

Maintainability Report
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How to install:

To install Opentray you must first build the hosting server. Start by installing Ubuntu 18.04 LTS on the bare metal or virtual platform of your choice. Once the operating system is installed start by installing Git. Git will be used to pull the open tray repository containing a file “Server_Setup” with the commands for installing the remaining software. After pulling the repository you will start building the web server by installing Apache2. Next, you must install PHP as Opentray is built on Laravel a PHP framework. The PHP install will also require installing multiple PHP dependencies for Composer. For the database open tray uses MySQL, and it simply requires my SQL server. All of the software packages will be pulled from the standard Ubuntu repository using apt-get.

To install Laravel you need to first install Composer. Inside the open tray repository there is a phar file containing Composer. To make composer globally accessible you must rename the file to “Composer”, and you are then plays this file in the /usr/local/bin/ directory. This will allow you to run Composer commands without specifying the path to Composer. Composer also might require changing the permissions and owner of the program. These commands are also contained within the “Server_Setup” file. Now you will be able to use Composer to install Laravel.

Now that all of the software is installed, you will need to configure Apache to host Opentray. This is done by configuring a virtual host pointing to the directory where Opentray was downloaded. By pulling to get repository into the documents directory the “Server_Setup” file contains a host file with proper directory for the DocumentRoot. The DocumentRoot must be the full path to the “/opentray/public” directory. Once the new virtual host is configured you need to disable the default Apache site, and enable the new Opentray site. Then restart Apache and you should be able to access Opentray through the browser.

How to Test:

To test the install, open your browser and attempt to connect to the server. The browser should now display the Opentray login page. If you receive an error, log on to the server and check the status of the firewall. Use the command “sudo ufw status” to check the status of the server firewall. For testing purposes, you can turn the firewall off by running the command “sudo ufw disable”. Be sure to re-enable the firewall after testing.

Updating Software:

Keeping the server up to date is essential for the security of your system. Start by taking a snapshot of the server. Before making any major changes to the server it is best practice to take an image of the current state allowing you to roll back if unforeseen issues arise. Periodically check Ubuntu for updates, by default Ubuntu Will automatically check for software updates. Before installing the updates check for conflicts with the other software.

For Apache, PHP, and MySQL go to the official distribution locations for the latest updates and documentation.

When updating Laravel to a new version, it is recommended to create a new install and copy the site over.

Repo Organization:

Opentray is being hosted on Github at <https://github.com/jasongunderson/opentray>. The Opentray Repository top level directory contains five folders, build, documents, spikes, test, and opentray. The /documents/documentation folder contains all the required information for setting up the server. The opentray directory contains all of the code required to run Opentray. This is the directory where you appoint the Apache virtual host.

Safety:

When in the healthcare Industry be sure to follow all company HIPAA guidelines. Protect yourself and your employer from possible recourse due to avoidable circumstances by following best practices.

Security:

The individual or group who is responsible for maintaining the system is also responsible for the security. Opentray and the software distributors offer recommendations for best security practices. Also, within the open tray repository there are multiple options for encryption. It is upon administrator(s) to analyze the environmental security risks and act responsibly. Opentray developers are not responsible for any losses or damages, the software is to be used at your own discretion.