



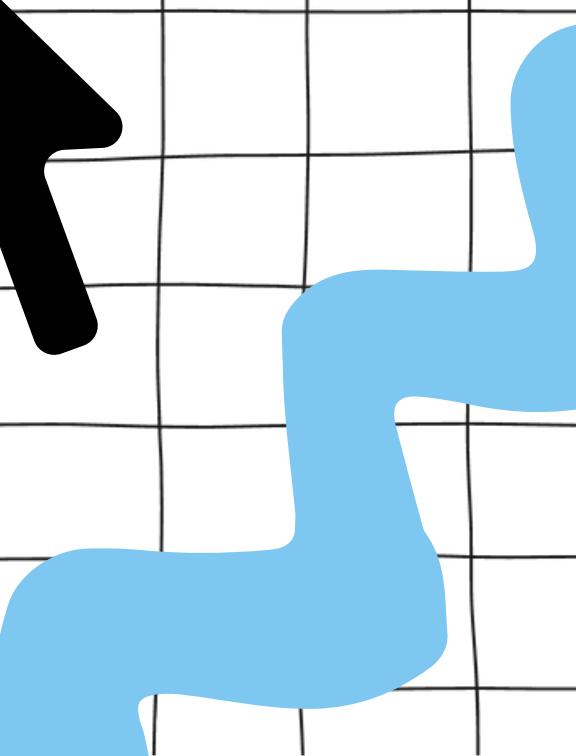
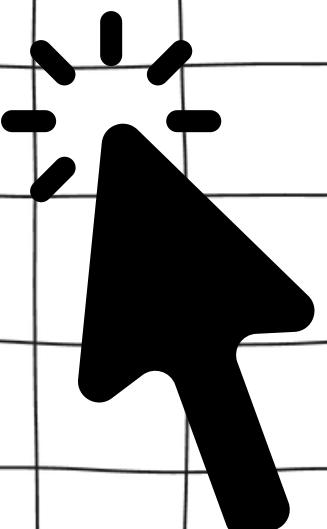
google cloud platform

Create apache web server on google
cloud

Contents



- 01** Contents General Instructions
- 02** Setting up the VM Instance
- 03** Create a Virtual Machine (VM
- 04** Setting up VM SSH
- 05** Running the server
- 06** Conclusion



creator info

...

linkedin



[linkedin.com/in/rahaf-
alayuni-5633901a9](https://linkedin.com/in/rahaf-alayuni-5633901a9)

