



INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA DO CEARÁ
CAMPUS FORTALEZA
TELEMÁTICA

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Disciplina: Administração de serviços de rede (01.302.25)

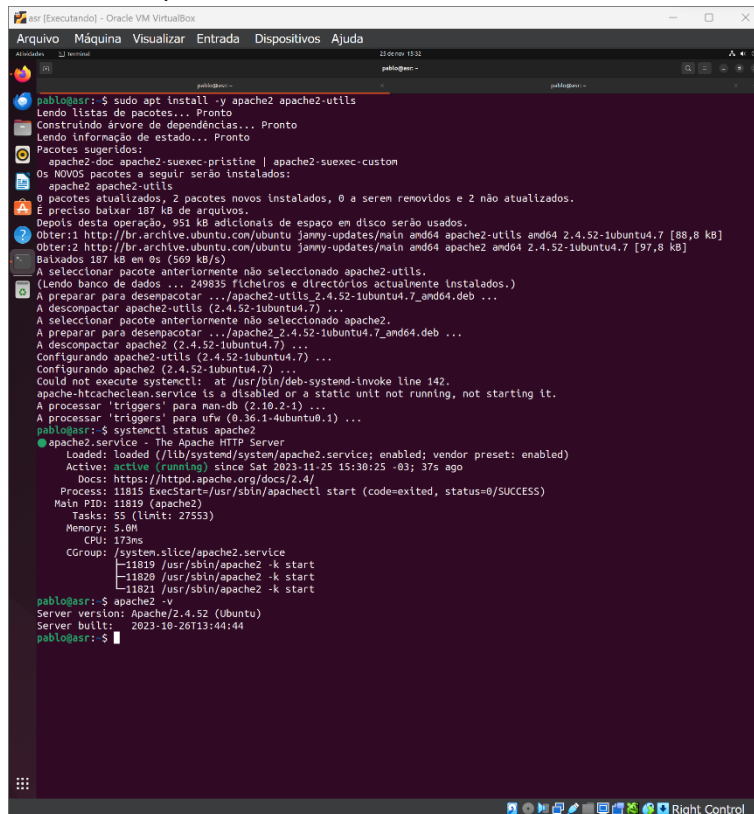
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Avaliação 4 - LAMP

1. Instalar o LAMP (Linux/Apache/MariaDB-MySQL/PHP) conforme o tutorial definido em <https://ubunlog.com/pt/lamp-instala-apache-mariadb-php-ubuntu-20-04/> Evidenciar com *prints* das etapas de conclusão do Apache, do banco de dados e do PHP.

a. Instalar o Apache.



```
pablo@paul:~$ sudo apt install -y apache2 apache2-utils
Lendo listas de pacotes... Pronto
Construindo árvore de dependências... Pronto
Lendo informações de estado... Pronto
Pacotes sugeridos:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom
Os NOVOS pacotes a seguir serão instalados:
  apache2 apache2-utils
Os pacotes atualizados, 2 pacotes novos instalados, 0 a serem removidos e 2 não atualizados.
É preciso baixar 187 kB de arquivos.
Depois desta operação, 951 kB adicionais de espaço em disco serão usados.
Obter:1 http://br.archive.ubuntu.com/ubuntu jammy-updates/main amd64 apache2-utils amd64 2.4.52-1ubuntu4.7 [88,8 kB]
Obter:2 http://br.archive.ubuntu.com/ubuntu jammy-updates/main amd64 apache2 amd64 2.4.52-1ubuntu4.7 [97,8 kB]
Baixados 187 kB em 0s (569 kB/s)
A selecionar pacote anteriormente não selecionado apache2-utils.
(Lendo banco de dados ... 249835 ficheiros e directorios actualmente instalados.)
A preparar para descompactar .../apache2-utils_2.4.52-1ubuntu4.7_amd64.deb ...
A descompactar apache2-utils (2.4.52-1ubuntu4.7) ...
A selecionar pacote anteriormente não selecionado apache2.
A preparar para descompactar .../apache2_2.4.52-1ubuntu4.7_amd64.deb ...
A descompactar apache2 (2.4.52-1ubuntu4.7) ...
Configurando apache2-utils (2.4.52-1ubuntu4.7) ...
Configurando apache2 (2.4.52-1ubuntu4.7) ...
Could not execute systemctl: at /usr/bin/deb-systemd-invoke line 142.
apache2.service is a disabled or a static unit not running, not starting it.
A processar 'triggers' para man-db (2.10.2-1) ...
A processar 'triggers' para ufw (0.36.1-4ubuntu0.1) ...
pablo@paul:~$ systemctl status apache2
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
   Active: active (running) since Sat 2023-11-25 15:30:25 -03; 37s ago
     Docs: https://httpd.apache.org/docs/2.4/
   Process: 11815 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
   Main PID: 11819 (apache2)
     Tasks: 55 (limit: 27553)
    Memory: 5.0M
       CPU: 173ms
   CGroup: /system.slice/apache2.service
           └─11819 /usr/sbin/apache2 -k start
             └─11820 /usr/sbin/apache2 -k start
               └─11821 /usr/sbin/apache2 -k start

pablo@paul:~$ apache2 -v
Server version: Apache/2.4.52 (Ubuntu)
Server built:   2023-10-26T13:44:44
pablo@paul:~$
```

