

# How to install a web server on Linux?

Author: DJ KONE.

Use case: Installing Apache Web Server on Ubuntu 22.04 LTS.

## Background

The Apache HTTP Server, commonly referred to as Apache, is a widely used open-source web server software. It plays a fundamental role in serving web content, handling client requests, and managing website configurations.

Ubuntu is a popular open-source Linux distribution based on Debian. It is known for its user-friendly interface, regular release cycle, and strong community support.

## Prerequisite

For this project, you need:

- A running Linux Ubuntu 22.04 LTS

- `sudo` privileges on the system.

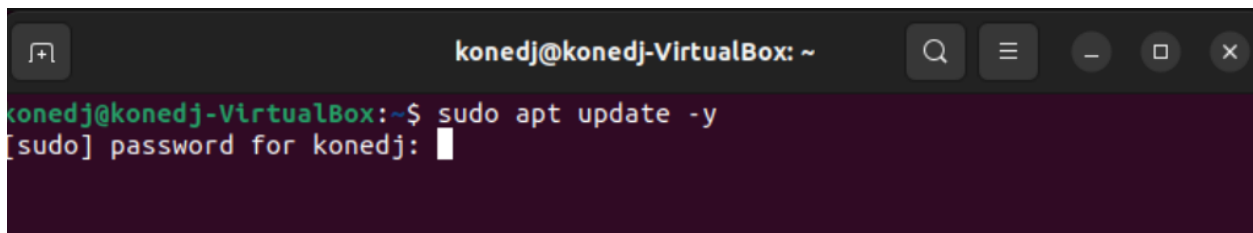
## Project Outline

As a cloud engineer, I need to install Apache Web Server on Linux Ubuntu distribution, in order to allow my team to test a webpage on the server. We'll provide the step-by-step to install Apache Web Server on Linux Ubuntu distribution.

**Let's have fun.**

### Step 1: Install Apache

- Log in to Ubuntu and open the terminal.
- Type `sudo apt update -y` to update all packages in your Linux repositories.

A screenshot of a terminal window titled 'konedj@konedj-VirtualBox: ~'. The terminal shows the command 'sudo apt update -y' being entered. Below the command, it says '[sudo] password for konedj:' followed by a cursor. The terminal has a dark background with light-colored text. The window has standard Linux window controls (minimize, maximize, close) and a search icon in the top right corner.

```
konedj@konedj-VirtualBox: ~$ sudo apt update -y
[sudo] password for konedj: 
```

- Install Apache by typing `sudo apt install apache2` in the command line.