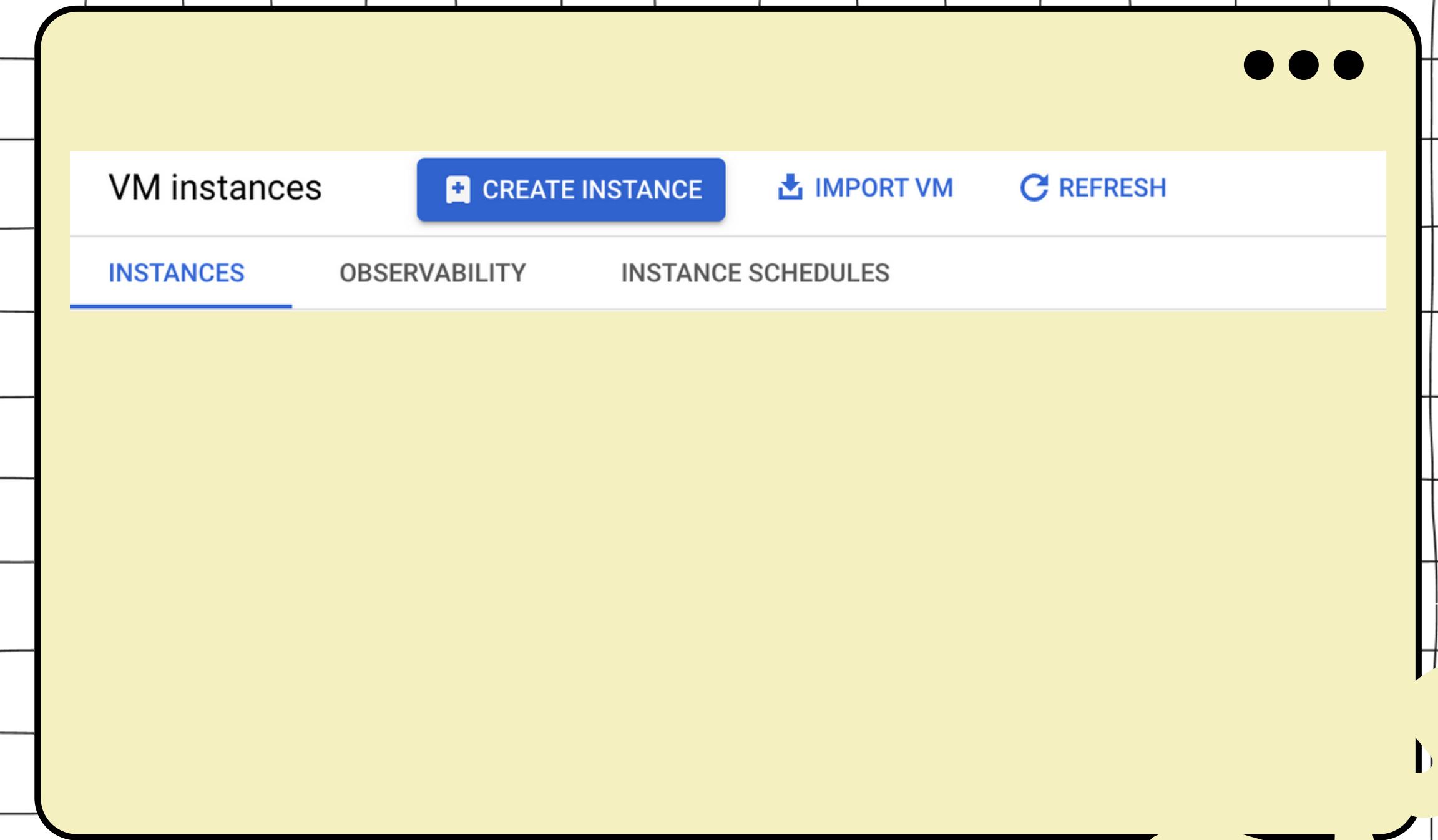
...

github



[github link](#)

- 1- Make your own GCP account. Through URL:
<https://cloud.google.com/>
- 2- From The Navigation Menu, go to Compute Engine.
- 3- Create a virtual machine by choosing VM Instance.



The screenshot shows the Google Cloud Platform interface for managing VM instances. At the top, there's a header with the title "VM instances" and three navigation tabs: "INSTANCES" (which is underlined in blue), "OBSERVABILITY", and "INSTANCE SCHEDULES". Below the tabs are three buttons: "CREATE INSTANCE" (with a plus icon), "IMPORT VM" (with a download icon), and "REFRESH" (with a circular arrow icon). In the bottom right corner of the main area, there's a yellow speech bubble icon with a small "D" inside it.

2. View The boot disk default settings (Can be changed by pressing the “Change” button).

Boot disk ?

Name	instance-20240511-203210
Type	New balanced persistent disk
Size	10 GB
License type ?	Free
Image	 Debian GNU/Linux 12 (bookworm)

CHANGE

3. FireWall section: Allow HTTP & HTTPS traffic.

Firewall ?

