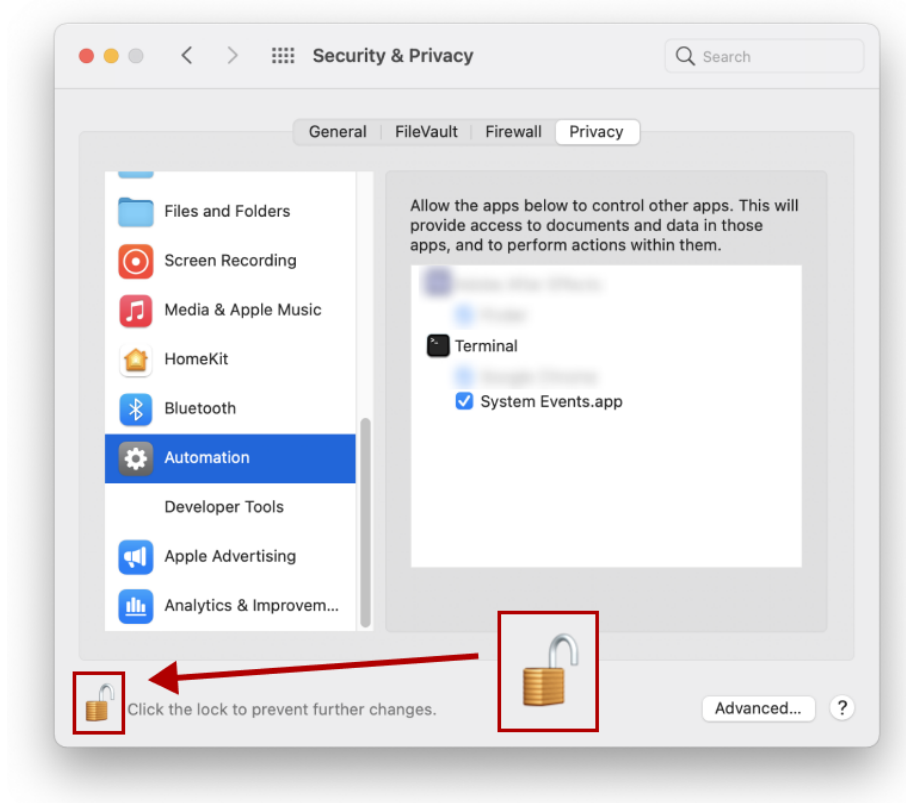
9. Use Touch ID or enter your password to unlock these settings.



10. Click on the checkbox next to Terminal to enable Terminal access.
You should see a checkmark.



11. Go to the left sidebar again and scroll down to "Automation". Under Terminal, click on the checkbox next to "System Events.app" to show the checkbox.

