**OpenCPU**

OpenCPU 2.0 provides a system for building and deploying R based apps and services. The server exposes a simple [HTTP API](https://www.opencpu.org/api.html) for calling with R functions, scripts and managing data, which provides a very solid basis for intergrating R into any environment. OpenCPU is a system for embedded scientific computing and reproducible research. The [OpenCPU API](https://www.opencpu.org/api.html) is a clean and simple interface to R, nothing more nothing less. It is compatible with any language or framework that speaks HTTP.

The software can be used, modified and redistributed for both for open source and proprietary projects in academia, industry or elsewhere.

**Benefits:**

Your applications will naturally support parallel computing and asynchronous requests without introducing any additional complexity.

Hybrid solution between stateless and stateful architecture: Objects are persistent, but the process is not. This means R models is always available, does not have to be loaded each time a prediction has to be made.

seamless integration of R and JavaScript (?)

(The (public?) cloud server supports [continuous integration](https://www.opencpu.org/api.html#api-ci) (when connected to github account) and is highly configurable to fit your every need)

**Deployment possibilities**

Two implementations of OpenCPU are available: a single-user server that runs inside an inter-

Active R session, and a cloud server that builds on apache and nginx. The single-user server

is intended for development and local use only. The cloud server builds on [AppArmor](http://www.jstatsoft.org/v55/i07/) to enforce security, and Nginx for caching and load balancing. All profiles and configurations can easily be customized.

Apps can be run or deployed in the following ways:

Single user server (development of your model/app)

* Run or develop locally using the single user server in R using opencpu::ocpu\_start\_app()

Cloud Servers: (Deployment of model/app) You can either use the public servers or host your own. (Question: is on premise solution possible as well?)

* Public server: Deploy for free on .ocpu.io or cloud.opencpu.org using the [CI webhook](https://www.opencpu.org/cloud.html) (and github)
* Host your own opencpu-server, either internally or on the internet
* Ship and deploy apps in docker containers

**How to publish an application on a server**

Put your code, models, data etc in a package and put it on a server. (Uses standard R packaging to develop, ship and deploy web applications.)

If you want to publish on the free .ocpu.io or cloud.opencpu.org server, then you can sync your package on your github account and link this account to the server.

Otherwise, if you use your own server: not clear yet how to deploy the package onto the server