



# How to install the Apache2 Server and the Website

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A Xampp server is a server for Linux which can receive data from a client (in this example, it is the Raspberry Pi Gateway) and can be used for a Website. This server is used for a project in the Østfold University College. This server gets data frame which is composed of different things like the temperature, the brightness and a voltage. If you want to understand how to implement this, you can follow this little guide.

First of all, to use this guide you must have these different components:

	Desktop
	Ethernet wire type RJ45

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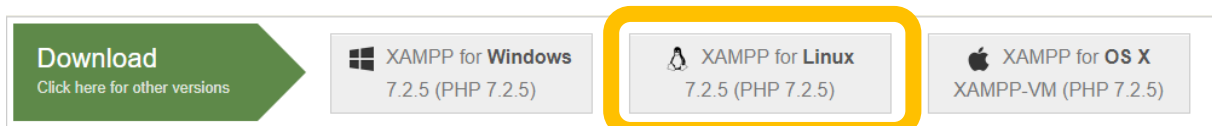
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## Step 1: Installing Ubuntu

You must have Ubuntu installed on your computer because you need to have a Linux OS, if it isn't done yet you can follow the instructions on this simple tutorial: [Install Ubuntu desktop](#)

## Step 2: Installing Xampp

We used XAMPP 7.2.5 because it is a simple server which work with our Website. To install it, click on this [link](#) and chose *XAMPP for Linux*.



Once the file is downloaded, install XAMPP using the terminal window, first type this command to target the folder where the file you downloaded is located:

```
cd Skrivebord
```

When it is done, you need to type the command which allows to get into the *Administrator mode* and therefore have the necessary rights in order to install the server:

```
sudo su
```

This previous command will request the Ubuntu administrator password. You have to type this password for ours:

```
elektro
```

The next command will grant you the permission for the executions rights, in order to finish the installation. Type this (replace the \* by your XAMPP's version number. In our case it was 7.2.5):

```
chmod 755 xampp-linux-*-installer.run
```

Now, run the program by typing this next command (once again, replace the \* by your XAMPP's version number):

```
./xampp-linux-*-installer.run
```

The XAMPP server should be installed. Close the terminal window and read how to use it in the next step.

## Step 3: Configurations

If you have another server running at the moment, let's say an Apache2, you must stop it beforehand to avoid conflicts with the XAMPP server. To do so, open a new terminal window and type this command:

```
sudo systemctl stop apache2
```

To prevent its possible automatic reactivation each time you boot up the computer, input this command:

```
sudo systemctl disable apache2
```

## Step 4: Program to get data from the Gateway

To use the data from the Gateway, download [Norway2.zip](#) and unzip it on the Desktop. To do so, open a terminal window and write these commands:

```
cd Skrivebord
```

```
mv Norway /opt/lamp/htdocs/
```

After, write this command to go in the repertory called *opt/lamp/htdocs/Norway*.

```
cd
```

```
cd opt/lampp/htdocs/Norway
```

When this is done, you can now type this command to stop the firewall:

```
sudo ufw disable
```

Launch the program by typing:

```
sudo python server.py
```

## Step 5: Starting the server

To run the server, you should type these commands in another the terminal window:

```
cd /opt/lampp/htdocs/Norway
```

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```
sudo su
```

Normally it will ask you the password and it is again:

```
elektro
```

To start the server please, write it on the terminal window:

```
/opt/lampp/lampp start
```

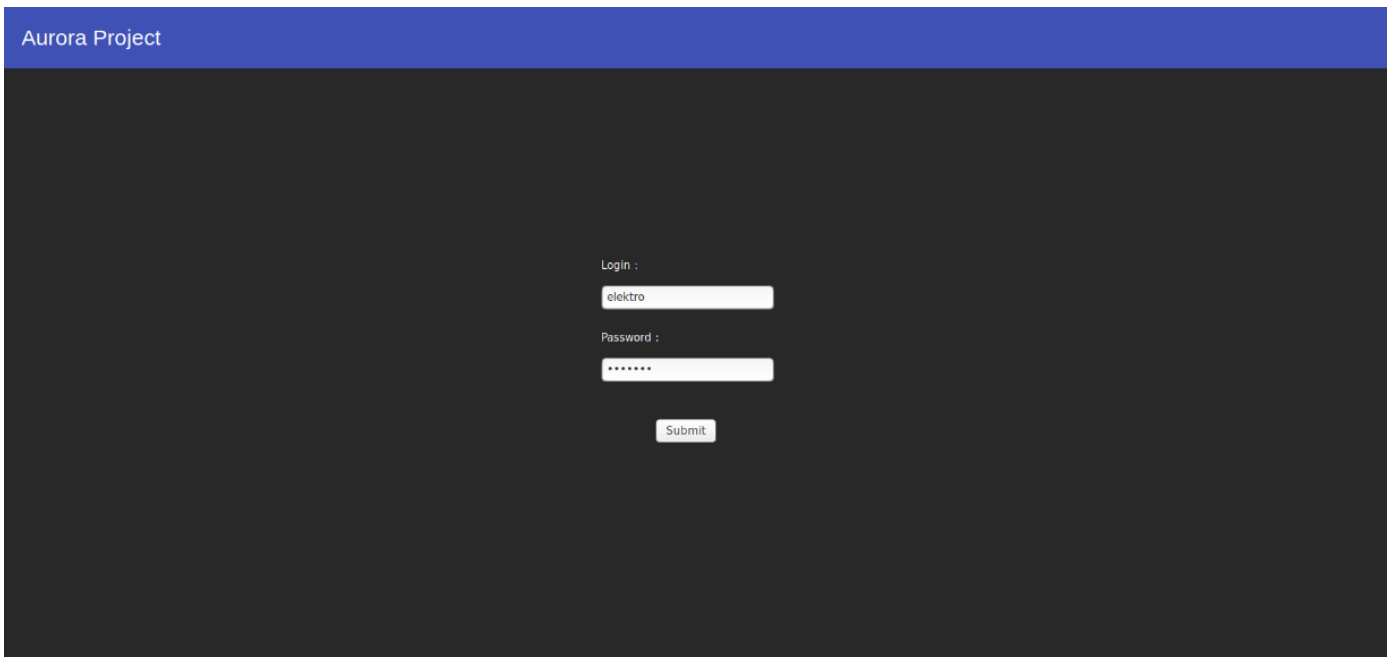
The server is now running and you can close the terminal window.

## Step 6: Website

If you want to know the sensors values you can actually read them on a Website. To do that, you have to open Mozilla Firefox and type on the search bar the following thing:

<http://localhost/Norway>

You will now arrive on this Web page:



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Login :  
elektro

Password :  
\*\*\*\*\*

Submit

Use this login:

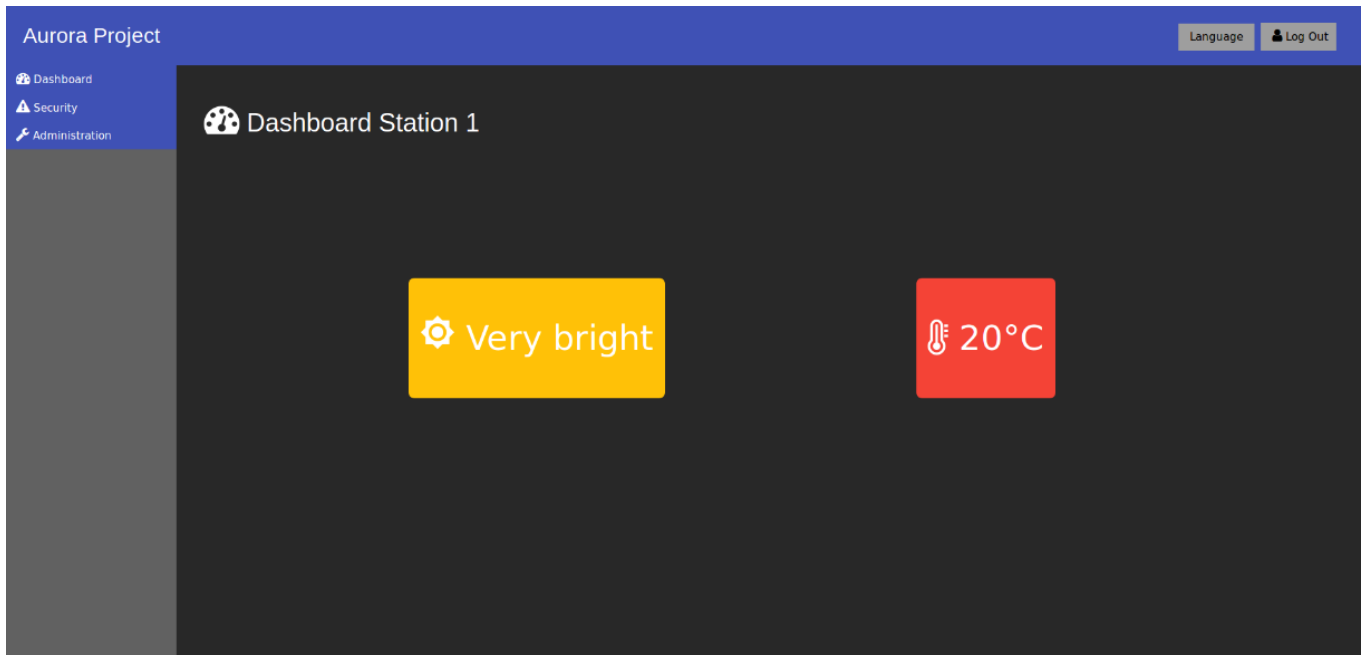
```
elektro
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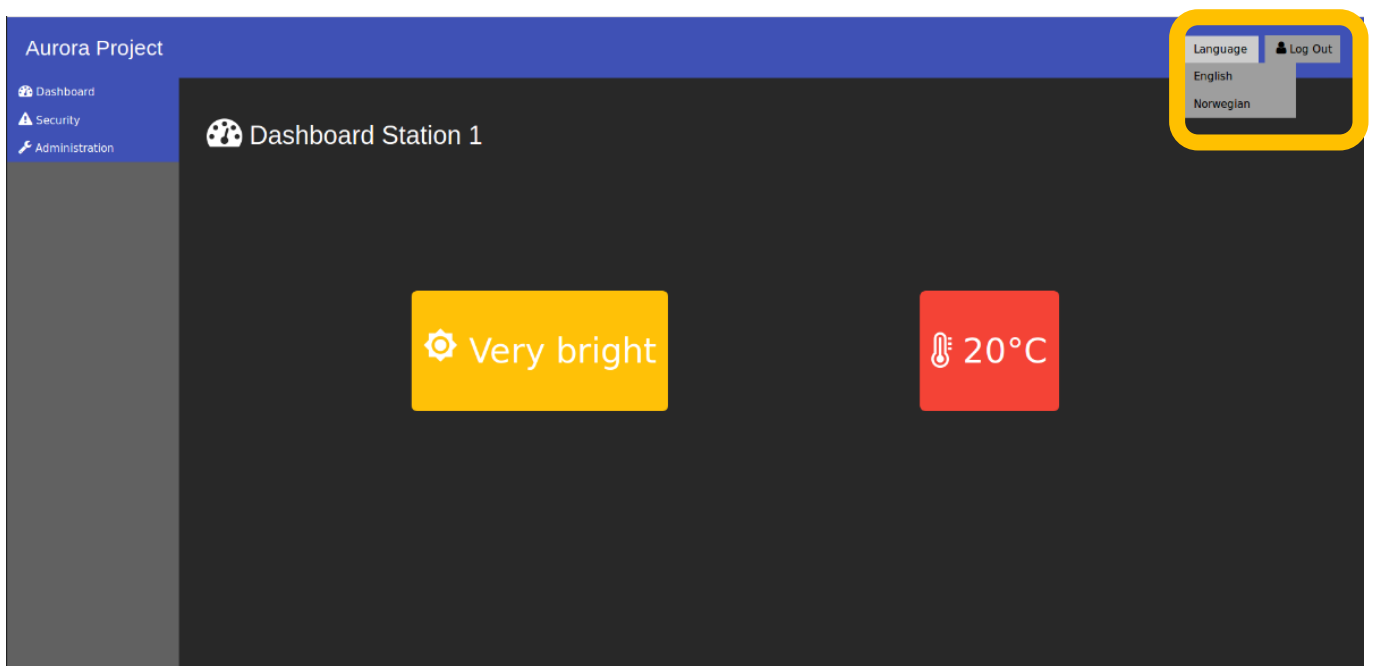
Use this password:

elektro

After your login you will arrive on this next page, it is the main page:

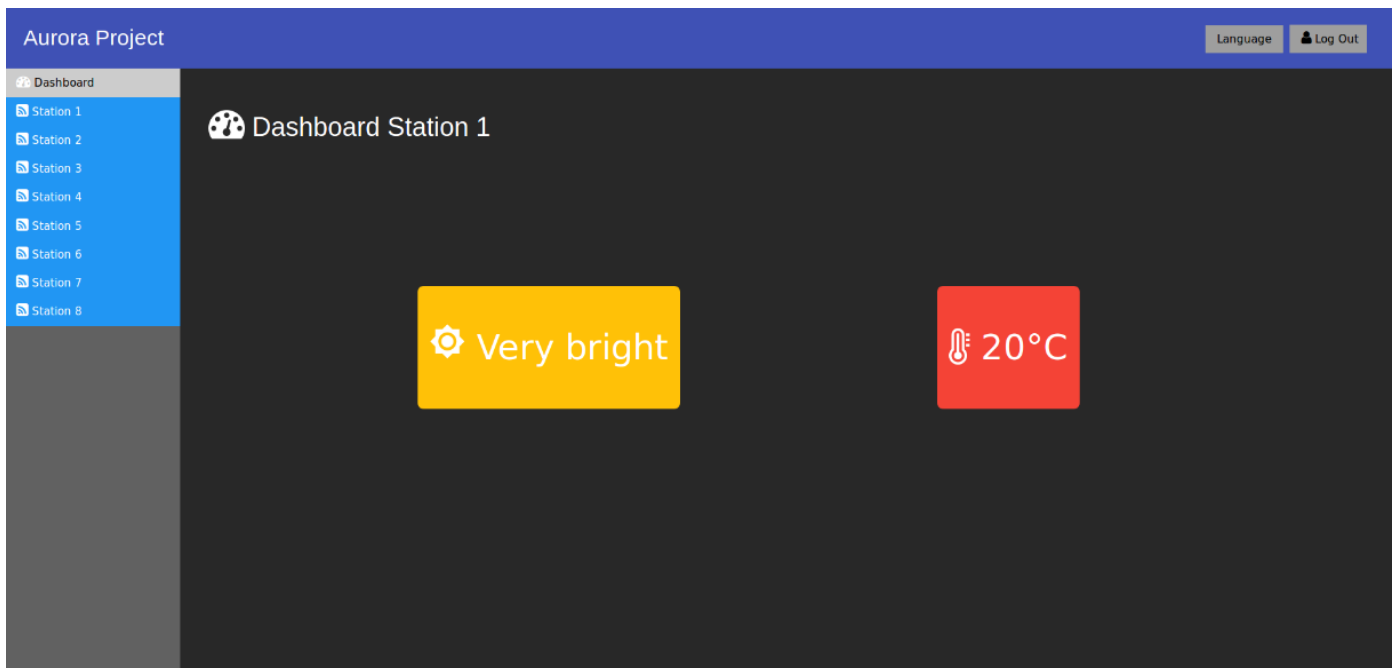


On the top right-hand corner, you click on *Language* to switch between Norwegian and English