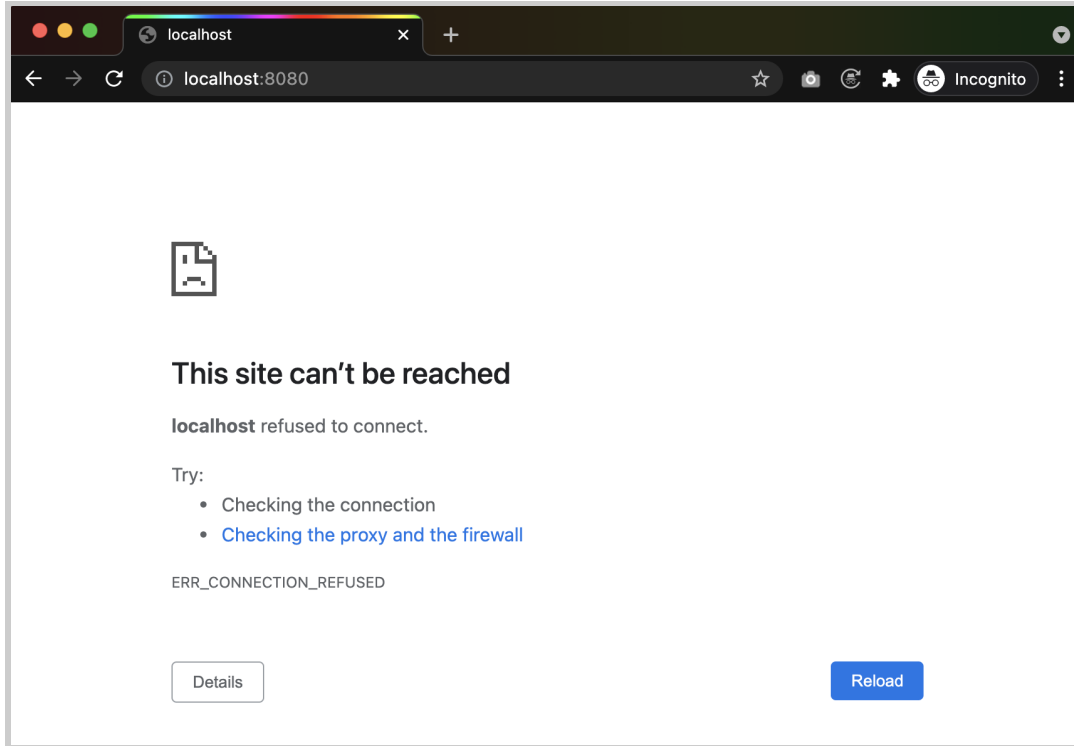


12. In the terminal, type in the command `run_osp` and press enter. You should now see the five terminal tabs opening.

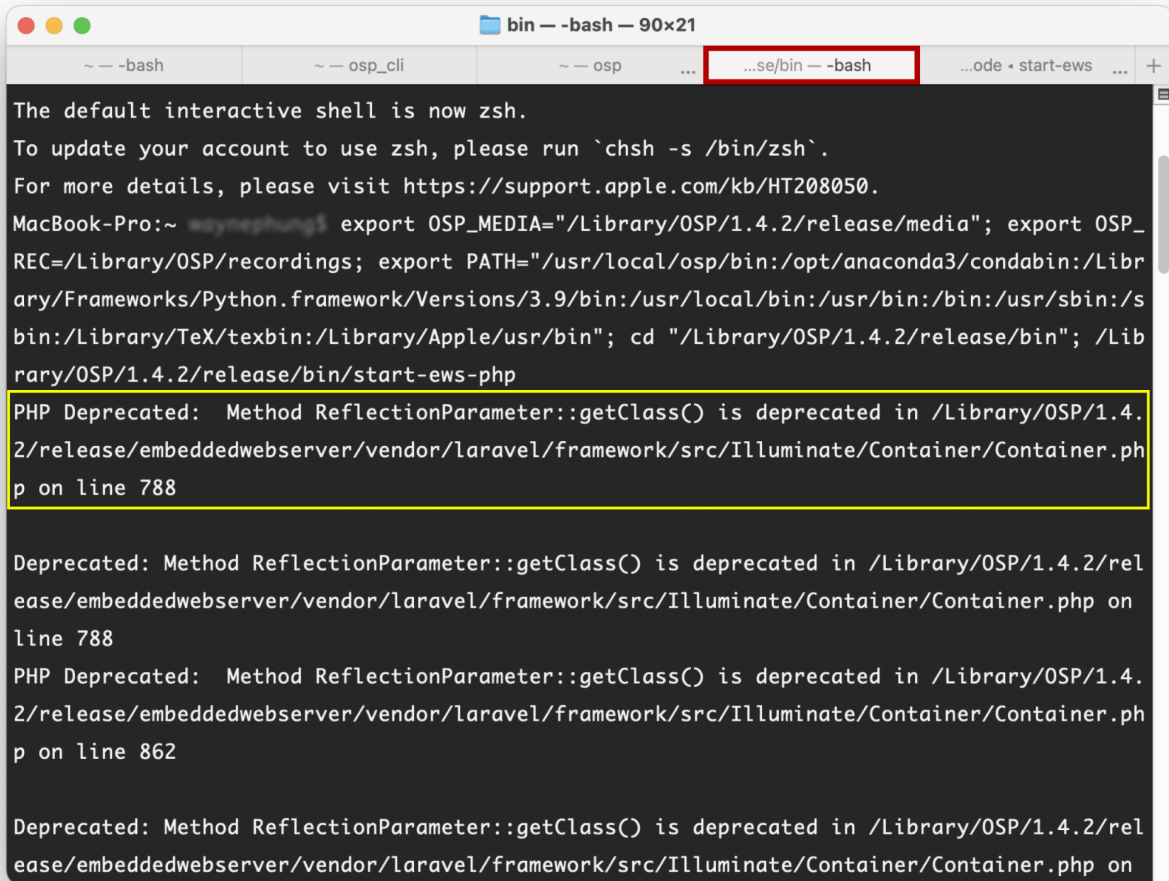
3.3 - Deprecated Error when Starting PHP

Version of EWS

If you can't connect to the PHP/Laravel version of EWS via <http://localhost:8080>, you may see this error.