Add tags and firewall rules to allow specific network traffic from the Internet

Allow HTTP traffic

Allow HTTPS traffic

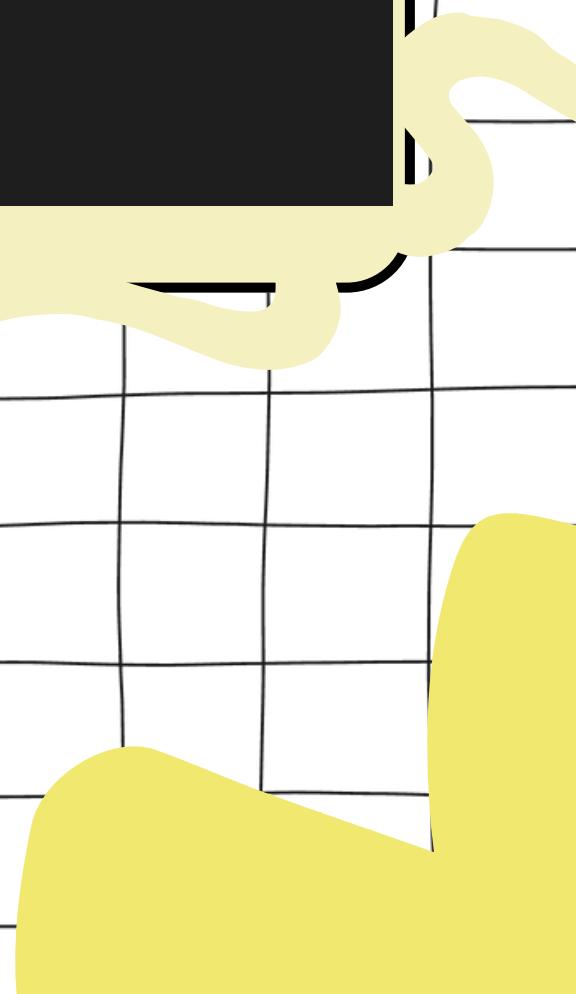
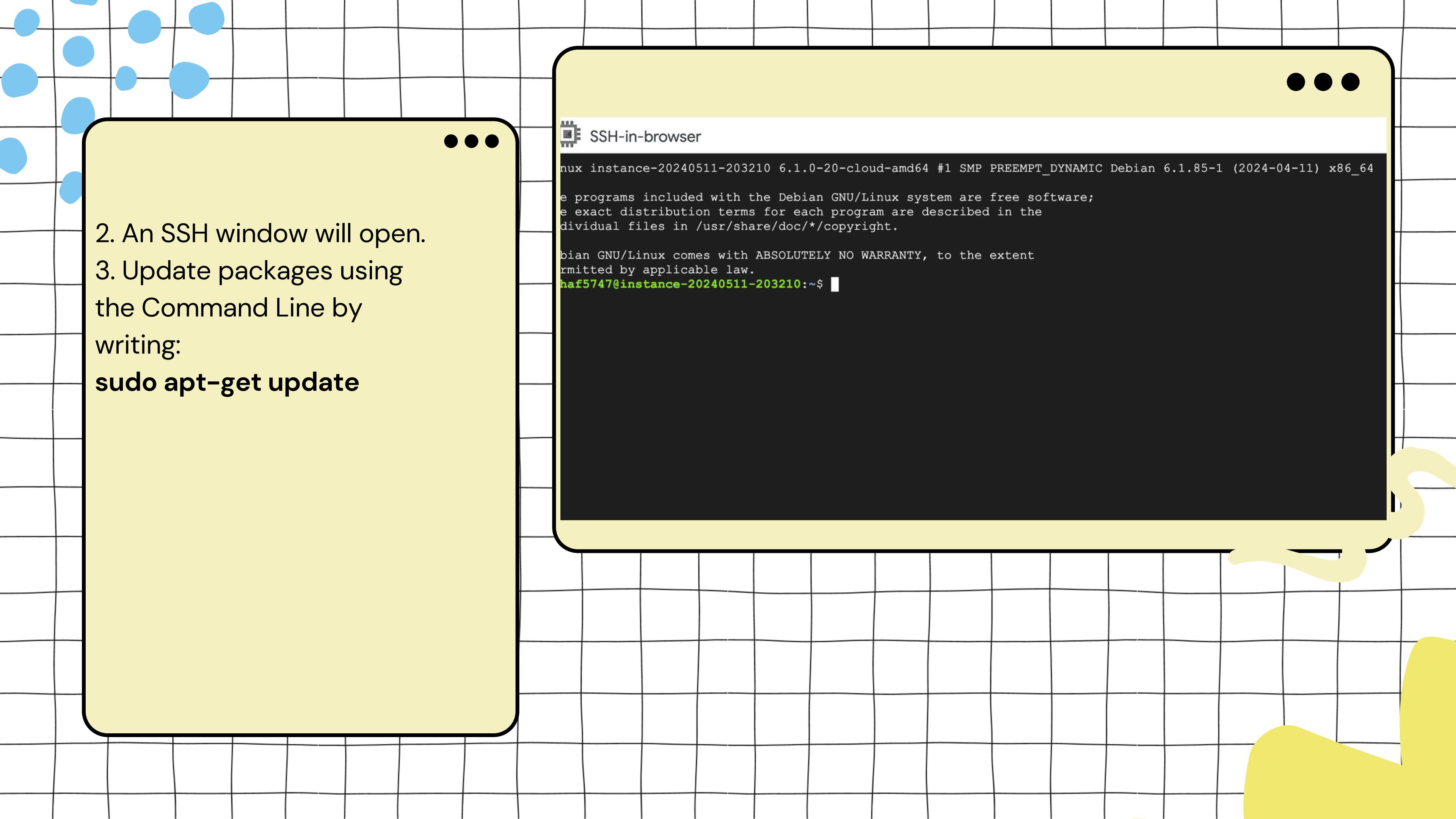
Allow Load Balancer Health Checks