### Step 2: Check the Status of Apache

- After the installation is completed, verify the status of Apache by entering the following command: `sudo systemctl status apache2`
- The status should be **active (running)**.

```
konedj@konedj-VirtualBox:~$ sudo systemctl status apache2
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor prese>
   Active: active (running) since Wed 2023-10-18 19:36:08 CDT; 2h 30min ago
     Docs: https://httpd.apache.org/docs/2.4/
   Process: 732 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUC>
  Main PID: 803 (apache2)
    Tasks: 55 (limit: 4598)
   Memory: 7.4M
      CPU: 1.443s
   CGroup: /system.slice/apache2.service
           └─803 /usr/sbin/apache2 -k start
             └─804 /usr/sbin/apache2 -k start
               └─805 /usr/sbin/apache2 -k start

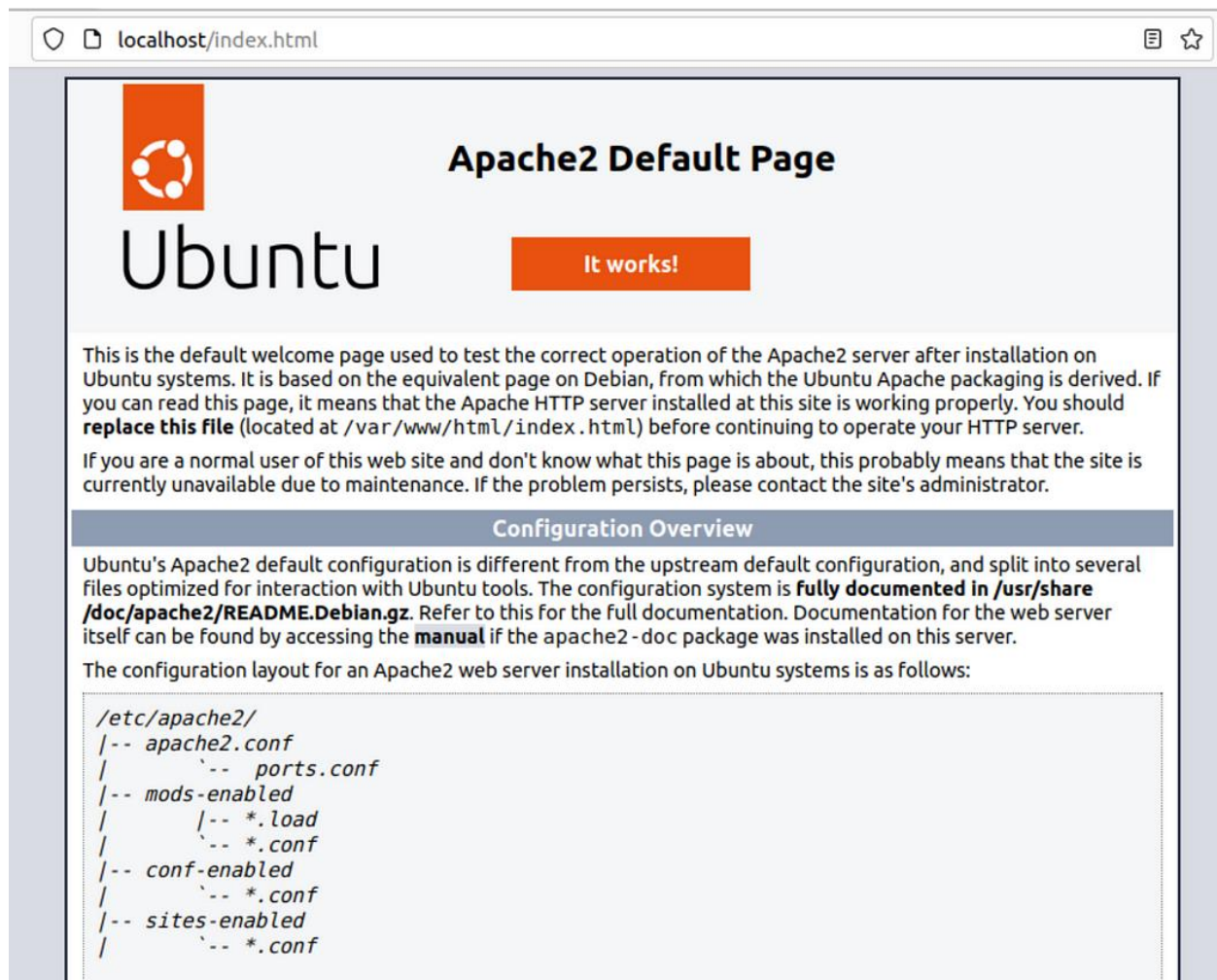
Oct 18 19:36:07 konedj-VirtualBox systemd[1]: Starting The Apache HTTP Server...
Oct 18 19:36:08 konedj-VirtualBox apachectl[761]: AH00558: apache2: Could not r>
Oct 18 19:36:08 konedj-VirtualBox systemd[1]: Started The Apache HTTP Server.
```