Figura 1. Instalação do Apache.

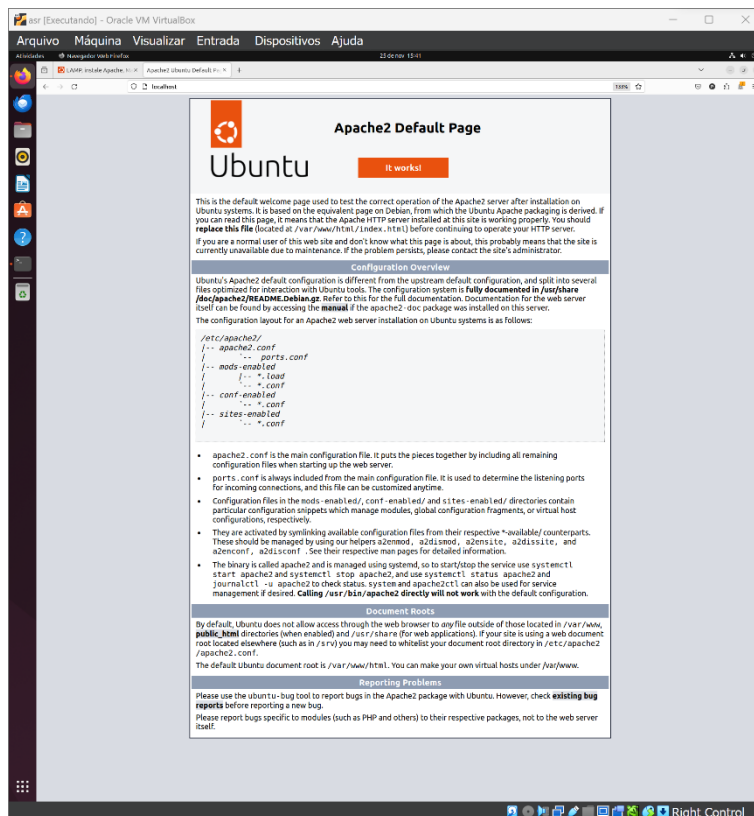
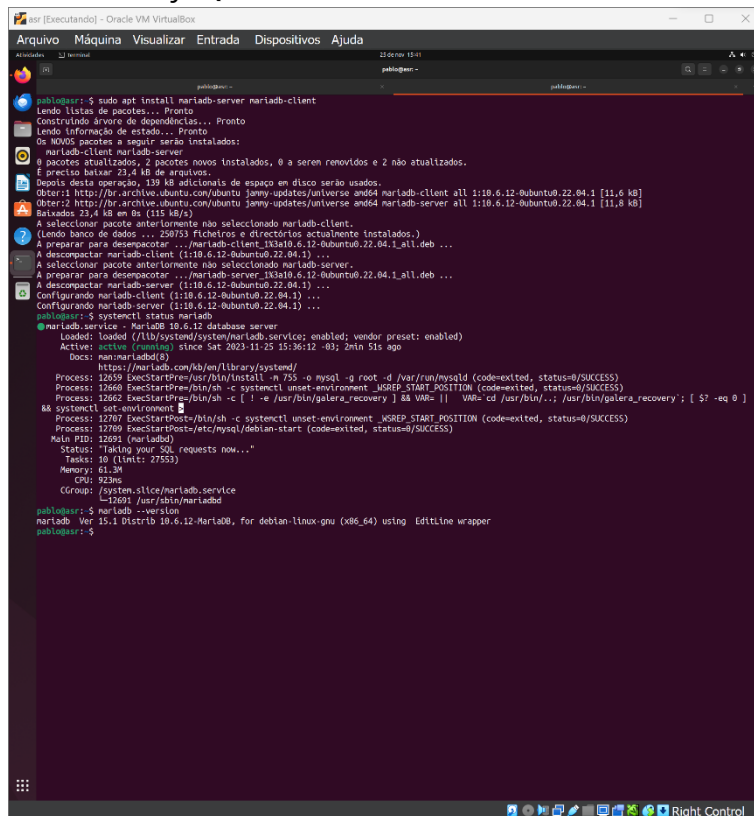


