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Torrens University Australia

ICC104 Introduction to Cloud Computing

Due date: End of week 12

Project + Report

Short Introduction

The content of this project + report will consist of understanding, exploring, and demonstrating Amazon Web Services and Google Cloud Platform. The purpose of this project + report was to be familiarise with Amazon Web Services (AWS) and Google Cloud Platform (GCP). Both AWS and GCP are public cloud providers. This project + report will consist of two screencast videos of a simple demonstration of Amazon Web Services and Google Cloud Platform. The first task of this project + report will be exploring GCP, setting up a virtual machine (VM) in Google Cloud, deploying LAMP server, and installing WordPress using the deployed server. The second task of this project + report will be exploring AWS, setting up an Elastic Compute Cloud (EC2) instance in AWS, deploying LAMP server, and installing WordPress using the deployed server. Each task will be demonstrated using a screen casting application.

Background Information

The invention of both AWS and GCP was a major turning point in the history of cloud computing. The cloud computing is a framework for enabling useful, on-demand services that are accessible from any devices given at any time using the cloud or the internet and requires minimal or no person interaction. Cloud computing is composed of three service models, four deployment models and five essential characteristics. Cloud computing service models consist of Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS). Cloud computing four deployment models consist of private cloud, community cloud, public cloud, and hybrid cloud. Cloud computing five essential characteristics consist of on-demand self-service, broad network access, resource pooling, rapid elasticity, and measured service. Three service models, four deployment models and five essential characteristics are used in both Amazon Web Services (AWS) and Google Cloud Platform (GCP). Amazon Web Services (AWS) was first introduced by Amazon to the public in March of 2006 and launched Simple Queue Service (SQS) as its first service. While Google Cloud Platform (GCP) was introduced by Google two years after AWS was launched, GCP was introduced in April of 2008 and launched App Engine as its first service.

Main Body

Cloud computing is one of the enablers of Amazon Web Services (AWS) and Google Cloud Platform (GCP), both are one of the most leading cloud providers that are being use around the world. Although AWS and GCP are one of the most leading cloud providers in the world, AWS and GCP may not be the best options for other organizations. Specific organizations

may prefer AWS over GCP or GCP over AWS as each one of the mentioned cloud providers offers great services.

Key service offering from Amazon Web Services and Google Cloud Platform.

According to Google Cloud Platform's (GCP) website, GCP's service offering includes compute, API management, containers, financial services, storage, developer tools, databases, data analytics, networking, management tools, migration, operations, serverless computing, AI and machine learning, healthcare and life sciences, hybrid and multi-cloud, media and gaming, security, and identity. All these GCP's service offering products offers flexibility in which the user could easily remove or add services as they wish. However, this amount of flexibility incurs a cost and will require a user spend the services wisely as pay-as-you-go model is highly costly depending on which services are used by the user. User may use a free tier service which allows a user to run their workloads for free and will be able to get a free three hundred credits if the user is new. Additionally, user will have opportunities to explore which services are suitable for their work. Lastly, GCP will offer additional free credits for verified businesses and GCP's free tier products are Compute Engine, Cloud Storage, BigQuery, Google Kubernetes Engine, App Engine, Cloud Run, Cloud Build, Operations, Firestore, Pub/Sub, Cloud Functions, Vision AI, Speech-To-Text, Natural Language API, AutoML Tables, AutoML Natural Language, AutoML Translation, Video Intelligence API, AutoML Vision, AutoML Video, Workflows, Cloud Source Repositories, Google Cloud Marketplace, and Secret Manager.

According to Amazon Web Service's (AWS) website, AWS's services offering includes Analytics, Application Integration, AWS Cost Management, Blockchain, Business Applications, Compute, Customer Engagement, Database, Developer Tools, End-user Computing, Game Tech, Internet of Things, Machine Learning, Media Services, Mobile, Quantum Technologies, Robotics, Satellite, Storage, Serverless, Security, Identity and Compliance, Networking and Content, Migration and Transfer, Management and Governance, AR and VR.

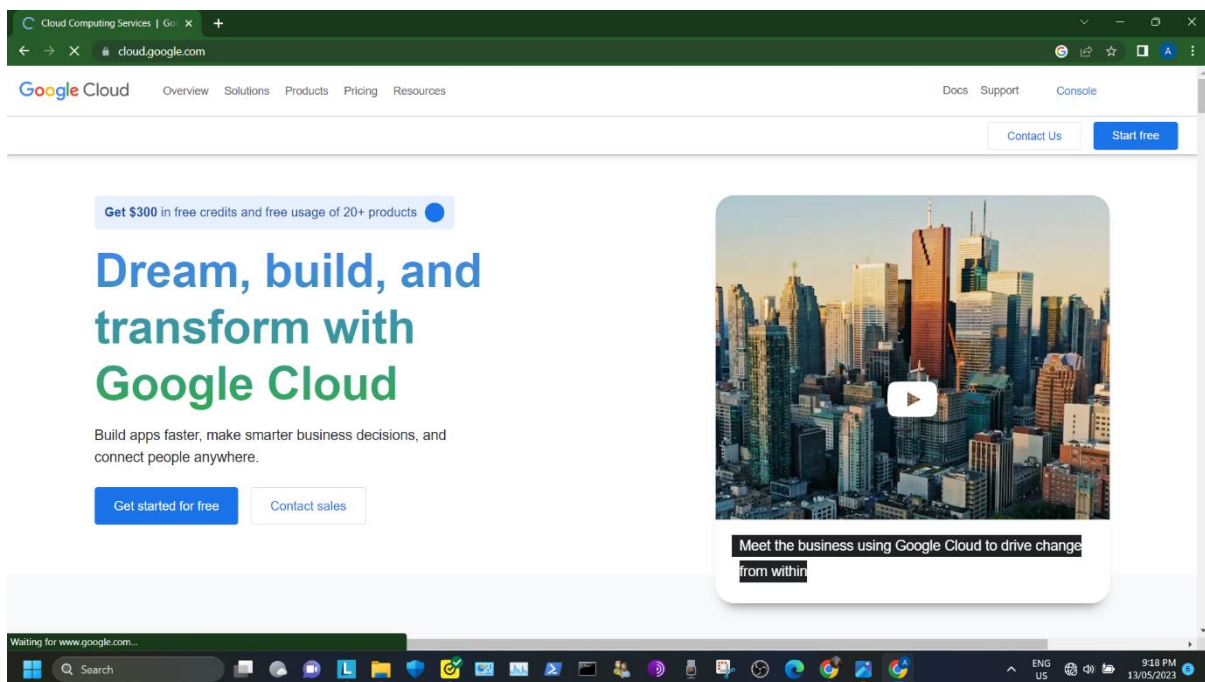
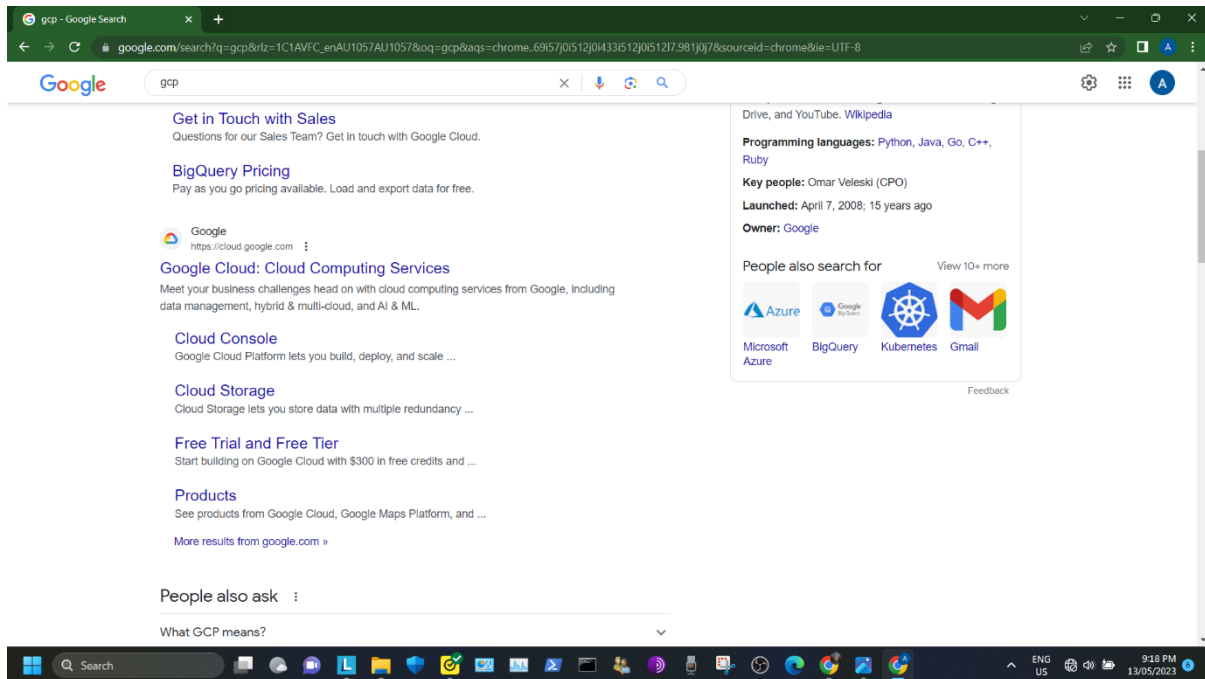
Comparison of cost model of AWS EC2 and GCP VM.

AWS and GCP may offer similar services and products. However, GCP provides more advantages to its users as it allows users to have unlimited free tier access until the user finished its credits. In contrast, AWS offers three types of tiers, and these are twelve months free, always free, and short-term trials. AWS will offer a pay-as-you-go approach to its users, allowing users to only pay for the services that users had used and if the used services fall under either of the three given tiers, services will fall on either of the three tiers provided. AWS's on-demand windows pricing is \$0.0192 USD per hour and AWS's on-demand Linux pricing is \$0.0146 USD per hour. GCP's on-demand hourly pricing is \$0.04 USD that runs on E2 series, e2-medium (2vCPU, 4 GB memory) machine and 10 GB balanced persistent disk. E2 series monthly estimate is \$27.55 USD, and the 10 GB balanced persistent disk is \$1.10 USD. GCP's total monthly cost is \$28.65 USD.

The procedure you followed from the registration of your account to the deployment of WordPress with supporting evidence like screenshots and logs.

GCP procedure:


Step 1: Search GCP and click on Google Cloud official website. Then click on get started for free, follow the steps and fill up the form.



Cloud Computing Services | Go x Step 1 of 2 - Free trial - Google x +
console.cloud.google.com/freetrial/signup/tos?pli=1

Try Google Cloud for free

Step 1 of 2 Account information

 **Angel Balandra**
apes8463@gmail.com [SWITCH ACCOUNT](#)

Country
Australia

What best describes your organisation or needs?
Please select
Other

Terms of Service
 I have read and agree to the [Google Cloud Platform Terms of Service](#), [Supplemental Free Trial Terms of Service](#) and the [Terms of Service of any applicable services and APIs](#).
Required to continue

Email updates
 I would like to receive periodic emails on news, product updates and special offers from Google Cloud and Google Cloud Partners.

[CONTINUE](#)

ENG US 9:28 PM 13/05/2023

Access to all Cloud Platform products

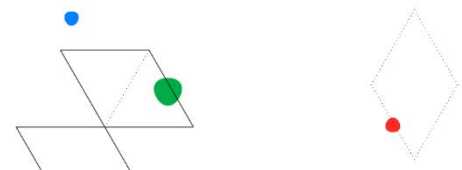
Get everything that you need to build and run your apps, websites and services, including Firebase and the Google Maps API.

\$300 credit for free


Put Google Cloud to work with \$300 in credit to spend over the next 90 days.

No auto-charge after free trial ends

We ask you for your credit card details to make sure that you are not a robot. You won't be charged unless you manually upgrade to a paid account.





Cloud Computing Services | Go x Step 2 of 2 - Free trial - Google x +
console.cloud.google.com/freetrial/signup/billing/AU?pli=1

Account type 

Individual

Only Business accounts can have multiple users. You cannot change the account type after signing up. In some countries, this selection affects your tax options. If you choose Individual as your account type, you agree that use of your account is for your trade, business, craft or profession. [Learn more](#)

Payment method

Card number
  MM / YY CVC

Cardholder name
Angel Balandra

Billing address

[START MY FREE TRIAL](#)

[Privacy policy](#) | [FAQs](#)

ENG US 9:28 PM 13/05/2023

Access to all Cloud Platform products

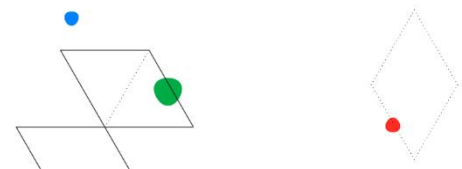
Get everything that you need to build and run your apps, websites and services, including Firebase and the Google Maps API.

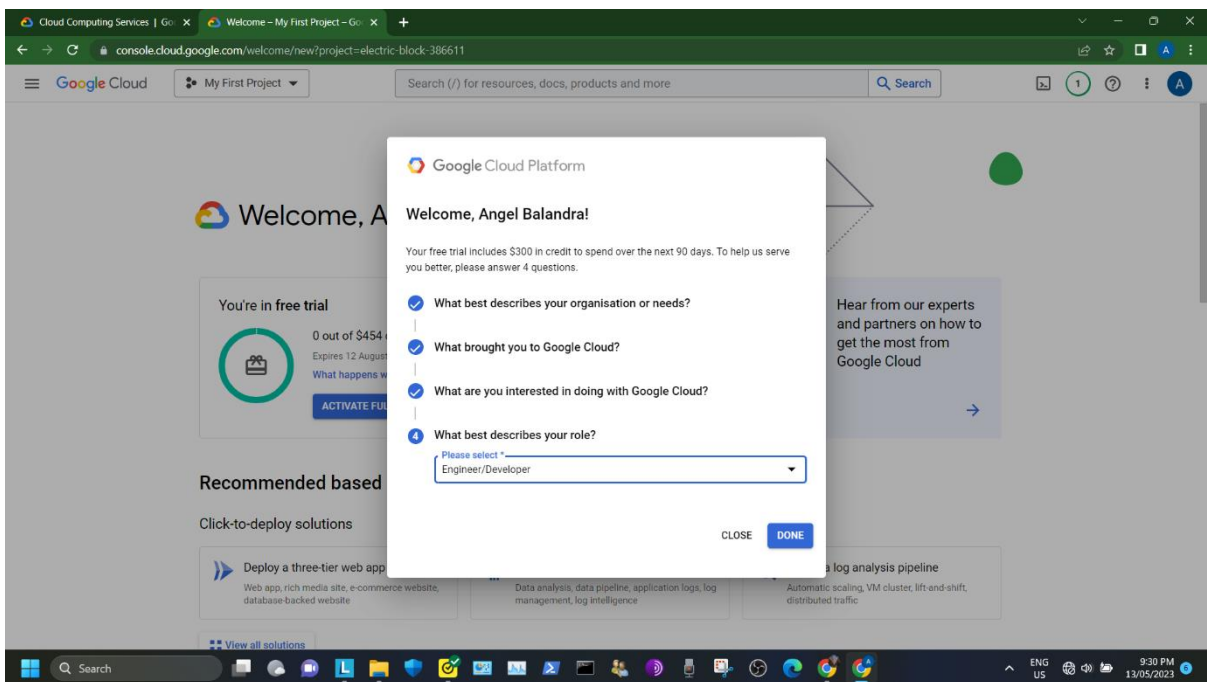
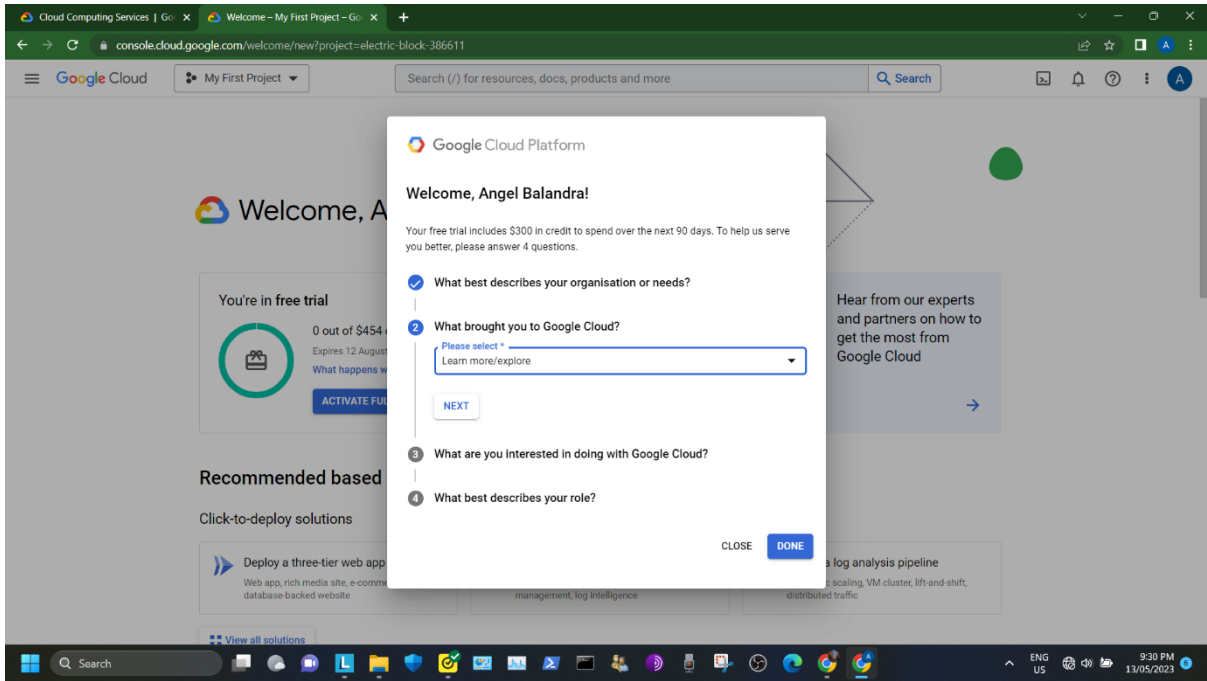
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Step 2: At the GCP main dashboard, click on the navigation menu located at the left top corner of the main dashboard, click on the compute engine, and click on enable button to enable compute engine. Then, click on the VM instances and click create instance. Enable allow https and http traffic to access the virtual machine (VM). Once the instance has been successfully created, click on the SSH to open the VM. Wait for the virtual machine (VM) to load.



Welcome, Angel Balandra PREVIEW

You're in free trial

0 out of \$454 credits used
Expires 12 August 2023
What happens when trial ends?
[ACTIVATE FULL ACCOUNT](#)

You're working on project **My First Project**

Number: 474496709936 ID: electric-block-386611

[Add people to your project](#)
[Set up budget alerts](#)
[Review credit usage](#)

Hear from our experts and partners on how to get the most from Google Cloud

[→](#)

Recommended based on your interest in Web, mobile, game, storage

Click-to-deploy solutions

[▶▶ Deploy a three-tier web app](#)
Web app, rich media site, e-commerce website, database-backed website

[View all solutions](#)

Cloud Computing Services | Go x Compute Engine - My First Proj... x +

console.cloud.google.com/compute/instancesAdd?project=electric-block-386611

Google Cloud My First Project Search (/) for resources, docs, products and more Search

← Create an instance EQUIVALENT CODE HELP ASSISTANT

To create a VM instance, select one of the options:

- New VM instance**
Create a single VM instance from scratch
- New VM instance from template**
Create a single VM instance from an existing template
- New VM instance from machine image**
Create a single VM instance from an existing machine image
- Marketplace**
Deploy a ready-to-go solution onto a VM instance

Identity and API access

Service accounts

Service account
Compute Engine default service account

Requires the Service Account User role (roles/iam.serviceAccountUser) to be set for users who want to access VMs with this service account. [Learn more](#)

Access scopes

- Allow default access
- Allow full access to all Cloud APIs
- Set access for each API

Firewall

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

- Allow HTTP traffic
- Allow HTTPS traffic

Advanced options
Networking, disks, security, management, sole-tenancy

Pricing summary

Monthly estimate
US\$28.65
That's about US\$0.04 hourly
Pay for what you use: No upfront costs and per-second billing

Item	Monthly estimate
2 vCPU + 4 GB memory	US\$27.55
10 GB balanced persistent disk	US\$1.10
Total	US\$28.65

[Compute Engine pricing](#)
^ LESS

CREATE CANCEL EQUIVALENT CODE

Cloud Computing Services | Go x VM instances - Compute Engine x +

console.cloud.google.com/compute/instances?project=electric-block-386611

Google Cloud My First Project Search (/) for resources, docs, products and more Search

Compute Engine VM instances CREATE INSTANCE IMPORT VM REFRESH HELP ASSISTANT LEARN

Virtual machines

- VM instances**
- Instance templates
- Sole-tenant nodes
- Machine images
- TPUs
- Committed use discounts
- Reservations
- Migrate to Virtual Machin...

Storage

- Disks
- Snapshots

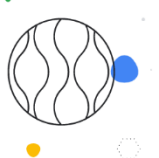
Marketplace

- Release notes

VM instances

INSTANCES OBSERVABILITY INSTANCE SCHEDULES

Filter Enter property name or value

Status	Name	Zone	Connect
 <p>VM instances</p> <p>Compute Engine lets you use virtual machines that run on Google's infrastructure. Create micro-VMs or larger instances running Debian, Windows or other standard images. Create your first VM instance, import it using a migration service or try the quickstart to build a sample app.</p>			

CREATE INSTANCE TAKE THE QUICKSTART

Get started with Compute Engine

Deploy a website or application, back up and restore VMs and disks, configure secure access, and design for scalability

- Create a website or application**
 - Create a "hello world" website on IIS**
Tutorial 25 min
Create an IIS web server VM using Compute Engine.
 - Create a "hello world" website on Apache**
Tutorial 10 min
Create an Apache web server on a Linux VM.
 - Transfer files to a Windows VM**
Tutorial 10 min
Upload and download files from the Cloud Storage bucket to the Windows VM
 - Transfer files to a Linux VM**
Tutorial 5 min
Learn how to transfer files to or from a Linux VM.
 - [Configure firewall rules](#)



Compute Engine API

Google Enterprise API

Compute Engine API

[TRY THIS API](#)

[OVERVIEW](#) [DOCUMENTATION](#) [SUPPORT](#) [RELATED PRODUCTS](#)

Overview

Creates and runs virtual machines on Google Cloud Platform.