### Step 3: Test Apache Web Server

- Obtain an html webpage from Apache.
- Type the following lines as described in the screenshot below.

```
konedj@konedj-VirtualBox: /var/www/html
konedj@konedj-VirtualBox:~$ cd /var/
konedj@konedj-VirtualBox:/var$ ls
backups  crash  local  log  metrics  run  spool  www
cache    lib    lock   mail  opt      snap  tmp
konedj@konedj-VirtualBox:/var$ cd www
konedj@konedj-VirtualBox:/var/www$ cd html
konedj@konedj-VirtualBox:/var/www/html$ ls
index.html
konedj@konedj-VirtualBox:/var/www/html$
```

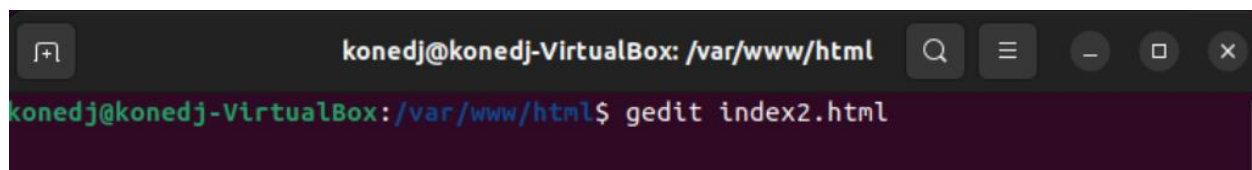
- Open a Mozilla browser by typing `firefox apache2`
- You should see a default webpage. If it doesn't display Apache, enter the following in the address bar of the browser that just opened: ***localhost/index.html***.
- Now you are able to see the page below.



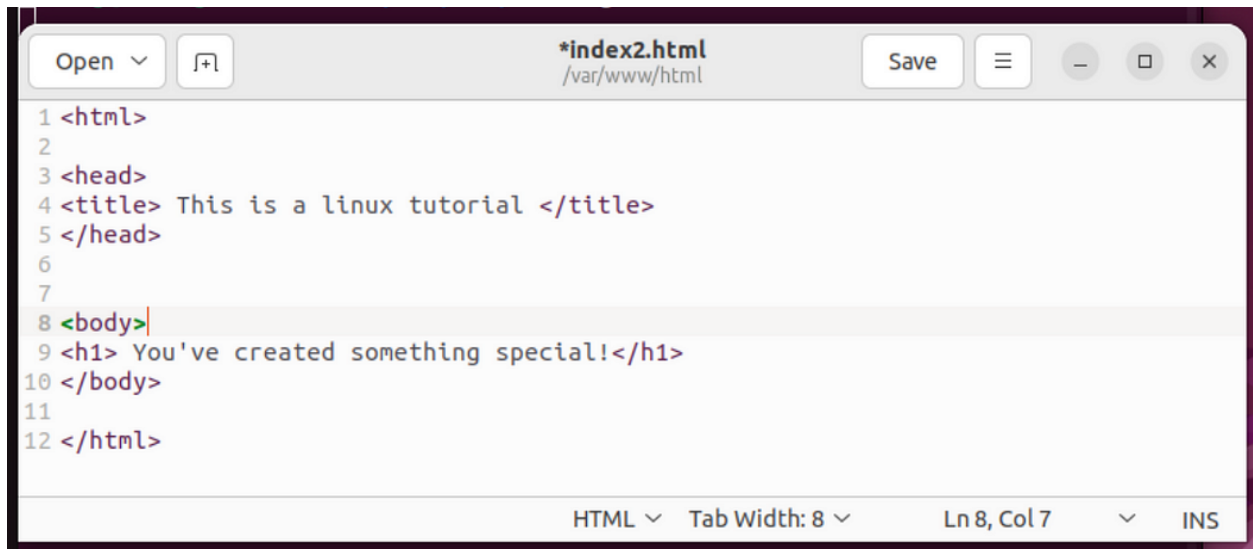
Apache Web Server is installed and hosting web pages.

## Bonus: Let's do another test.

- Create another HTML file by typing the following command in the terminal `gedit index2.html`



- A text editor window will open automatically.
- Copy and paste the code below into your text editor. Feel free to customize it.

