

OpenCPU Set-Up Guide

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This document provides a set-up guide for installing OpenCPU on a UNIX system via terminal commands. Instructions for adding packages to OpenCPU server and a description for using them has also been provided.

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Install OpenCPU

[Follow this link to the official OpenCPU user manual.](#)

This guide will use Advanced Package Tool (APT) to install the required packages. Some commands require **sudo** access rights.

- (1) Update the package listings and upgrade all installed packages.

```
sudo apt-get update
```

```
sudo apt-get upgrade
```

- (2) Add OpenCPU package library to your system.

```
sudo add-apt-repository ppa:opencpu/opencpu-2.0-y
```

```
sudo apt-get update
```

- (3) Continue with installing OpenCPU server.

```
sudo apt-get install opencpu-server
```

The following command is optional and will install several other tools along with OpenCPU, e.g. RStudio, git etc.

```
sudo apt-get install opencpu-full
```

- (4) To run OpenCPU server, run these two commands.

```
sudo a2ensite opencpu
```

```
sudo apachectl restart
```

You should now be able to access OpenCPU (OCPU) on your browser. Navigate to <http://localhost/ocpu/>.

Install R packages on OpenCPU

Installing custom R packages

Create R project in RStudio or load an existing R project by opening an .Rproj file.

Click **Build** and **Build source package** from the top navigation menu.

Now, a .tar.gz file has been generated (path shown in RStudio). Use this path (you may need to modify it) to install the package in OpenCPU.

```
sudo R CMD INSTALL <package path>  
--library=/usr/local/lib/R/site-library
```

The head to <http://localhost/ocpu/library/> and verify you can see the package you just installed. You can also navigate to <http://localhost/ocpu/library/<package>> to see more information about your package.

Installing publicly available R packages

Open an R environment in your terminal with superuser privileges.

```
sudo R
```

Use the following command to install a package.

```
install.packages("ggplot2")
```

You should replace the package name between the quotation marks (") with the package that you'd like to install.

Required OpenCPU packages

Some useful R packages that I used in my work are listed here. To successfully run the Taverna workflows, you should first install these.

- dplyr
- wranglingB (by Han Qin)