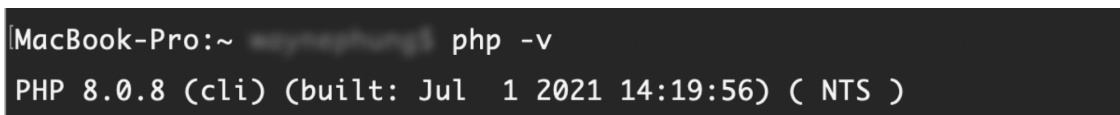
You may encounter this error when you navigate to the “bin - bash” terminal tab.



The screenshot shows a terminal window with a dark background. The title bar reads "bin -- -bash -- 90x21". The terminal content includes instructions to switch to zsh, environment variable exports for OSP, and a command to run a PHP script. Below the command, there are four deprecation warnings from PHP, each stating: "PHP Deprecated: Method ReflectionParameter::getClass() is deprecated in /Library/OSP/1.4.2/release/embeddedwebserver/vendor/laravel/framework/src/Illuminate/Container/Container.php on line 788" or "on line 862". One of these warning lines is highlighted with a yellow border.

To resolve this issue, follow these steps:

1. Open a new terminal window.
2. Enter the command `php -v` to check the current version of PHP installed in your computer.



The screenshot shows a terminal window with a dark background. The prompt is "[MacBook-Pro:~ ...] php -v". The output is "PHP 8.0.8 (cli) (built: Jul 1 2021 14:19:56) (NTS)".

The PHP/Laravel version of EWS doesn't support versions later than 7.4 (such as 8.0.8). If you have a version of PHP installed within your computer that is later than 7.4, this may be the cause of the error.

Otherwise, if you don't have PHP installed, follow step #3, install PHP 7.4 with the command **brew install php@7.4**, then skip to step #6.

3. Install [Homebrew](#) with this command:

```
/bin/bash -c "$(curl -fsSL  
https://raw.githubusercontent.com/Homebrew/install/  
HEAD/install.sh)"
```

Wait until the process is finished.

4. Open Finder. Go to “Macintosh HD” and navigate through these folder names in order: “usr” > “local” > “Cellar”> “php”. Within “php” check the version number.
5. Enter the command **brew unlink php** to detach usage of the current version of PHP.

```
[MacBook-Pro:~ % brew unlink php  
Unlinking /usr/local/Cellar/php/8.0.8... 24 symlinks removed.  
MacBook-Pro:~ %
```

6. Enter the command **brew link php@7.4** to use the 7.4 version of PHP.

```
[MacBook-Pro:~ % brew link php@7.4  
Linking /usr/local/Cellar/php@7.4/7.4.21... 25 symlinks created.
```

7. Enter the command `php -v` to check that the 7.4 PHP version is correctly linked.

```
MacBook-Pro:~ myname@myname: php -v  
PHP 7.4.21 (cli) (built: Jul 1 2021 23:31:08) ( NTS )
```

8. (Re)start OSP again: `run_osp`
9. Once you are redirected to the Node.js version of EWS, enter <http://localhost:8080> in the search bar to re-launch PHP/Laravel version of EWS.
10. If you wish to uninstall [Homebrew](#), enter this command:
`/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/uninstall.sh)"`

4 - Next Steps and Resources

At this point, you should have properly installed the OSP software.

You should refer to section 4 - “Sanity Checks” in the [Getting Started Guide](#) to validate that the OSP software works as intended and that you know how to uninstall it from your local computer.

For a full understanding of OSP software capabilities, refer to the [manual](#). Sanity checks for OSP can also be found here.

Below are hyperlinks to other OSP-related resources:

- [OSP Website](#) - General information of OSP.
- [OpenSpeechPlatform on GitHub](#) - This is a public repository where you will find installer files and other documentation files for setting up both OSP software and hardware. Check back for future OSP release notes, updated installer files, and other updates.
 - [“Binaries” folder on GitHub](#) - This is the specific folder where you can download the software builds for either macOS or for the OSP hardware provided.
- [Google Form “OSP Feedback Form”](#) - You can complete this form if you would like to follow up regarding any topics or issues using OSP to a project staff member.