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Primeiros comandos linux:

Verificar as configurações do servidor:

df: df – Mostra o espaço em disco do sistema de arquivos usado por todas as partições. “df -h” é provavelmente o mais útil – usa megabytes (M) e gigabytes (G) em vez de blocos para relatar o tamanhos. (-h significa “human-readable”).

```
root@vps37738:~# df -h
Filesystem      Size  Used Avail Use% Mounted on
udev            174M    0   174M   0% /dev
tmpfs           44M   1.2M   43M   3% /run
/dev/xvda2      20G   6.3G   13G  34% /
tmpfs           218M    0   218M   0% /dev/shm
tmpfs           5.0M    0   5.0M   0% /run/lock
tmpfs           218M    0   218M   0% /sys/fs/cgroup
/dev/loop1      56M   56M    0 100% /snap/core18/2284
/dev/loop2      62M   62M    0 100% /snap/core20/1361
/dev/loop4      68M   68M    0 100% /snap/lxd/21835
/dev/loop5      68M   68M    0 100% /snap/lxd/22526
/dev/loop6      44M   44M    0 100% /snap/snapd/14978
/dev/loop7      62M   62M    0 100% /snap/core20/1376
tmpfs           44M    0   44M   0% /run/user/0
/dev/loop3      44M   44M    0 100% /snap/snapd/15177
/dev/loop8      56M   56M    0 100% /snap/core18/2344
root@vps37738:~#
```

free – Este comando exibe a quantidade de memória livre e usada no sistema. “free -m” fornece a informação usando megabytes, que é provavelmente mais útil para computadores atuais.

```
root@vps37738:~# free
              total        used        free       shared  buff/cache   available
Mem:           445248       262056        30500          788       152692       163532
Swap:          2045948       429568       1616380
root@vps37738:~# free -m
              total        used        free       shared  buff/cache   available
Mem:              434         257          28           0          149         158
Swap:             1997         419        1578
root@vps37738:~#
```

lscpu: Este comando exibe informações sobre a arquitetura da CPU.

```

Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:            Little Endian
Address sizes:         46 bits physical, 48 bits virtual
CPU(s):                1
On-line CPU(s) list:   0
Thread(s) per core:    1
Core(s) per socket:    1
Socket(s):             1
NUMA node(s):          1
Vendor ID:             GenuineIntel
CPU family:            6
Model:                 79
Model name:            Intel(R) Xeon(R) CPU E5-2630 v4 @ 2.20GHz
Stepping:              1
CPU MHz:               2200.002
BogoMIPS:              4400.00
Hypervisor vendor:     Xen
Virtualization type:   full
L1d cache:             32 KiB
L1i cache:             32 KiB
L2 cache:              256 KiB
L3 cache:              25 MiB
NUMA node0 CPU(s):     0
Vulnerability Itlb multihit: KVM: Vulnerable
Vulnerability L1tf:      Mitigation; PTE Inversion
Vulnerability Mds:       Mitigation; Clear CPU buffers; SMT Host state unknown
Vulnerability Meltdown:  Mitigation; PTI
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Retpolines, IBPB conditional, IBRS_FW, STIBP disabled, RSB filling
Vulnerability Srbds:     Not affected
Vulnerability Tsx async abort: Mitigation; Clear CPU buffers; SMT Host state unknown
Flags:                  fpu vme de pse tsc msr pae mce cx8 apic sep mtr
                        r pge mca cmov pat pse36 clflush acpi mmx fxsr
                        sse sse2 ht syscall nx pdpe1gb rdtscp lm constant_tsc rep_good nopl cpuid pni pclmulqdq ssse3
                        fma cx16 pcid sse4_1 sse4_2 x2apic movbe popcnt
                        tsc_deadline_timer aes xsave avx f16c rdrand hypervisor lahf_lm abm 3dnowprefetch cpuid_fault
                        invpcid_single pti ssbd ibrs ibpb stibp fsgsba

```

Verificar a versão do SO:

uname: Este comando exibe várias informações sobre o sistema, incluindo o nome da máquina, nome e versão do Kernel e alguns outros detalhes. É muito útil para verificar qual é o Kernel usado por você.

- "uname -a" para exibir todas as informações.
- "uname -m" para exibir a arquitetura da máquina. (Equivalente ao "arch").
- "uname -r" para exibir o release do sistema operacional.

```
root@vps37738:~# uname -a
Linux vps37738 5.4.0-104-generic #118-Ubuntu SMP Wed Mar 2 19:02:41 UTC 2022 x86_64 x86_64 x86_64 GNU/Linux
```

Criar uma pasta com seu nome:

```
root@vps37738:~# mkdir marcos
```

Criar um arquivo texto com o conteúdo “olá mundo” dentro da pasta:

cat: a) Abra uma janela de terminal e crie o primeiro arquivo:

- cat >teste1.txt

b) O cursor se move para uma nova linha, em que você pode adicionar o texto desejado. Digite uma frase simples como:

Isso é um teste do arquivo #1.

c) Para sair do prompt e gravar as alterações no arquivo, segure a tecla Ctrl e pressione d

```
root@vps37738:~# cd marcos
root@vps37738:~/marcos# ls
root@vps37738:~/marcos# cat >olaMundo.txt
Olá Mundo!!!
root@vps37738:~/marcos# ls
olaMundo.txt
```

Criar uma pasta com seu sobrenome:

```
root@vps37738:~# mkdir Percinoto
root@vps37738:~#
```

Criar três arquivo de texto dentro da pasta teste:

```
root@vps37738:~# mkdir testes
root@vps37738:~# cd testes
root@vps37738:~/testes# touch arquivo1.txt arquivo2.txt arquivo3.txt
root@vps37738:~/testes#
```

Listar os arquivos dentro da pasta:

```
root@vps37738:~/testes# ls
arq1.txt  arq2.txt  arq3.txt  arquivo1.txt  arquivo2.txt  arquivo3.txt
```

Excluir os arquivos e a pasta criada:

Removendo arquivos:

```
root@vps37738:~/marcos/testes# ls
arq1.txt  arq2.txt  arq3.txt
root@vps37738:~/marcos/testes# rm arq1.txt arq2.txt arq3.txt
```

Removendo pastas:

```
root@vps37738:~# rm -r marcos
root@vps37738:~# ls
alissonLindo  Geremias.txt      maguinho.txt      OlaMundo.txt      Souza
Allan         joao              MAQUINHOOOOO.TXT Percinoto         teste
Bruno         Joao              mundo.txt          pontes            testecd.txt
cd            joaopedrovalente nagao              Rafaela           testes
DaniloKoba    LeoMariano        new                Rodrigues          teste.txt
felipe        LucasSantana      newdir            sd                thiago
gere-lucas.txt LucasSantana.txt   ola               snap              trashca
Geremias      lunna             olaMundo.txt      sources.list
root@vps37738:~#
```

Criando e configurando o servidor:

Definir nome de identificação do servidor:

- O nome que definimos foi, Grupo2.