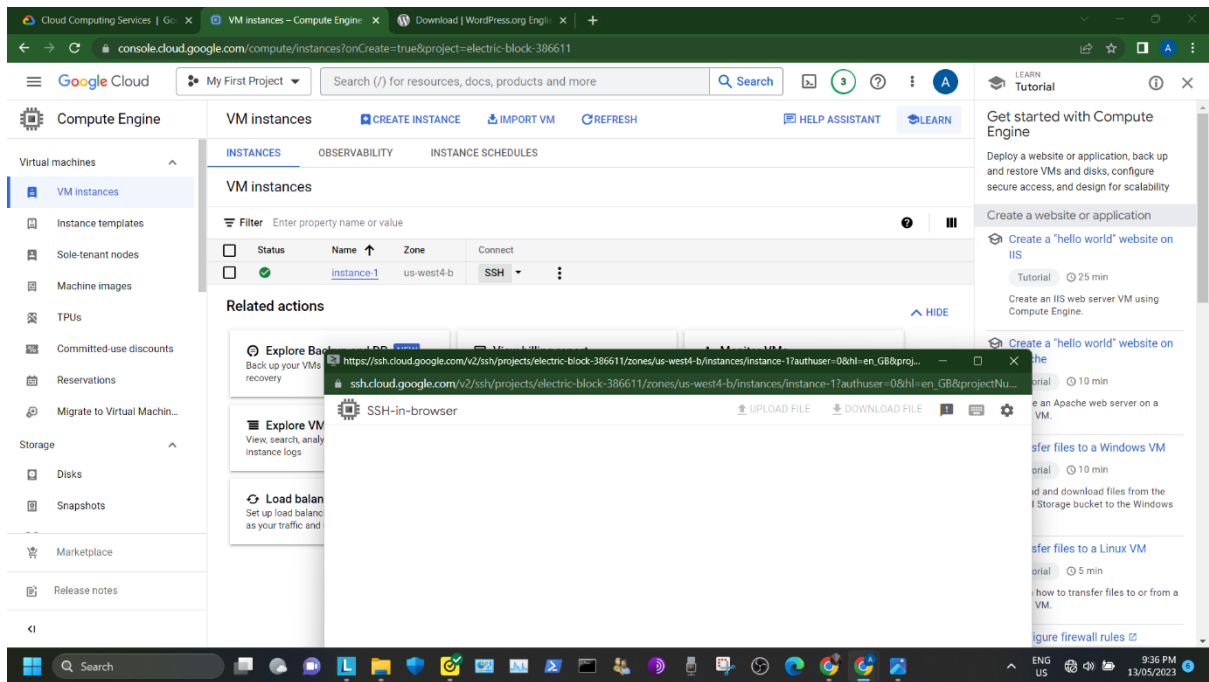
Additional details

Type: [SaaS & APIs](#)
Last updated: 24/03/2023
Category: [Compute](#), [Networking](#), [Google Enterprise APIs](#)
Service name: compute.googleapis.com

Tutorials and documentation

[Learn more](#)

The screenshot shows the Google Cloud console interface. On the left, a navigation menu is open, listing various services under 'VIRTUAL MACHINES', 'STORAGE', 'INSTANCE GROUPS', and 'VM MANAGER'. The main area displays a dashboard with a search bar at the top. Below the search bar, there are several tiles and cards, including one for 'Angel Balandra' with a 'PREVIEW' tag, and another for 'You're working on project My First Project' with details like 'Number: 474496709936' and 'ID: electric-block-386611'. A 'CREDITS USED' section shows '2023' and 'When trial ends?'. A 'HEAR FROM OUR EXPERTS' card is also visible. The bottom of the screen shows the Windows taskbar with the time '9:31 PM' and date '13/05/2023'.



Step 3: Once the VM has loaded, enter the VM and type the commands accordingly:

- a) To upgrade and update the packages, type:
 - Sudo apt update && sudo apt upgrade
- b) To install Apache server, type:
 - Sudo apt install apache2
- c) To install MariaDB, type:
 - Sudo apt-get install MariaDB-server MariaDB-client.
- d) Enter MariaDB database, type:
 - Sudo MariaDB
- e) Within the database, create a database, and a user with a password which grants access to the database, then exit type:
 - Create database '*database name.*'
 - Create user '*user*' identified by '*password*'.
 - Grant all on *database name.* * to '*user*'
 - Flush privileges.
 - Exit.
- f) On the main root, install apache2 and php library packages to run WordPress properly, type:
 - Sudo apt install php libapache2-mod-php php-sql
- g) Go to the library's directory and list the files that are stored within that folder, type:
 - Cd /var/www/html
 - Ls
- h) Create a folder name wordpress within var/www directory and revoke the access permission, type:
 - Sudo mkdir /var/www/wordpress
 - Sudo chown -R \$USER: \$USER /var/www/wordpress

- i) Go to the sites-available directory, open a website configuration file, and copy the default configuration file, then create a wordpress configuration file and paste the text from the default configuration file and save it within the sites-available directory, type:
 - Cd /etc/apache2/sites-available
 - Ls
 - Sudo nano 000-default.conf
 - Sudo nano /etc/apache2/sites-available/wordpress.conf
- j) Enable the wordpress configuration file and disable the default configuration file, type:
 - Sudo a2ensite wordpress.conf
 - Sudo a2dissite 000-default.conf
- k) Evaluate the server if it is working and reload the server:
 - Sudo apachectl configtest
 - Sudo systemctl reload apache2.

Installation of WordPress via Google Console Platform Visual Machine

- l) Go to the temporary folder and download and install the official wordpress application, then decompress the gzip folder:
 - Curl -O https://en-au.wordpress.org/latest-en_AU.tar.gz
 - Tar xzvf https://en-au.wordpress.org/latest-en_AU.tar.gz
- m) Copy the sample.php, then archive it and create the new official upgrade of the wordpress.php within the newly created directory in wordpress' temporary folder:
 - Sudo cp -a /tmp/wordpress/wp-config-sample.php /tmp/wordpress/wp-config.php
 - Sudo mkdir /tmp/wordpress/wp-content/upgrade
 - Sudo cp -a /tmp/wordpress/. /var/www/wordpress
- n) Revoke the access permission of the wordpress.conf file and open the wp-config.php file and edit the database, username database and username database password to be able to install the wordpress and clearly communicate with the server:
 - Sudo chown -R www-data: www-data /var/www/wordpress
 - Sudo nano /var/www/wordpress/wp-config.php
- o) These must be the same configuration and information that will be use in logging to wordpress before installation.
 - DB_NAME = database name.
 - DB_USER = database username.
 - DB_PASSWORD = database user's password.
- p) GCP external IPv4 address for WordPress: <http://34.125.87.46>

```
SSH-in-browser
UPLOAD FILE
DOWNLOAD FILE

GNU nano 3.4 /var/www/wordpress/wp-config.php *
/** MySQL settings - You can get this info from your web host ** //
/** The name of the database for WordPress */
define( 'DB_NAME', 'gop-wordpress' );
/** MySQL database username */
define( 'DB_USER', 'user1' );
/** MySQL database password */
define( 'DB_PASSWORD', 'password123' );
/** MySQL hostname */
define( 'DB_HOST', 'localhost' );

Help Write Out Where Is Cut Escute Location Undo Set Mark To Bracket Previous Back
Exit Read File Replace Paste Justify Go To Line Redo Copy Where Was Next Forward
```

```
SSH-in-browser
UPLOAD FILE
DOWNLOAD FILE

apes8463@instance-1: /tmp$ ls
latest-en_AU.tar.gz  systemd-private-b284b116f8e451ca458272dc2b19b16-apache2.service-XbUhh1  systemd-private-b284b116f8e451ca458272dc2b19b16-haveged.service-0W37hg
ssh-ly3yrk9Tq4      systemd-private-b284b116f8e451ca458272dc2b19b16-chrony.service-V716ag  systemd-private-b284b116f8e451ca458272dc2b19b16-systemd-logind.service-Af2j1j
apes8463@instance-1: /tmp$ gzip --docpress latest-en_AU.tar.gz
apes8463@instance-1: /tmp$ ls
latest-en_AU.tar  systemd-private-b284b116f8e451ca458272dc2b19b16-apache2.service-XbUhh1  systemd-private-b284b116f8e451ca458272dc2b19b16-haveged.service-0W37hg
ssh-ly3yrk9Tq4    systemd-private-b284b116f8e451ca458272dc2b19b16-chrony.service-V716ag  systemd-private-b284b116f8e451ca458272dc2b19b16-systemd-logind.service-Af2j1j
apes8463@instance-1: /tmp$ gzip -d latest-en_AU.tar
gzip: latest-en_AU.tar: unknown suffix -- ignored
apes8463@instance-1: /tmp$
```

```
apache2.conf conf-available conf-enabled envvars magic mods-available mods-enabled ports.conf sites-available sites-enabled
apes8463@instance-1:/etc/apache2/sites-available$ cd sites-available/
apes8463@instance-1:/etc/apache2/sites-available$ ls
000-default.conf default-ssl.conf
apes8463@instance-1:/etc/apache2/sites-available$ sudo nano 000-default.conf
apes8463@instance-1:/etc/apache2/sites-available$ sudo nano /etc/apache2/sites-available/wordpress.conf
apes8463@instance-1:/etc/apache2/sites-available$ ls
000-default.conf default-ssl.conf wordpress.conf
apes8463@instance-1:/etc/apache2/sites-available$ sudo nano wordpress.conf
apes8463@instance-1:/etc/apache2/sites-available$ sudo a2ensite wordpress
Enabling site wordpress.
To activate the new configuration, you need to run:
systemctl reload apache2
apes8463@instance-1:/etc/apache2/sites-available$ sudo a2dssite 000-default.conf
sudo: a2dssite: command not found
apes8463@instance-1:/etc/apache2/sites-available$ sudo a2dissite 000-default.conf
Site 000-default disabled.
To activate the new configuration, you need to run:
systemctl reload apache2
apes8463@instance-1:/etc/apache2/sites-available$ sudo apache2ctl configtest
Syntax OK
apes8463@instance-1:/etc/apache2/sites-available$ sudo systemctl reload apache2
apes8463@instance-1:/etc/apache2/sites-available$ cd /tmp
apes8463@instance-1:/tmp$ curl -O https://en-au.wordpress.org/latest-en_AU.tar.gz
  % Total    % Received % Xferd Average Speed   Time    Time     Current
                                 Dload  Upload   Total   Spent    Left  Speed
100 22.5M  100 22.5M    0     0 19.8M    0  0:00:01  0:00:01  ---:-- 19.8M
apes8463@instance-1:/tmp$ tar xzvf https://en-au.wordpress.org/latest-en_AU.tar.gz
tar (Child): Cannot connect to https: resolve failed

gzip: stdin: unexpected end of file
tar: Child returned status 128
tar: Error is not recoverable: exiting now
apes8463@instance-1:/tmp$ tar -rxf https://en-au.wordpress.org/latest-en_AU.tar.gz
tar: Cannot connect to https: resolve failed
apes8463@instance-1:/tmp$ ls
latest-en_AU.tar.gz
ssh-ly5y7k9lq4      systemd-private-b284b116f8e451ca458272dc2b19b16-apache2.service-XBUthi  systemd-private-b284b116f8e451ca458272dc2b19b16-havedged.service-OW37hq
ssh-ly5y7k9lq4      systemd-private-b284b116f8e451ca458272dc2b19b16-chrony.service-V716ag  systemd-private-b284b116f8e451ca458272dc2b19b16-systemd-logind.service-AF2j1j
apes8463@instance-1:/tmp$ sudo rm latest-en_AU.tar.gz
apes8463@instance-1:/tmp$ ls
ssh-ly5y7k9lq4      systemd-private-b284b116f8e451ca458272dc2b19b16-apache2.service-XBUthi  systemd-private-b284b116f8e451ca458272dc2b19b16-havedged.service-OW37hq
ssh-ly5y7k9lq4      systemd-private-b284b116f8e451ca458272dc2b19b16-chrony.service-V716ag  systemd-private-b284b116f8e451ca458272dc2b19b16-systemd-logind.service-AF2j1j
apes8463@instance-1:/tmp$
```

```
GNU nano 5.4 /etc/apache2/sites-available/wordpress.conf
<VirtualHost *:80>
# The ServerName directive sets the request scheme, hostname and port that
# the server uses to identify itself. This is used when creating
# redirection URLs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
#ServerName www.example.com

ServerAdmin webmaster@localhost
DocumentRoot /var/www/wordpress

# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

ErrorLog ${APACHE_LOG_DIR}/error.log
CustomLog ${APACHE_LOG_DIR}/access.log combined

# For most configuration files from conf-available/, which are
# enabled or disabled at a global level, it is possible to
# include a line for only one particular virtual host. For example the
# following line enables the cgi configuration for this host only
# after it has been globally disabled with "addmodule".
#include conf-available/serve-cgi-bin.conf
</VirtualHost>

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet
```

```
SSH-in-browser
apex8463@instance-1:~/etc/apache2$ ls
apache2.conf  conf-available  conf-enabled  envvars  magic  mods-available  mods-enabled  ports.conf  sites-available  sites-enabled
apex8463@instance-1:~/etc/apache2$ cd sites-available/
apex8463@instance-1:~/etc/apache2/sites-available$ ls
000-default.conf  default-ssl.conf
apex8463@instance-1:~/etc/apache2/sites-available$
```

```
SSH-in-browser
apex8463@instance-1:~$ ls
apex8463@instance-1:~$ cd /var/
apex8463@instance-1:~/var$ ls
backups  cache  lib  local  lock  log  mail  opt  run  spool  www
apex8463@instance-1:~/var$ cd www
apex8463@instance-1:~/var/www$ ls
html
apex8463@instance-1:~/var/www$ cd html/
apex8463@instance-1:~/var/www/html$ ls
index.html
apex8463@instance-1:~/var/www/html$ sudo mkdir /var/www/wordpress
apex8463@instance-1:~/var/www/html$ ls
index.html
apex8463@instance-1:~/var/www/html$ sudo chown -R $USER:$USER /var/www/wordpress
apex8463@instance-1:~/var/www/html$ cd /etc/apache2/sites-available
-bash: cd: /etc/apache2/sites-available: No such file or directory
apex8463@instance-1:~/var/www/html$ ls
index.html
apex8463@instance-1:~/var/www/html$ cd etc
-bash: cd: etc: No such file or directory
apex8463@instance-1:~/var/www/html$ cd /etc
-bash: cd: /etc: No such file or directory
apex8463@instance-1:~/var/www/html$ cd /etc
apex8463@instance-1:~/etc$ ls
X11  chrony  environment  hosts  localtime  motd  ps  resolv.conf  subgid  udev
adduser.conf  cron.d  etherypes  hosts.allow  logcheck  mtab  PPP  rmt  subgid-
aliases  cron.daily  exim4  hosts.deny  login.defs  mysql  profile  rpc  subgid-
alternatives  cron.hourly  fstab  initt.d  logrotate.conf  nanorc  profile.d  rsyslog.conf  subuid-
apache2  cron.monthly  fstab.old  initramfs-tools  logrotate.d  netconfig  protocols  rsyslog.d  sudo.conf  wgetrc
apparmor  cron.weekly  gai.conf  inputrc  machine-id  network  python3  runit  sudo_logsrvd.conf  xattr.conf
apparmor.d  cronstab  google_instance_id  iproute2  magic  networkd  python3.9  screencrc  sudoers  xdg
apt  dbus-1  groff  issue  magic.mime  nsswitch.conf  rc0.d  security  sudoers.d
bash.bashrc  debconf.conf  group  issue.net  mailcap  nvme  rc1.d  selinux  sv
bash_completion  debian_version  group-  kernel  mailcap.order  opt  rc2.d  services  sysctl.conf
bash_completion.d  default  grub.d  kernel-img.conf  manpath.config  os-release  rc3.d  shadow  sysctl.d
bindresvport.blacklist  deluser.conf  gshadow  ld.so.cache  mime.types  pam.conf  rc4.d  shadow-  systemd
binfmt.d  dhcp  gshadow-  ld.so.conf  mke2fs.conf  pam.d  rc5.d  shells  terminfo
boto.cfg  dpkg  gss  ld.so.conf.d  modprobe.d  passwd  rc6.d  skel  timezone
ca-certificates  e2scrub.conf  host.conf  ldap  modules  passwd-  rcS.d  ssh  tmpfiles.d
ca-certificates.conf  email_addresses  hostname  libaudit.conf  modules-load.d  perl  reportbug.conf  ssl  ucf.conf
-bash: cd: /apache2: No such file or directory
apex8463@instance-1:~/etc$ cd apache2
apex8463@instance-1:~/etc/apache2$ ls
```

```
Processing triggers for libc-bin (2.31-13+deb11u6) ...
apes@4638instance-1:~$ sudo apt install mysql-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package mysql-server is not available, but is referred to by another package.
This may mean that the package is missing, has been obsoleted, or
is only available from another source.

E Package 'mysql-server' has no installation candidate
apes@4638instance-1:~$ sudo mysql
sudo: mysql: command not found
apes@4638instance-1:~$ sudo apt install mysql-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package mysql-server is not available, but is referred to by another package.
This may mean that the package is missing, has been obsoleted, or
is only available from another source

E Package 'mysql-server' has no installation candidate
apes@4638instance-1:~$ sudo apt-get install mariadb-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  galera-4 gawk libaio1 libbcgi-fast-perl libbcgi-pm-perl libclone-perl libconfig-inifiles-perl libdbd-mariadb-perl libdbi-perl libencode-locale-perl libfcgi-bin libfcgi-perl libfcgi01db1
  libhtml-parser-perl libhtml-tagset-perl libhtml-template-perl libhttp-date-perl libhttp-message-perl libio-html-perl liblwp-mediatypes-perl libmpfr6 libnattyv5
  librtm-readkey-perl libtimedate-perl liburi-perl lsof mariadb-client-10.5 mariadb-client-core-10.5 mariadb-server-10.5 mariadb-server-core-10.5 rync
Suggested packages:
  gawk-doc libdbd-mysql-perl libnss-daemon-perl libsql-statement-perl libdata-dump-perl libipc-sharedcache-perl libwww-perl mariadb-test netcat-openbsd
The following NEW packages will be installed:
  galera-4 gawk libaio1 libbcgi-fast-perl libbcgi-pm-perl libclone-perl libconfig-inifiles-perl libdbd-mariadb-perl libdbi-perl libencode-locale-perl libfcgi-bin libfcgi-perl libfcgi01db1
  libhtml-parser-perl libhtml-tagset-perl libhtml-template-perl libhttp-date-perl libhttp-message-perl libio-html-perl liblwp-mediatypes-perl libmpfr6 libnattyv5
  librtm-readkey-perl libtimedate-perl liburi-perl lsof mariadb-client-10.5 mariadb-client-core-10.5 mariadb-server-10.5 mariadb-server-core-10.5 rync
0 upgraded, 33 newly installed, 0 to remove and 0 not upgraded.
Need to get 19.4 MB of archives.
After this operation, 161 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 https://deb.debian.org/debian bullseye/main amd64 libmpfr6 amd64 4.1.0-3 [2012 kB]
Get:2 https://deb.debian.org/debian bullseye/main amd64 libsigsegv2 amd64 2.13-1 [34.8 kB]
Get:3 https://deb.debian.org/debian bullseye/main amd64 gawk amd64 1:5.1.0-1 [605 kB]
Get:4 https://deb.debian.org/debian bullseye/main amd64 galera-4 amd64 26.4.11-0+deb11u1 [804 kB]
Get:5 https://deb.debian.org/debian bullseye/main amd64 libdbi-perl amd64 1.643-3+b1 [780 kB]
```

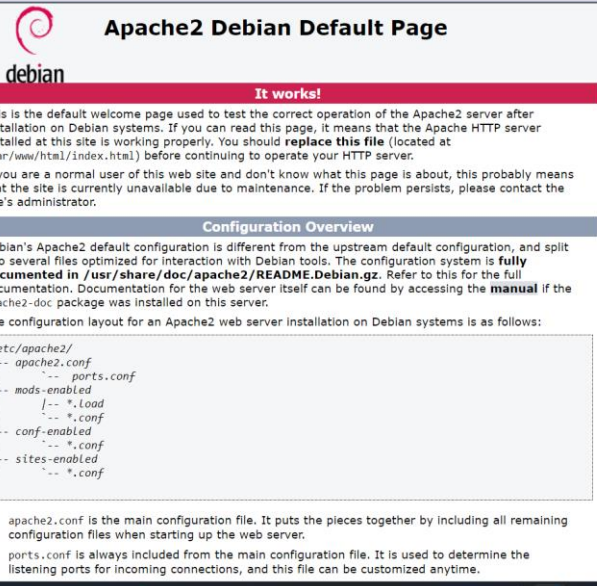
```
Enabling module authz_user.
Enabling module alias.
Enabling module dir.
Enabling module autoindex.
Enabling module env.
Enabling module mime.
Enabling module negotiation.
Enabling module setenvif.
Enabling module filter.
Enabling module deflate.
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service -> /lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service -> /lib/systemd/system/apache-htcacheclean.service.
Processing triggers for man-db (2.9.4-2) ...
Processing triggers for libc-bin (2.31-13+deb11u6) ...
apes@4638instance-1:~$ sudo apt install mysql-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package mysql-server is not available, but is referred to by another package.
This may mean that the package is missing, has been obsoleted, or
is only available from another source

E Package 'mysql-server' has no installation candidate
apes@4638instance-1:~$ sudo mysql
sudo: mysql: command not found
apes@4638instance-1:~$ sudo apt install mysql-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package mysql-server is not available, but is referred to by another package.
This may mean that the package is missing, has been obsoleted, or
is only available from another source

E Package 'mysql-server' has no installation candidate
apes@4638instance-1:~$ sudo apt-get install mariadb-server
```

```
SSH-in-browser
Setting up mailcap (3.69) ...
Setting up apache2-utils (2.4.56-1-deb11u2) ...
Setting up mime-support (3.66) ...
Setting up apache2-bin (2.4.56-1-deb11u2) ...
Setting up apache2 (2.4.56-1-deb11u2) ...
Enabling module mpm_event.
Enabling module authz_core.
Enabling module authz_host.
Enabling module authn_core.
Enabling module auth_basic.
Enabling module access_compat.
Enabling module authn_file.
Enabling module authz_user.
Enabling module alias.
Enabling module dir.
Enabling module autoindex.
Enabling module env.
Enabling module mime.
Enabling module negotiation.
Enabling module setenvif.
Enabling module filter.
Enabling module deflate.
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service → /lib/systemd/system/apache-htcacheclean.service.
Processing triggers for man-db (2.9.4-2) ...
Processing triggers for libc-bin (2.31-13+deb11u6) ...
gpe8463@instance-1:~$ sudo apt install mysql-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package mysql-server is not available, but is referred to by another package.
This may mean that the package is missing, has been obsoleted, or
is only available from another source.

Package 'mysql-server' has no installation candidate
gpe8463@instance-1:~$
```



The image shows the Apache2 Debian Default Page. It features the Debian logo and the title "Apache2 Debian Default Page". A red banner with the text "It works!" is prominent. Below this, there is a paragraph explaining that this is the default welcome page used to test the correct operation of the Apache2 server after installation on Debian systems. It states that if the user can read this page, it means the Apache HTTP server is working properly. A section titled "Configuration Overview" follows, explaining that Debian's Apache2 default configuration is different from the upstream default and is split into several files. It mentions that the configuration system is fully documented in /usr/share/doc/apache2/README.Debian.gz. A code block shows the layout of the configuration files in /etc/apache2/. Finally, there are two bullet points explaining the roles of apache2.conf and ports.conf.

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.
- `ports.conf` is always included from the main configuration file. It is used to determine the listening ports for incoming connections, and this file can be customized anytime.

The image shows a browser window with a Google search page. The search bar contains the IP address 34.125.87.46. Below the search bar, there are three buttons: Download, Web Store, and Add shortcut. The browser's address bar shows the URL console.cloud.google.com/compute/instancesDetail/zones/us-west4-b/instances/instance-1?project=electric-block-386611. The Google Cloud console is open, displaying the details for instance-1. The console shows network tags, network interfaces, storage, and boot disk information.