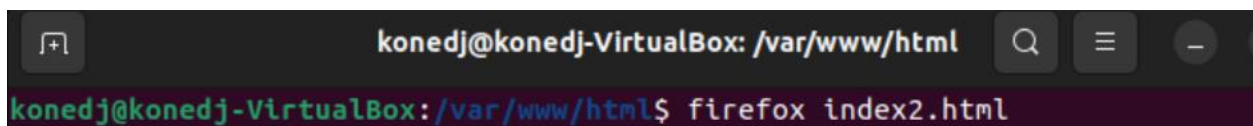


A screenshot of a text editor window titled `*index2.html` with the path `/var/www/html`. The editor contains the following HTML code:

```
1 <html>
2
3 <head>
4 <title> This is a linux tutorial </title>
5 </head>
6
7
8 <body>
9 <h1> You've created something special!</h1>
10 </body>
11
12 </html>
```

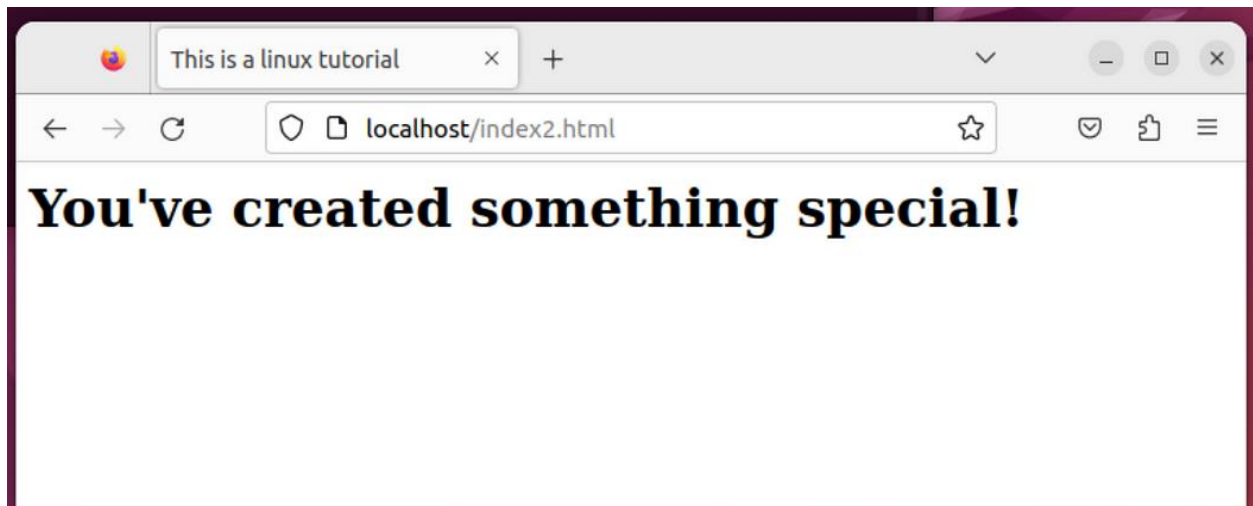
The status bar at the bottom indicates the file type is `HTML`, tab width is `8`, and the cursor is at `Ln 8, Col 7` in `INS` mode.

- Do not save this code yet. Copy the code and close the editor.
- Return to the command line and enter `sudo gedit index2.html`
- You'll be prompted to enter your password.
- Another text editor will open. Paste the code in the text editor that popped up, and save everything.
- In the command line, type the following code `firefox index2.html`



A screenshot of a terminal window with the prompt `konedj@konedj-VirtualBox: /var/www/html`. The command `firefox index2.html` has been entered and executed.

- Another browser window will open.
- In the address bar, type `localhost/index2.html` as we did before.
- Upon completion, you should see the webpage as shown below.



Voilà! You have installed Apache Web Server on Ubuntu 22.