Setting up VM SSH

1. run SSH by clicking the "SSH" button.

<input type="checkbox"/> Status	Name	Zone	Recommendations	In use by	Internal IP	External IP	Connect
<input checked="" type="checkbox"/>	instance-20240511-203210	us-central1-a			10.128.0.2 (nic0)	34.68.177.18 (nic0)	SSH

2. An SSH window will open.
3. Update packages using
the Command Line by
writing:
sudo apt-get update



SSH-in-browser

```
nux instance-20240511-203210 6.1.0-20-cloud-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.85-1 (2024-04-11) x86_64

e programs included with the Debian GNU/Linux system are free software;
e exact distribution terms for each program are described in the
dividual files in /usr/share/doc/*copyright.

bian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
rmitted by applicable law.
haf5747@instance-20240511-203210:~$ █
```

sudo apt-get update

SSH-in-browser

```
Linux instance-20240511-203210 6.1.0-20-cloud-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.85-1 (2024-04-11) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/*copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
rahaf5747@instance-20240511-203210:~$ sudo apt-get update
Get:1 file:/etc/apt/mirrors/debian.list Mirrorlist [30 B]
Get:3 file:/etc/apt/mirrors/debian-security.list Mirrorlist [39 B]
Get:7 https://packages.cloud.google.com/apt google-compute-engine-bookworm-stable InRelease [1321 B]
Get:8 https://packages.cloud.google.com/apt cloud-sdk-bookworm InRelease [1652 B]
Get:2 https://deb.debian.org/debian bookworm InRelease [151 kB]
Get:9 https://packages.cloud.google.com/apt google-compute-engine-bookworm-stable/main all Packages [2830 B]
Get:10 https://packages.cloud.google.com/apt google-compute-engine-bookworm-stable/main amd64 Packages [3128 B]
Get:4 https://deb.debian.org/debian bookworm-updates InRelease [55.4 kB]
Get:5 https://deb.debian.org/debian bookworm-backports InRelease [56.5 kB]
Get:6 https://deb.debian.org/debian-security bookworm-security InRelease [48.0 kB]
Get:11 https://packages.cloud.google.com/apt cloud-sdk-bookworm/main amd64 Packages [2993 kB]
Get:12 https://packages.cloud.google.com/apt cloud-sdk-bookworm/main all Packages [1453 kB]
Get:13 https://deb.debian.org/debian bookworm-updates/main Sources.diff/Index [10.6 kB]
Get:14 https://deb.debian.org/debian bookworm-updates/main amd64 Packages.diff/Index [10.6 kB]
Get:15 https://deb.debian.org/debian bookworm-updates/main Translation-en.diff/Index [10.6 kB]
Get:16 https://deb.debian.org/debian bookworm-updates/main Sources T-2024-04-23-2036.10-F-2024-04-23-2036.10.pdiff [831 B]
Get:17 https://deb.debian.org/debian bookworm-updates/main amd64 Packages T-2024-04-23-2036.10-F-2024-04-23-2036.10.pdiff [1595 B]
Get:16 https://deb.debian.org/debian bookworm-updates/main Sources T-2024-04-23-2036.10-F-2024-04-23-2036.10.pdiff [831 B]