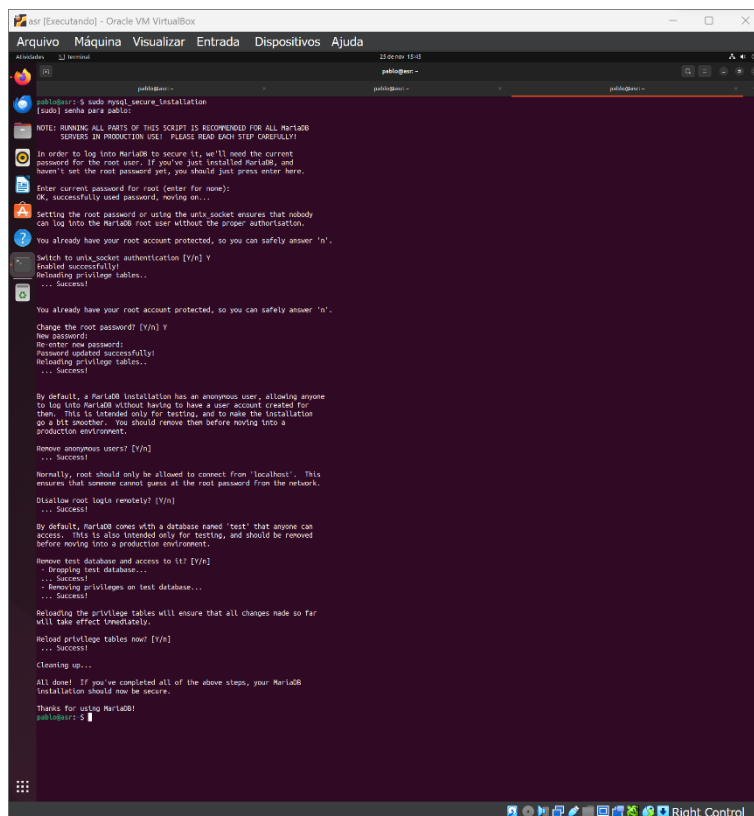
Figura 2. Verificação do Apache no navegador.

b. Instalar o MySQL.



```
pablo@paul:~$ sudo apt install mariadb-server mariadb-client
Lendo listas de pacotes... Pronto
Construindo árvore de dependências... Pronto
Lendo informação de estado... Pronto
Os NOVOS pacotes a seguir serão instalados:
  mariadb-client mariadb-server
0 pacotes atualizados, 2 pacotes novos instalados, 0 a serem renovados e 2 não atualizados.
O espaço necessário é de 23,4 kB de arquivos.
Depois desta operação, 139 kB adicionais de espaço em disco serão usados.
Obter1: http://br.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 mariadb-client all 1:10.6.12-0ubuntu0.22.04.1 [11,6 kB]
Obter2: http://br.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 mariadb-server all 1:10.6.12-0ubuntu0.22.04.1 [11,8 kB]
Baixados 23,4 kB em 0s (115 kB/s)
A selecionar pacote anteriormente não selecionado mariadb-client.
(Lendo banco de dados ... 28023 ficheiros e directórios actualmente instalados.)
A preparar para desempacotar .../mariadb-client_10.6.12-0ubuntu0.22.04.1_all.deb ...
A descompactar mariadb-client (1:10.6.12-0ubuntu0.22.04.1) ...
A selecionar pacote anteriormente não selecionado mariadb-server.
A preparar para desempacotar .../mariadb-server_10.6.12-0ubuntu0.22.04.1_all.deb ...
A descompactar mariadb-server (1:10.6.12-0ubuntu0.22.04.1) ...
Configurando mariadb-client (1:10.6.12-0ubuntu0.22.04.1) ...
Configurando mariadb-server (1:10.6.12-0ubuntu0.22.04.1) ...
pablo@paul:~$ 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 2023-11-25 15:36:12 -03; 2min 51s ago
     Docs: man:mariadb(8)
           https://mariadb.com/kb/en/library/systemd/
   Process: 12659 ExecStartPre=/usr/bin/install -m 755 -o mysql -g root -d /var/run/mysqld (code=exited, status=0/SUCCESS)
   Process: 12660 ExecStartPre=/bin/sh -c 'systemctl unset-environment _MGRUP_START_POSITION (code=exited, status=0/SUCCESS)
   Process: 12662 ExecStartPre=/bin/sh -c '[ ! -e /usr/bin/galera_recovery ] && VMW= cd /usr/bin/; ; /usr/bin/galera_recovery'; [ $? -eq 0 ]
   Process: 12664 ExecStartPre=/bin/sh -c 'systemctl unset-environment _MGRUP_START_POSITION (code=exited, status=0/SUCCESS)
   Process: 12709 ExecStartPost=/etc/mysql/debian-start (code=exited, status=0/SUCCESS)
   Main PID: 12691 (mariadbd)
   Status: "Taking your SQL requests now..."
   Tasks: 10 (limit: 2753)
   Memory: 61,3M
   CPU: 92ms
   CGroup: /system.slice/mariadb.service
           └─12691 /usr/sbin/mariadbd
pablo@paul:~$ mariadb --version
mariadb Ver 10.6.12 Distrib 10.6.12-MariaDB, for debian-linux-gnu (x86_64) using Editline wrapper
pablo@paul:~$
```