Network tags

http-server https-server

Network interfaces

Network	Primary internal IP address	Alias IP ranges	IP stack type	External IP address	Network tier	IP forwarding
default	10.182.0.2		IPv4	34.125.87.46 (Ephemeral)	Premium	Off

Storage

Boot disk

Name	Image	Interface type	Size (GB)	Device name	Type	Architecture	Encryption
instance-1	debian-11-bullseye-v20230509	SCSI	10	instance-1	Balanced persistent disk	x86_64	Google-managed

Local disks

VM Instances

- Connecting to instances
- Connecting to instances using advanced methods
- Transferring files to Linux VMs
- Managing SSH keys in metadata
- Assigning an external IP address to an existing instance

```
SSH-in-browser
UPLOAD FILE
DOWNLOAD FILE

Fetched 20.5 MB in 0s (55.3 MB/s)
Reading changelogs... Done
Selecting previously unselected package firmware-linux-free.
(Reading database ... 59473 files and directories currently installed.)
Preparing to unpack .../firmware-linux-free_20200122-1_all.deb ...
Unpacking firmware-linux-free (20200122-1) ...
Selecting previously unselected package linux-image-5.10.0-23-cloud-amd64.
Preparing to unpack .../linux-image-5.10.0-23-cloud-amd64_5.10.179-1_amd64.deb ...
Unpacking linux-image-5.10.0-23-cloud-amd64 (5.10.179-1) ...
Preparing to unpack .../linux-image-cloud-amd64_5.10.179-1_amd64.deb ...
Unpacking linux-image-cloud-amd64 (5.10.179-1) over (5.10.178-3) ...
Setting up firmware-linux-free (20200122-1) ...
Setting up linux-image-5.10.0-23-cloud-amd64 (5.10.179-1) ...
/etc/kernel/postinst.d/initramfs-tools:
update-initramfs: Generating /boot/initrd.img-5.10.0-23-cloud-amd64
/etc/kernel/postinst.d/zz-update-grub:
Generating grub configuration file ...
Found linux image: /boot/vmlinuz-5.10.0-23-cloud-amd64
Found initrd image: /boot/initrd.img-5.10.0-23-cloud-amd64
Found linux image: /boot/vmlinuz-5.10.0-22-cloud-amd64
Found initrd image: /boot/initrd.img-5.10.0-22-cloud-amd64
Warning: os-prober will be executed to detect other bootable partitions.
Its output will be used to detect bootable binaries on them and create new boot entries.
Adding boot menu entry for UEFI Firmware Settings ...
done
Setting up linux-image-cloud-amd64 (5.10.179-1) ...
Processing triggers for initramfs-tools (0.140) ...
update-initramfs: Generating /boot/initrd.img-5.10.0-23-cloud-amd64
#ssh@43instance-1:~$ sudo apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils bzip2 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap libgdcm-compat4 libjansson4 liblua5.3-0 libperl5.32 mailcap mime-support perl
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser bzip2-doc perl-doc libterm-readline-gnu-perl | libterm-readline-perl-perl make libtap-harness-archive-perl
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils bzip2 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap libgdcm-compat4 libjansson4 liblua5.3-0 libperl5.32 mailcap mime-support
  perl perl-modules-5.32 ssl-cert
0 upgraded, 18 newly installed, 0 to remove and 0 not upgraded.
Need to get 9907 kB of archives.
After this operation, 56.0 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

```
SSH-in-browser
UPLOAD FILE
DOWNLOAD FILE

Linux instance-1 5.10.0-22-cloud-amd64 #1 SMP Debian 5.10.178-3 (2023-04-22) 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.
#ssh@43instance-1:~$ sudo apt update && sudo apt upgrade
Hit:1 https://deb.debian.org/debian bullseye InRelease
Get:2 https://deb.debian.org/debian-security bullseye-security InRelease [48.4 kB]
Get:3 https://packages.cloud.google.com/apt google-compute-engine-bullseye-stable InRelease [5146 B]
Get:4 https://deb.debian.org/debian bullseye-updates InRelease [44.1 kB]
Get:5 https://deb.debian.org/debian bullseye-backports InRelease [49.0 kB]
Get:6 https://packages.cloud.google.com/apt cloud-sdk-bullseye InRelease [6400 B]
Get:7 https://deb.debian.org/debian-security bullseye-security/main Sources [195 kB]
Get:8 https://deb.debian.org/debian-security bullseye-security/main amd64 Packages [240 kB]
Get:9 https://deb.debian.org/debian-security bullseye-security/main Translation-en [158 kB]
Get:10 https://deb.debian.org/debian bullseye-backports/main Sources.diff/Index [63.3 kB]
Get:11 https://deb.debian.org/debian bullseye-backports/main amd64 Packages.diff/Index [63.3 kB]
Get:12 https://deb.debian.org/debian bullseye-backports/main Sources 7-2023-05-11-2014.53-F-2023-05-09-2004.12.pdf [1672 B]
Get:13 https://deb.debian.org/debian bullseye-backports/main Sources 7-2023-05-11-2014.53-F-2023-05-09-2004.12.pdf [1672 B]
Get:14 https://deb.debian.org/debian bullseye-backports/main amd64 Packages 7-2023-05-11-0814.21-F-2023-05-09-2004.12.pdf [2704 B]
Get:15 https://deb.debian.org/debian bullseye-backports/main amd64 Packages 7-2023-05-11-0814.21-F-2023-05-09-2004.12.pdf [2704 B]
Fetched 877 kB in 1s (797 kB/s)
Reading package lists... Done
Building dependency tree... 50%
```



Welcome

Welcome to the famous five-minute WordPress installation process! Just fill in the information below and you'll be on your way to using the most extendable and powerful personal publishing platform in the world.

Information needed

Please provide the following information. Do not worry, you can always change these settings later.

Site Title

Username
Usernames can have only alphanumeric characters, spaces, underscores, hyphens, periods, and the @ symbol.

Password
Strong
Important: You will need this password to log in. Please store it in a secure location.

Your Email
Double-check your email address before continuing.

```
apes@4638instance-1:/tmp$ sudo mysql
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 31
Server version: 10.5.19-MariaDB-0+deb11u2 Debian 11

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> CREATE DATABASE gpwordpress;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'DATABASE gpwordpress' at line 1
MariaDB [(none)]> CREATE DATABASE gpwordpress;
Query OK, 1 row affected (0.000 sec)

MariaDB [(none)]> CREATE USER 'user2'@'%' IDENTIFIED BY 'password2';
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]> GRANT ALL ON gpwordpress.* TO 'user2'@'%';
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]> FLUSH PRIVILEGES;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'PRIVILEGES' at line 1
MariaDB [(none)]> FLUSH PRIVILEGES;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'PRIVILEGES' at line 1
MariaDB [(none)]> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]> EXIT
Bye
apes@4638instance-1:/tmp$ CLEAR
-Bash: CLEAR: command not found
apes@4638instance-1:/tmp$ clear
```



```
wordpress/wp-includes/assets/
wordpress/wp-includes/assets/script-loader-react-refresh-runtime.php
wordpress/wp-includes/assets/script-loader-packages.php
wordpress/wp-includes/assets/script-loader-packages.min.php
wordpress/wp-includes/assets/script-loader-react-refresh-runtime.min.php
wordpress/wp-includes/assets/script-loader-react-refresh-entry.php
wordpress/wp-includes/assets/script-loader-react-refresh-entry.min.php
wordpress/wp-includes/html-api/
wordpress/wp-includes/html-api/class-wp-html-text-replacement.php
wordpress/wp-includes/html-api/class-wp-html-tag-processor.php
wordpress/wp-includes/html-api/class-wp-html-span.php
wordpress/wp-includes/class-wp-query.php
wordpress/wp-includes/class-wp-block-type-registry.php
wordpress/wp-includes/class-wp-recovery-mode-email-service.php
wordpress/wp-includes/class-wp-recovery-mode-link-service.php
wordpress/wp-includes/class-wp-omdb-controller.php
wordpress/wp-includes/class-wp-block-supports.php
wordpress/wp-includes/PHPMailer/
wordpress/wp-includes/PHPMailer/PHPMailer.php
wordpress/wp-includes/PHPMailer/Exception.php
wordpress/wp-includes/PHPMailer/SMTP.php
wordpress/wp-includes/class-wp-recovery-mode.php
wordpress/wp-includes/class-wp-simplepie-sanitize-kses.php
wordpress/wp-includes/class-wp-date-query.php
wordpress/wp-includes/class-walker-comment.php
wordpress/wp-includes/nav-menu.php
wordpress/wp-includes/class-wp-paused-extensions-storage.php
wordpress/wp-includes/class-wp-dependencies.php
wordpress/wp-signup.php
wordpress/wp-links-cpm1.php
apex8463@instance-1:~/tmp$ ls
lsat -en AU tar.gz systemd-private-b284b116f8e451ca458272dc2b19b16-apache2.service-NIRQ6 systemd-private-b284b116f8e451ca458272dc2b19b16-haveged.service-0W37hg wordpress
ssh-PITAgR632 systemd-private-b284b116f8e451ca458272dc2b19b16-chrony.service-V716ag systemd-private-b284b116f8e451ca458272dc2b19b16-systemd-logind.service-A[2]j1
apex8463@instance-1:~/tmp$ sudo cp -a /tmp/wordpress/wp-config-sample.php
cp: missing destination file operand after '/tmp/wordpress/wp-config-sample.php'
Try 'cp --help' for more information.
apex8463@instance-1:~/tmp$ sudo cp -a /tmp/wordpress/wp-config-sample.php /tmp/wordpress/wp-config.php
apex8463@instance-1:~/tmp$ sudo mkdir /tmp/wordpress/wp-content/upgrade
apex8463@instance-1:~/tmp$ sudo cp -a /tmp/wordpress/. /var/www/wordpress
cp: warning: source directory '.' specified more than once
apex8463@instance-1:~/tmp$ sudo cp -a /tmp/wordpress/. /var/www/wordpress
apex8463@instance-1:~/tmp$
```

```
wordpress/wp-includes/ID3/module.audio.flac.php
wordpress/wp-includes/ID3/license.commercial.txt
wordpress/wp-includes/chems.json
wordpress/wp-includes/api-autoload-compat.php
wordpress/wp-includes/assets/
wordpress/wp-includes/assets/script-loader-react-refresh-runtime.php
wordpress/wp-includes/assets/script-loader-packages.php
wordpress/wp-includes/assets/script-loader-packages.min.php
wordpress/wp-includes/assets/script-loader-react-refresh-runtime.min.php
wordpress/wp-includes/assets/script-loader-react-refresh-entry.php
wordpress/wp-includes/assets/script-loader-react-refresh-entry.min.php
wordpress/wp-includes/html-api/
wordpress/wp-includes/html-api/class-wp-html-text-replacement.php
wordpress/wp-includes/html-api/class-wp-html-tag-processor.php
wordpress/wp-includes/html-api/class-wp-html-span.php
wordpress/wp-includes/class-wp-query.php
wordpress/wp-includes/class-wp-block-type-registry.php
wordpress/wp-includes/class-wp-recovery-mode-email-service.php
wordpress/wp-includes/class-wp-recovery-mode-link-service.php
wordpress/wp-includes/class-wp-locale-switcher.php
wordpress/wp-includes/class-wp-block-supports.php
wordpress/wp-includes/PHPMailer/
wordpress/wp-includes/PHPMailer/PHPMailer.php
wordpress/wp-includes/PHPMailer/Exception.php
wordpress/wp-includes/PHPMailer/SMTP.php
wordpress/wp-includes/class-wp-recovery-mode.php
wordpress/wp-includes/class-wp-simplepie-sanitize-kses.php
wordpress/wp-includes/class-wp-date-query.php
wordpress/wp-includes/class-walker-comment.php
wordpress/wp-includes/nav-menu.php
wordpress/wp-includes/class-wp-paused-extensions-storage.php
wordpress/wp-includes/class-wp-dependencies.php
wordpress/wp-signup.php
wordpress/wp-links-cpm1.php
apex8463@instance-1:~/tmp$ ls
lsat -en AU tar.gz systemd-private-b284b116f8e451ca458272dc2b19b16-apache2.service-NIRQ6 systemd-private-b284b116f8e451ca458272dc2b19b16-haveged.service-0W37hg wordpress
ssh-PITAgR632 systemd-private-b284b116f8e451ca458272dc2b19b16-chrony.service-V716ag systemd-private-b284b116f8e451ca458272dc2b19b16-systemd-logind.service-A[2]j1
apex8463@instance-1:~/tmp$ sudo cp -a /tmp/wordpress/wp-config-sample.php
cp: missing destination file operand after '/tmp/wordpress/wp-config-sample.php'
Try 'cp --help' for more information.
apex8463@instance-1:~/tmp$ sudo cp -a /tmp/wordpress/wp-config-sample.php /tmp/wordpress/wp-config.php
apex8463@instance-1:~/tmp$
```

```
wordpress/wp-includes/js/customize-base.js
wordpress/wp-includes/js/hoverIntent-1.js.min.js
wordpress/wp-includes/js/customize-loader.min.js
wordpress/wp-includes/js/wpdialog.min.js
wordpress/wp-includes/js/wp-link.min.js
wordpress/wp-includes/js/zxcvbn.min.js
wordpress/wp-includes/js/hoverIntent-1.js
wordpress/wp-includes/js/mce-view.js
wordpress/wp-includes/js/media-models.min.js
wordpress/wp-includes/js/quicktags.min.js
wordpress/wp-includes/js/customize-preview-widgets.min.js
wordpress/wp-includes/js/hoverIntent.min.js
wordpress/wp-includes/js/media-editor.min.js
wordpress/wp-includes/js/swfupload/
wordpress/wp-includes/js/swfupload/handlers.js
wordpress/wp-includes/js/swfupload/license.txt
wordpress/wp-includes/js/swfupload/swfupload.js
wordpress/wp-includes/js/swfupload/handlers.min.js
wordpress/wp-includes/js/backbone.js
wordpress/wp-includes/js/wp-emoji.js
wordpress/wp-includes/js/customize-preview-nav-menus.js
wordpress/wp-includes/js/wp-embed-template.min.js
wordpress/wp-includes/js/twemoji.min.js
wordpress/wp-includes/js/wp-embed.js
wordpress/wp-includes/js/wp-embed.min.js
wordpress/wp-includes/js/underscores.min.js
wordpress/wp-includes/js/wp-util.js
wordpress/wp-includes/js/wp-emoji-release.min.js
wordpress/wp-includes/js/shortcode.min.js
wordpress/wp-includes/js/wp-util.min.js
wordpress/wp-includes/js/customize-preview.js
wordpress/wp-includes/js/backbone.min.js
wordpress/wp-includes/js/api-request.js
wordpress/wp-includes/js/wp-emoji-loader.min.js
wordpress/wp-includes/js/wp-list-revisions.js
wordpress/wp-includes/js/imagesloaded.min.js
wordpress/wp-includes/js/wp-emoji-loader.js
wordpress/wp-includes/js/wp-backbone.min.js
wordpress/wp-includes/js/underscores.js
wordpress/wp-includes/js/wp-custom-header.js
wordpress/wp-includes/js/comment-reply.min.js
wordpress/wp-includes/js/shortcode.js
wordpress/wp-includes/js/media-audiovideo.js
wordpress/wp-includes/js/wp-backbone.js
```

```
ape84638instance-1:/var/www/html$ sudo mkdir /var/www/wordpress
ape84638instance-1:/var/www/html$ sudo chown -R $USER:$USER /var/www/wordpress
ape84638instance-1:~$ cd /etc/apache2/sites-available
ape84638instance-1:/etc/apache2/sites-available$ ls
000-default.conf default-ssl.conf wordpress.conf
ape84638instance-1:/etc/apache2/sites-available$ sudo nano wordpress.conf
ape84638instance-1:/etc/apache2/sites-available$ sudo nano 000-default.conf
ape84638instance-1:~$ cd /tmp/
ape84638instance-1:/tmp$ ls
sh-PIFAgzR63z          systemd-private-b284b116f8e451ca458272dc2b19b16-apache2.service-NIRq8e  systemd-private-b284b116f8e451ca458272dc2b19b16-havaged.service-OW37hq
systemd-private-b284b116f8e451ca458272dc2b19b16-apache2.service-NIRq8e  systemd-private-b284b116f8e451ca458272dc2b19b16-systemd-logind.service-Af2j1j
systemd-private-b284b116f8e451ca458272dc2b19b16-chromy.service-V716ag
ape84638instance-1:/tmp$ curl -O https://en-au.wordpress.org/latest-en_AU.tar.gz
% Total    % Received % Xferd    Average Speed   Time    Time     Time
           %         %         %              Upload    Total    Spent    Left   Speed
100 22.5M  100 22.5M    0     0  21.3M      0  0:00:01  0:00:01 --:--:-- 21.4M
ape84638instance-1:/tmp$ ls
latest-en_AU.tar.gz  systemd-private-b284b116f8e451ca458272dc2b19b16-apache2.service-NIRq8e  systemd-private-b284b116f8e451ca458272dc2b19b16-havaged.service-OW37hq
sh-PIFAgzR63z      systemd-private-b284b116f8e451ca458272dc2b19b16-chromy.service-V716ag  systemd-private-b284b116f8e451ca458272dc2b19b16-systemd-logind.service-Af2j1j
ape84638instance-1:/tmp$
```

```
sh-PIFAgzR63z          systemd-private-b284b116f8e451ca458272dc2b19b16-apache2.service-NIRq8e  systemd-private-b284b116f8e451ca458272dc2b19b16-havaged.service-OW37hq
systemd-private-b284b116f8e451ca458272dc2b19b16-apache2.service-NIRq8e  systemd-private-b284b116f8e451ca458272dc2b19b16-systemd-logind.service-Af2j1j
systemd-private-b284b116f8e451ca458272dc2b19b16-chromy.service-V716ag
ape84638instance-1:/tmp$ curl -O https://en-au.wordpress.org/latest-en_AU.tar.gz
% Total    % Received % Xferd    Average Speed   Time    Time     Time
           %         %         %              Upload    Total    Spent    Left   Speed
100 22.5M  100 22.5M    0     0  21.3M      0  0:00:01  0:00:01 --:--:-- 21.4M
ape84638instance-1:/tmp$ ls
latest-en_AU.tar.gz  systemd-private-b284b116f8e451ca458272dc2b19b16-apache2.service-NIRq8e  systemd-private-b284b116f8e451ca458272dc2b19b16-havaged.service-OW37hq
sh-PIFAgzR63z      systemd-private-b284b116f8e451ca458272dc2b19b16-chromy.service-V716ag  systemd-private-b284b116f8e451ca458272dc2b19b16-systemd-logind.service-Af2j1j
ape84638instance-1:/tmp$
```

```
SSH-in-browser
UPLOAD FILE
DOWNLOAD FILE

apes84638instance-1:/var/www/html$ sudo mkdir /var/www/wordpress
apes84638instance-1:/var/www/html$ sudo chown -R $USER:$USER /var/www/wordpress
apes84638instance-1:/var/www/html$ cd
apes84638instance-1:~$ cd /etc/apache2/sites-available
apes84638instance-1:/etc/apache2/sites-available$ ls
000-default.conf default-ssl.conf wordpress.conf
apes84638instance-1:/etc/apache2/sites-available$ sudo nano wordpress.conf
apes84638instance-1:/etc/apache2/sites-available$ sudo nano 000-default.conf
apes84638instance-1:/etc/apache2/sites-available$ cd
apes84638instance-1:~$ cd /tmp/
apes84638instance-1:/tmp$ ls
ssh-PITqzR632          systemd-private-b284b116f8e451ca458272dc2b19b16-haveged.service-0W37hq
systemd-private-b284b116f8e451ca458272dc2b19b16-apache2.service-NIRqbe  systemd-private-b284b116f8e451ca458272dc2b19b16-systemd-logind.service-AE2j1j
systemd-private-b284b116f8e451ca458272dc2b19b16-chromy.service-V716ag
apes84638instance-1:/tmp$ curl -O https://en-au.wordpress.org/latest-en_AU.tar.gz
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 load  upload  Total    Spent    Left   Speed
100 22.5M  100 22.5M    0     0  21.3M    0  0:00:01  0:00:01  ---:--: 21.4M
apes84638instance-1:/tmp$
```

```
SSH-in-browser
UPLOAD FILE
DOWNLOAD FILE

apes84638instance-1:/var/www/html$ sudo mkdir /var/www/wordpress
apes84638instance-1:/var/www/html$ sudo chown -R $USER:$USER /var/www/wordpress
apes84638instance-1:/var/www/html$ cd
apes84638instance-1:~$ cd /etc/apache2/sites-available
apes84638instance-1:/etc/apache2/sites-available$ ls
000-default.conf default-ssl.conf wordpress.conf
apes84638instance-1:/etc/apache2/sites-available$ sudo nano wordpress.conf
apes84638instance-1:/etc/apache2/sites-available$ sudo nano 000-default.conf
apes84638instance-1:/etc/apache2/sites-available$ cd
apes84638instance-1:~$
```

```
SSH-in-browser
UPLOAD FILE
DOWNLOAD FILE

ape84638instance-1:/var/www/html$ sudo mkdir /var/www/wordpress
ape84638instance-1:/var/www/html$ sudo chown -R $USER:$USER /var/www/wordpress
ape84638instance-1:/var/www/html$ cd
ape84638instance-1:~$ cd /etc/apache2/sites-available
ape84638instance-1:/etc/apache2/sites-available$ ls
000-default.conf default-ssl.conf wordpress.conf
ape84638instance-1:/etc/apache2/sites-available$ sudo nano wordpress.conf
ape84638instance-1:/etc/apache2/sites-available$ sudo nano 000-default.conf
ape84638instance-1:/etc/apache2/sites-available$
```

```
SSH-in-browser
UPLOAD FILE
DOWNLOAD FILE

ape84638instance-1:/var/www/html$ sudo mkdir /var/www/wordpress
ape84638instance-1:/var/www/html$ sudo chown -R $USER:$USER /var/www/wordpress
ape84638instance-1:/var/www/html$ cd
ape84638instance-1:~$ cd /etc/apache2/sites-available
ape84638instance-1:/etc/apache2/sites-available$
```

```
SSH-in-browser
UPLOAD FILE
DOWNLOAD FILE

Creating config file /etc/php/7.4/mods-available/opcode.ini with new version
Setting up php7.4-json (7.4.33-1+deb11u3) ...
Creating config file /etc/php/7.4/mods-available/json.ini with new version
Setting up php7.4-xml (7.4.33-1+deb11u3) ...
Creating config file /etc/php/7.4/mods-available/dom.ini with new version
Creating config file /etc/php/7.4/mods-available/simplexml.ini with new version
Creating config file /etc/php/7.4/mods-available/xml.ini with new version
Creating config file /etc/php/7.4/mods-available/xmlreader.ini with new version
Creating config file /etc/php/7.4/mods-available/xmlwriter.ini with new version
Creating config file /etc/php/7.4/mods-available/xsl.ini with new version
Setting up php7.4-cli (7.4.33-1+deb11u3) ...
update-alternatives using /usr/bin/php7.4 to provide /usr/bin/php (php) in auto mode
update-alternatives: using /usr/bin/php7.4 to provide /usr/bin/phar (phar) in auto mode
update-alternatives: using /usr/bin/phar.php7.4 to provide /usr/bin/phar (phar.php) in auto mode
Creating config file /etc/php/7.4/cli/php.ini with new version
Setting up libapache2-mod-php7.4 (7.4.33-1+deb11u3) ...
Creating config file /etc/php/7.4/apache2/php.ini with new version
Module mpm_event disabled.
Enabling module mpm_prefork.
apache2_switch_mpm switch to prefork
apache2_invoke: Enable module php7.4
Setting up php-xml (2:7.4+76) ...
Setting up php-pear (1:1.10.12+submodules+notgz+20210212-1) ...
Setting up php7.4 (7.4.33-1+deb11u3) ...
Setting up libapache2-mod-php (2:7.4+76) ...
Setting up php-db (1.10.0-1) ...
Setting up php (2:7.4+76) ...
Processing triggers for man-db (2.9.4-2) ...
Processing triggers for libc-bin (2.31-13+deb11u6) ...
Processing triggers for php7.4-cli (7.4.33-1+deb11u3) ...
Processing triggers for libapache2-mod-php7.4 (7.4.33-1+deb11u3) ...
apes@4638instance-1:~$
```

```
SSH-in-browser
UPLOAD FILE
DOWNLOAD FILE

MariaDB [(none)]> CREATE USER 'admin'@'%' IDENTIFIED WITH mariadb_native_password BY 'password123';
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'BY 'password123'' at line 1
MariaDB [(none)]> CREATE USER 'admin'@'%' IDENTIFIED WITH mariadb_native_password BY 'Admin@123';
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'BY 'Admin@123'' at line 1
MariaDB [(none)]> CREATE USER 'user1'@localhost IDENTIFIED BY 'password1';
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]> GRANT ALL ON gcpwordpress.* TO 'user1'@localhost;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near '' at line 1
MariaDB [(none)]> GRANT ALL ON gcpwordpress.* TO 'user1';
ERROR 1133 (28000): Can't find any matching row in the user table
MariaDB [(none)]> GRANT ALL ON gcpwordpress.* TO 'user1';
ERROR 1133 (28000): Can't find any matching row in the user table
MariaDB [(none)]> CREATE USER 'user2'@'%' IDENTIFIED BY 'password2';
Query OK, 0 rows affected (0.002 sec)

MariaDB [(none)]> GRANT ALL ON gcpwordpress.* TO 'user2'@'%' ;
Query OK, 0 rows affected (0.002 sec)