Get:17 https://deb.debian.org/debian bookworm-updates/main amd64 Packages T-2024-04-23-2036.10-F-2024-04-23-2036.10.pdiff [1595 B]
Get:21 https://deb.debian.org/debian bookworm-updates/main Translation-en T-2024-04-23-2036.10-F-2024-04-23-2036.10.pdiff [2563 B]
Get:21 https://deb.debian.org/debian bookworm-updates/main Translation-en T-2024-04-23-2036.10-F-2024-04-23-2036.10.pdiff [2563 B]
Get:18 https://deb.debian.org/debian bookworm-backports/main Sources.diff/Index [63.3 kB]
Get:19 https://deb.debian.org/debian bookworm-backports/main amd64 Packages.diff/Index [63.3 kB]
Get:20 https://deb.debian.org/debian bookworm-backports/main Translation-en.diff/Index [63.3 kB]
Get:25 https://deb.debian.org/debian bookworm-backports/main Sources T-2024-05-11-0204.13-F-2024-04-15-2018.42.pdiff [24.9 kB]
Get:26 https://deb.debian.org/debian bookworm-backports/main amd64 Packages T-2024-05-10-2016.54-F-2024-04-15-2018.42.pdiff [29.2 kB]
Get:25 https://deb.debian.org/debian bookworm-backports/main Sources T-2024-05-11-0204.13-F-2024-04-15-2018.42.pdiff [24.9 kB]
Get:26 https://deb.debian.org/debian bookworm-backports/main amd64 Packages T-2024-05-10-2016.54-F-2024-04-15-2018.42.pdiff [29.2 kB]
Get:27 https://deb.debian.org/debian bookworm-backports/main Translation-en T-2024-05-09-0207.01-F-2024-04-19-2009.49.pdiff [8032 B]
Get:27 https://deb.debian.org/debian bookworm-backports/main Translation-en T-2024-05-09-0207.01-F-2024-04-19-2009.49.pdiff [8032 B]
Get:22 https://deb.debian.org/debian-security bookworm-security/main Sources [96.0 kB]
Get:23 https://deb.debian.org/debian-security bookworm-security/main amd64 Packages [155 kB]
Get:24 https://deb.debian.org/debian-security bookworm-security/main Translation-en [92.6 kB]
Fetched 5398 kB in 1s (3632 kB/s)
Reading package lists... Done
rahaf5747@instance-20240511-203210:~$
```

4. Install apache2 server
using the Command Line by
writing: **sudo apt-get install
apache2 -y**

**Now the Server is installed
on the VM.**

```
rahal5747@instance-20240511-203210:~$ sudo apt-get install apache2 -y
```

Running the server

1. To check if the server is working use the Command Line by writing : **sudo service --status-all**

```
rahaf5747@instance-20240511-203210:~$ sudo service --status-all
[ + ]    apache-htcacheclean
[ + ]    apache2
[ + ]    apparmor
[ + ]    cron
[ + ]    dbus
[ + ]    exim4
[ + ]    haveged
[ - ]    hwclock.sh
[ + ]    kmod
[ + ]    procps
[ - ]    screen-cleanup
[ + ]    ssh
[ - ]    sudo
[ + ]    udev
[ + ]    unattended-upgrades
[ - ]    uuidd
rahaf5747@instance-20240511-203210:~$
```

after we upload the website
we can access it by clicking
on the “External IP” button
at the VMInstances page

In use by	Internal IP	External IP	Connect
	10.128.0.2 (nic0)	34.68.177.18 (nic0) 	SSH 

after clicking on the external IP we will go to the websits.