Figura 3. Instalação do MySQL.



```
pablo@paul:~$ sudo mysql_secure_installation
[sudo] senha para pablo:
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 authorization.

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

Switch to unix_socket authentication [Y/n] Y
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
a bit smoother. You should remove them before moving into a
production environment.

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

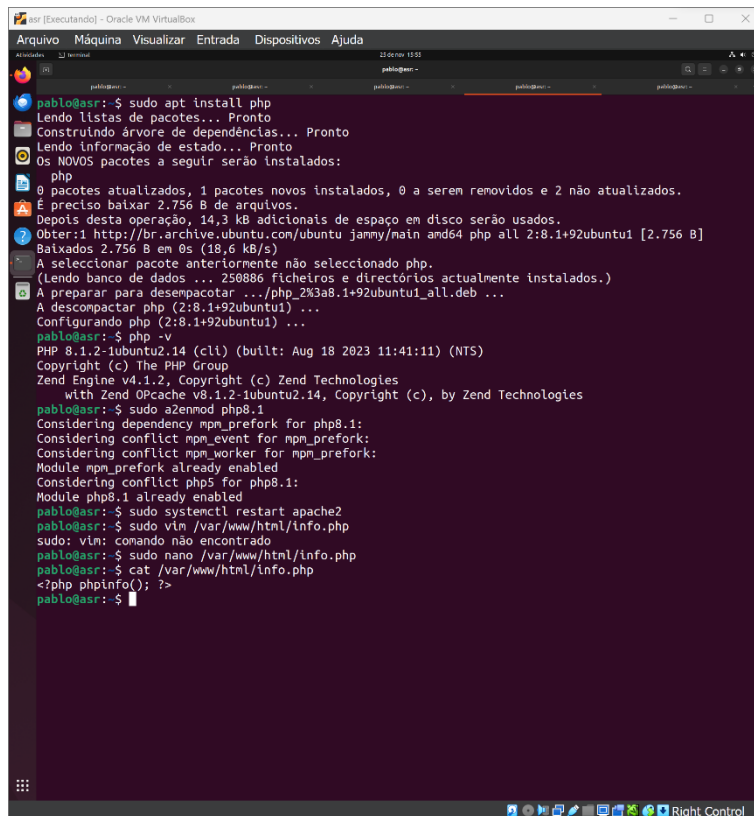
Cleaning up...

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

Thanks for using MariaDB!
pablo@paul:~$
```

Figura 4. Configuração do MySQL.