MariaDB [(none)]> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]> EXIT;
Bye
apes@4638instance-1:~$ sudo apt install php libapache2-mod-php php-sql
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package php-sql
apes@4638instance-1:~$ sudo apt install php libapache2-mod-php php-db
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libapache2-mod-php7.4 libsodium23 libxslt1.1 php-common php-pear php-xml php7.4 php7.4-cli
  php7.4-common php7.4-json php7.4-opcache php7.4-readline php7.4-xml
The following NEW packages will be installed:
  libapache2-mod-php libapache2-mod-php7.4 libsodium23 libxslt1.1 php php-common php-db
  php-pear php-xml php7.4 php7.4-cli php7.4-common php7.4-json php7.4-opcache
  php7.4-readline php7.4-xml
0 upgraded, 16 newly installed, 0 to remove and 0 not upgraded.
Need to get 5000 kB of archives.
After this operation, 22.1 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

```
SSH-in-browser
ape84638@instance-1:~$ sudo mariadb
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 36
Server version: 10.5.19-MariaDB-0+deb11u2 Debian 11

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> CREATE DATABASE gcp-wordpress;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'CEATE DATABASE gcp-wordpress' at line 1
MariaDB [(none)]> CREATE DATABASE gcpwordpress;
Query OK, 1 row affected (0.000 sec)

MariaDB [(none)]> CREATE USER 'admin'@'%' IDENTIFIED WITH mariadb_native_password BY 'password123';
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'BY 'password123'' at line 1
MariaDB [(none)]> CREATE USER 'admin'@'%' IDENTIFIED WITH mariadb_native_password BY 'Admin@123';
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'BY 'Admin@123'' at line 1
MariaDB [(none)]> CREATE USER 'user1'@localhost IDENTIFIED BY 'password1';
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]> GRANT ALL ON gcpwordpress;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near '' at line 1
MariaDB [(none)]> GRANT ALL ON gcpwordpress.* TO 'user1'@localhost;
ERROR 1133 (28000): Can't find any matching row in the user table
MariaDB [(none)]> GRANT ALL ON gcpwordpress.* TO 'user1';
ERROR 1133 (28000): Can't find any matching row in the user table
MariaDB [(none)]> CREATE USER 'user2'@'%' IDENTIFIED BY 'password2';
Query OK, 0 rows affected (0.002 sec)

MariaDB [(none)]> GRANT ALL ON gcpwordpress.* TO 'user2'@'%'
Query OK, 0 rows affected (0.002 sec)

MariaDB [(none)]> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]> EXIT;
Bye
ape84638@instance-1:~$
```

```
SSH-in-browser
ape84638@instance-1:~$ sudo mariadb
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 36
Server version: 10.5.19-MariaDB-0+deb11u2 Debian 11

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> CREATE DATABASE gcp-wordpress;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'CEATE DATABASE gcp-wordpress' at line 1
MariaDB [(none)]> CREATE DATABASE gcpwordpress;
Query OK, 1 row affected (0.000 sec)

MariaDB [(none)]> CREATE USER 'admin'@'%' IDENTIFIED WITH mariadb_native_password BY 'password123';
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'BY 'password123'' at line 1
MariaDB [(none)]> CREATE USER 'admin'@'%' IDENTIFIED WITH mariadb_native_password BY 'Admin@123';
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'BY 'Admin@123'' at line 1
MariaDB [(none)]> CREATE USER 'user1'@localhost IDENTIFIED BY 'password1';
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]> GRANT ALL ON gcpwordpress;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near '' at line 1
MariaDB [(none)]> GRANT ALL ON gcpwordpress.* TO 'user1'@localhost;
ERROR 1133 (28000): Can't find any matching row in the user table
MariaDB [(none)]> GRANT ALL ON gcpwordpress.* TO 'user1';
ERROR 1133 (28000): Can't find any matching row in the user table
MariaDB [(none)]> CREATE USER 'user2'@'%' IDENTIFIED BY 'password2';
Query OK, 0 rows affected (0.002 sec)

MariaDB [(none)]> GRANT ALL ON gcpwordpress.* TO 'user2'@'%'
Query OK, 0 rows affected (0.002 sec)

MariaDB [(none)]> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]>
```

```
https://ssh.cloud.google.com/v2/ssh/projects/electric-block-386611/zones/us-west4-b/instances/instance-1?authuser=0&hl=en_GB&projectNumber=474496709936&useAdminProxy=true - Google Chrome
ssh.cloud.google.com/v2/ssh/projects/electric-block-386611/zones/us-west4-b/instances/instance-1?authuser=0&hl=en_GB&projectNumber=474496709936&useAdminProxy=true
SSH-in-browser
UPLOAD FILE
DOWNLOAD FILE

ape@4638instance-1:~$ sudo mariadb
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 36
Server version: 10.5.19-MariaDB-0+deb11u2 Debian 11

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> CEATE DATABASE gcp-wordpress;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'CEATE DATABASE gcp-wordpress' at line 1
MariaDB [(none)]> CREATE DATABASE gcpwordpress;
Query OK, 1 row affected (0.000 sec)

MariaDB [(none)]> CREATE USER 'admin'@'%' IDENTIFIED WITH mariadb_native_password BY 'password123';
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'BY 'password123'' at line 1
MariaDB [(none)]> CREATE USER 'admin'@'%' IDENTIFIED WITH mariadb_native_password BY 'Admin@123';
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'BY 'Admin@123'' at line 1
MariaDB [(none)]> CREATE USER 'user1'@localhost IDENTIFIED BY 'password1';
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]> GRANT ALL ON gcpwordpress;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near '' at line 1
MariaDB [(none)]> GRANT ALL ON gcpwordpress.* TO 'user1'@localhost';
ERROR 1133 (28000): Can't find any matching row in the user table
MariaDB [(none)]> GRANT ALL ON gcpwordpress.* TO 'user1';
ERROR 1133 (28000): Can't find any matching row in the user table
MariaDB [(none)]> CREATE USER 'user2'@'%' IDENTIFIED BY 'password2';
Query OK, 0 rows affected (0.002 sec)

MariaDB [(none)]> GRANT ALL ON gcpwordpress.* TO 'user2'@'%' ;
Query OK, 0 rows affected (0.002 sec)

MariaDB [(none)]>
```

```
https://ssh.cloud.google.com/v2/ssh/projects/electric-block-386611/zones/us-west4-b/instances/instance-1?authuser=0&hl=en_GB&projectNumber=474496709936&useAdminProxy=true - Google Chrome
ssh.cloud.google.com/v2/ssh/projects/electric-block-386611/zones/us-west4-b/instances/instance-1?authuser=0&hl=en_GB&projectNumber=474496709936&useAdminProxy=true
SSH-in-browser
UPLOAD FILE
DOWNLOAD FILE

ape@4638instance-1:~$ sudo mariadb
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 36
Server version: 10.5.19-MariaDB-0+deb11u2 Debian 11

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> CEATE DATABASE gcp-wordpress;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'CEATE DATABASE gcp-wordpress' at li
ne 1
MariaDB [(none)]> CREATE DATABASE gcpwordpress;
Query OK, 1 row affected (0.000 sec)

MariaDB [(none)]> CREATE USER 'admin'@'%' IDENTIFIED WITH mariadb_native_password BY 'password123';
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'BY 'password123'' at line 1
MariaDB [(none)]> CREATE USER 'admin'@'%' IDENTIFIED WITH mariadb_native_password BY 'Admin@123';
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'BY 'Admin@123'' at line 1
MariaDB [(none)]> CREATE USER 'user1'@localhost IDENTIFIED BY 'password1';
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]>
```

```
SSH-in-browser
apex8463@instance-1:~$ sudo mariadb
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 36
Server version: 10.5.19-MariaDB-0+deb11u2 Debian 11

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> CREATE DATABASE gcp-wordpress;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'CREATE DATABASE gcp-wordpress' at line 1
MariaDB [(none)]> CREATE DATABASE gcpwordpress;
Query OK, 1 row affected (0.000 sec)

MariaDB [(none)]>
```

```
SSH-in-browser
apex8463@instance-1:/etc/apache2/sites-available$ cd /tmp
apex8463@instance-1:/tmp$ ls
latest-gh_AU.tar
ssh-PIPaqr8652
ssh-1y5yrk3iq4
systemd-private-b284b1116fba451ca458272dc2b19b16-apache2.service-Xb8bh1
systemd-private-b284b1116fba451ca458272dc2b19b16-chrony.service-V716ag
systemd-private-b284b1116fba451ca458272dc2b19b16-havaged.service-OW37hg
systemd-private-b284b1116fba451ca458272dc2b19b16-systemd-logind.service-Af21lj
wordpress
apex8463@instance-1:/tmp$ sudo -rm wordpress
sudo: wordpress: command not found
apex8463@instance-1:/tmp$ cd wordpress/
apex8463@instance-1:/tmp/wordpress$ cd content/
apex8463@instance-1:/tmp/wordpress/content$ cd upgrade/
apex8463@instance-1:/tmp/wordpress/content/upgrade$ cd ..
apex8463@instance-1:/tmp$ cd /tmp
apex8463@instance-1:/tmp$ cd wordpress/
apex8463@instance-1:/tmp/wordpress$ cd content/
apex8463@instance-1:/tmp/wordpress/content$ cd upgrade/
apex8463@instance-1:/tmp/wordpress/content/upgrade$ cd ..
apex8463@instance-1:/tmp/wordpress/content$ sudo -rm upgrade
sudo: upgrade: command not found
apex8463@instance-1:/tmp/wordpress/content$ sudo -rm /upgrade
sudo: /upgrade: command not found
apex8463@instance-1:/tmp/wordpress/content$ cd ..
apex8463@instance-1:/tmp/wordpress$ cd ..
apex8463@instance-1:/tmp$ sudo rm -r wordpress
apex8463@instance-1:/tmp$ ls
latest-gh_AU.tar
ssh-PIPaqr8652
ssh-1y5yrk3iq4
systemd-private-b284b1116fba451ca458272dc2b19b16-apache2.service-Xb8bh1
systemd-private-b284b1116fba451ca458272dc2b19b16-chrony.service-V716ag
systemd-private-b284b1116fba451ca458272dc2b19b16-havaged.service-OW37hg
systemd-private-b284b1116fba451ca458272dc2b19b16-systemd-logind.service-Af21lj
apex8463@instance-1:/tmp$
```

Release notes	In use by	None
	Reservations	Automatically choose

DISMISS ACTIVATE

LEARN Tutorial

VM Instances

- Connecting to instances
- Connecting to instances using advanced methods
- Transferring files to Linux VMs
- Managing SSH keys in metadata
- Assigning an external IP address to an existing instance

SSH-in-browser terminal window showing the installation of MariaDB and Apache2 on a Linux VM. The terminal output includes package list reading, dependency tree building, and the successful installation of MariaDB 10.5.19 and Apache2 2.4.18. The user then navigates to the MariaDB monitor and attempts to start the service, but encounters an error related to the 'sites-available' directory.

```
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
apes@463einstance-1:~$ sudo mariadb
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 33
Server version: 10.5.19-MariaDB-0+deb11u2 Debian 11

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\q' to clear the current input statement.

MariaDB [(none)]> Ctrl-C -- exit!
Aborted
apes@463einstance-1:~$ cd /etc/
apes@463einstance-1:~/etc$ cd apache2/
apes@463einstance-1:~/etc/apache2$ cd /sites-available
-bash: cd: /sites-available: No such file or directory
apes@463einstance-1:~/etc/apache2$ cd sites-available/
apes@463einstance-1:~/etc/apache2/sites-available$ ls
000-default.conf  default-ssl.conf  wordpress.conf
apes@463einstance-1:~/etc/apache2/sites-available$ sudo nano wordpress.conf
apes@463einstance-1:~/etc/apache2/sites-available$ cd tmp
-bash: cd: tmp: No such file or directory
apes@463einstance-1:~/etc/apache2/sites-available$ cd /tmp
apes@463einstance-1:~/tmp$ ls
latest_en_AU.tar
ssh-PfFagzR632
ssh-1p9pzk29q4
systemd-private-b284b1116fbd451ca458272dc2b19b16-apache2.service-Xbt4bhl
systemd-private-b284b1116fbd451ca458272dc2b19b16-chromy.service-V716ag
systemd-private-b284b1116fbd451ca458272dc2b19b16-havaged.service-OW37bq
systemd-private-b284b1116fbd451ca458272dc2b19b16-systemd-logind.service-AF211j
wordpress
apes@463einstance-1:~/tmp$
```

VM Instances sidebar menu with the following items:

- Connecting to instances (Tutorial)
- Connecting to instances using advanced methods (Help document)
- Transferring files to Linux VMs (Tutorial, 5 min)
- Managing SSH keys in metadata (Help document)
- Assigning an external IP address to an existing instance (Help document)

SSH-in-browser terminal window showing the configuration of the Apache2 virtual host file (wordpress.conf). The user is editing the file to specify the server name and other configuration details.

```
apes@463einstance-1:~/tmp$ nano wordpress.conf
<VirtualHost *:80>
# The ServerName directive sets the request scheme, hostname and port that
# the server uses to identify itself. This is used when creating
# redirection URLs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
#ServerName www.example.com

ServerAdmin webmaster@localhost
DocumentRoot /var/www/wordpress

# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

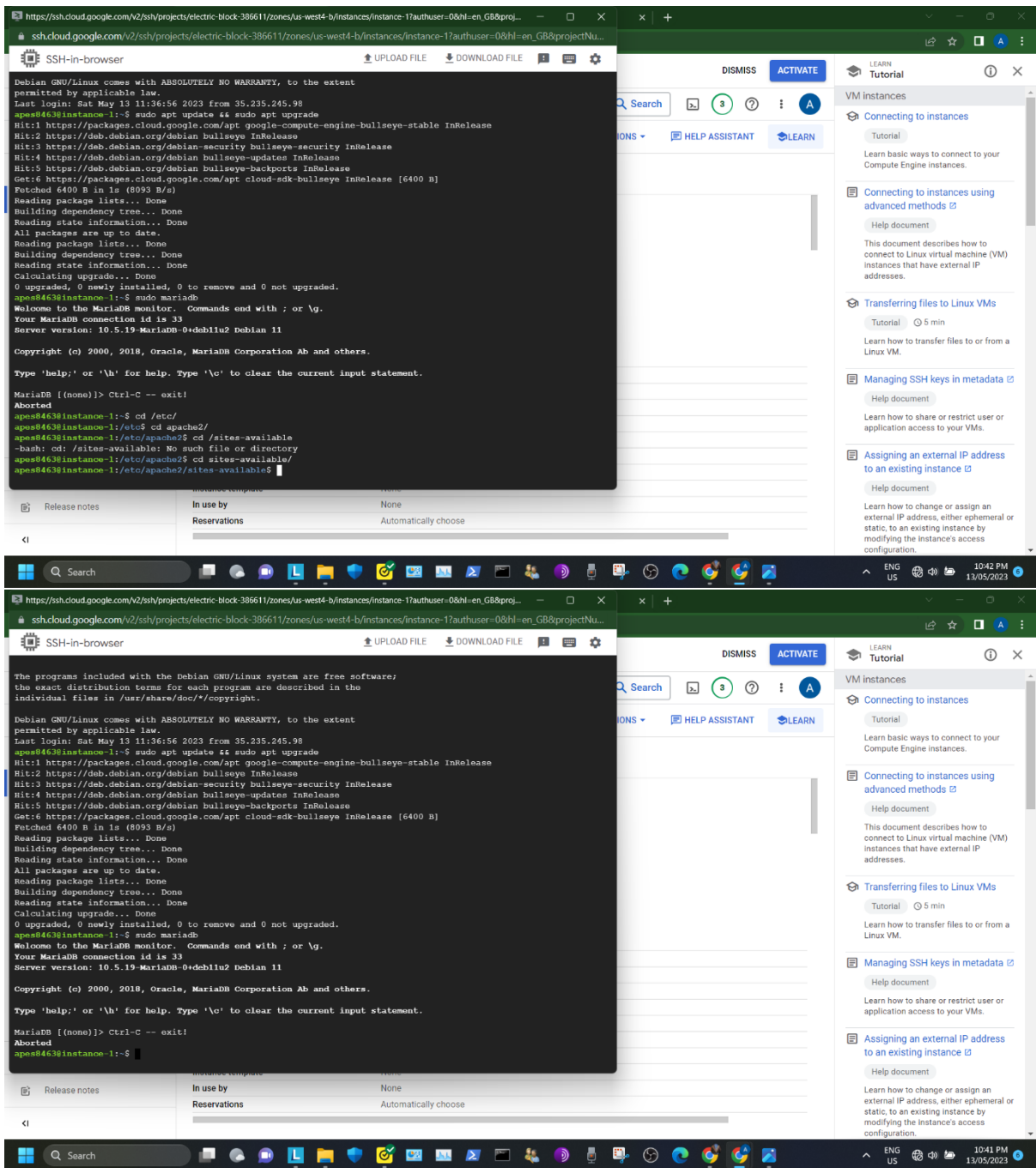
ErrorLog ${APACHE_LOG_DIR}/error.log
CustomLog ${APACHE_LOG_DIR}/access.log combined

# For most configuration files from conf-available/, which are
# enabled or disabled at a global level, it is possible to
# include a line for only one particular virtual host. For example the
# following line enables the CGI configuration for this host only
# after it has been globally disabled with "IncludeOptional".
#Include conf-available/serve-cgi-bin.conf
</VirtualHost>

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet
```

VM Instances sidebar menu with the following items:

- Connecting to instances (Tutorial)
- Connecting to instances using advanced methods (Help document)
- Transferring files to Linux VMs (Tutorial, 5 min)
- Managing SSH keys in metadata (Help document)
- Assigning an external IP address to an existing instance (Help document)



AWS procedure:

1. Go to the official page of Amazon Web Services, click get started for free and follow the steps until the AWS management console dashboard appears.
2. Click the services panel on the left to open the navigation bar and within the navigation bar, click compute and within the EC2 dashboard click launch instance. Modify the instance according to requirements and create a key pair name. Once the key pair name is created, it will download a pem file that will be use later. Enable SSH, HTTPS, and HTTP to enable access to the VM instance. Click launch instance if done.

3. After the instance has been launched, go to instances, and click the blue instance ID to view the instance summary.
4. Open a git bash cli, go to the directory where the pem file was placed, and protect the pem file from accidental overwriting.
 - Cd /mnt/c/users/acb/downloads
5. Confirm and list the files that are located within the downloads:
 - Ls
6. Accidental overwriting protection:
 - Chmod 400 pem_file
7. After the accidental overwriting protection, promptly communicate to the instance server by typing:
 - ssh -I pemfile ec2-user@ipv4
8. Change to the root directory of the visual machine. Within the root directory of visual machine, update and upgrade the packages and dependencies of the software:
 - Sudo su
 - Apt update && apt upgrade -y
9. Within the root directory of visual machine, install apache2:
 - Apt install apache2 -y
10. To enable the apache2 server, type:
Systemctl enable apache2.
11. Once the apache2 server is enabled, type:
 - Systemctl status apache2
12. Now, install mariadb database server and client side:
Apt install mariadb-server mariadb-client -y
After the installation of mariadb, start the database:
 - Systemctl start mariadb.
13. And to confirm that it is running:
Systemctl status mariadb
14. To improve the security of the mariadb database:
 - Sudo mysql_secure_installation
15. After the command above has been entered, the user will be prompted to choose to either use a password for root or no. Just simply press enter for no password and for the rest of the options excluding change the root password, remove anonymous users, disallow root login remotely, remove test database and access to it, and reload privileges table now.
16. A user must answer yes for change the root password, remove anonymous users, disallow root login remotely, remove test database and access to it, and reload privileges table now to make the configuration easy and secure.
17. After the questions has been answered, restart the mariadb database by typing:
 - Systemctl restart mariadb.

Installation of WordPress via AWS EC2 Visual Machine

1. While still inside of the visual machine root directory, install php and MySQL library package that will allow the wordpress to run smoothly:
 - Apt install php php-mysql php-gd php-cli php-common -y
2. After the library package has installed, install a command for enabling to unzip a wordpress download file.
 - Apt install wget unzip -y
3. Once done, download and install wordpress by copying the download link from the wordpress' official site and pasting the link after the wget command.
 - Wget https://en-au.wordpress.org/latest-en_AU.zip
4. List the files of recently installed wordpress and find the file.
 - ls
5. Once found, unzip the zip file, and list the files to confirm that it is successfully decompressed.
6. Go back to the instance page, copy the public ipv4 address and paste the ipv4 address in a new tab to confirm that the installation of wordpress via AWS EC2 visual machine is successful.
7. AWS public IPv4 address for WordPress: <http://54.206.89.240>

My Billing Account - Overview | Download | WordPress.org Engl | Dashboard | EC2 Management | Your AWS Account is Ready - G

ap-southeast-2.console.aws.amazon.com/ec2/home?region=ap-southeast-2#Home

Services Search [Alt+S]

New EC2 Experience
Tell us what you think

EC2 Dashboard
EC2 Global View
Events
Limits
▼ Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations
▼ Images
AMIs
AMI Catalog
▼ Elastic Block Store
Volumes
Snapshots

Resources
EC2 Global view

You are using the following Amazon EC2 resources in the Asia Pacific (Sydney) Region:

Instances (running)	0	Auto Scaling Groups	0	Dedicated Hosts	0
Elastic IPs	0	Instances	0	Key pairs	0
Load balancers	0	Placement groups	0	Security groups	1
Snapshots	0	Volumes	0		

Easily size, configure, and deploy Microsoft SQL Server Always On availability groups on AWS using the AWS Launch Wizard for SQL Server. [Learn more](#)

Launch instance
To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.
[Launch instance](#)
[Migrate a server](#)

Service health
[AWS Health Dashboard](#)
Region: Asia Pacific (Sydney)
Status: ✔ This service is operating normally

Account attributes
Supported platforms
• VPC
Default VPC
vpc-08f1ea401e70b6f13
Settings
EBS encryption
Zones
EC2 Serial Console
Default credit specification
Console experiments

Explore AWS
Get Up to 40% Better Price Performance
T4g instances deliver the best price performance for burstable general purpose workloads in Amazon EC2. [Learn more](#)
10 Things You Can Do Today to Reduce AWS Costs
Explore how to effectively manage your AWS costs

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1:07 AM 14/05/2023


portal.aws.amazon.com/billing/signup?refid=ha_aws-sm-evergreen-1st-visit&redirect_url=https%3A%2F%2Faws.amazon.com%2Fregistration-confirmation#/start/password

English

aws

Sign up for AWS

Explore Free Tier products with a new AWS account.
To learn more, visit aws.amazon.com/free.



Create your password

✔ It's you! Your email address has been successfully verified.

Your password provides you with sign in access to AWS, so it's important we get it right.

Root user password

Confirm root user password

[Continue \(step 1 of 5\)](#)

OR

[Sign in to an existing AWS account](#)

12:50 AM 14/05/2023

The image shows a browser window with the AWS website. The top navigation bar includes links for Products, Solutions, Pricing, Documentation, Learn, Partner Network, AWS Marketplace, Customer Enablement, Events, and Explore More. A prominent "Start Building on AWS Today" headline is followed by a sub-headline: "Whether you're looking for compute power, database storage, content delivery, or other functionality, AWS has the services to help you build sophisticated applications with increased flexibility, scalability and reliability." Below this is a "Get Started for Free" button.

Two main sections are visible: "For Builders" (for developers) and "For Decision Makers" (for organization leaders). The "For Builders" section includes "Launch Your First Application" and "Learn, Build & Get Connected". The "For Decision Makers" section includes "Optimize Business Value" and "Reinvent with Data".

The bottom portion of the image shows the AWS Management Console. The "Instance type" section is selected, showing details for the "t2.micro" instance type, including pricing and "Free tier eligible" status. The "Key pair (login)" section has "awswordpress" selected. The "Network settings" section shows "vpc-08f1ea401e70b6f13" and "No preference" for the subnet. The "Summary" section on the right shows "Number of instances: 1", "Software Image (AMI): Canonical, Ubuntu, 22.04 LTS", "Virtual server type (instance type): t2.micro", and "Storage (volumes): 1 volume(s) - 8 GiB". A "Free tier" badge indicates that the first year includes 750 hours. The "Launch instance" button is highlighted in orange.

At the bottom, a CloudShell terminal window is open with the prompt "awswordpress.pem". The footer of the console shows "© 2023, Amazon Web Services, Inc. or its affiliates." and the time "1:39 AM 14/05/2023".