Grupo2

vps38198.publiccloud.com.br (200.234.219.47)

Login com usuário administrador:

Usuário: root

Senha : grupo2##

Definir distribuição Linux será escolhida:

- Debian versão 11.0.

Definir forma de acesso ao servidor:

- Escolhemos o PuTTY como forma de acesso.

Criar um VPS para grupo de 4 alunos:

Grupo2

vps38198.publiccloud.com.br (200.234.219.47)

Cada integrante, deverá ter seu login e senha de acesso:

```
Adding user `marcospercinoto' ...
Adding new group `marcospercinoto' (1002) ...
Adding new user `marcospercinoto' (1002) with group `marcospercinoto' ...
Creating home directory `/home/marcospercinoto' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
```

O user root só deverá ser utilizado para administrador:

Usuário: marcospercinoto

Senha : marcospercinoto01##

Instalar Banco MySQL:

Comparação MySQL x MariaDB: MySQL é um sistema de gerenciamento de banco de dados relacional de código aberto (RDBMS) baseado em Structured Query Language (SQL). Ele é desenvolvido e gerenciado pela oracle corporation e inicialmente lançado em 23 de maio de 1995. É amplamente utilizado em muitas aplicações industriais de pequena e grande escala e é capaz de lidar com um grande volume de dados. Após a aquisição do MySQL pela Oracle, alguns problemas aconteceram com o uso do banco de dados e, portanto, o MariaDB foi desenvolvido. MariaDB é um sistema de gerenciamento de banco de dados relacional de código aberto (RDBMS) que é um substituto compatível para a tecnologia de banco de dados MySQL amplamente usada. Foi desenvolvido pela Fundação MariaDB e lançado inicialmente em 29 de outubro de 2009. MariaDB tem um número significativamente alto de novos recursos, o que o torna melhor em termos de desempenho e orientação ao usuário do que o MySQL.

Instalar o Banco de Dados do MySQL:

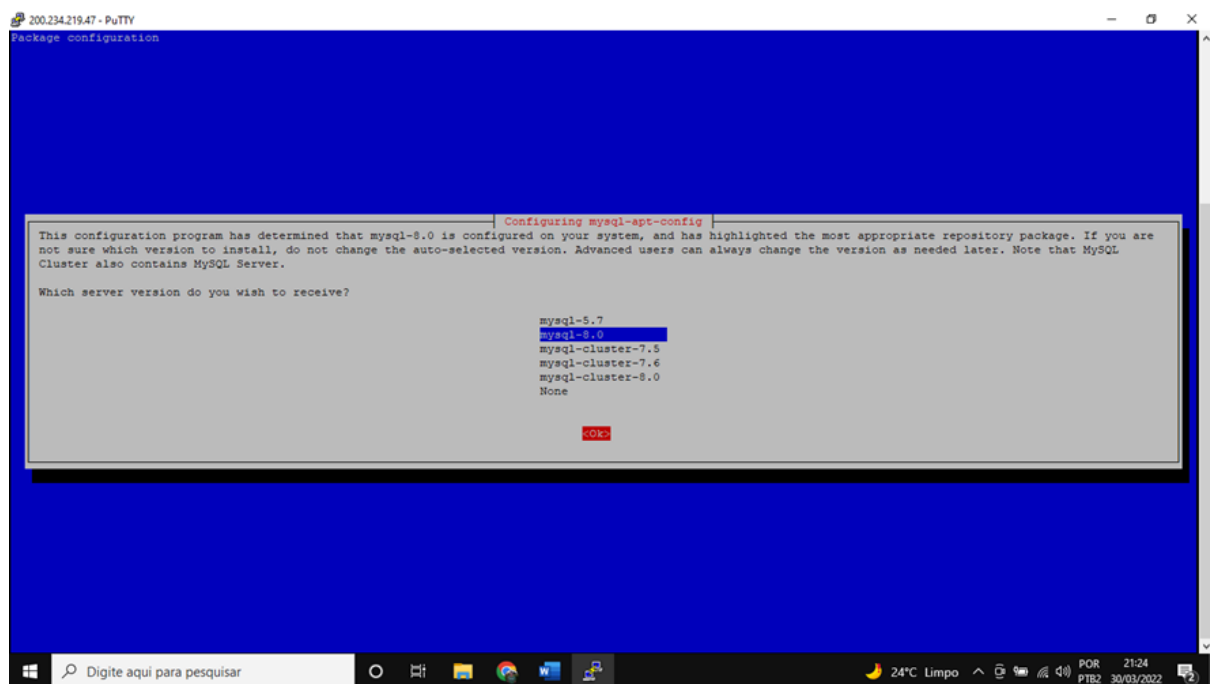
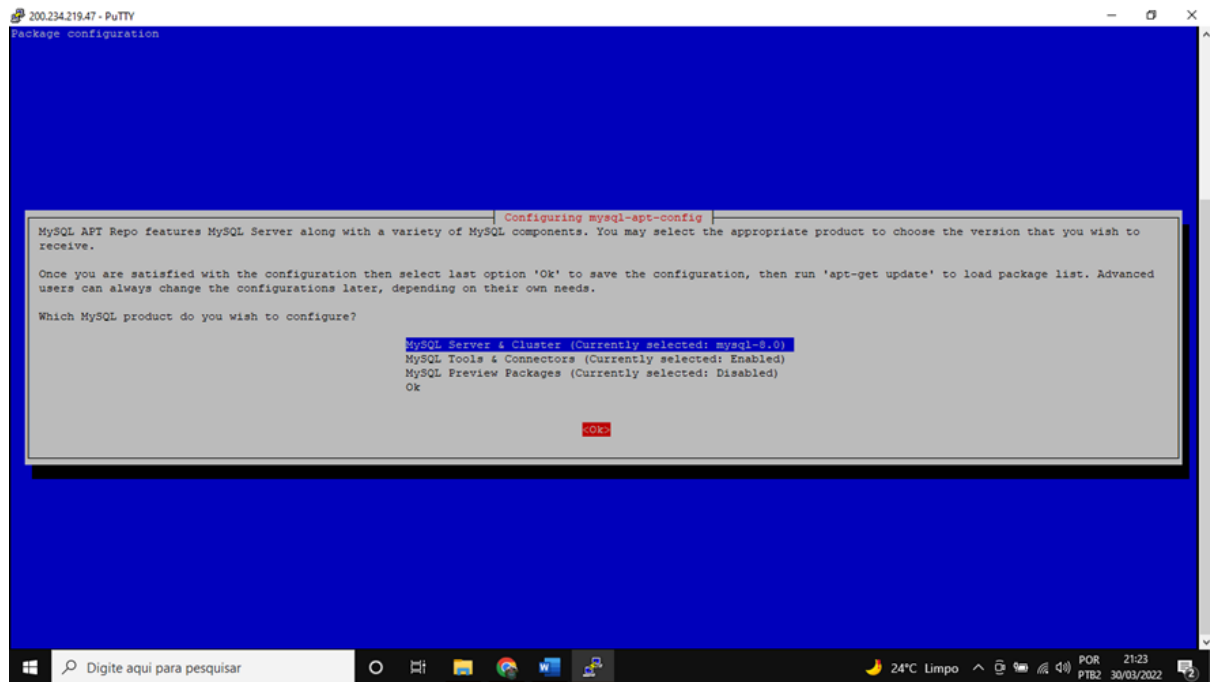
```
200.234.219.47 - PuTTY
root@vps38198:~# sudo apt update
Hit:1 http://debian.mirror.locaweb.com.br/debian bullseye InRelease
Hit:2 http://debian.mirror.locaweb.com.br/debian-security bullseye-security InRelease
Hit:3 http://debian.mirror.locaweb.com.br/debian bullseye-updates InRelease
Hit:4 http://debian.mirror.locaweb.com.br/debian bullseye-backports InRelease
Get:5 http://repo.mysql.com/apt/debian buster InRelease [22.1 kB]
Err:5 http://repo.mysql.com/apt/debian buster InRelease
  The following signatures couldn't be verified because the public key is not available: NO_FUBKEY 467B942D3A79BD29
Reading package lists... Done
W: GPG error: http://repo.mysql.com/apt/debian buster InRelease: The following signatures couldn't be verified because the public key is not available: NO_FUBKEY 467B942D3A79BD29
E: The repository 'http://repo.mysql.com/apt/debian buster InRelease' is not signed.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
root@vps38198:~#
```

```
200.234.219.47 - PuTTY
root@vps38198:~# wget https://dev.mysql.com/get/mysql-apt-config_0.8.22-1_all.deb
--2022-03-30 21:23:10-- https://dev.mysql.com/get/mysql-apt-config_0.8.22-1_all.deb
Resolving dev.mysql.com (dev.mysql.com)... 137.254.60.11
Connecting to dev.mysql.com (dev.mysql.com)|137.254.60.11|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://repo.mysql.com/mysql-apt-config_0.8.22-1_all.deb [following]
--2022-03-30 21:23:11-- https://repo.mysql.com/mysql-apt-config_0.8.22-1_all.deb
Resolving repo.mysql.com (repo.mysql.com)... 2.23.148.236
Connecting to repo.mysql.com (repo.mysql.com)|2.23.148.236|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 18012 (18K) [application/x-debian-package]
Saving to: 'mysql-apt-config_0.8.22-1_all.deb'

mysql-apt-config_0.8.22-1_all.deb 100%[=====] 17.59K --.-KB/s in 0s

2022-03-30 21:23:11 (99.7 MB/s) - 'mysql-apt-config_0.8.22-1_all.deb' saved [18012/18012]

root@vps38198:~#
```



```
200.234.219.47 - PuTTY
root@vps38198:~# sudo apt install ./mysql-apt-config_0.8.22-1_all.deb
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Note, selecting 'mysql-apt-config' instead of './mysql-apt-config_0.8.22-1_all.deb'
The following package was automatically installed and is no longer required:
  linux-image-5.10.0-10-amd64
Use 'sudo apt autoremove' to remove it.
The following packages will be upgraded:
  mysql-apt-config
1 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
Need to get 0 B/18.0 kB of archives.
After this operation, 0 B of additional disk space will be used.
Get:1 /root/mysql-apt-config_0.8.22-1_all.deb mysql-apt-config all 0.8.22-1 [18.0 kB]
Reading changelogs... Done
Preconfiguring packages ...
(Reading database ... 53833 files and directories currently installed.)
Preparing to unpack .../mysql-apt-config_0.8.22-1_all.deb ...
Unpacking mysql-apt-config (0.8.22-1) over (0.8.13-1) ...
Setting up mysql-apt-config (0.8.22-1) ...
Warning: apt-key should not be used in scripts (called from postinst maintainer script of the package mysql-apt-config)
Warning: apt-key is deprecated. Manage keyring files in trusted.gpg.d instead (see apt-key(8)).
OK
# Download is performed unsandboxed as root as file '/root/mysql-apt-config_0.8.22-1_all.deb' couldn't be accessed by user '_apt'. - pkgAcquire::Run (13: Permission denied)
root@vps38198:~# service mysql status
Unit mysql.service could not be found.
root@vps38198:~# sudo apt update
Hit:1 http://debian.mirror.locaweb.com.br/debian bullseye InRelease
Hit:2 http://debian.mirror.locaweb.com.br/debian-security bullseye-security InRelease
Get:3 http://debian.mirror.locaweb.com.br/debian bullseye-updates InRelease [39.4 kB]
Get:4 http://debian.mirror.locaweb.com.br/debian bullseye-backports InRelease [44.2 kB]
Get:5 http://repo.mysql.com/apt/debian buster InRelease [22.1 kB]
Get:6 http://debian.mirror.locaweb.com.br/debian bullseye-backports/main amd64 Packages.diff/Index [63.3 kB]
Get:7 http://repo.mysql.com/apt/debian buster/mysql-8.0 amd64 Packages T-2022-03-30-2017.13-F-2022-03-30-2017.13.pdiff [822 B]
Get:8 http://repo.mysql.com/apt/debian buster/mysql-8.0 Sources [941 B]
Get:9 http://repo.mysql.com/apt/debian buster/mysql-apt-config amd64 Packages [567 B]
Get:10 http://repo.mysql.com/apt/debian buster/mysql-8.0 amd64 Packages [8,421 B]
Get:11 http://repo.mysql.com/apt/debian buster/mysql-tools amd64 Packages [7,070 B]
Fetched 187 kB in 4s (45.9 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
```