Apache2 Debian Default Page



It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Debian systems. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

Configuration Overview

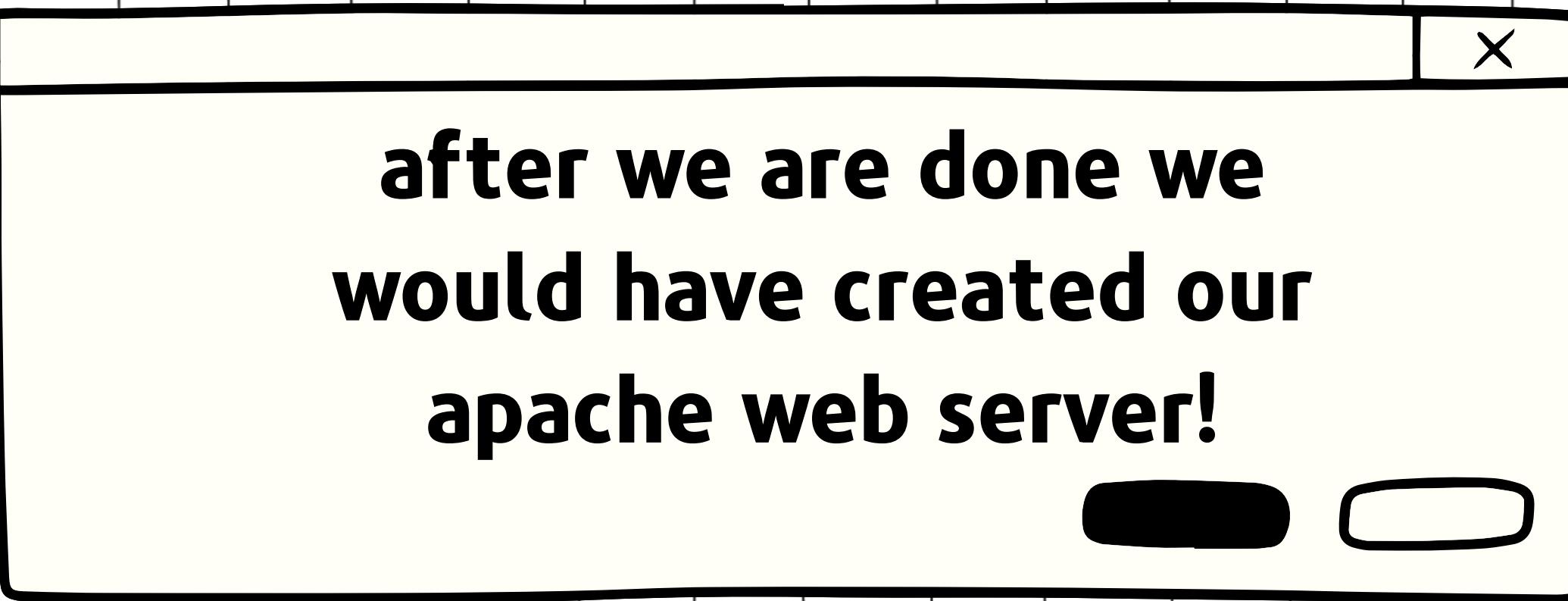
Debian's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Debian tools. The configuration system is **fully documented in `/usr/share/doc/apache2/README.Debian.gz`**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the `apache2-doc` package was installed on this server.