My Billing Account - Overview | Download | WordPress.org Engl | Instance details | EC2 Manag... | Your AWS Account is Ready - G... | +

ap-southeast-2.console.aws.amazon.com/ec2/home?region=ap-southeast-2#InstanceDetails:instanceId=i-0ae2d5fc511fb720f

Services Search [Alt+S]

New EC2 Experience Tell us what you think

EC2 Dashboard
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Events
Limits

Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations

Images
AMIs
AMI Catalog

Elastic Block Store

EC2 > Instances > i-0ae2d5fc511fb720f

Instance summary for i-0ae2d5fc511fb720f (awswordpress) Updated less than a minute ago

Instance ID i-0ae2d5fc511fb720f (awswordpress) 3.25.226.100 | open address

IPv6 address -

Hostname type IP name: ip-172-31-3-156.ap-southeast-2.compute.internal

Answer private resource DNS name IPv4 (A) ip-172-31-3-156.ap-southeast-2.compute.internal

Auto-assigned IP address 3.25.226.100 [Public IP]

IAM Role -

IMDSv2 Optional

Private IP address 3.25.226.100 | open address

Instance state **Running**

Private IP DNS name (IPv4 only) ip-172-31-3-156.ap-southeast-2.compute.internal

Instance type t2.micro

VPC ID vpc-08f1ea401e70b6f13

Subnet ID subnet-087da2b366a745968

Private IPv4 addresses 172.31.3.156

Public IPv4 DNS ec2-3-25-226-100.ap-southeast-2.compute.amazonaws.com | open address

Elastic IP addresses -

AWS Compute Optimizer finding [Opt-in to AWS Compute Optimizer for recommendations.](#) | Learn more

Auto Scaling Group name -

Connect Instance state Actions

Public IPv4 address copied

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awswordpress.pem Show all

My Billing Account - Overview | Download | WordPress.org Engl | Launch an instance | EC2 Manag... | Your AWS Account is Ready - G... | +

ap-southeast-2.console.aws.amazon.com/ec2/home?region=ap-southeast-2#LaunchInstances

Services Search [Alt+S]

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

▼ Configure storage Info Advanced

1x 20 GIB gp2 Root volume (Not encrypted)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage

Add new volume

The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance

0 x File systems Edit

▶ Advanced details Info

▼ Summary

Number of instances Info 1

Software Image (AMI) Canonical, Ubuntu, 22.04 LTS, ...read more ami-05f998515cca9bfe3

Virtual server type (instance type) t2.micro

Firewall (security group) New security group

Storage (volumes) 1 volume(s) - 8 GIB

Free tier: In your first year includes 750

Cancel Launch instance Review commands

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awswordpress.pem Show all

My Billing Account - Overview | Download | WordPress.org Engl | Launch an instance | EC2 Manag... | Your AWS Account is Ready - G... | +

ap-southeast-2.console.aws.amazon.com/ec2/home?region=ap-southeast-2#LaunchInstances

Services Search [Alt+S]

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

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0 x File systems Edit

▶ Advanced details Info

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Number of instances Info 1

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Virtual server type (instance type) t2.micro

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Free tier: In your first year includes 750

Cancel Launch instance Review commands

My Billing Account - Overview | Download | WordPress.org Engl... | Launch an instance | EC2 Manag... | Your AWS Account is Ready - Gr... | +

ap-southeast-2.console.aws.amazon.com/ec2/home?region=ap-southeast-2#LaunchInstances:

Services Search [Alt+S]

vpc-08f1ea401e70b6f13

Subnet Info
No preference (Default subnet in any availability zone)

Auto-assign public IP Info
Enable

Firewall (security groups) Info
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group Select existing security group

We'll create a new security group called 'launch-wizard-1' with the following rules:

- Allow SSH traffic from
Helps you connect to your instance. Anywhere (0.0.0.0/0)
- Allow HTTPS traffic from the internet
To set up an endpoint, for example when creating a web server.
- Allow HTTP traffic from the internet
To set up an endpoint, for example when creating a web server.

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Summary

Number of instances Info
1

Software Image (AMI)
Canonical, Ubuntu, 22.04 LTS, ...read more
ami-05f998315cca9bfe3

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 8 GiB

Free tier: In your first year includes 750

Cancel **Launch instance**
[Review commands](#)


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awordpress.pem Show all

WordPress Setup Configuration: x +

Not secure | 54.206.89.240/wp-admin/setup-config.php?step=2

Gmail YouTube Maps News Translate Touch Input for Mo... Touch Input for Mo... Google Play Consol... Google AdMob 1.1: Your first Andro... developer.android.c... Android Studio for...



All right, sunshine! You've made it through this part of the installation. WordPress can now communicate with your database. If you are ready, time now to...

[Run the installation](#)

ENG US 1:09 AM 14/05/2023

ENG US 4:34 AM 14/05/2023

```
root@ip-172-31-3-198:~# drop database awwordpress;
root@ip-172-31-3-198:~# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 37
Server version: 10.6.12-MariaDB-0ubuntu0.22.04.1 Ubuntu 22.04

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> drop database awwordpress;
ERROR 1008 (HY000): Can't drop database 'awwordpress': database doesn't exist
MariaDB [(none)]> drop database awwordpress;
Query OK, 0 rows affected (0.008 sec)

MariaDB [(none)]> drop user "aws_wordpress3" identified by "password1213";
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'identified by "password1213"' at line 1
MariaDB [(none)]> drop user "aws_wordpress3" identified by "password123";
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'identified by "password123"' at line 1
MariaDB [(none)]> DROP USER "aws_wordpress3" IDENTIFIED BY "password123";
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'IDENTIFIED BY "password123"' at line 1
MariaDB [(none)]> DROP USER "aws_wordpress3";
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]> create database awwordpress;
Query OK, 1 row affected (0.000 sec)


MariaDB [(none)]> create user "awsuser" identified by "password123";
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]> grant all privilege on awwordpress.* to "awsuser";
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'privilege on awwordpress.* to "awsuser"' at line 1
MariaDB [(none)]> grant all privileges on awwordpress.* to "awsuser";
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]>
```

WordPress Setup Configuration

Not secure | 54.206.89.240/wp-admin/setup-config.php



Welcome to WordPress. Before getting started, you will need to know the following items.

1. Database name
2. Database username
3. Database password
4. Database host
5. Table prefix (if you want to run more than one WordPress in a single database)

This information is being used to create a wp-config.php file. **If for any reason this automatic file creation does not work, do not worry. All this does is fill in the database information to a configuration file. You may also simply open wp-config-sample.php in a text editor, fill in your information, and save it as wp-config.php.** Need more help? [Read the support article on wp-config.php.](#)

