

# Table of Contents

1. Skylab Webserver .....	2
1.1. The installation of LAMP is done by: .....	3
1.2. Install MySQL .....	3
1.3. Install PHP .....	3
1.4. Finalizing .....	4
1.5. Install additional packages & commands .....	4
1.6. reference: .....	5

## **Welcome**

### **Project Willy**

- [History of Willy](#)
- [Project Willy](#)
- [Publicity](#)
- [Sponsors](#)

### **Getting started**

- [Development Guide](#)
- [Driving Willy](#)
- [Documentation](#)

### **Build of Willy**

- [Design history](#)
- [Requirements](#)
- [Design reference](#)
- [Physical build](#)
- [Hardware](#)

### **Robotic Operating System**

- [Introduction to ROS](#)
- [ROS Tutorials](#)
- [Multi master](#)

### **Architecture**

- [Software Architecture](#)
- [Hardware Architecture](#)
- [Skylab Architecture](#)
- [ROS topic design](#)

### **Hardware nodes**

- [sensor node](#)
- [si node](#)
- [power node](#)
- [WillyWRT](#)

### **Components**

- [ROS master](#)
- [New ROS master on Ubuntu](#)
- [Brain](#)

- [Sonar](#)
- [Lidar](#)
- [Localization and navigation](#)
- [Motor controller](#)
- [Joystick](#)
- [Social interaction](#)
- [Speech](#)
- [Speech recognition](#)

## **Skylab**

- [Setup Skylab](#)
- [Python scripts](#)
- [Webserver](#)
- [Functions of the webserver](#)
- [Skylab servers](#)
- [ROS installation on Ubuntu VMs in Skylab](#)
- [DNS,DHCP, pfSense & Ubuntu](#)

## **Radeffect App**

- [Radeffect App](#)

## **Lessons learned**

- [Todo & Advice](#)
- [Lessons Learned](#)

## **Archive**

- [Previous Groups](#)
- [Research Archive](#)

# **1. Skylab Webserver**

In Skylab a webserver is installed on 10.10.1.45. The webserver can be used for

- Seeing the content of the fetched topics
- Upload and download survey files
- Maintenance on the webserver environment

The installation is on Ubuntu 16.04 and has a LAMP installation.

## 1.1. The installation of LAMP is done by:

```
sudo apt-get update
sudo apt-get install apache2

sudo nano /etc/apache2/apache2.conf
```

Add at the bottom:

```
ServerName 10.10.1.45
```

Restart Apache with:

```
sudo systemctl restart apache2
```

Allow incoming traffic:

```
sudo ufw allow in "Apache Full"
```

## 1.2. Install MySQL

```
sudo apt-get install mysql-server
```

use standard password

Secure MySQL environment

```
mysql_secure_installation
```

## 1.3. Install PHP

```
sudo apt-get install php libapache2-mod-php php-mcrypt php-mysql
```

edit dir.conf and move index.php higher up in the list

```
sudo nano /etc/apache2/mods-enabled/dir.conf
```

Activate PostgreSQL connectivity: Open the php.ini file (/etc/php/7.0/cli/php.ini) and check if the following line is un-commented. If it is not, you can remove the semicolon ( ; ) in front of the entry.

```
extension=php_pdo_pgsql.dll
```

Install Postgres driver

```
sudo apt-get install php-pgsql
```

## 1.4. Finalizing

Restart Apache

```
sudo systemctl restart apache2
```

Test server:

```
sudo nano /var/www/html/info.php
```

```
<?php  
phpinfo();  
?>
```

Check with:

```
http://10.10.1.45/info.php
```

## 1.5. Install additional packages & commands

```
sudo apt-get install libssl-dev  
sudo apt-get install php7.0-cli -y  
sudo apt-get install libssh2-1 php-ssh2 -y
```

add to php.ini

```
extension = ssh2.so
```

Give website rights in home directory of Willy

```
sudo chmod -R 777 /home/willy
```

Enable CGI

```
sudo a2enmod cgi
```

Restart Apache

```
sudo systemctl restart apache2
```

## 1.6. reference:

<https://www.digitalocean.com/community/tutorials/how-to-install-linux-apache-mysql-php-lamp-stack-on-ubuntu-16-04>