Criar um usuário para cada integrante do grupo:

```
200.234.219.47 - PuTTY
root@vps38198:~# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 10
Server version: 8.0.28 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

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

mysql>
```



```
200.234.219.47 - PuTTY
root@vps381981:~# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 11
Server version: 8.0.28 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

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

mysql> CREATE USER 'gabriel.santos'@'localhost' IDENTIFIED BY 'Gabriel@11022001';
Query OK, 0 rows affected (0.08 sec)

mysql> CREATE USER 'daniilo.koba'@'localhost' IDENTIFIED BY 'grupo2##';
ERROR 1819 (HY000): Your password does not satisfy the current policy requirements
mysql> CREATE USER 'daniilo.koba'@'localhost' IDENTIFIED BY 'Grupo2##';
Query OK, 0 rows affected (0.01 sec)

mysql> CREATE USER 'marcos.percinoto'@'localhost' IDENTIFIED BY 'Marcospercinoto01##';
Query OK, 0 rows affected (0.02 sec)

mysql>
```

```
200.234.219.47 - PuTTY
root@vps381981:~# mysql -u gabriel.santos -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 13
Server version: 8.0.28 MySQL Community Server - GPL

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owners.

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

mysql>
```

```
200.234.219.47 - PuTTY
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 20
Server version: 8.0.28 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

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

mysql> GRANT ALL PRIVILEGES ON * . * TO 'newuser'@'localhost';
ERROR 1410 (42000): You are not allowed to create a user with GRANT
mysql> GRANT ALL PRIVILEGES ON * . * TO 'newuser'@'localhost';
ERROR 1410 (42000): You are not allowed to create a user with GRANT
mysql> ^C
mysql> GRANT ALL PRIVILEGES ON * . * TO 'newuser'@'localhost';
ERROR 1410 (42000): You are not allowed to create a user with GRANT
mysql> GRANT ALL PRIVILEGES ON * . * TO 'marcos.percinoto'@'localhost';
Query OK, 0 rows affected (0.01 sec)

mysql> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.01 sec)

mysql> create database db_gabriel_clientes;
Query OK, 1 row affected (0.05 sec)

mysql> create database db_marcos_clientes;
Query OK, 1 row affected (0.01 sec)

mysql> create database db_danilo_clientes;
Query OK, 1 row affected (0.01 sec)

mysql> GRANT ALL PRIVILEGES ON db_gabriel_clientes.* TO 'gabriel.santos'@'localhost';
Query OK, 0 rows affected (0.01 sec)

mysql> GRANT ALL PRIVILEGES ON db_marcos_clientes.* TO 'marcos.percinoto'@'localhost';
Query OK, 0 rows affected (0.03 sec)

mysql> GRANT ALL PRIVILEGES ON db_danilo_clientes.* TO 'danilo.koba'@'localhost';
Query OK, 0 rows affected (0.02 sec)

mysql>
```

Cada integrante deverá criar sua tabela Cliente x Atributo:

```
mysql> create table Cidade( codCidade int(4) auto_increment, nomeCidade varchar(50) not null, CEP
varchar(15) not null, primary key (codCidade));
Query OK, 0 rows affected, 1 warning (0.07 sec)

mysql> create table Cliente( codCli int(4) auto_increment, nomeCli varchar(50)
not null, email varchar(50), telefone varchar(15), primary key (codCli));
Query OK, 0 rows affected, 1 warning (0.21 sec)

mysql> alter table Cliente add codCidade int(4);
Query OK, 0 rows affected, 1 warning (0.07 sec)
Records: 0 Duplicates: 0 Warnings: 1

mysql> alter table Cliente add constraint fk_cliente_cidade foreign key(codCidade) references Cida
de(codCidade);
Query OK, 0 rows affected (0.31 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

Inserir registros na tabela cliente:

```
mysql> insert into Cidade(nomeCidade, CEP) values('Mirante do Paranapanema', '19260-000');
Query OK, 1 row affected (0.01 sec)

mysql> select * from Cidade;
+-----+-----+-----+
| codCidade | nomeCidade          | CEP      |
+-----+-----+-----+
| 1 | Mirante do Paranapanema | 19260-000 |
+-----+-----+-----+
```

```
mysql> insert into Cliente (nomeCli, email, telefone, CodCidade) values('Marcos', 'marcos@toledo.br', '998025581', 1);
Query OK, 1 row affected (0.02 sec)
```

```
mysql> select * from Cliente;
+-----+-----+-----+-----+-----+
| codCli | nomeCli | email          | telefone | codCidade |
+-----+-----+-----+-----+-----+
|      2 | Marcos  | marcos@toledo.br | 998025581 |          1 |
+-----+-----+-----+-----+-----+
1 row in set (0.01 sec)
```

Teste de integridade:

```
mysql> delete from Cidade;
ERROR 1451 (23000): Cannot delete or update a parent row: a foreign key constraint fails (`db_marcos_clientes`.`Cliente`, CONSTRAINT `fk_cliente_cidade` FOREIGN KEY (`codCidade`) REFERENCES `Cidade` (`codCidade`))
```

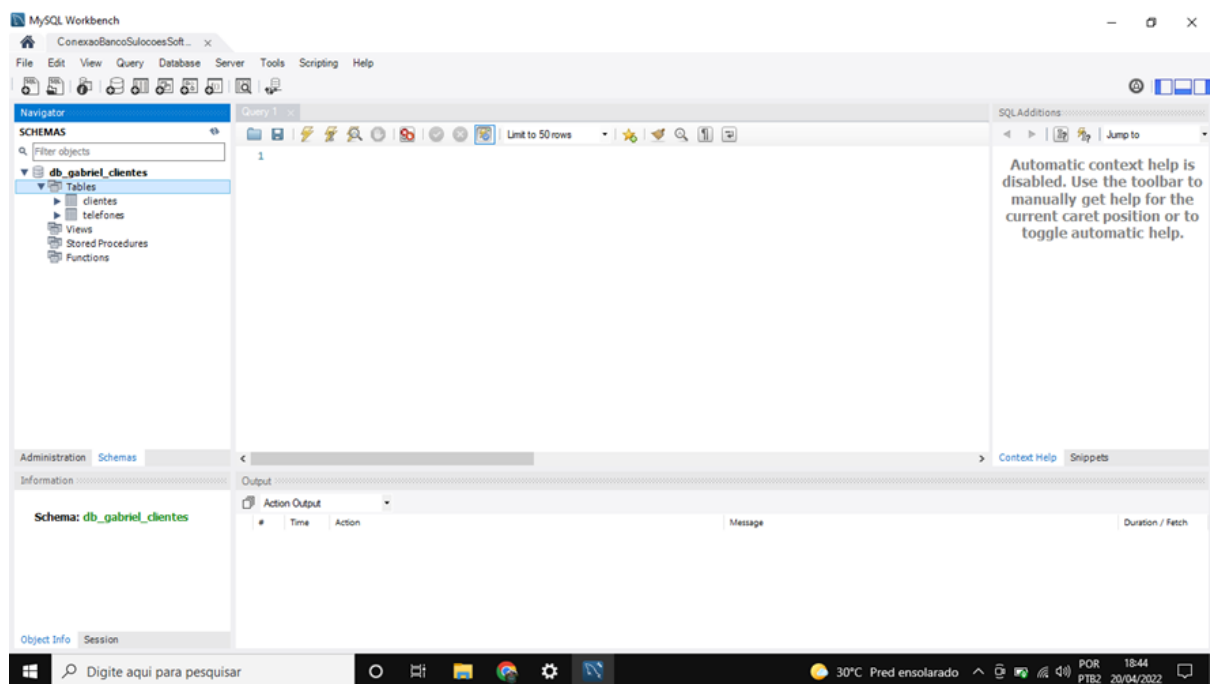
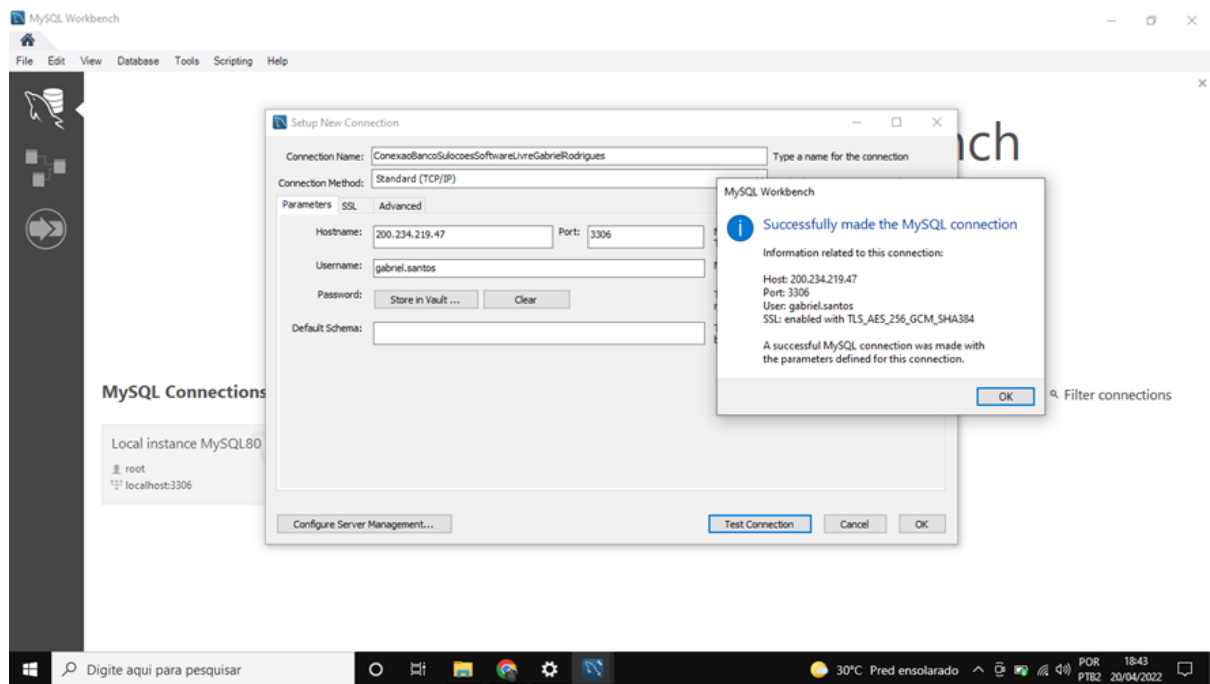
```
mysql> insert into Cliente (nomeCli, email, telefone, CodCidade) values('Marcos', 'marcos@toledo.br', '998025581', 10);
ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails (`db_marcos_clientes`.`Cliente`, CONSTRAINT `fk_cliente_cidade` FOREIGN KEY (`codCidade`) REFERENCES `Cidade` (`codCidade`))
```

```
mysql> insert into Cidade(codCidade, nomeCidade, CEP) values(1, 'Mirante do Paranapanema', '19260-000');
ERROR 1062 (23000): Duplicate entry '1' for key 'Cidade.PRIMARY'
mysql>
```

INNER JOIN:

```
mysql> select nomeCli, telefone, Cidade.nomeCidade from Cliente inner join Cidade on Cliente.codCidade = Cidade.codCidade;
+-----+-----+-----+
| nomeCli | telefone | nomeCidade |
+-----+-----+-----+
| Marcos  | 998025581 | Mirante do Paranapanema |
| Danilo  | 9968545226 | Presidente Prudente |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

Liberar acesso remoto ao MySQL para cada usuário:



Instalar o Apache:

```
200.234.219.47 - PuTTY
root@vps38198:~# sudo apt update -y
Hit:1 http://deb.debian.mirror.locaweb.com.br/debian bullseye InRelease
Hit:2 http://deb.debian.mirror.locaweb.com.br/debian-security bullseye-security InRelease
Hit:3 http://deb.debian.mirror.locaweb.com.br/debian bullseye-updates InRelease
Hit:4 http://deb.debian.mirror.locaweb.com.br/debian bullseye-backports InRelease
Hit:5 http://repo.mysql.com/apt/debian buster InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
1 package can be upgraded. Run 'apt list --upgradable' to see it.
root@vps38198:~# sudo apt install apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  linux-image-5.10.0-10-amd64
Use 'sudo apt autoremove' to remove it.
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap libbrotli1 libjansson4 liblua5.3-0 ssl-cert
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap libbrotli1 libjansson4 liblua5.3-0 ssl-cert
0 upgraded, 12 newly installed, 0 to remove and 1 not upgraded.
Need to get 2,863 kB of archives.
After this operation, 9,300 kB of additional disk space will be used.
Get:1 http://deb.debian.mirror.locaweb.com.br/debian bullseye/main amd64 libapr1 amd64 1.7.0-6+deb11u1 [106 kB]
Get:2 http://deb.debian.mirror.locaweb.com.br/debian bullseye/main amd64 libaprutil1 amd64 1.6.1-5 [92.1 kB]
Get:3 http://deb.debian.mirror.locaweb.com.br/debian bullseye/main amd64 libaprutil1-dbd-sqlite3 amd64 1.6.1-5 [18.8 kB]
Get:4 http://deb.debian.mirror.locaweb.com.br/debian bullseye/main amd64 libaprutil1-ldap amd64 1.6.1-5 [17.0 kB]
Get:5 http://deb.debian.mirror.locaweb.com.br/debian bullseye/main amd64 libbrotli1 amd64 1.0.7-2+deb11u1 [341 kB]
Get:6 http://deb.debian.mirror.locaweb.com.br/debian bullseye/main amd64 libjansson4 amd64 2.13.1-1 [39.7 kB]
Get:7 http://deb.debian.mirror.locaweb.com.br/debian bullseye/main amd64 liblua5.3-0 amd64 5.3.3-1+deb11u1 [120 kB]
Get:8 http://deb.debian.mirror.locaweb.com.br/debian bullseye/main amd64 apache2-bin amd64 2.4.53-1+deb11u1 [1,415 kB]
Get:9 http://deb.debian.mirror.locaweb.com.br/debian bullseye/main amd64 apache2-data all 2.4.53-1+deb11u1 [140 kB]
Get:10 http://deb.debian.mirror.locaweb.com.br/debian bullseye/main amd64 apache2-utils amd64 2.4.53-1+deb11u1 [259 kB]
Get:11 http://deb.debian.mirror.locaweb.com.br/debian bullseye/main amd64 apache2 amd64 2.4.53-1+deb11u1 [273 kB]
Get:12 http://deb.debian.mirror.locaweb.com.br/debian bullseye/main amd64 ssl-cert all 1.1.0+mmul [21.0 kB]
Fetched 2,863 kB in 0s (7,235 kB/s)
Preconfiguring packages ...
Selecting previously unselected package libapr1:amd64.
(Reading database ... 54268 files and directories currently installed.)
Preparing to unpack .../00-libapr1_1.7.0-6+deb11u1_amd64.deb ...
Unpacking libapr1:amd64 (1.7.0-6+deb11u1) ...
Selecting previously unselected package libaprutil1:amd64.
Preparing to unpack .../01-libaprutil1_1.6.1-5_amd64.deb ...
Unpacking libaprutil1:amd64 (1.6.1-5) ...
Selecting previously unselected package libaprutil1-dbd-sqlite3:amd64.
Preparing to unpack .../02-libaprutil1-dbd-sqlite3_1.6.1-5_amd64.deb ...
Unpacking libaprutil1-dbd-sqlite3:amd64 (1.6.1-5) ...
Selecting previously unselected package libaprutil1-ldap:amd64.
Preparing to unpack .../03-libaprutil1-ldap_1.6.1-5_amd64.deb ...
Unpacking libaprutil1-ldap:amd64 (1.6.1-5) ...
Preparing to unpack .../04-apache2-bin_2.4.53-1+deb11u1_amd64.deb ...
Unpacking apache2-bin (2.4.53-1+deb11u1) ...
Preparing to unpack .../05-apache2-data_2.4.53-1+deb11u1_all.deb ...
Unpacking apache2-data (2.4.53-1+deb11u1) ...
Preparing to unpack .../06-apache2-utils_2.4.53-1+deb11u1_amd64.deb ...
Unpacking apache2-utils (2.4.53-1+deb11u1) ...
Selecting previously unselected package apache2.
Preparing to unpack .../07-apache2_2.4.53-1+deb11u1_amd64.deb ...
Unpacking apache2 (2.4.53-1+deb11u1) ...
Selecting previously unselected package ssl-cert.
Preparing to unpack .../11-ssl-cert_1.1.0+mmul_all.deb ...
Unpacking ssl-cert (1.1.0+mmul) ...
Setting up libapr1:amd64 (1.7.0-6+deb11u1) ...
Setting up libjansson4:amd64 (2.13.1-1) ...
Setting up ssl-cert (1.1.0+mmul) ...
Setting up liblua5.3-0:amd64 (5.3.3-1+deb11u1) ...
Setting up libbrotli1:amd64 (1.0.7-2+deb11u1) ...
Setting up libaprutil1:amd64 (1.6.1-5) ...
Setting up libaprutil1-dbd-sqlite3:amd64 (1.6.1-5) ...
Setting up libaprutil1-ldap:amd64 (1.6.1-5) ...
Setting up apache2-bin (2.4.53-1+deb11u1) ...
Setting up apache2-data (2.4.53-1+deb11u1) ...
Setting up apache2-utils (2.4.53-1+deb11u1) ...
Setting up apache2 (2.4.53-1+deb11u1) ...
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 libc-bin (2.31-13+deb11u3) ...
root@vps38198:~#
```