c. Instalar o PHP.



```
pablo@asr:~$ sudo apt install php
Lendo listas de pacotes... Pronto
Construindo árvore de dependências... Pronto
Lendo informação de estado... Pronto
Os NOVOS pacotes a seguir serão instalados:
  php
0 pacotes atualizados, 1 pacotes novos instalados, 0 a serem removidos e 2 não atualizados.
E preciso baixar 2.756 B de arquivos.
Depois desta operação, 14,3 kB adicionais de espaço em disco serão usados.
Obter:1 http://br.archive.ubuntu.com/ubuntu jammy/main amd64 php all 2:8.1+92ubuntu1 [2.756 B]
Baixados 2.756 B em 0s (18,6 kB/s)
A seleccionar pacote anteriormente não seleccionado php.
(Lendo banco de dados ... 250886 ficheiros e directórios actualmente instalados.)
A descompactar php (2:8.1+92ubuntu1) ...
Configurando php (2:8.1+92ubuntu1) ...
pablo@asr:~$ php -v
PHP 8.1.2-1ubuntu2.14 (cli) (built: Aug 18 2023 11:41:11) (NTS)
Copyright (c) The PHP Group
Zend Engine v4.1.2, Copyright (c) Zend Technologies
with Zend OPcache v8.1.2-1ubuntu2.14, Copyright (c), by Zend Technologies
pablo@asr:~$ sudo a2enmod php8.1
Considering dependency mpm_prefork for php8.1:
Considering conflict mpm_event for mpm_prefork:
Considering conflict mpm_worker for mpm_prefork:
Module mpm_prefork already enabled
Considering conflict php5 for php8.1:
Module php8.1 already enabled
pablo@asr:~$ sudo systemctl restart apache2
pablo@asr:~$ sudo vim /var/www/html/info.php
sudo: vim: comando não encontrado
pablo@asr:~$ sudo nano /var/www/html/info.php
pablo@asr:~$ cat /var/www/html/info.php
<?php phpinfo(); ?>
pablo@asr:~$
```

Figura 5. Instalação do PHP.



PHP Version 8.1.2-1ubuntu2.14

System	Linux 6.2.0-37-generic #38~22.04.1-Ubuntu SMP PREEMPT_DYNAMIC Thu Nov 2 18:01:13 UTC 2 x86_64
Build Date	Aug 18 2023 11:41:11
Build System	Linux
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/8.1/apache2
Loaded Configuration File	/etc/php/8.1/apache2/php.ini
Scan this dir for additional .ini files	/etc/php/8.1/apache2/conf.d
Additional .ini files parsed	/etc/php/8.1/apache2/conf.d/00-apache.ini, /etc/php/8.1/apache2/conf.d/10-pdo.ini, /etc/php/8.1/apache2/conf.d/20-ctype.ini, /etc/php/8.1/apache2/conf.d/20-curl.ini, /etc/php/8.1/apache2/conf.d/20-iconv.ini, /etc/php/8.1/apache2/conf.d/20-ldap.ini, /etc/php/8.1/apache2/conf.d/20-mbstring.ini, /etc/php/8.1/apache2/conf.d/20-mysql.ini, /etc/php/8.1/apache2/conf.d/20-pdo_mysql.ini, /etc/php/8.1/apache2/conf.d/20-redis.ini, /etc/php/8.1/apache2/conf.d/20-sockets.ini, /etc/php/8.1/apache2/conf.d/20-ssh2.ini, /etc/php/8.1/apache2/conf.d/20-sysvmsg.ini, /etc/php/8.1/apache2/conf.d/20-sysvsem.ini, /etc/php/8.1/apache2/conf.d/20-xmlrpc.ini, /etc/php/8.1/apache2/conf.d/20-xsl.ini
PHP API	20210902
PHP Extension	20210902
Zend Extension	420210902
Zend Extension Build	API420210902.NTS
PHP Extension Build	API420210902.NTS
Debug Build	no
Thread Safety	disabled
Zend Signal Handling	enabled
Zend Memory Manager	enabled
Zend Multibyte Support	enabled
IPv6 Support	enabled
DTrace Support	available, disabled
Registered PHP Streams	ftp, ftps, compress.zlib, php, file, glob, ftps, ftps, ftps, ftps
Registered Stream Socket Transports	tcp, udp, unix, udg, ssl, tls, tlsv1, tlsv1.1, tlsv1.2, tlsv1.3
Registered Stream Filters	zlib.*, string.rot13, string.rot48, string.rot96, convert.*, consumed, dechunk, convert.iconv.*

This program makes use of the Zend Scripting Language Engine:
Zend Engine v4.1.2, Copyright (c) Zend Technologies
with Zend OPcache v8.1.2-1ubuntu2.14, Copyright (c), by Zend Technologies

Configuration
apache2handler

Directive	Local Value	Master Value
engine	On	On
last_modified	Off	Off

Figura 6. Verificação do PHP no navegador.