In all likelihood, these items were supplied to you by your web host. If you do not have this information, then you will need to contact them before you can continue. If you are ready...

```
root@ip-172-31-3-198: /var/www/html
root@ip-172-31-3-198:~# pwd
/root
root@ip-172-31-3-198:~# cp -r wordpress/* /var/www/html/
root@ip-172-31-3-198:~# cd /var/www/html# ls -l
bash: cd: too many arguments
root@ip-172-31-3-198:~# cd /var/www/html/
root@ip-172-31-3-198:/var/www/html# ls -l
total 240
-rw-r--r-- 1 root root 10671 May 13 17:36 index.html
-rw-r--r-- 1 root root 405 May 13 18:10 index.php
-rw-r--r-- 1 root root 19915 May 13 18:10 license.txt
-rw-r--r-- 1 root root 7402 May 13 18:10 readme.html
-rw-r--r-- 1 root root 7205 May 13 18:10 wp-activate.php
dwxr-xr-x 9 root root 4096 May 13 18:10 wp-admin
-rw-r--r-- 1 root root 351 May 13 18:10 wp-blog-header.php
-rw-r--r-- 1 root root 2338 May 13 18:10 wp-comments-post.php
-rw-r--r-- 1 root root 3013 May 13 18:10 wp-config-sample.php
dwxr-xr-x 5 root root 4096 May 13 18:10 wp-content
-rw-r--r-- 1 root root 5536 May 13 18:10 wp-cron.php
dwxr-xr-x 28 root root 12288 May 13 18:10 wp-includes
-rw-r--r-- 1 root root 2502 May 13 18:10 wp-links-opml.php
-rw-r--r-- 1 root root 3792 May 13 18:10 wp-load.php
-rw-r--r-- 1 root root 49330 May 13 18:10 wp-login.php
-rw-r--r-- 1 root root 8541 May 13 18:10 wp-mail.php
-rw-r--r-- 1 root root 24993 May 13 18:10 wp-settings.php
-rw-r--r-- 1 root root 34350 May 13 18:10 wp-signup.php
-rw-r--r-- 1 root root 4889 May 13 18:10 wp-trackback.php
-rw-r--r-- 1 root root 3238 May 13 18:10 xmlrpc.php
root@ip-172-31-3-198:/var/www/html# chown www-data:www-data -R /var/www/html/
root@ip-172-31-3-198:/var/www/html# ls -l
total 240
-rw-r--r-- 1 www-data www-data 10671 May 13 17:36 index.html
-rw-r--r-- 1 www-data www-data 405 May 13 18:10 index.php
-rw-r--r-- 1 www-data www-data 19915 May 13 18:10 license.txt
-rw-r--r-- 1 www-data www-data 7402 May 13 18:10 readme.html
-rw-r--r-- 1 www-data www-data 7205 May 13 18:10 wp-activate.php
dwxr-xr-x 9 www-data www-data 4096 May 13 18:10 wp-admin
-rw-r--r-- 1 www-data www-data 351 May 13 18:10 wp-blog-header.php
-rw-r--r-- 1 www-data www-data 2338 May 13 18:10 wp-comments-post.php
-rw-r--r-- 1 www-data www-data 3013 May 13 18:10 wp-config-sample.php
dwxr-xr-x 5 www-data www-data 4096 May 13 18:10 wp-content
dwxr-xr-x 28 www-data www-data 12288 May 13 18:10 wp-includes
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-rw-r--r-- 1 www-data www-data 3792 May 13 18:10 wp-load.php
-rw-r--r-- 1 www-data www-data 49330 May 13 18:10 wp-login.php
-rw-r--r-- 1 www-data www-data 8541 May 13 18:10 wp-mail.php
-rw-r--r-- 1 www-data www-data 24993 May 13 18:10 wp-settings.php
-rw-r--r-- 1 www-data www-data 34350 May 13 18:10 wp-signup.php
-rw-r--r-- 1 www-data www-data 4889 May 13 18:10 wp-trackback.php
-rw-r--r-- 1 www-data www-data 3238 May 13 18:10 xmlrpc.php
root@ip-172-31-3-198:/var/www/html#
```

```
root@ip-172-31-3-198: /var/www/html
root@ip-172-31-3-198:~# pwd
/root
root@ip-172-31-3-198:~# cp -r wordpress/* /var/www/html/
root@ip-172-31-3-198:~# cd /var/www/html# ls -l
bash: cd: too many arguments
root@ip-172-31-3-198:~# cd /var/www/html/
root@ip-172-31-3-198:/var/www/html# ls -l
total 240
-rw-r--r-- 1 root root 10671 May 13 17:36 index.html
-rw-r--r-- 1 root root 405 May 13 18:10 index.php
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-rw-r--r-- 1 root root 3013 May 13 18:10 wp-config-sample.php
dwxr-xr-x 5 root root 4096 May 13 18:10 wp-content
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-rw-r--r-- 1 root root 4889 May 13 18:10 wp-trackback.php
-rw-r--r-- 1 root root 3238 May 13 18:10 xmlrpc.php
root@ip-172-31-3-198:/var/www/html#
```



```
root@ip-172-31-3-198:~# apt install php php-mysql php-gd php-cli php-common -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
php is already the newest version (2:8.1+92ubuntu1).
php-cli is already the newest version (2:8.1+92ubuntu1).
php-common is already the newest version (2:8.1+92ubuntu1).
php-gd is already the newest version (2:8.1+92ubuntu1).
php-mysql is already the newest version (2:8.1+92ubuntu1).
The following packages were automatically installed and are no longer required:
  libevent-pthreads-2.1-7 libmecab2 libprotobuf-lite23 mecab-ipadic mecab-ipadic-utf8 mecab-utlils
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 49 not upgraded.
root@ip-172-31-3-198:~# apt install wget unzip -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
wget is already the newest version (1.21.2-2ubuntu1).
unzip is already the newest version (6.0-26ubuntu1.1).
The following packages were automatically installed and are no longer required:
  libevent-pthreads-2.1-7 libmecab2 libprotobuf-lite23 mecab-ipadic mecab-ipadic-utf8 mecab-utlils
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 49 not upgraded.
root@ip-172-31-3-198:~# wget https://en-au.wordpress.org/latest-en_AU.zip
--2023-05-13 18:03:10-- https://en-au.wordpress.org/latest-en_AU.zip
Resolving en-au.wordpress.org (en-au.wordpress.org)... 198.143.164.252
Connecting to en-au.wordpress.org (en-au.wordpress.org)|198.143.164.252|:443... connected.
HTTP request sent, awaiting response... 200 OK
length: 25144202 (24M) [application/zip]
Saving to: 'latest-en_AU.zip'

latest-en_AU.zip           50%[=====] 12.03M  4.25MB/s
```

```
root@ip-172-31-3-198:~# apt install php php-mysql php-gd php-cli php-common -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
php is already the newest version (2:8.1+92ubuntu1).
php-cli is already the newest version (2:8.1+92ubuntu1).
php-common is already the newest version (2:8.1+92ubuntu1).
php-gd is already the newest version (2:8.1+92ubuntu1).
php-mysql is already the newest version (2:8.1+92ubuntu1).
The following packages were automatically installed and are no longer required:
  libevent-pthreads-2.1-7 libmecab2 libprotobuf-lite23 mecab-ipadic mecab-ipadic-utf8 mecab-utlils
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 49 not upgraded.
root@ip-172-31-3-198:~# apt install wget unzip -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
wget is already the newest version (1.21.2-2ubuntu1).
unzip is already the newest version (6.0-26ubuntu1.1).
The following packages were automatically installed and are no longer required:
  libevent-pthreads-2.1-7 libmecab2 libprotobuf-lite23 mecab-ipadic mecab-ipadic-utf8 mecab-utlils
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 49 not upgraded.
root@ip-172-31-3-198:~#
```

```
root@ip-172-31-3-198: /home/ubuntu/wordpress
creating: wordpress/wp-includes/ID3/
inflating: wordpress/wp-includes/ID3/module.audio-video.asf.php
inflating: wordpress/wp-includes/ID3/module.audio.mpeg3.php
inflating: wordpress/wp-includes/ID3/readme.txt
inflating: wordpress/wp-includes/ID3/module.audio-video.riff.php
inflating: wordpress/wp-includes/ID3/module.audio.dts.php
inflating: wordpress/wp-includes/ID3/getid3.lib.php
inflating: wordpress/wp-includes/ID3/module.tag.lyrics3.php
inflating: wordpress/wp-includes/ID3/module.tag.id3v1.php
inflating: wordpress/wp-includes/ID3/module.tag.id3v2.php
inflating: wordpress/wp-includes/ID3/module.audio.ac3.php
inflating: wordpress/wp-includes/ID3/module.audio-video.quicktime.php
inflating: wordpress/wp-includes/ID3/license.txt
inflating: wordpress/wp-includes/ID3/module.tag.apetag.php
inflating: wordpress/wp-includes/ID3/getid3.php
inflating: wordpress/wp-includes/ID3/module.audio.ogg.php
inflating: wordpress/wp-includes/ID3/module.audio-video.matroska.php
inflating: wordpress/wp-includes/ID3/module.audio-video.flv.php
inflating: wordpress/wp-includes/ID3/module.audio.flac.php
inflating: wordpress/wp-includes/ID3/license.commercial.txt
inflating: wordpress/wp-includes/theme.json
inflating: wordpress/wp-includes/sp1-autoload-compat.php
creating: wordpress/wp-includes/assets/
inflating: wordpress/wp-includes/assets/script-loader-react-refresh-runtime.php
inflating: wordpress/wp-includes/assets/script-loader-packages.php
inflating: wordpress/wp-includes/assets/script-loader-packages.min.php
inflating: wordpress/wp-includes/assets/script-loader-react-refresh-runtime.min.php
inflating: wordpress/wp-includes/assets/script-loader-react-refresh-entry.php
inflating: wordpress/wp-includes/assets/script-loader-react-refresh-entry.min.php
creating: wordpress/wp-includes/html-api/
inflating: wordpress/wp-includes/html-api/class-wp-html-text-replacement.php
inflating: wordpress/wp-includes/html-api/class-wp-html-tag-processor.php
inflating: wordpress/wp-includes/html-api/class-wp-html-span.php
inflating: wordpress/wp-includes/html-api/class-wp-html-attribute-token.php
inflating: wordpress/wp-includes/class-wp-query.php
inflating: wordpress/wp-includes/class-wp-block-type-registry.php
inflating: wordpress/wp-includes/class-wp-recovery-mode-email-service.php
inflating: wordpress/wp-includes/class-wp-local-switcher.php
inflating: wordpress/wp-includes/class-wp-recovery-mode-link-service.php
inflating: wordpress/wp-includes/class-wp-embed-controller.php
inflating: wordpress/wp-includes/class-wp-block-supports.php
creating: wordpress/wp-includes/PHPMailer/
inflating: wordpress/wp-includes/PHPMailer/PHPMailer.php
inflating: wordpress/wp-includes/PHPMailer/Exception.php
inflating: wordpress/wp-includes/PHPMailer/SMTPEmbed.php
inflating: wordpress/wp-includes/class-wp-recovery-mode.php
inflating: wordpress/wp-includes/class-wp-simplify-sanitize-kses.php
inflating: wordpress/wp-includes/class-wp-date-query.php
inflating: wordpress/wp-includes/class-walker-comment.php
inflating: wordpress/wp-includes/nav-menu.php
inflating: wordpress/wp-includes/class-wp-paused-extensions-storage.php
inflating: wordpress/wp-includes/class.wp-dependencies.php
inflating: wordpress/wp-sitemap.php
inflating: wordpress/wp-links-sql.php
root@ip-172-31-3-198: /home/ubuntu# ls
latest-ai.zip  wordpress
root@ip-172-31-3-198: /home/ubuntu# cd wordpress/
root@ip-172-31-3-198: /home/ubuntu/wordpress#
```

```
root@ip-172-31-3-198: /home/ubuntu
inflating: wordpress/wp-includes/ms-site.php
creating: wordpress/wp-includes/ID3/
inflating: wordpress/wp-includes/ID3/module.audio-video.asf.php
inflating: wordpress/wp-includes/ID3/module.audio.mpeg3.php
inflating: wordpress/wp-includes/ID3/readme.txt
inflating: wordpress/wp-includes/ID3/module.audio-video.riff.php
inflating: wordpress/wp-includes/ID3/module.audio.dts.php
inflating: wordpress/wp-includes/ID3/getid3.lib.php
inflating: wordpress/wp-includes/ID3/module.tag.lyrics3.php
inflating: wordpress/wp-includes/ID3/module.tag.id3v1.php
inflating: wordpress/wp-includes/ID3/module.tag.id3v2.php
inflating: wordpress/wp-includes/ID3/module.audio.ac3.php
inflating: wordpress/wp-includes/ID3/module.audio-video.quicktime.php
inflating: wordpress/wp-includes/ID3/license.txt
inflating: wordpress/wp-includes/ID3/module.tag.apetag.php
inflating: wordpress/wp-includes/ID3/getid3.php
inflating: wordpress/wp-includes/ID3/module.audio.ogg.php
inflating: wordpress/wp-includes/ID3/module.audio-video.matroska.php
inflating: wordpress/wp-includes/ID3/module.audio-video.flv.php
inflating: wordpress/wp-includes/ID3/module.audio.flac.php
inflating: wordpress/wp-includes/ID3/license.commercial.txt
inflating: wordpress/wp-includes/theme.json
inflating: wordpress/wp-includes/sp1-autoload-compat.php
creating: wordpress/wp-includes/assets/
inflating: wordpress/wp-includes/assets/script-loader-react-refresh-runtime.php
inflating: wordpress/wp-includes/assets/script-loader-packages.php
inflating: wordpress/wp-includes/assets/script-loader-packages.min.php
inflating: wordpress/wp-includes/assets/script-loader-react-refresh-runtime.min.php
inflating: wordpress/wp-includes/assets/script-loader-react-refresh-entry.php
inflating: wordpress/wp-includes/assets/script-loader-react-refresh-entry.min.php
creating: wordpress/wp-includes/html-api/
inflating: wordpress/wp-includes/html-api/class-wp-html-text-replacement.php
inflating: wordpress/wp-includes/html-api/class-wp-html-tag-processor.php
inflating: wordpress/wp-includes/html-api/class-wp-html-span.php
inflating: wordpress/wp-includes/html-api/class-wp-html-attribute-token.php
inflating: wordpress/wp-includes/class-wp-query.php
inflating: wordpress/wp-includes/class-wp-block-type-registry.php
inflating: wordpress/wp-includes/class-wp-recovery-mode-email-service.php
inflating: wordpress/wp-includes/class-wp-local-switcher.php
inflating: wordpress/wp-includes/class-wp-recovery-mode-link-service.php
inflating: wordpress/wp-includes/class-wp-embed-controller.php
inflating: wordpress/wp-includes/class-wp-block-supports.php
creating: wordpress/wp-includes/PHPMailer/
inflating: wordpress/wp-includes/PHPMailer/PHPMailer.php
inflating: wordpress/wp-includes/PHPMailer/Exception.php
inflating: wordpress/wp-includes/PHPMailer/SMTPEmbed.php
inflating: wordpress/wp-includes/class-wp-recovery-mode.php
inflating: wordpress/wp-includes/class-wp-simplify-sanitize-kses.php
inflating: wordpress/wp-includes/class-wp-date-query.php
inflating: wordpress/wp-includes/class-walker-comment.php
inflating: wordpress/wp-includes/nav-menu.php
inflating: wordpress/wp-includes/class-wp-paused-extensions-storage.php
inflating: wordpress/wp-includes/class.wp-dependencies.php
inflating: wordpress/wp-sitemap.php
inflating: wordpress/wp-links-sql.php
root@ip-172-31-3-198: /home/ubuntu# ls
latest-ai.zip  wordpress
root@ip-172-31-3-198: /home/ubuntu#
```

```
root@ip-172-31-3-198: /home/ubuntu
inflating: wordpress/wp-includes/class-wp-customize-nav-menus.php
inflating: wordpress/wp-includes/feed-rdf.php
inflating: wordpress/wp-includes/ms-site.php
creating: wordpress/wp-includes/ID3/
inflating: wordpress/wp-includes/ID3/module_audio-video.asf.php
inflating: wordpress/wp-includes/ID3/module_audio-video.riff.php
inflating: wordpress/wp-includes/ID3/module_audio-dts.php
inflating: wordpress/wp-includes/ID3/getid3.lib.php
inflating: wordpress/wp-includes/licenses.txt
extracting: wordpress/wp-includes/images/crystal/document.png
extracting: wordpress/wp-includes/images/crystal/code.png
extracting: wordpress/wp-includes/images/crystal/interactive.png
inflating: wordpress/wp-includes/images/spinner.gif
inflating: wordpress/wp-includes/images/tool-e-arrow.png
extracting: wordpress/wp-includes/images/w-logo-blue-white-bg.png
inflating: wordpress/wp-includes/images/down_arrow.gif
inflating: wordpress/wp-includes/images/arrow-pointer-blue-2x.png
inflating: wordpress/wp-includes/images/wpicons-2x.png
inflating: wordpress/wp-includes/images/wpicons.png
extracting: wordpress/wp-includes/images/rss-2x.png
creating: wordpress/wp-includes/images/wlw/
extracting: wordpress/wp-includes/images/wlw/wp-icon.png
extracting: wordpress/wp-includes/images/wlw/wp-comments.png
extracting: wordpress/wp-includes/images/rss.png
inflating: wordpress/wp-includes/images/spinner-2x.gif
inflating: wordpress/wp-includes/images/blank.gif
extracting: wordpress/wp-includes/images/icon-pointer-flag.png
inflating: wordpress/wp-includes/images/down_arrow-2x.gif
inflating: wordpress/wp-includes/images/w-logo-blue.png
extracting: wordpress/wp-includes/images/icon-pointer-flag-2x.png
extracting: wordpress/wp-includes/images/exit.gif
inflating: wordpress/wp-includes/images/wspin-2x.gif
extracting: wordpress/wp-includes/images/wp-loader-icons.png
inflating: wordpress/wp-includes/default-constants.php
inflating: wordpress/wp-includes/ms-load.php
inflating: wordpress/wp-includes/class-wp-editor.php
inflating: wordpress/wp-includes/class-wp-styles.php
creating: wordpress/wp-includes/theme-compat/
inflating: wordpress/wp-includes/theme-compat/sidebar.php
inflating: wordpress/wp-includes/theme-compat/header-embed.php
inflating: wordpress/wp-includes/theme-compat/embed.php
inflating: wordpress/wp-includes/theme-compat/embed-404.php
inflating: wordpress/wp-includes/theme-compat/footer-embed.php
inflating: wordpress/wp-includes/theme-compat/header.php
inflating: wordpress/wp-includes/theme-compat/footer.php
inflating: wordpress/wp-includes/theme-compat/embed-content.php
inflating: wordpress/wp-includes/theme-compat/comments.php
inflating: wordpress/wp-includes/class-wp-block-type.php
inflating: wordpress/wp-includes/class-wp-comment-query.php
inflating: wordpress/wp-includes/feed-rss.php
inflating: wordpress/wp-includes/ms-functions.php
inflating: wordpress/wp-includes/class-wp-theme-json-data.php
inflating: wordpress/wp-includes/class-wp-user-query.php
```

```
root@ip-172-31-3-198: /home/ubuntu
root@ip-172-31-3-198: /home/ubuntu# apt install wget unzip -y
Building dependency tree... Done
Reading package lists... Done
Building state information... Done
E: Unable to locate package unzip.
root@ip-172-31-3-198: /home/ubuntu# apt install wget unzip -y
Building dependency tree... Done
Reading package lists... Done
Building state information... Done
wget is already the newest version (1.21.2-2ubuntu1).
unzip is already the newest version (6.0-26ubuntu3.1).
The following packages were automatically installed and are no longer required:
  libevent-pthreads-2.1-7 libmecab2 libprotobuf-lite23 mecab-ipadic mecab-ipadic-utf8 mecab-utils
Use 'sudo apt autoremove' to remove them.
Suggested packages:
  zip
The following NEW packages will be installed:
  unzip
0 upgraded, 1 newly installed, 0 to remove and 49 not upgraded.
Need to get 174 kB of archives.
After this operation, 385 kB of additional disk space will be used.
Get:1 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 unzip amd64 6.0-26ubuntu3.1 [174 kB]
Fetched 174 kB in 0s (11.6 MB/s)
Selecting previously unselected package unzip.
(Reading database ... 6749 files and directories currently installed.)
Preparing to unpack .../unzip_6.0-26ubuntu3.1_...
Unpacking unzip (6.0-26ubuntu3.1) ...
Setting up unzip (6.0-26ubuntu3.1) ...
Processing triggers for mailcap (3.70+nmu1ubuntu1) ...
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-198: /home/ubuntu# wget https://en-au.wordpress.org/latest-en_AU.zip
--2023-05-13 17:55:25-- https://en-au.wordpress.org/latest-en_AU.zip
Resolving en-au.wordpress.org (en-au.wordpress.org)... 198.143.164.252
Connecting to en-au.wordpress.org (en-au.wordpress.org)|198.143.164.252|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 25144302 (24M) [application/zip]
Saving to: 'latest-en_AU.zip'

latest-en_AU.zip           100%[=====] 23.98M  7.37MB/s   in 4.5s

2023-05-13 17:55:30 (5.37 MB/s) - 'latest-en_AU.zip' saved [25144302/25144302]

root@ip-172-31-3-198: /home/ubuntu# ls
latest-en_AU.zip
root@ip-172-31-3-198: /home/ubuntu# unzip latest-en_AU.zip
```



```
root@ip-172-31-3-198: /home/ubuntu
no containers need to be restarted.
no user sessions are running outdated binaries.
No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-198:/home/ubuntu# apt install wget unzip. -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package wget.
E: Couldn't find any package by glob 'wget.'
root@ip-172-31-3-198:/home/ubuntu# apt install wget unzip -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
wget is already the newest version (1.21.2-2ubuntu1).
wget set to manually installed.
The following packages were automatically installed and are no longer required:
libevent-pthreads-2.1-7 libmecab2 libprotobuf-lite23 mecab-ipadic mecab-ipadic-utf8 mecab-util5
Use 'sudo apt autoremove' to remove them.
Suggested packages:
unzip
The following NEW packages will be installed:
unzip
0 upgraded, 1 newly installed, 0 to remove and 49 not upgraded.
need to get 174 kB of archives.
After this operation, 385 kB of additional disk space will be used.
Get:1 http://ap-southeast-2-ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 unzip amd64 6.0-26ubuntu3.1 [174 kB]
Fetched 174 kB in 0s (11.6 MB/s)
Selecting previously unselected package unzip.
(Reading database ... 65749 files and directories currently installed.)
Preparing to unpack .../unzip_6.0-26ubuntu3.1_amd64.deb ...
Unpacking unzip (6.0-26ubuntu3.1) ...
Setting up unzip (6.0-26ubuntu3.1) ...
Processing triggers for mailcap (2.70-nmmlubuntu1) ...
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning linux images...
Running kernel seems to be up-to-date.
no services need to be restarted.
no containers need to be restarted.
no user sessions are running outdated binaries.
No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-198:/home/ubuntu# wget https://en-au.wordpress.org/latest-en_AU.zip
--2023-05-13 17:55:25-- https://en-au.wordpress.org/latest-en_AU.zip
Resolving en-au.wordpress.org (en-au.wordpress.org)... 198.143.164.252
Connecting to en-au.wordpress.org (en-au.wordpress.org)|198.143.164.252|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 25144302 (24M) [application/zip]
Saving to: 'latest-en_AU.zip'

latest-en_AU.zip           15%[=====]          3.71M  2.02MB/s

root@ip-172-31-3-198:/home/ubuntu
apache2 invoke: Enable module php8.1
Setting up libfontconfig:amd64 (2.13.1-4.2ubuntu5) ...
Setting up php8.1 (8.1.2-1ubuntu2.11) ...
Setting up libgd3:amd64 (2.3.0-2ubuntu2) ...
Setting up php (2:8.1+2ubuntu1) ...
Setting up php8.1-gd (8.1.2-1ubuntu2.11) ...
Creating config file /etc/php/8.1/mods-available/gd.ini with new version
Setting up php-gd (2:8.1+2ubuntu1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libcb-bin (2.35-0ubuntu3.1) ...
Processing triggers for php8.1-cgi (8.1.2-1ubuntu2.11) ...
Processing triggers for libapache2-mod-php8.1 (8.1.2-1ubuntu2.11) ...
Scanning processes...
Scanning linux images...
Running kernel seems to be up-to-date.
no services need to be restarted.
no containers need to be restarted.
no user sessions are running outdated binaries.
No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-198:/home/ubuntu# apt install wget unzip. -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package wget.
E: Couldn't find any package by glob 'wget.'
root@ip-172-31-3-198:/home/ubuntu# apt install wget unzip -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
wget is already the newest version (1.21.2-2ubuntu1).
wget set to manually installed.
The following packages were automatically installed and are no longer required:
libevent-pthreads-2.1-7 libmecab2 libprotobuf-lite23 mecab-ipadic mecab-ipadic-utf8 mecab-util5
Use 'sudo apt autoremove' to remove them.
Suggested packages:
unzip
The following NEW packages will be installed:
unzip
0 upgraded, 1 newly installed, 0 to remove and 49 not upgraded.
need to get 174 kB of archives.
After this operation, 385 kB of additional disk space will be used.
Get:1 http://ap-southeast-2-ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 unzip amd64 6.0-26ubuntu3.1 [174 kB]
Fetched 174 kB in 0s (11.6 MB/s)
Selecting previously unselected package unzip.
(Reading database ... 65749 files and directories currently installed.)
Preparing to unpack .../unzip_6.0-26ubuntu3.1_amd64.deb ...
Unpacking unzip (6.0-26ubuntu3.1) ...
Setting up unzip (6.0-26ubuntu3.1) ...
Processing triggers for mailcap (2.70-nmmlubuntu1) ...
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning linux images...
Running kernel seems to be up-to-date.
no services need to be restarted.
no containers need to be restarted.
no user sessions are running outdated binaries.
No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-198:/home/ubuntu#
```

```
root@ip-172-31-3-198: /home/ubuntu
Creating config file /etc/php/8.1/mods-available/mysqli.ini with new version
Creating config file /etc/php/8.1/mods-available/pdo_mysql.ini with new version
Setting up fonts-dejavu-core (2.37-2build1) ...
Setting up libjpeg-turbo8:amd64 (2.1.2-0ubuntu1) ...
Setting up libwebp:amd64 (1.2.2-2) ...
Setting up php8.1-readline (8.1.2-1ubuntu2.11) ...
Creating config file /etc/php/8.1/mods-available/readline.ini with new version
Setting up php8.1-opcache (8.1.2-1ubuntu2.11) ...
Creating config file /etc/php/8.1/mods-available/opcache.ini with new version
Setting up libjpeg8:amd64 (8c-2ubuntu10) ...
Setting up php-mysql (2:8.1-92ubuntu1) ...
Setting up fontconfig-config (2.13.1-4.2ubuntu5) ...
Setting up php8.1-cli (8.1.2-1ubuntu2.11) ...
update-alternatives: using /usr/bin/php8.1 to provide /usr/bin/php (php) in auto mode
update-alternatives: using /usr/bin/php8.1 to provide /usr/bin/phar (phar) in auto mode
update-alternatives: using /usr/bin/phar.phar8.1 to provide /usr/bin/phar.phar (phar.phar) in auto mode
Creating config file /etc/php/8.1/cli/php.ini with new version
Setting up php-cli (2:8.1-92ubuntu1) ...
update-alternatives: using /usr/bin/php.default to provide /usr/bin/php (php) in auto mode
update-alternatives: using /usr/bin/phar.default to provide /usr/bin/phar (phar) in auto mode
update-alternatives: using /usr/bin/phar.phar.default to provide /usr/bin/phar.phar (phar.phar) in auto mode
Setting up libtiff5:amd64 (4.3.0-0ubuntu2.4) ...
Setting up libapache2-mod-php8.1 (8.1.2-1ubuntu2.11) ...
Creating config file /etc/php/8.1/apache2/php.ini with new version
Module mpm_event disabled.
Enabling module mpm_prefork.
apache2_switch_www switch to prefork
apache2_invoke: Enable module php8.1
Setting up libfontconfig1:amd64 (2.13.1-4.2ubuntu5) ...
Setting up php8.1 (8.1.2-1ubuntu2.11) ...
Setting up libgd3:amd64 (2.3.0-2ubuntu2) ...
Setting up php (2:8.1-92ubuntu1) ...
Setting up php8.1-gd (8.1.2-1ubuntu2.11) ...
Creating config file /etc/php/8.1/mods-available/gd.ini with new version
Setting up php-gd (2:8.1-92ubuntu1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Processing triggers for php8.1-cli (8.1.2-1ubuntu2.11) ...
Processing triggers for libapache2-mod-php8.1 (8.1.2-1ubuntu2.11) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-198: /home/ubuntu# apt install wget unzip. -y
```

```
root@ip-172-31-3-198: /home/ubuntu
Get:10 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libfontconfig1:amd64 2.13.1-4.2ubuntu5 [131 kB]
Get:11 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libjpeg-turbo8:amd64 2.1.2-0ubuntu1 [134 kB]
Get:12 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libjpeg8:amd64 8c-2ubuntu10 [2264 B]
Get:13 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libwebp:amd64 2:1.2-3-1ubuntu0.22.04.1 [29.2 kB]
Get:14 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libwebp7:amd64 1.2.2-2 [206 kB]
Get:15 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libtiff5:amd64 4.3.0-0ubuntu2.4 [183 kB]
Get:16 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libspng:amd64 1:3.3-2-1ubuntu0.22.04.1 [36.4 kB]
Get:17 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libgd3:amd64 2.3.0-2ubuntu2 [129 kB]
Get:18 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 php8.1-all 8.1.2-1ubuntu2.11 [9150 B]
Get:19 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 php-all 2:8.1-92ubuntu1 [2736 B]
Get:20 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 php-cli-all 2:8.1-92ubuntu1 [3234 B]
Get:21 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 php8.1-gd:amd64 8.1.2-1ubuntu2.11 [32.6 kB]
Get:22 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 php-gd-all 2:8.1-92ubuntu1 [1828 B]
Get:23 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 php8.1-mysql:amd64 8.1.2-1ubuntu2.11 [130 kB]
Get:24 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 php-mysql-all 2:8.1-92ubuntu1 [1834 B]
etched 7250 kB in 4s (9411 kB/s)
Selecting previously unselected package fonts-dejavu-core.
(Reading database ... 65429 files and directories currently installed.)
Preparing to unpack .../00-fonts-dejavu-core_2.37-2build1_all.deb ...
Unpacking fonts-dejavu-core (2.37-2build1) ...
Selecting previously unselected package fontconfig-config.
Preparing to unpack .../01-fontconfig-config_2.13.1-4.2ubuntu5_all.deb ...
Unpacking fontconfig-config (2.13.1-4.2ubuntu5) ...
Selecting previously unselected package php-common.
Preparing to unpack .../02-php-common_2:8.1-92ubuntu1_all.deb ...
Unpacking php-common (2:8.1-92ubuntu1) ...
Selecting previously unselected package php8.1-common.
Preparing to unpack .../03-php8.1-common_8.1.2-1ubuntu2.11_amd64.deb ...
Unpacking php8.1-common (8.1.2-1ubuntu2.11) ...
Selecting previously unselected package php8.1-opcache.
Preparing to unpack .../04-php8.1-opcache_8.1.2-1ubuntu2.11_amd64.deb ...
Unpacking php8.1-opcache (8.1.2-1ubuntu2.11) ...
Selecting previously unselected package php8.1-readline.
Preparing to unpack .../05-php8.1-readline_8.1.2-1ubuntu2.11_amd64.deb ...
Unpacking php8.1-readline (8.1.2-1ubuntu2.11) ...
Selecting previously unselected package php8.1-readline.
Preparing to unpack .../06-php8.1-readline_8.1.2-1ubuntu2.11_amd64.deb ...
Unpacking php8.1-readline (8.1.2-1ubuntu2.11) ...
Selecting previously unselected package php8.1-cli.
Preparing to unpack .../07-php8.1-cli_8.1.2-1ubuntu2.11_amd64.deb ...
Unpacking php8.1-cli (8.1.2-1ubuntu2.11) ...
Selecting previously unselected package libapache2-mod-php8.1.
Preparing to unpack .../08-libapache2-mod-php8.1_8.1.2-1ubuntu2.11_amd64.deb ...
Unpacking libapache2-mod-php8.1 (8.1.2-1ubuntu2.11) ...
Selecting previously unselected package libdeflate0:amd64.
Preparing to unpack .../09-libdeflate0_1.10-2_amd64.deb ...
Unpacking libdeflate0:amd64 (1.10-2) ...
Selecting previously unselected package libfontconfig1:amd64.
Preparing to unpack .../10-libfontconfig1_2.13.1-4.2ubuntu5_amd64.deb ...
Unpacking libfontconfig1:amd64 (2.13.1-4.2ubuntu5) ...
Selecting previously unselected package libjpeg-turbo8:amd64.
Preparing to unpack .../11-libjpeg-turbo8_2.1.2-0ubuntu1_amd64.deb ...
Unpacking libjpeg-turbo8:amd64 (2.1.2-0ubuntu1) ...
Selecting previously unselected package libjpeg8:amd64.
Preparing to unpack .../12-libjpeg8_8c-2ubuntu10_amd64.deb ...
Unpacking libjpeg8:amd64 (8c-2ubuntu10) ...
Selecting previously unselected package libwebp:amd64.
Preparing to unpack .../13-libwebp_1:2.1.2-3-1ubuntu0.22.04.1_amd64.deb ...
Unpacking libwebp:amd64 (1:2.1.2-3-1ubuntu0.22.04.1) ...
Selecting previously unselected package libtiff5:amd64.
Preparing to unpack .../14-libtiff5_4.3.0-0ubuntu2.4_amd64.deb ...
Unpacking libtiff5:amd64 (4.3.0-0ubuntu2.4) ...
Selecting previously unselected package libspng:amd64.
Preparing to unpack .../15-libspng_1:3.3-2-1ubuntu0.22.04.1_amd64.deb ...
Unpacking libspng:amd64 (1:3.3-2-1ubuntu0.22.04.1) ...
Selecting previously unselected package libgd3:amd64.
Preparing to unpack .../16-libgd3_2.3.0-2ubuntu2_amd64.deb ...
Unpacking libgd3:amd64 (2.3.0-2ubuntu2) ...
Selecting previously unselected package php8.1-gd.
Preparing to unpack .../17-php8.1-gd_8.1.2-1ubuntu2.11_amd64.deb ...
Unpacking php8.1-gd (8.1.2-1ubuntu2.11) ...
Selecting previously unselected package php-gd.
Preparing to unpack .../18-php-gd_2:8.1-92ubuntu1_all.deb ...
Unpacking php-gd (2:8.1-92ubuntu1) ...
Selecting previously unselected package php8.1-mysql.
Preparing to unpack .../19-php8.1-mysql_8.1.2-1ubuntu2.11_amd64.deb ...
Unpacking php8.1-mysql (8.1.2-1ubuntu2.11) ...
Selecting previously unselected package php-mysql.
Preparing to unpack .../20-php-mysql_2:8.1-92ubuntu1_all.deb ...
Unpacking php-mysql (2:8.1-92ubuntu1) ...
Setting up fonts-dejavu-core (2.37-2build1) ...
Setting up fontconfig-config (2.13.1-4.2ubuntu5) ...
Setting up php-common (2:8.1-92ubuntu1) ...
Setting up php8.1-common (8.1.2-1ubuntu2.11) ...
Setting up libjpeg-turbo8:amd64 (2.1.2-0ubuntu1) ...
Setting up libjpeg8:amd64 (8c-2ubuntu10) ...
Setting up libwebp:amd64 (1:2.1.2-3-1ubuntu0.22.04.1) ...
Setting up libtiff5:amd64 (4.3.0-0ubuntu2.4) ...
Setting up libspng:amd64 (1:3.3-2-1ubuntu0.22.04.1) ...
Setting up libgd3:amd64 (2.3.0-2ubuntu2) ...
Setting up php8.1-gd (8.1.2-1ubuntu2.11) ...
Setting up php-gd (2:8.1-92ubuntu1) ...
Setting up php8.1-mysql (8.1.2-1ubuntu2.11) ...
Setting up php-mysql (2:8.1-92ubuntu1) ...
Setting up php8.1-cli (8.1.2-1ubuntu2.11) ...
Setting up php-cli (2:8.1-92ubuntu1) ...
Setting up libapache2-mod-php8.1 (8.1.2-1ubuntu2.11) ...
Setting up php8.1 (8.1.2-1ubuntu2.11) ...
Setting up php (2:8.1-92ubuntu1) ...
```

```
root@ip-172-31-3-198: /home/ubuntu
You already have your root account protected, so you can safely answer 'n'.
Switch to unix_socket authentication [Y/n]
Enabled successfully!
Reloading privilege tables..
... Success!

You already have your root account protected, so you can safely answer 'n'.
Change the root password? [Y/n] y
New password:
Re-enter new password:
Password updated successfully!
Reloading privilege tables..
... Success!

By default, a MariaDB installation has an anonymous user, allowing anyone
to log into MariaDB without having to have a user account created for
them. This is intended only for testing, and to make the installation
go a bit smoother. You should remove them before moving into a
production environment.

Remove anonymous users? [Y/n] y
... Success!

Normally, root should only be allowed to connect from 'localhost'. This
ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n] y
... Success!

By default, MariaDB comes with a database named 'test' that anyone can
access. This is also intended only for testing, and should be removed
before moving into a production environment.

Remove test database and access to it? [Y/n] y
- Dropping test database...
... Success!
- Removing privileges on test database...
... Success!

Reloading the privilege tables will ensure that all changes made so far
will take effect immediately.

Reload privilege tables now? [Y/n] y
... Success!

Cleaning up...

All done! If you've completed all of the above steps, your MariaDB
installation should now be secure.

Thanks for using MariaDB!
root@ip-172-31-3-198:/home/ubuntu# systemctl restart mariadb
root@ip-172-31-3-198:/home/ubuntu# apt install php php-mysql php-gd php-cli php-common -y

root@ip-172-31-3-198: /home/ubuntu
You already have your root account protected, so you can safely answer 'n'.
Switch to unix_socket authentication [Y/n]
Enabled successfully!
Reloading privilege tables..
... Success!

You already have your root account protected, so you can safely answer 'n'.
Change the root password? [Y/n] y
New password:
Re-enter new password:
Password updated successfully!
Reloading privilege tables..
... Success!

By default, a MariaDB installation has an anonymous user, allowing anyone
to log into MariaDB without having to have a user account created for
them. This is intended only for testing, and to make the installation
go a bit smoother. You should remove them before moving into a
production environment.

Remove anonymous users? [Y/n] y
... Success!

Normally, root should only be allowed to connect from 'localhost'. This
ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n] y
... Success!

By default, MariaDB comes with a database named 'test' that anyone can
access. This is also intended only for testing, and should be removed
before moving into a production environment.

Remove test database and access to it? [Y/n] y
- Dropping test database...
... Success!
- Removing privileges on test database...
... Success!

Reloading the privilege tables will ensure that all changes made so far
will take effect immediately.

Reload privilege tables now? [Y/n] y
... Success!

Cleaning up...

All done! If you've completed all of the above steps, your MariaDB
installation should now be secure.

Thanks for using MariaDB!
root@ip-172-31-3-198:/home/ubuntu# systemctl restart mariadb
root@ip-172-31-3-198:/home/ubuntu#
```

```
root@ip-172-31-3-198: /home/ubuntu
In order to log into MariaDB to secure it, we'll need the current
password for the root user. If you've just installed MariaDB, and
haven't set the root password yet, you should just press enter here.

Enter current password for root (enter for none):
OK, successfully used password, moving on...

Setting the root password or using the unix_socket ensures that nobody
can log into the MariaDB root user without the proper authorisation.

You already have your root account protected, so you can safely answer 'n'.

Switch to unix_socket authentication [Y/n]
Enabled successfully!
Reloading privilege tables..
... Success!

You already have your root account protected, so you can safely answer 'n'.

Change the root password? [Y/n] y
New password:
Re-enter new password:
Password updated successfully!
Reloading privilege tables..
... Success!

By default, a MariaDB installation has an anonymous user, allowing anyone
to log into MariaDB without having to have a user account created for
them. This is intended only for testing, and to make the installation
go a bit smoother. You should remove them before moving into a
production environment.

Remove anonymous users? [Y/n] y
... Success!

Normally, root should only be allowed to connect from 'localhost'. This
ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n] y
... Success!

By default, MariaDB comes with a database named 'test' that anyone can
access. This is also intended only for testing, and should be removed
before moving into a production environment.

Remove test database and access to it? [Y/n] y
- Dropping test database...
... Success!
- Removing privileges on test database...
... Success!

Reloading the privilege tables will ensure that all changes made so far
will take effect immediately.

Reload privilege tables now? [Y/n]

Cleaning up...

All done! If you've completed all of the above steps, your MariaDB
installation should now be secure.

Thanks for using MariaDB!
root@ip-172-31-3-198: /home/ubuntu#
root@ip-172-31-3-198: /home/ubuntu# mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB
SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!

In order to log into MariaDB to secure it, we'll need the current
password for the root user. If you've just installed MariaDB, and
haven't set the root password yet, you should just press enter here.

Enter current password for root (enter for none):
OK, successfully used password, moving on...

Setting the root password or using the unix_socket ensures that nobody
can log into the MariaDB root user without the proper authorisation.

You already have your root account protected, so you can safely answer 'n'.

Switch to unix_socket authentication [Y/n]
Enabled successfully!
Reloading privilege tables..
... Success!

You already have your root account protected, so you can safely answer 'n'.

Change the root password? [Y/n] y
New password:
Re-enter new password:
Password updated successfully!
Reloading privilege tables..
... Success!

By default, a MariaDB installation has an anonymous user, allowing anyone
to log into MariaDB without having to have a user account created for
them. This is intended only for testing, and to make the installation
go a bit smoother. You should remove them before moving into a
production environment.

Remove anonymous users? [Y/n] y
```

```
root@ip-172-31-3-198: /home/ubuntu
You already have your root account protected, so you can safely answer 'n'.
Switch to unix_socket authentication [Y/n] n
... skipping.
You already have your root account protected, so you can safely answer 'n'.
Change the root password? [Y/n] n
... skipping.
By default, a MariaDB installation has an anonymous user, allowing anyone
to log into MariaDB without having to have a user account created for
them. This is intended only for testing, and to make the installation
go a bit smoother. You should remove them before moving into a
production environment.
Remove anonymous users? [Y/n] n
... skipping.
Normally, root should only be allowed to connect from 'localhost'. This
ensures that someone cannot guess at the root password from the network.
Disallow root login remotely? [Y/n]
... Success!
By default, MariaDB comes with a database named 'test' that anyone can
access. This is also intended only for testing, and should be removed
before moving into a production environment.
Remove test database and access to it? [Y/n]
- Dropping test database...
... Success!
- Removing privileges on test database...
... Success!
Reloading the privilege tables will ensure that all changes made so far
will take effect immediately.
Reload privilege tables now? [Y/n]
... Success!
Cleaning up...
All done! If you've completed all of the above steps, your MariaDB
installation should now be secure.
Thanks for using MariaDB!
root@ip-172-31-3-198: /home/ubuntu#
root@ip-172-31-3-198: /home/ubuntu# mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB
SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!

In order to log into MariaDB to secure it, we'll need the current
password for the root user. If you've just installed MariaDB, and
haven't set the root password yet, you should just press enter here.
Enter current password for root (enter for none):

root@ip-172-31-3-198: /home/ubuntu
Process: 4272 ExecStartPre/bin/sh -c [ ! -e /usr/bin/galera_recovery ] && VAR= [ VAR= cd /usr/bin/.; /usr/bin/galera_recovery ; [ $? -eq 0 ] && systemctl set-environment _WSREP_START_POSITION=$VAR
Process: 4313 ExecStartPost/bin/sh -c systemctl unset-environment _WSREP_START_POSITION (code=exited, status=0/SUCCESS)
Process: 4315 ExecStartPost/etc/mysql/debian-start (code=exited, status=0/SUCCESS)
Main PID: 4300 (mariadbd)
Status: "Taking your SQL requests now..."
Tasks: 14 (limit: 1141)
Memory: 61.2M
CPU: 327ms
CGroup: /system.slice/mariadb.service
└─1300 /usr/sbin/mariadbd

May 13 17:45:56 ip-172-31-3-198 mariadbd[4300]: Version: '10.6.12-MariaDB-0ubuntu0.22.04.1' socket: '/run/mysqld/mysqld.sock' port: 3306 ubuntu 22.04
May 13 17:45:56 ip-172-31-3-198 systemd[1]: Started MariaDB 10.6.12 database server.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4317]: Upgrading MySQL tables if necessary.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: Looking for 'mariadb' as: /usr/bin/mariadb
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: Looking for 'mariadb-check' as: /usr/bin/mariadb-check
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: This installation of MariaDB is already upgraded to 10.6.12-MariaDB.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: There is no need to run mysql_upgrade again for 10.6.12-MariaDB.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: You can use --force if you still want to run mysql_upgrade