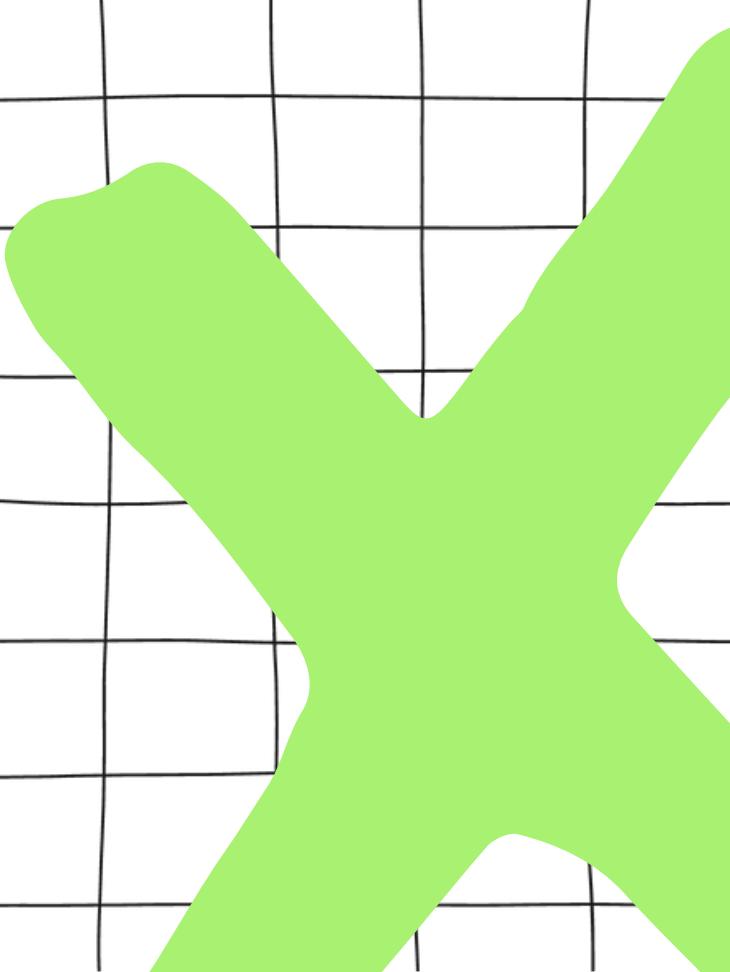
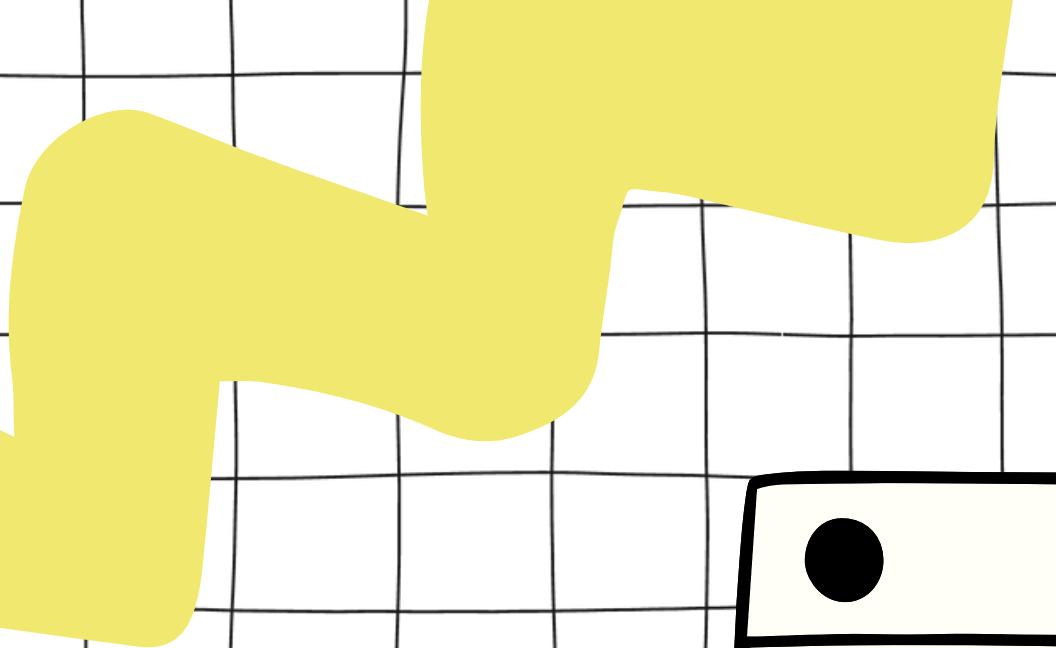
The configuration layout for an Apache2 web server installation on Debian systems is as follows:

```
/etc/apache2/
|-- apache2.conf
    '-- ports.conf
-- mods-enabled
    |-- *.load
    '-- *.conf
-- conf-enabled
    '-- *.conf
-- sites-enabled
    '-- *.conf
```

- `apache2.conf` is the main configuration file. It puts the pieces together by including all remaining configuration files when starting up the web server.

S





Thank you

BY : Rahaf Alayuni