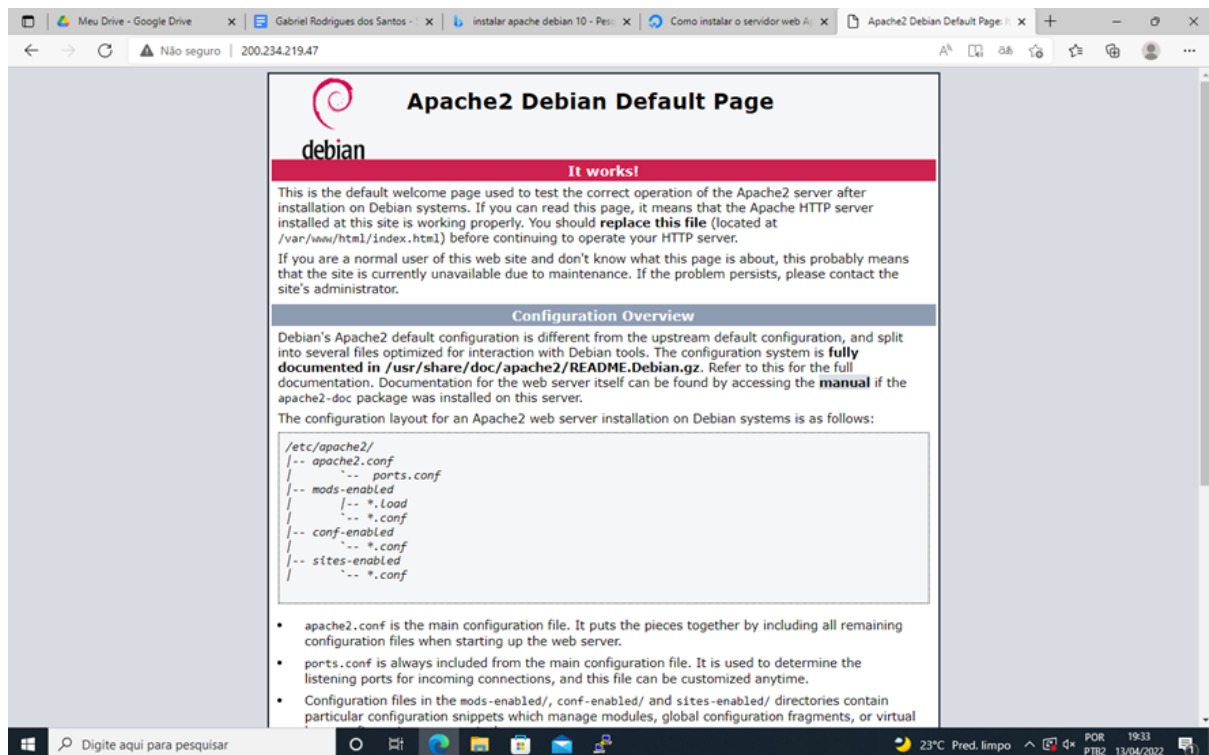
```
200.234.219.47 - PuTTY
Preparing to unpack .../09-apache2-utils_2.4.53-1+deb11u1_amd64.deb ...
Unpacking apache2-utils (2.4.53-1+deb11u1) ...
Selecting previously unselected package apache2.
Preparing to unpack .../10-apache2_2.4.53-1+deb11u1_amd64.deb ...
Unpacking apache2 (2.4.53-1+deb11u1) ...
Selecting previously unselected package ssl-cert.
Preparing to unpack .../11-ssl-cert_1.1.0+mmul_all.deb ...
Unpacking ssl-cert (1.1.0+mmul) ...
Setting up libapr1:amd64 (1.7.0-6+deb11u1) ...
Setting up libjansson4:amd64 (2.13.1-1) ...
Setting up ssl-cert (1.1.0+mmul) ...
Setting up liblua5.3-0:amd64 (5.3.3-1+deb11u1) ...
Setting up libbrotli1:amd64 (1.0.7-2+deb11u1) ...
Setting up libaprutil1:amd64 (1.6.1-5) ...
Setting up libaprutil1-dbd-sqlite3:amd64 (1.6.1-5) ...
Setting up libaprutil1-ldap:amd64 (1.6.1-5) ...
Setting up apache2-bin (2.4.53-1+deb11u1) ...
Setting up apache2-data (2.4.53-1+deb11u1) ...
Setting up apache2-utils (2.4.53-1+deb11u1) ...
Setting up apache2 (2.4.53-1+deb11u1) ...
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 libc-bin (2.31-13+deb11u3) ...
root@vps38198:~#
```

```
200.234.219.47 - PuTTY
root@vps38198:~# sudo systemctl status apache2
* apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
   Active: active (running) since Wed 2022-04-13 19:26:36 -03; 1min 1s ago
     Docs: https://httpd.apache.org/docs/2.4/
    Main PID: 314809 (apache2)
      Tasks: 55 (limit: 475)
    Memory: 5.5M
       CPU: 53ms
    CGroup: /system.slice/apache2.service
            └─314809 /usr/sbin/apache2 -k start
              └─314811 /usr/sbin/apache2 -k start
                └─314812 /usr/sbin/apache2 -k start

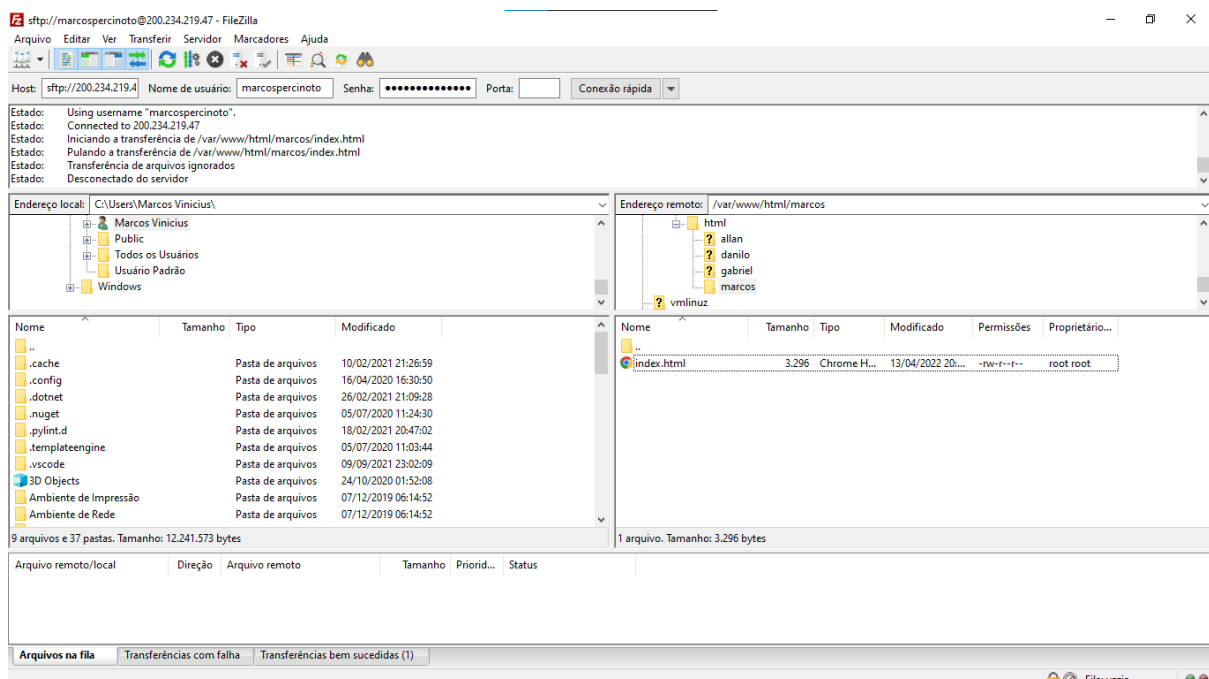
Apr 13 19:26:36 vps38198 systemd[1]: Starting The Apache HTTP Server...
Apr 13 19:26:36 vps38198 systemd[1]: Started The Apache HTTP Server.
root@vps38198:~#
```

```
200.234.219.47 - PuTTY
root@vps38198:~# sudo systemctl status apache2
* apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
   Active: active (running) since Wed 2022-04-13 19:26:36 -03; 1min 1s ago
     Docs: https://httpd.apache.org/docs/2.4/
    Main PID: 314809 (apache2)
      Tasks: 55 (limit: 475)
    Memory: 5.5M
       CPU: 53ms
    CGroup: /system.slice/apache2.service
            └─314809 /usr/sbin/apache2 -k start
              └─314811 /usr/sbin/apache2 -k start
                └─314812 /usr/sbin/apache2 -k start

Apr 13 19:26:36 vps38198 systemd[1]: Starting The Apache HTTP Server...
Apr 13 19:26:36 vps38198 systemd[1]: Started The Apache HTTP Server.
root@vps38198:~# sudo systemctl enable apache2
Synchronizing state of apache2.service with SysV service script with /lib/systemd/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable apache2
root@vps38198:~#
```



