

# Deployment

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## Overview

The following applications are to be deployed and configured:

- Offwind Processing Application
- Offwind Web Application

Note, that the list above is just a high-level outline. Each application may consist of several sub-applications and require some additional installations.

## Deploying Processing Application

This is a server-processing stuff which consists of the following major parts:

- Offwind.ProcApp - main processing application. Handles jobs queue and maintains simulation process. Requires internet connection to remote Offwind.API (part of Offwind Web Application)
- Offwind.ProcSvc - servicing web application application that serves as a facility for logs output for Offwind Web Application.
- Offwind.Downloads - simple Apache web application that handles requests to result files.

Offwind.ProcApp requires:

- OpenFOAM 2.1.x
- Python 2.7.x

Offwind.ProcSvc and Offwind.Downloads require:

- Python 2.7.x (2.7.3)
- Web.Py
- Apache 2.2.x (2.2.22)
- mod\_wsgi

## OpenFOAM 2.1.x

Here are step-by-step instructions: <http://www.openfoam.org/download/ubuntu.php>

You will find that it lists different versions of OpenFOAM:

- 10.04 LTS, codename lucid
- 11.04, codename natty
- 11.10, codename oneiric

First step you should set \$VERS variable to concrete version, example:

```
VERS='lucid'
```

That's it. Then, next steps will work.

## Python 2.7.x

Same as Apache, you can just check if it is installed by typing:

```
> python
```

And the same about installation.

## Apache 2.2.x

First, check if it is already installed:

```
> /usr/sbin/apache2 -v
```

If it is installed, you will see the information about version. Otherwise just google for how to do that - it's quite straitforward.

## Apache mod\_wsgi

This module will be required for some Offwind.ProcApp.Services. It makes Apache handle Python scripts. Install it by typing:

```
> sudo apt-get install libapache2-mod-wsgi
```

## Offwind.ProcApp

Take sources from repository

```
> git clone https://github.com/OffWind/offwind.git
```

Enter into Offwind.ProcApp directory and run commands

```
> chmod +x start.py
```

```
> sudo ./start.py init
```

Now, the application must be ready to start. You may try it by running command:

```
> sudo ./start.py
```

The command "start.py" without parameters starts processing in interactive mode. To start it as a daemon simply add "start" parameter.

Now, you may want to configure your working folder as you need. Configuration file path is **"/etc/offwind-proc.conf"** by default.

That's should be enough for processing application.

## **Offwind.ProcSvc**

This is a Python web application that provides access to log files of running/active jobs. The API is quite simple for now:

### 1) Parse solver log and read logs directory

```
http://proc.offwind.eu/app/list/[Job ID]
```

### 2) Read concrete file:

```
http://proc.offwind.eu/app/read/[Job ID]/[file name]
```

This application is used by Offwind Web Application to provide a user with current state of job - log, statistics.

Configuration files for Offwind.ProcSvc and Offwind.Downloads are in:  
Offwind.ProcSvc/apacheConfigs

## **Offwind.Downloads**

This is a very basic web-application that gives access to working directory and allows to download result zip files.

# **Deploying Web Application**

TBD