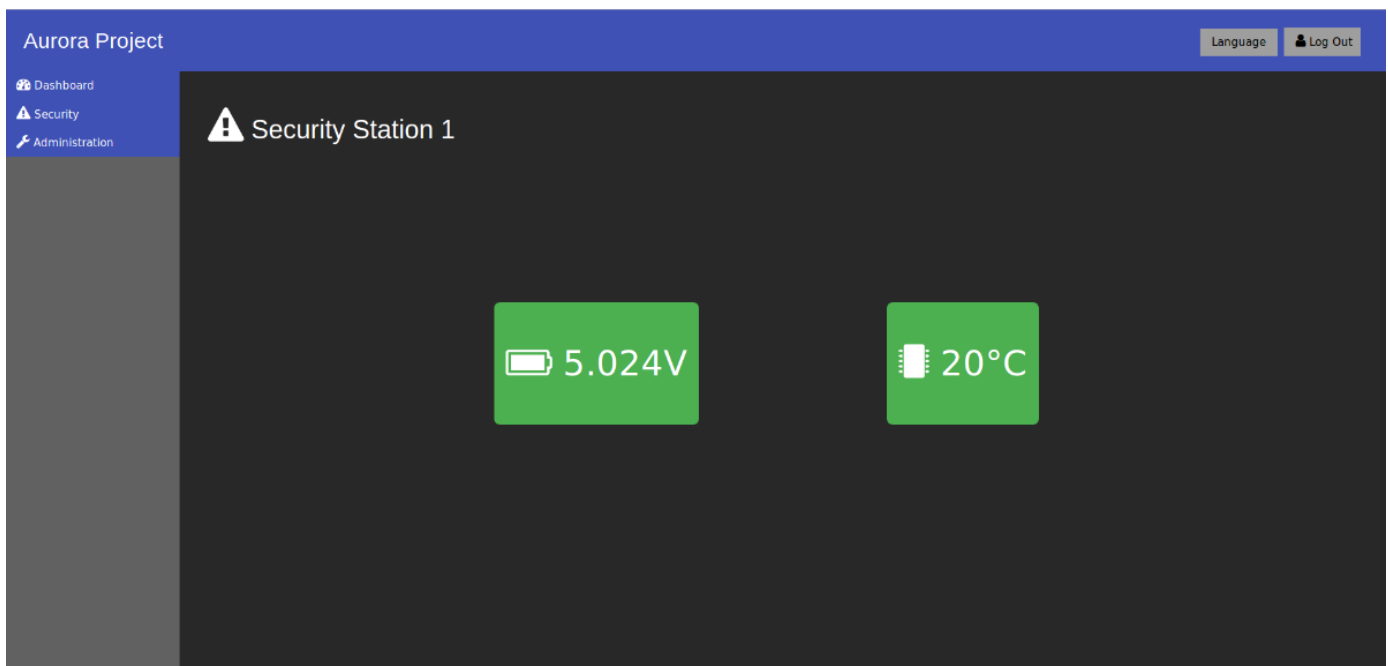


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You can also choose your station by moving your mouse over *Dashboard*, and then selecting the one you would like to consult:



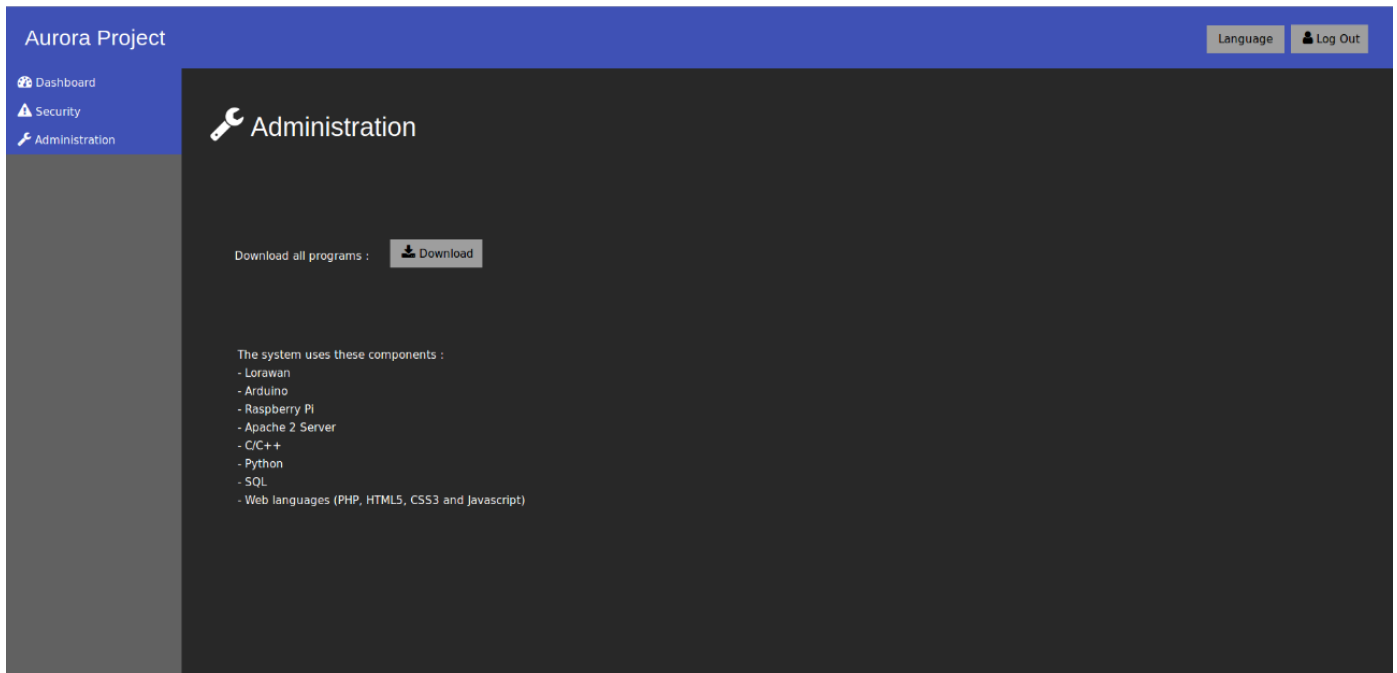
You can also check the Arduino 5V voltage line measurement and its CPU temperature: enter the Security Stations by moving your mouse over it



And finally, you can view the page called Administration by clicking on it:

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## HOW TO INSTALL THE APACHE2 SERVER AND THE WEBSITE



Now the tutorial is finished.

Thank you for reading

Aurora project members