Acessando minhas pastas pelo FileZilla:



Concedendo permissões a meu usuário:

```
root@vps38198:~# chmod u+xrw,g-wrx,o-rwx /var/www/html/marcos
root@vps38198:~# chown marcospercinoto /var/www/html/marcos
```


Instalar PHP e módulos:

Atualizando pacote para instalar php:

```
root@vps38198:~# sudo apt-get update
Hit:1 http://debian.mirror.locaweb.com.br/debian bullseye InRelease
Hit:2 http://debian.mirror.locaweb.com.br/debian-security bullseye-security InRelease
Hit:3 http://debian.mirror.locaweb.com.br/debian bullseye-updates InRelease
Hit:4 http://debian.mirror.locaweb.com.br/debian bullseye-backports InRelease
Hit:5 http://repo.mysql.com/apt/debian buster InRelease
Reading package lists... Done
```

Instalando php:

```
root@vps38198:~# sudo apt install php
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  linux-image-5.10.0-10-amd64
Use 'sudo apt autoremove' to remove it.
The following additional packages will be installed:
  libapache2-mod-php7.4 libsodium23 php-common php7.4 php7.4-cli php7.4-common
  php7.4-json php7.4-opcache php7.4-readline
Suggested packages:
  php-pear
The following NEW packages will be installed:
  libapache2-mod-php7.4 libsodium23 php php-common php7.4 php7.4-cli
  php7.4-common php7.4-json php7.4-opcache php7.4-readline
0 upgraded, 10 newly installed, 0 to remove and 4 not upgraded.
Need to get 4,288 kB of archives.
After this operation, 18.4 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://debian.mirror.locaweb.com.br/debian bullseye/main amd64 php-common
all 2:76 [15.6 kB]
Get:2 http://debian.mirror.locaweb.com.br/debian bullseye/main amd64 php7.4-comm
on amd64 7.4.28-1+deb11u1 [1,023 kB]
Get:3 http://debian.mirror.locaweb.com.br/debian bullseye/main amd64 php7.4-json
amd64 7.4.28-1+deb11u1 [19.3 kB]
Get:4 http://debian.mirror.locaweb.com.br/debian bullseye/main amd64 php7.4-opca
che amd64 7.4.28-1+deb11u1 [198 kB]
Get:5 http://debian.mirror.locaweb.com.br/debian bullseye/main amd64 php7.4-read
line amd64 7.4.28-1+deb11u1 [12.3 kB]
Get:6 http://debian.mirror.locaweb.com.br/debian bullseye/main amd64 libsodium23
amd64 1.0.18-1 [161 kB]
Get:7 http://debian.mirror.locaweb.com.br/debian bullseye/main amd64 php7.4-cli
amd64 7.4.28-1+deb11u1 [1,428 kB]
```

Instalar módulo apache do PHP:

```
root@vps38198:~# sudo apt install libapache2-mod-php
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  linux-image-5.10.0-10-amd64
Use 'sudo apt autoremove' to remove it.
The following NEW packages will be installed:
  libapache2-mod-php
0 upgraded, 1 newly installed, 0 to remove and 4 not upgraded.
Need to get 6,460 B of archives.
After this operation, 17.4 kB of additional disk space will be used.
Get:1 http://debian.mirror.locaweb.com.br/debian bullseye/main amd64 libapache2-mod-php all 2:7.4+76 [6,460 B]
Fetched 6,460 B in 0s (292 kB/s)
Selecting previously unselected package libapache2-mod-php.
(Reading database ... 55157 files and directories currently installed.)
Preparing to unpack .../libapache2-mod-php_2%3a7.4+76_all.deb ...
Unpacking libapache2-mod-php (2:7.4+76) ...
Setting up libapache2-mod-php (2:7.4+76) ...
```

Instalar módulo mysql do PHP:

```
root@vps38198:~# sudo apt install php-mysql
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  linux-image-5.10.0-10-amd64
Use 'sudo apt autoremove' to remove it.
The following additional packages will be installed:
  php7.4-mysql
The following NEW packages will be installed:
  php-mysql php7.4-mysql
0 upgraded, 2 newly installed, 0 to remove and 4 not upgraded.
Need to get 127 kB of archives.
After this operation, 483 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://debian.mirror.locaweb.com.br/debian bullseye/main amd64 php7.4-mysql amd64 7.4.28-1+deb11u1 [121 kB]
Get:2 http://debian.mirror.locaweb.com.br/debian bullseye/main amd64 php-mysql all 2:7.4+76 [6,360 B]
Fetched 127 kB in 0s (2,522 kB/s)
```