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4328]: Checking for insecure root accounts.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4332]: Triggering mysam-recover for all MyISAM tables and aria-recover for all Aria tables
https://mariadb.com

root@ip-172-31-3-198: /home/ubuntu# exit
exit
ubuntu@ip-172-31-3-198:~$ sudo su
root@ip-172-31-3-198: /home/ubuntu# mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB
SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!

In order to log into MariaDB to secure it, we'll need the current
password for the root user. If you've just installed MariaDB, and
haven't set the root password yet, you should just press enter here.
Enter current password for root (enter for none):
OK, successfully used password, moving on...

Setting the root password or using the unix_socket ensures that nobody
can log into the MariaDB root user without the proper authorisation.

You already have your root account protected, so you can safely answer 'n'.
Switch to unix_socket authentication [Y/n] n
... skipping.
You already have your root account protected, so you can safely answer 'n'.
Change the root password? [Y/n] n
... skipping.
By default, a MariaDB installation has an anonymous user, allowing anyone
to log into MariaDB without having to have a user account created for
them. This is intended only for testing, and to make the installation
go a bit smoother. You should remove them before moving into a
production environment.
Remove anonymous users? [Y/n] n
```

```
root@ip-172-31-3-198: /home/ubuntu
No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-198: /home/ubuntu# systemctl start mariadb
root@ip-172-31-3-198: /home/ubuntu# systemctl status mariadb
● mariadb.service - MariaDB 10.6.12 database server
  Loaded: loaded (/lib/systemd/system/mariadb.service; enabled; vendor preset: enabled)
  Active: active (running) since Sat 2023-05-13 17:45:56 UTC; 25s ago
    Docs: man:mariadb(8)
           https://mariadb.com/kb/en/library/systemd/
  Process: 4268 ExecStartPre=/usr/bin/install -m 755 -o mysql -g root -d /var/run/mysql (code=exited, status=0/SUCCESS)
  Process: 4269 ExecStartPre=/bin/sh -c systemctl unset-environment _WSREP_START_POSITION (code=exited, status=0/SUCCESS)
  Process: 4271 ExecStartPre=/bin/sh -c [ ! -e /usr/bin/galera_recovery ] && VAR=|| VAR=cd /usr/bin/.; /usr/bin/galera_recovery; [ $? -eq 0 ] && systemctl set-environment _WSREP_START_POSITION=$VAR
  Process: 4313 ExecStartPost=/bin/sh -c systemctl unset-environment _WSREP_START_POSITION (code=exited, status=0/SUCCESS)
  Process: 4315 ExecStartPost=/etc/mysql/debian-start (code=exited, status=0/SUCCESS)
  Main PID: 4300 (mariadbd)
  Status: "Taking your SQL requests now..."
  Tasks: 14 (limit: 1141)
  Memory: 61.2M
  CPU: 327ms
  CGroup: /system.slice/mariadb.service
          └─4300 /usr/sbin/mariadbd

May 13 17:45:56 ip-172-31-3-198 mariadbd[4300]: Version: '10.6.12-MariaDB-0ubuntu0.22.04.1' socket: '/run/mysql/mysql.sock' port: 3306 Ubuntu 22.04
May 13 17:45:56 ip-172-31-3-198 systemd[1]: Started MariaDB 10.6.12 database server.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4317]: Upgrading MySQL tables if necessary.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: Looking for 'mariadb' as: /usr/bin/mariadb
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: Looking for 'mariadb-check' as: /usr/bin/mariadb-check
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: This installation of MariaDB is already upgraded to 10.6.12-MariaDB.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: There is no need to run mysql_upgrade again for 10.6.12-MariaDB.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: You can use --force if you still want to run mysql_upgrade
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4328]: Checking for insecure root accounts.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4332]: Triggering myisam-recover for all MyISAM tables and aria-recover for all Aria tables
lines 1-28/28 (END)

root@ip-172-31-3-198: /home/ubuntu# exit
exit
ubuntu@ip-172-31-3-198:~$ sudo su
root@ip-172-31-3-198: /home/ubuntu# mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB
SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!


In order to log into MariaDB to secure it, we'll need the current
password for the root user. If you've just installed MariaDB, and
haven't set the root password yet, you should just press enter here.

Enter current password for root (enter for none):
OK, successfully used password, moving on...

Setting the root password or using the unix_socket ensures that nobody
can log into the MariaDB root user without the proper authorisation.

You already have your root account protected, so you can safely answer 'n'.

Switch to unix_socket authentication [Y/n] n
```



```
root@ip-172-31-3-198: /home/ubuntu
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-198: /home/ubuntu# systemctl start mariadb
root@ip-172-31-3-198: /home/ubuntu# systemctl status mariadb
● mariadb.service - MariaDB 10.6.12 database server
  Loaded: loaded (/lib/systemd/system/mariadb.service; enabled; vendor preset: enabled)
  Active: active (running) since Sat 2023-05-13 17:45:56 UTC; 25s ago
    Docs: man:mariadb(8)
           https://mariadb.com/kb/en/library/systemd/
  Process: 4268 ExecStartPre=/usr/bin/install -m 755 -o mysql -g root -d /var/run/mysql (code=exited, status=0/SUCCESS)
  Process: 4269 ExecStartPre=/bin/sh -c systemctl unset-environment _WSREP_START_POSITION (code=exited, status=0/SUCCESS)
  Process: 4271 ExecStartPre=/bin/sh -c [ ! -e /usr/bin/galera_recovery ] && VAR=|| VAR=cd /usr/bin/.; /usr/bin/galera_recovery; [ $? -eq 0 ] && systemctl set-environment _WSREP_START_POSITION=$VAR
  Process: 4313 ExecStartPost=/bin/sh -c systemctl unset-environment _WSREP_START_POSITION (code=exited, status=0/SUCCESS)
  Process: 4315 ExecStartPost=/etc/mysql/debian-start (code=exited, status=0/SUCCESS)
  Main PID: 4300 (mariadbd)
  Status: "Taking your SQL requests now..."
  Tasks: 14 (limit: 1141)
  Memory: 61.2M
  CPU: 327ms
  CGroup: /system.slice/mariadb.service
          └─4300 /usr/sbin/mariadbd


May 13 17:45:56 ip-172-31-3-198 mariadbd[4300]: Version: '10.6.12-MariaDB-0ubuntu0.22.04.1' socket: '/run/mysql/mysql.sock' port: 3306 Ubuntu 22.04
May 13 17:45:56 ip-172-31-3-198 systemd[1]: Started MariaDB 10.6.12 database server.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4317]: Upgrading MySQL tables if necessary.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: Looking for 'mariadb' as: /usr/bin/mariadb
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: Looking for 'mariadb-check' as: /usr/bin/mariadb-check
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: This installation of MariaDB is already upgraded to 10.6.12-MariaDB.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: There is no need to run mysql_upgrade again for 10.6.12-MariaDB.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: You can use --force if you still want to run mysql_upgrade
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4328]: Checking for insecure root accounts.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4332]: Triggering myisam-recover for all MyISAM tables and aria-recover for all Aria tables
lines 1-28/28 (END)

root@ip-172-31-3-198: /home/ubuntu# exit
exit
ubuntu@ip-172-31-3-198:~$ sudo su
root@ip-172-31-3-198: /home/ubuntu# mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB
SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!

In order to log into MariaDB to secure it, we'll need the current
password for the root user. If you've just installed MariaDB, and
haven't set the root password yet, you should just press enter here.

Enter current password for root (enter for none):
```



```
root@ip-172-31-3-198: /home/ubuntu
Setting up libdbd-mysql-perl:amd64 (4.050-5) ...
Setting up mariadb-client-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up mariadb-client (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up mariadb-server-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Installing new version of config file /etc/mysql/debian-start ...
renamed /etc/rotate.d/mysql-server -> /etc/rotate.d/mysql-server.dpkg-bak
Created symlink /etc/systemd/system/multi-user.target.wants/mariadb.service ~ /lib/systemd/system/mariadb.service.
Setting up mariadb-server (1:10.6.12-0ubuntu0.22.04.1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.
No services need to be restarted.
No containers need to be restarted.
No user sessions are running outdated binaries.
No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-198:/home/ubuntu# systemctl start mariadb
root@ip-172-31-3-198:/home/ubuntu# systemctl status mariadb
● mariadb.service - MariaDB 10.6.12 database server
   Loaded: loaded (/lib/systemd/system/mariadb.service; enabled; vendor preset: enabled)
   Active: active (running) since Sat 2023-05-13 17:45:56 UTC; 25s ago
     Docs: man:mariadb(8)
           https://mariadb.com/kb/en/library/systemd/
   Process: 4268 ExecStartPre=/usr/bin/install -m 755 -o mysql -g root -d /var/run/mysqld (code=exited, status=0/SUCCESS)
   Process: 4271 ExecStartPre=/bin/sh -c systemctl unset-environment _WSREP_START_POSITION (code=exited, status=0/SUCCESS)
   Process: 4311 ExecStartPost=/bin/sh -c [ ! -e /usr/bin/galera_recovery ] && VAR= || VAR=cd /usr/bin/.; /usr/bin/galera_recovery; [ $? -eq 0 ] && systemctl set-environment _WSREP_START_POSITION=$VAR (code=exited, status=0/SUCCESS)
   Process: 4315 ExecStartPost=/etc/mysql/debian-start (code=exited, status=0/SUCCESS)
  Main PID: 4300 (mariadb)
    Status: "Taking your SQL requests now..."
     Tasks: 14 (limit: 1141)
    Memory: 61.2M
           CPU: 327ms
    CGroup: /system.slice/mariadb.service
           └─4300 /usr/sbin/mariadb

May 13 17:45:56 ip-172-31-3-198 mariadb[4300]: Version: '10.6.12-MariaDB-0ubuntu0.22.04.1' socket: '/run/mysqld/mysqld.sock' port: 3306 ubuntu 22.04
May 13 17:45:56 ip-172-31-3-198 systemd[1]: Started MariaDB 10.6.12 database server.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4317]: Upgrading MySQL tables if necessary.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: Looking for 'mariadb' as: /usr/bin/mariadb
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: Looking for 'mariadb-check' as: /usr/bin/mariadb-check
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: This installation of MariaDB is already upgraded to 10.6.12-MariaDB.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: There is no need to run mysql_upgrade again for 10.6.12-MariaDB.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: You can use --force if you still want to run mysql_upgrade
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4328]: Checking for insecure root accounts.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4332]: Triggering myisam-recover for all MYISAM tables and aria-recover for all Aria tables
lines 123/22 (END)
```

```
root@ip-172-31-3-198:/home/ubuntu# exit
exit
ubuntu@ip-172-31-3-198:~$ sudo su
root@ip-172-31-3-198:/home/ubuntu#
```



```
ubuntu@ip-172-31-3-198:~$
Setting up mariadb-client-core-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up libdbd-mysql-perl:amd64 (4.050-5) ...
Setting up mariadb-client-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up mariadb-client (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up mariadb-server-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Installing new version of config file /etc/mysql/debian-start ...
renamed /etc/rotate.d/mysql-server -> /etc/rotate.d/mysql-server.dpkg-bak
Created symlink /etc/systemd/system/multi-user.target.wants/mariadb.service ~ /lib/systemd/system/mariadb.service.
Setting up mariadb-server (1:10.6.12-0ubuntu0.22.04.1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.
No services need to be restarted.
No containers need to be restarted.
No user sessions are running outdated binaries.
No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-198:/home/ubuntu# systemctl start mariadb
root@ip-172-31-3-198:/home/ubuntu# systemctl status mariadb
● mariadb.service - MariaDB 10.6.12 database server
   Loaded: loaded (/lib/systemd/system/mariadb.service; enabled; vendor preset: enabled)
   Active: active (running) since Sat 2023-05-13 17:45:56 UTC; 25s ago
     Docs: man:mariadb(8)
           https://mariadb.com/kb/en/library/systemd/
   Process: 4268 ExecStartPre=/usr/bin/install -m 755 -o mysql -g root -d /var/run/mysqld (code=exited, status=0/SUCCESS)
   Process: 4271 ExecStartPre=/bin/sh -c systemctl unset-environment _WSREP_START_POSITION (code=exited, status=0/SUCCESS)
   Process: 4311 ExecStartPost=/bin/sh -c [ ! -e /usr/bin/galera_recovery ] && VAR= || VAR=cd /usr/bin/.; /usr/bin/galera_recovery; [ $? -eq 0 ] && systemctl set-environment _WSREP_START_POSITION=$VAR (code=exited, status=0/SUCCESS)
   Process: 4315 ExecStartPost=/etc/mysql/debian-start (code=exited, status=0/SUCCESS)
  Main PID: 4300 (mariadb)
    Status: "Taking your SQL requests now..."
     Tasks: 14 (limit: 1141)
    Memory: 61.2M
           CPU: 327ms
    CGroup: /system.slice/mariadb.service
           └─4300 /usr/sbin/mariadb

May 13 17:45:56 ip-172-31-3-198 mariadb[4300]: Version: '10.6.12-MariaDB-0ubuntu0.22.04.1' socket: '/run/mysqld/mysqld.sock' port: 3306 ubuntu 22.04
May 13 17:45:56 ip-172-31-3-198 systemd[1]: Started MariaDB 10.6.12 database server.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4317]: Upgrading MySQL tables if necessary.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: Looking for 'mariadb' as: /usr/bin/mariadb
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: Looking for 'mariadb-check' as: /usr/bin/mariadb-check
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: This installation of MariaDB is already upgraded to 10.6.12-MariaDB.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: There is no need to run mysql_upgrade again for 10.6.12-MariaDB.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: You can use --force if you still want to run mysql_upgrade
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4328]: Checking for insecure root accounts.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4332]: Triggering myisam-recover for all MYISAM tables and aria-recover for all Aria tables
lines 123/22 (END)
```

```
root@ip-172-31-3-198:/home/ubuntu# exit
exit
ubuntu@ip-172-31-3-198:~$
```



```
root@ip-172-31-3-198: /home/ubuntu
Setting up liburing2:amd64 (2.1-2build1) ...
Setting up libpmem1:amd64 (1.11.1-3build1) ...
Setting up libldb-perl:amd64 (1.643-2build1) ...
Setting up mariadb-server-core-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up mariadb-client-core-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up libldb-mysql-perl:amd64 (4.050-5) ...
Setting up mariadb-client-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up mariadb-client (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up mariadb-server-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Installing new version of config file /etc/mysql/debian-start ...
renamed /etc/logrotate.d/mysql-server -> /etc/logrotate.d/mysql-server.dpkg-bak'
created symlink /etc/systemd/system/multi-user.target.wants/mariadb.service -> /lib/systemd/system/mariadb.service.
Setting up mariadb-server (1:10.6.12-0ubuntu0.22.04.1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-198: /home/ubuntu# systemctl start mariadb
root@ip-172-31-3-198: /home/ubuntu# systemctl status mariadb
● mariadb.service - MariaDB 10.6.12 database server
   Loaded: loaded (/lib/systemd/system/mariadb.service; enabled; vendor preset: enabled)
   Active: active (running) since Sat 2023-05-13 17:45:56 UTC; 25s ago
     Docs: man:mariadb(8)
           https://mariadb.com/kb/en/library/systemd/
   Process: 4268 ExecStartPre=/usr/bin/install -m 755 -o mysql -g root -d /var/run/mysql (code=exited, status=0/SUCCESS)
   Process: 4269 ExecStartPre=/usr/bin/sh -c systemctl unset-environment _WSREP_START_POSITION (code=exited, status=0/SUCCESS)
   Process: 4273 ExecStartPre=/bin/sh -c [ ! -e /usr/bin/galera_recovery ] && VAR= cd /usr/bin/galera_recovery ; [ $? -eq 0 ] && systemctl set-environment _WSREP_START_POSITION=$VAR
   Process: 4313 ExecStartPost=/bin/sh -c systemctl unset-environment _WSREP_START_POSITION (code=exited, status=0/SUCCESS)
   Process: 4315 ExecStartPost=/etc/mysql/debian-start (code=exited, status=0/SUCCESS)
  Main PID: 4300 (mariadb)
   Status: "Taking your SQL requests now..."
     Tasks: 14 (limit: 1341)
    Memory: 61.2M
       CPU: 327ms
   CGroup: /system.slice/mariadb.service
           └─4300 /usr/sbin/mariadb

May 13 17:45:56 ip-172-31-3-198 mariadb[4300]: Version: '10.6.12-MariaDB-0ubuntu0.22.04.1' socket: '/run/mysqlq/mysql.sock' port: 3306 ubuntu 22.04
May 13 17:45:57 ip-172-31-3-198 systemd[1]: Started MariaDB 10.6.12 database server.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4327]: Upgrading MySQL tables if necessary.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: Looking for 'mariadb' as: /usr/bin/mariadb
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: Looking for 'mariadb-check' as: /usr/bin/mariadb-check
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: This installation of MariaDB is already upgraded to 10.6.12-MariaDB.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: There is no need to run mysql_upgrade again for 10.6.12-MariaDB.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4320]: You can use --force if you still want to run mysql_upgrade
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4328]: Checking for insecure root accounts.
May 13 17:45:57 ip-172-31-3-198 /etc/mysql/debian-start[4332]: Triggering mysisam-recover for all MyISAM tables and aria-recover for all Aria tables
lines 1-28/28 (END)
```

```
root@ip-172-31-3-198: /home/ubuntu
Selecting previously unselected package mariadb-server-10.6.
(Reading database ... 65270 files and directories currently installed.)
Preparing to unpack .../mariadb-server-10.6_1:10.6.12-0ubuntu0.22.04.1_amd64.deb ...
/var/lib/mysql; found previous version 8.0
The file /var/lib/mysql/debian-8.0.flag indicates a
version that cannot automatically be upgraded. Therefore the
previous data directory will be renamed to /var/lib/mysql-8.0 and
a new data directory will be initialized at /var/lib/mysql.
Please manually export/import your data (e.g. with mysqldump) if needed.
unpacking mariadb-server-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Selecting previously unselected package libmysqlclient21:amd64.
Preparing to unpack .../libmysqlclient21_8.0.33-0ubuntu0.22.04.1_amd64.deb ...
unpacking libmysqlclient21:amd64 (8.0.33-0ubuntu0.22.04.1) ...
Selecting previously unselected package libldb-mysql-perl:amd64.
Preparing to unpack .../libldb-mysql-perl_4.050-5_amd64.deb ...
unpacking libldb-mysql-perl:amd64 (4.050-5) ...
Selecting previously unselected package mariadb-client.
Preparing to unpack .../mariadb-client_10.6.12-0ubuntu0.22.04.1_all.deb ...
unpacking mariadb-client (1:10.6.12-0ubuntu0.22.04.1) ...
Selecting previously unselected package mariadb-server.
Preparing to unpack .../mariadb-server_10.6.12-0ubuntu0.22.04.1_all.deb ...
unpacking mariadb-server (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up libconfig-ini-files-perl (3.000003-1) ...
Setting up galera-4 (26.4.9-1build1) ...
Setting up libmysqlclient21:amd64 (8.0.33-0ubuntu0.22.04.1) ...
Setting up libsnappy1v5:amd64 (1.1.8-1build3) ...
Setting up socat (1.7.4.1-ubuntu) ...
Setting up libnssdbm3:amd64 (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up libdaxctl1:amd64 (72.1-1) ...
Setting up liburing2:amd64 (2.1-2build1) ...
Setting up libpmem1:amd64 (1.11.1-3build1) ...
Setting up libldb-perl:amd64 (1.643-2build1) ...
Setting up mariadb-server-core-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up mariadb-client-core-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up libldb-mysql-perl:amd64 (4.050-5) ...
Setting up mariadb-client-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up mariadb-client (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up mariadb-server-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Installing new version of config file /etc/mysql/debian-start ...
renamed /etc/logrotate.d/mysql-server -> /etc/logrotate.d/mysql-server.dpkg-bak'
created symlink /etc/systemd/system/multi-user.target.wants/mariadb.service -> /lib/systemd/system/mariadb.service.
Setting up mariadb-server (1:10.6.12-0ubuntu0.22.04.1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-198: /home/ubuntu# systemctl start mariadb
```

```
root@ip-172-31-3-198: /home/ubuntu
Selecting previously unselected package mariadb-server-10.6.
(Reading database ... 65270 files and directories currently installed.)
Preparing to unpack .../mariadb-server-10.6-183a10.6.12-0ubuntu0.22.04.1 amd64.deb ...
/var/lib/mysql: found previous version 8.0
The file /var/lib/mysql/debian-8.0.flag indicates a
version that cannot automatically be upgraded. Therefore the
previous data directory will be renamed to /var/lib/mysql-8.0 and
a new data directory will be initialized at /var/lib/mysql.
Please manually export/import your data (e.g. with mysqldump) if needed.
unpacking mariadb-server-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Selecting previously unselected package libmysqldclient21:amd64.
Preparing to unpack .../libmysqldclient21:amd64_8.0.33-0ubuntu0.22.04.1 amd64.deb ...
unpacking libmysqldclient21:amd64 (8.0.33-0ubuntu0.22.04.1) ...
Selecting previously unselected package libdbd-mysql-perl:amd64.
Preparing to unpack .../libdbd-mysql-perl_4.050-5_amd64.deb ...
unpacking libdbd-mysql-perl:amd64 (4.050-5) ...
Selecting previously unselected package mariadb-client.
Preparing to unpack .../mariadb-client-1:10.6.12-0ubuntu0.22.04.1 all.deb ...
unpacking mariadb-client (1:10.6.12-0ubuntu0.22.04.1) ...
Selecting previously unselected package mariadb-server.
Preparing to unpack .../mariadb-server-1:10.6.12-0ubuntu0.22.04.1 all.deb ...
unpacking mariadb-server (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up galera-4 (26.4.9-1ubuntu1) ...
Setting up libmysqldclient21:amd64 (8.0.33-0ubuntu0.22.04.1) ...
Setting up libsnappy1v5:amd64 (1.1.8-1build1) ...
Setting up socat (1.7.4.1-3ubuntu1) ...
Setting up libmariadb3:amd64 (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up libdaxctl1:amd64 (72.1-1) ...
Setting up libdbd-mysql-perl (4.050-5) ...
Setting up liburing2:amd64 (2.1-2build1) ...
Setting up librpm1:amd64 (1:11.1-3build1) ...
Setting up libdbi-perl:amd64 (1.643-3build1) ...
Setting up mariadb-server-core-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up mariadb-client-core-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up libdbd-mysql-perl:amd64 (4.050-5) ...
Setting up mariadb-client-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Setting up mariadb-server-10.6 (1:10.6.12-0ubuntu0.22.04.1) ...
Installing new version of config file /etc/mysql/debian-start ...
renamed /etc/logrotate.d/mysql-server -> /etc/logrotate.d/mysql-server.dpkg-bak
Created symlink /etc/systemd/system/multi-user.target.wants/mariadb.service -> /lib/systemd/system/mariadb.service.
Setting up mariadb-server (1:10.6.12-0ubuntu0.22.04.1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-198: /home/ubuntu#
```

```
root@ip-172-31-3-198: /home/ubuntu
Removing removed key_buffer and myisam-recover options (if present)
mysql will log errors to /var/log/mysql/error.log
mysql is running as pid 3363
Created symlink /etc/systemd/system/multi-user.target.wants/mysql.service -> /lib/systemd/system/mysql.service.
Setting up libcgl-pg-perl (4.54-1) ...
Setting up libhtml-template-perl (2.37-1.1) ...
Setting up mysql-server (8.0.33-0ubuntu0.22.04.1) ...
Setting up libcgl-fast-perl (1.2.15-1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

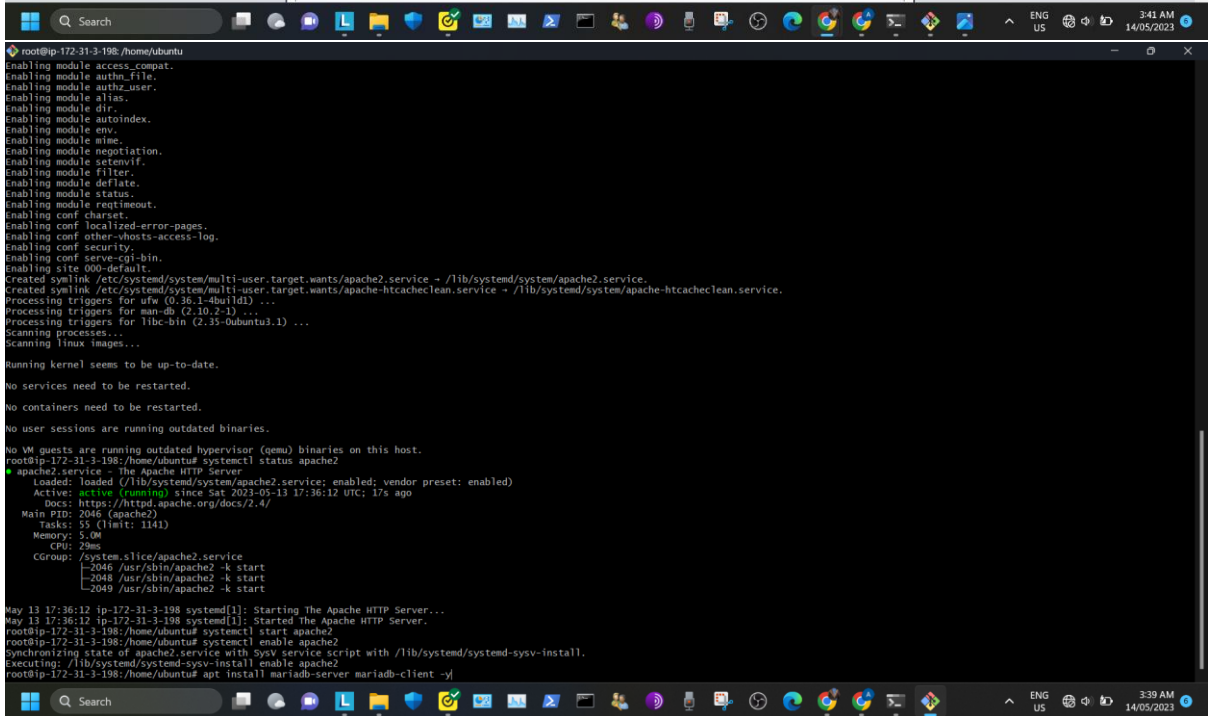
No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-198: /home/ubuntu# sudo apt-get install mariadb-server mariadb-client -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  libevent-stdout-2.1-7 libmcs2 libprotobuf-lite23 mecab-ipadic mecab-utf8 mecab-util5
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  galera-4 libconfig-inifiles-perl libdaxctl1 libdbd-mysql-perl libdbi-perl libmariadb3 libmysqldclient21 libndctl6 librpm1 libsnappy1v5 liburing2 mariadb-client-10.6 mariadb-client-core-10.6 mariadb-common
  mariadb-common mariadb-server mariadb-server-10.6 mariadb-server-core-10.6 socat
The following packages will be REMOVED:
  libdbd-perl libnet-daemon-perl libsql-statement-perl mailx mariadb-test
The following NEW packages will be installed:
  galera-4 libconfig-inifiles-perl libdaxctl1 libdbd-mysql-perl libdbi-perl libmariadb3 libmysqldclient21 libndctl6 librpm1 libsnappy1v5 liburing2 mariadb-client mariadb-client-10.6 mariadb-client-core-10.6
0 upgraded, 19 newly installed, 5 to remove and 49 not upgraded.
Need to get 17.9 MB of archives.
After this operation, 22.0 MB disk space will be freed.
Get:1 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 mariadb-common all 1:10.6.12-0ubuntu0.22.04.1 [16.4 kB]
Get:2 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 galera-4 amd64 26.4.9-1build1 [720 kB]
Get:3 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libdbi-perl amd64 1.643-3build1 [761 kB]
Get:4 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libconfig-inifiles-perl all 3.000003-1 [40.5 kB]
Get:5 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 libmariadb3 amd64 1:10.6.12-0ubuntu0.22.04.1 [173 kB]
Get:6 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 mariadb-client-core-10.6 amd64 1:10.6.12-0ubuntu0.22.04.1 [976 kB]
Get:7 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 mariadb-client-10.6 amd64 1:10.6.12-0ubuntu0.22.04.1 [1545 kB]
Get:8 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libdaxctl1 amd64 72.1-1 [19.8 kB]
Get:9 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libndctl6 amd64 72.1-1 [57.7 kB]
Get:10 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 librpm1 amd64 1:11.1-3build1 [81.4 kB]
Get:11 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libsnappy1v5 amd64 1.1.8-1build1 [17.5 kB]
Get:12 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 liburing2 amd64 2.1-2build1 [10 [17.5 kB]
Get:13 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 liburing2 amd64 2.1-2build1 [10.3 kB]
Get:14 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 mariadb-server-core-10.6 amd64 1:10.6.12-0ubuntu0.22.04.1 [7633 kB]
Get:15 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 socat amd64 1.7.4.1-3ubuntu4 [349 kB]
[OK [working]]
```

```
root@ip-172-31-3-198: /home/ubuntu
mysql-client-core-8.0 mysql-common mysql-server mysql-server-8.0 mysql-server-core-8.0
0 upgraded, 26 newly installed, 0 to remove and 49 not upgraded.
Need to get 29.6 MB of archives.
After this operation, 243 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 mysql-common all 5.8+1.0.8 [7212 B]
Get:2 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client-core-8.0 amd64 8.0.33-0ubuntu0.22.04.1 [2802 kB]
Get:3 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client-8.0 amd64 8.0.33-0ubuntu0.22.04.1 [22.7 kB]
Get:4 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libevent-pthreads-2.1.7 amd64 2.1.12-stable-1buildd3 [7642 B]
Get:5 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libmecab2 amd64 0.996-14buildd9 [1399 kB]
Get:6 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libprotobuf-lite23 amd64 3.12.4-1ubuntu7.22.04.1 [209 kB]
Get:7 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-server-core-8.0 amd64 8.0.33-0ubuntu0.22.04.1 [12.5 MB]
Get:8 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-server-8.0 amd64 8.0.33-0ubuntu0.22.04.1 [1431 kB]
Get:9 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libhtml-tagset-perl all 3.20-4 [12.5 kB]
Get:10 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 liburi-perl all 5.10-1 [78.8 kB]
Get:11 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libhtml-parser-perl amd64 3.76-1buildd2 [88.4 kB]
Get:12 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libcgi-perl all 4.54-1 [188 kB]
Get:13 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libfcgi0ldl amd64 2.4.2-2buildd [28.0 kB]
Get:14 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libfcgi-perl amd64 0.82ds-1buildd [22.8 kB]
Get:15 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libcgi-fast-perl all 12.15-1 [10.5 kB]
Get:16 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libclone-perl amd64 0.45-1buildd3 [11.0 kB]
Get:17 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libencode-locale-perl all 1.05-1.1 [11.8 kB]
Get:18 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libfcgi-bin amd64 2.4.2-2buildd [11.2 kB]
Get:19 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libhtml-template-perl all 2.97-1.1 [59.1 kB]
Get:20 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libltime-date-perl all 2.3300-2 [34.0 kB]
Get:21 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libhtml-date-perl all 6.05-1 [5920 B]
Get:22 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libio-html-perl all 1.004-2 [15.4 kB]
Get:23 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libhttp-mediatypes-perl all 6.04-1 [19.5 kB]
Get:24 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libhttp-message-perl all 6.26-1 [76.8 kB]
Get:25 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 mecab-utf8 amd64 0.996-14buildd9 [4850 B]
Get:26 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 mecab-ipadic all 2.7.0-20070801-main-3 [6718 kB]
Get:27 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 mecab-ipadic-utf8 all 2.7.0-20070801-main-3 [4384 B]
Get:28 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-server all 8.0.33-0ubuntu0.22.04.1 [9460 B]
Fetched 29.6 MB in 2s (14.3 MB/s)
Preconfiguring packages...
Selecting previously unselected package mysql-common.
(Reading database ... 64426 files and directories currently installed.)
Preparing to unpack .../0-mysql-common-5.8+1.0.8-all.deb ...
Unpacking mysql-common (5.8+1.0.8) ...
Selecting previously unselected package mysql-client-core-8.0.
Preparing to unpack .../1-mysql-client-core-8.0-8.0.33-0ubuntu0.22.04.1_amd64.deb ...
Unpacking mysql-client-core-8.0 (8.0.33-0ubuntu0.22.04.1) ...
Selecting previously unselected package mysql-client-8.0.
Preparing to unpack .../2-mysql-client-8.0-8.0.33-0ubuntu0.22.04.1_amd64.deb ...
Unpacking mysql-client-8.0 (8.0.33-0ubuntu0.22.04.1) ...
Selecting previously unselected package libevent-pthreads-2.1.7-amd64.
Preparing to unpack .../3-libevent-pthreads-2.1.7-2.1.12-stable-1buildd3_amd64.deb ...
Unpacking libevent-pthreads-2.1.7-amd64 (2.1.12-stable-1buildd3) ...
Selecting previously unselected package libmecab2:amd64.
Preparing to unpack .../4-libmecab2-0.996-14buildd9_amd64.deb ...
Unpacking libmecab2:amd64 (0.996-14buildd9) ...
Selecting previously unselected package libprotobuf-lite23:amd64.
Preparing to unpack .../5-libprotobuf-lite23-3.12.4-1ubuntu7.22.04.1_amd64.deb ...
Unpacking libprotobuf-lite23:amd64 (3.12.4-1ubuntu7.22.04.1) ...
Selecting previously unselected package mysql-server-core-8.0.
Preparing to unpack .../6-mysql-server-core-8.0-8.0.33-0ubuntu0.22.04.1_amd64.deb ...
Unpacking mysql-server-core-8.0 (8.0.33-0ubuntu0.22.04.1) ...
```

```
root@ip-172-31-3-198: /home/ubuntu
Failed to start mariadb.service: Unit mariadb.service not found.
root@ip-172-31-3-198: /home/ubuntu# apt install mariadb-server mariadb-client
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package mariadb-server
E: Unable to locate package mariadb-client
root@ip-172-31-3-198: /home/ubuntu# sudo apt install mariadb-server mariadb-client
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package mariadb-server
E: Unable to locate package mariadb-client
root@ip-172-31-3-198: /home/ubuntu# AC
root@ip-172-31-3-198: /home/ubuntu#
root@ip-172-31-3-198: /home/ubuntu# sudo apt update
Hit:1 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Hit:3 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [108 kB]
Get:4 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 MB]
Get:5 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:6 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]
Get:7 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 c-n-f Metadata [286 kB]
Get:8 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [217 kB]
Get:9 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/multiverse Translation-en [112 kB]
Get:10 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 c-n-f Metadata [8372 B]
Get:11 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [579 kB]
Get:12 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [166 kB]
Get:13 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [14.4 kB]
Get:14 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [276 kB]
Get:15 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [33.7 kB]
Get:16 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [604 B]
Get:17 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [887 kB]
Get:18 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [182 kB]
Get:19 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [18.8 kB]
Get:20 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [15.3 kB]
Get:21 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [8452 B]
Get:22 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [468 B]
Get:23 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [40.9 kB]
Get:24 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [10.2 kB]
Get:25 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 B]
Get:26 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:27 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [22.2 kB]
Get:28 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [15.0 kB]
Get:29 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [548 B]
Get:30 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [363 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [108 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [932 B]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [225 kB]
Get:35 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [33.3 kB]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f Metadata [604 B]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [109 kB]
Get:38 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [122 kB]
Get:39 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [14.3 kB]
Get:40 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [30.2 kB]
91% [6 Translation-en core 0] [Connecting to security.ubuntu.com (91.189.91.93)]
```



```
root@ip-172-31-3-198: /home/ubuntu
root@ip-172-31-3-198:/home/ubuntu# apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils bzip2 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.3-0 mailcap mime-support ssl-cert
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser bzip2-doc
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils bzip2 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.3-0 mailcap mime-support ssl-cert
0 upgraded, 13 newly installed, 0 to remove and 0 not upgraded.
Need to get 2138 kB of archives.
After this operation, 8505 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libapr1 amd64 1.7.0-8ubuntu0.22.04.1 [108 kB]
Get:2 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libaprutil1 amd64 1.6.1-5ubuntu4.22.04.1 [92.6 kB]
Get:3 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libaprutil1-dbd-sqlite3 amd64 1.6.1-5ubuntu1.22.04.1 [11.3 kB]
Get:4 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libaprutil1-ldap amd64 1.6.1-5ubuntu4.22.04.1 [9168 B]
Get:5 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 liblua5.3-0 amd64 5.3.6-1build1 [140 kB]
Get:6 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 apache2-bin amd64 2.4.52-1ubuntu4.4 [1345 kB]
Get:7 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 apache2-data all 2.4.52-1ubuntu4.4 [165 kB]
Get:8 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 apache2-utils amd64 2.4.52-1ubuntu4.4 [89.5 kB]
Get:9 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 mailcap all 3.70-rnmu1ubuntu1 [23.8 kB]
Get:10 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 mime-support all 3.66 [3696 B]
Get:11 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 apache2 amd64 2.4.52-1ubuntu4.4 [97.8 kB]
Get:12 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 bzip2 amd64 1.0.8-5ubuntu1 [34.8 kB]
Get:13 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 ssl-cert all 1:1.1.2 [17.4 kB]
Fetched 2138 kB in 1s (3071 kB/s)
Preconfiguring packages ...
selecting previously unselected package libapr1:amd64.
(Reading database ... 63657 files and directories currently installed.)
Preparing to unpack .../00-libapr1_1.7.0-8ubuntu0.22.04.1_amd64.deb ...
Unpacking libapr1:amd64 (1.7.0-8ubuntu0.22.04.1) ...
Progress: [ 0%] [#####]
root@ip-172-31-3-198:/home/ubuntu
root@ip-172-31-3-198:/home/ubuntu# sudo apt install update && apt install upgrade -y
```

```
root@ip-172-31-3-198: /home/ubuntu
$ ssh -i "awswordpress3.pem" ubuntu@ec2-54-206-89-240.ap-southeast-2.compute.amazonaws.com
The authenticity of host 'ec2-54-206-89-240.ap-southeast-2.compute.amazonaws.com (54.206.89.240)' can't be established.
ED25519 key fingerprint is SHA256:1FXzsgG67F6y8VCs7B2M9i1d7JhTXjaqirQRfko.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? no
Host key verification failed.

root@ip-172-31-3-198: /home/ubuntu
$ ssh -i "awswordpress3.pem" ubuntu@ec2-54-206-89-240.ap-southeast-2.compute.amazonaws.com
The authenticity of host 'ec2-54-206-89-240.ap-southeast-2.compute.amazonaws.com (54.206.89.240)' can't be established.
ED25519 key fingerprint is SHA256:1FXzsgG67F6y8VCs7B2M9i1d7JhTXjaqirQRfko.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? fingerprint
Please type 'yes', 'no' or the fingerprint: fingerprint
Please type 'yes', 'no' or the fingerprint: yes
Warning: Permanently added 'ec2-54-206-89-240.ap-southeast-2.compute.amazonaws.com' (ED25519) to the list of known hosts.
welcome to Ubuntu 22.04.2 LTS (GNU/Linux 5.15.0-1031-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Sat May 13 17:31:53 UTC 2023

System load: 0.076171875   Processes:           101
Usage of /:  7.9% of 19.20GB   Users logged in:    0
Memory usage: 21%          IPv4 address for eth0: 172.31.3.198
Swap usage:  0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

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

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-3-198:~$ sudo su
root@ip-172-31-3-198:/home/ubuntu#
```

```
ubuntu@ip-172-31-3-198:~$
root@ip-172-31-3-198:~#
$ ssh -i "awswordpress3.pem" ubuntu@ec2-54-206-89-240.ap-southeast-2.compute.amazonaws.com
The authenticity of host 'ec2-54-206-89-240.ap-southeast-2.compute.amazonaws.com (54.206.89.240)' can't be established.
ED25519 key fingerprint is SHA256:1FXzsgG67F6y8VCs7B2M9i1d7JhTXjaqirQRfko.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? no
Host key verification failed.

root@ip-172-31-3-198:~#
$ ssh -i "awswordpress3.pem" ubuntu@ec2-54-206-89-240.ap-southeast-2.compute.amazonaws.com
The authenticity of host 'ec2-54-206-89-240.ap-southeast-2.compute.amazonaws.com (54.206.89.240)' can't be established.
ED25519 key fingerprint is SHA256:1FXzsgG67F6y8VCs7B2M9i1d7JhTXjaqirQRfko.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? fingerprint
Please type 'yes', 'no' or the fingerprint: fingerprint
Please type 'yes', 'no' or the fingerprint: yes
Warning: Permanently added 'ec2-54-206-89-240.ap-southeast-2.compute.amazonaws.com' (ED25519) to the list of known hosts.
welcome to Ubuntu 22.04.2 LTS (GNU/Linux 5.15.0-1031-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Sat May 13 17:31:53 UTC 2023

System load: 0.076171875   Processes:           101
Usage of /:  7.9% of 19.20GB   Users logged in:    0
Memory usage: 21%          IPv4 address for eth0: 172.31.3.198
Swap usage:  0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

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

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-3-198:~$
```

```
ubuntu@ip-172-31-3-198:~$ ssh -i "awswordpress3.pem" ubuntu@ec2-54-206-89-240.ap-southeast-2.compute.amazonaws.com
The authenticity of host 'ec2-54-206-89-240.ap-southeast-2.compute.amazonaws.com (54-206-89-240)' can't be established.
ED25519 key fingerprint is SHA256:TFXkzGg67F6y8Vcs78ZM9id7JhTIXjaIriQRfko.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? no
Host key verification failed.

ubuntu@ip-172-31-3-198:~$ ssh -i "awswordpress3.pem" ubuntu@ec2-54-206-89-240.ap-southeast-2.compute.amazonaws.com
The authenticity of host 'ec2-54-206-89-240.ap-southeast-2.compute.amazonaws.com (54-206-89-240)' can't be established.
ED25519 key fingerprint is SHA256:TFXkzGg67F6y8Vcs78ZM9id7JhTIXjaIriQRfko.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? fingerprint
Please type 'yes', 'no' or the fingerprint: fingerprint
Please type 'yes', 'no' or the fingerprint: yes
Warning: Permanently added 'ec2-54-206-89-240.ap-southeast-2.compute.amazonaws.com' (ED25519) to the list of known hosts.
Welcome to Ubuntu 22.04.2 LTS (GNU/Linux 5.15.0-1031-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:   https://landscape.canonical.com
 * Support:      https://ubuntu.com/advantage

System information as of Sat May 13 17:31:53 UTC 2023

System load: 0.076171875   Processes:           101
Usage of /:  7.9% of 19.20GB   Users logged in:    0
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See "man sudo_root" for details.

ubuntu@ip-172-31-3-198:~$
```

Possible improvement suggestion in the process while remaining within the Cloud domain.

A much higher number of suggestions can be given in the process while being inside of the cloud domain. A free tier service with limited credits and over a hundred of services to choose from both services, two suggestions are highly recommended to be mentioned. First, it is crucial to understand, familiarise and intent the task before creating instances. Each instances requires funds to run and evaluate the given project. Second, configuration within GCP may be ambiguous for beginners who are not familiar with Kubernetes and advanced configuration. In contrast to AWS, allowing users to securely connect to instances via git bash or ubuntu terminal. Thus, enabling a user's own machine to function as a visual machine in AWS.

Comparison of both the Platform EC2 and VM.

Despite each of both platform's disadvantages, both platforms continue to grow and has made positive impact on most individuals and industries. Enabling the accessibility of remote access software and platforms for most society. Although, AWS EC2 may be advanced than GCP VM. Both platforms are globally available around the region of the world. However, GCP VM configuration was difficult than AWS EC2 and AWS EC2 may be more dependable to use than GCP VM. With EC2 reliability, fast, and straight forward configuration may come with highly costly prices. Unlike GCP VM, that offers 25 to 50 percent lower price than AWS EC2. Either way, both cloud provider platforms supply immense virtualization and elastic resources services to their users.

The concept of virtualization and elastic resources in AWS and GCP.

The concept of virtualization in AWS and GCP is the ability for everyone to have access to a secure, efficient, and cost-effective cloud infrastructure. The enabling for virtualization allows everyone across the world to access resources easily without the need of a physical hardware resources. AWS concept of visualisation is the ability to offer users a straightforward development configuration process for an application and requires little time

spent on deployment. AWS offers excellent and fast computing power which aids the user to improve the productivity of development. AWS enables users to use command line interfaces that are familiar with the users. In contrast, GCP concept of visualisation is the ability to offer users instances and payment configurations which are incredibly useful in terms of budget. GCP also offers future-proof infrastructure and powerful data analytics.

Conclusion

In conclusion, this project + report highlights the importance of understanding cloud computing and exploring two cloud providers platforms. These cloud providers are Amazon Web Services (AWS) and Google Cloud Platform (GCP), both AWS and GCP are compared and highlighted in this project + report. Both AWS and GCP offers cloud computing infrastructure to everyone and give ability to their users to access most services. In comparison of AWS and GCP key service offerings, AWS offers more services than GCP. AWS offers more than two hundred fully featured services and GCP offers more than one hundred services. In comparison of AWS and GCP cost model, GCP offers more cheaper options for their users and allowing users to have three hundred free credits to be use for their first-time use. In contrast, AWS allows users to have twelve months trials, short term free trials and always free trials based on the user. GCP offers affordable and cost-effective price than AWS, making GCP cheaper to use than AWS. GCP is twenty five percent to fifty percent cheaper than AWS. Both GCP and AWS offers the same outcomes in regards of completing the tasks, but AWS would be preferable as it offers straightforward configuration to its user.

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