

Construction de l'image Docker et connexion SSH

L'image Debian est construite, le conteneur démarre et la connexion SSH (port 2222) réussit.

```
Docker image 'student-lab-image' not found. Building image...
[+] Building 12.9s (9/9) FINISHED
--> [internal] load build definition from Dockerfile          0.0s
--> [internal] load metadata for docker.io/library/debian:bullseye-slim 0.0s
--> [internal] load build context                          0.0s
--> [internal] load context                                0.0s
--> [internal] transfer context: 2B                         0.0s
--> [1/6] FROM docker.io/library/debian:bullseye-slim@sha256:b5f9bc44bdfbd9d551dffdd432687cbc6bb5d9dddea726a1191797d7749166973 1.6s
--> [2/6] RUN apt-get update && apt install -y openssh-server net-tools iputils-ping curl wget unzip less 0.0s
--> [3/6] RUN mkdir /var/run/sshd                           0.0s
--> [4/6] RUN echo 'root:root' | chpasswd                  0.0s
--> [5/6] RUN sed -i '/#PermitRootLogin prohibit-password/PermitRootLogin yes/' /etc/ssh/sshd_config 0.0s
--> [6/6] COPY --from=builder /root/.ssh/* /root/.ssh/               0.0s
--> exporting to image                                      2.7s
--> exporting layers                                       2.1s
--> exporting manifest sha256:7c897d1b9f3c45c07b2421e8b995f0a13879a4677c9117f7fd1ef77 0.0s
--> exporting config sha256:235297c0732a4e97931127cf88722615507c2a3bf745db9e978aabb8952 0.0s
--> exporting history sha256:9c933cc52a7ff04448a35479a4a1bcd987eb14cc17bef527e8ee4884747a6 0.0s
--> exporting manifest list sha256:27c80e774d28841e71865dc744565692af056cb97fb275c2ea7671ef41dbde74 0.0s
--> naming to docker.io/library/student-lab-image:latest 0.0s
--> => unpacking to docker.io/library/student-lab-image:latest 0.0s
View build details: docker-desktop://dashboard/build/desktop-linux/7j3v4nxjjn134b4umzsdx42yy
Creating and starting container 'akram'...
5b26d1deb15e366f3446583ff7e5d5b64ab97e8eb4ad75ac389575e5f2
Cleaning up temporary SSH key for [localhost]:2222...
# Host [localhost]:2222 found: line 11
# Host [localhost]:2222 found: line 12
# Host [localhost]:2222 found: line 13
# Users/akram@localhost/.ssh/known_hosts updated.
OpenSSH_8.0p1, LibreSSL 2.8.3
Container 'akram' started
SSH access: ssh root@localhost -p 2222 (password: root)
akram@kroufMacBookAir-de-akram mywebapp % ssh root@localhost -p 2222
The authenticity of host 'localhost' (2222 ([::]:2222)) can't be established.
ED25519 key fingerprint is 5d265a2a1a11411f1ow2/mVKhneuXuYRrjD10xfjRoR0Nx/M.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '[localhost]:2222' (ED25519) to the list of known hosts.
root@localhost's password:
Linux 5b26d1deb15 6.18.14-linuxkit #1 SMP Tue Apr 16 16:00:54 UTC 2025 aarch64

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.
root@5b26d1deb15:~# apt update
```

Mise à jour des paquets

`apt update` met à jour la liste des paquets à l'intérieur du conteneur.

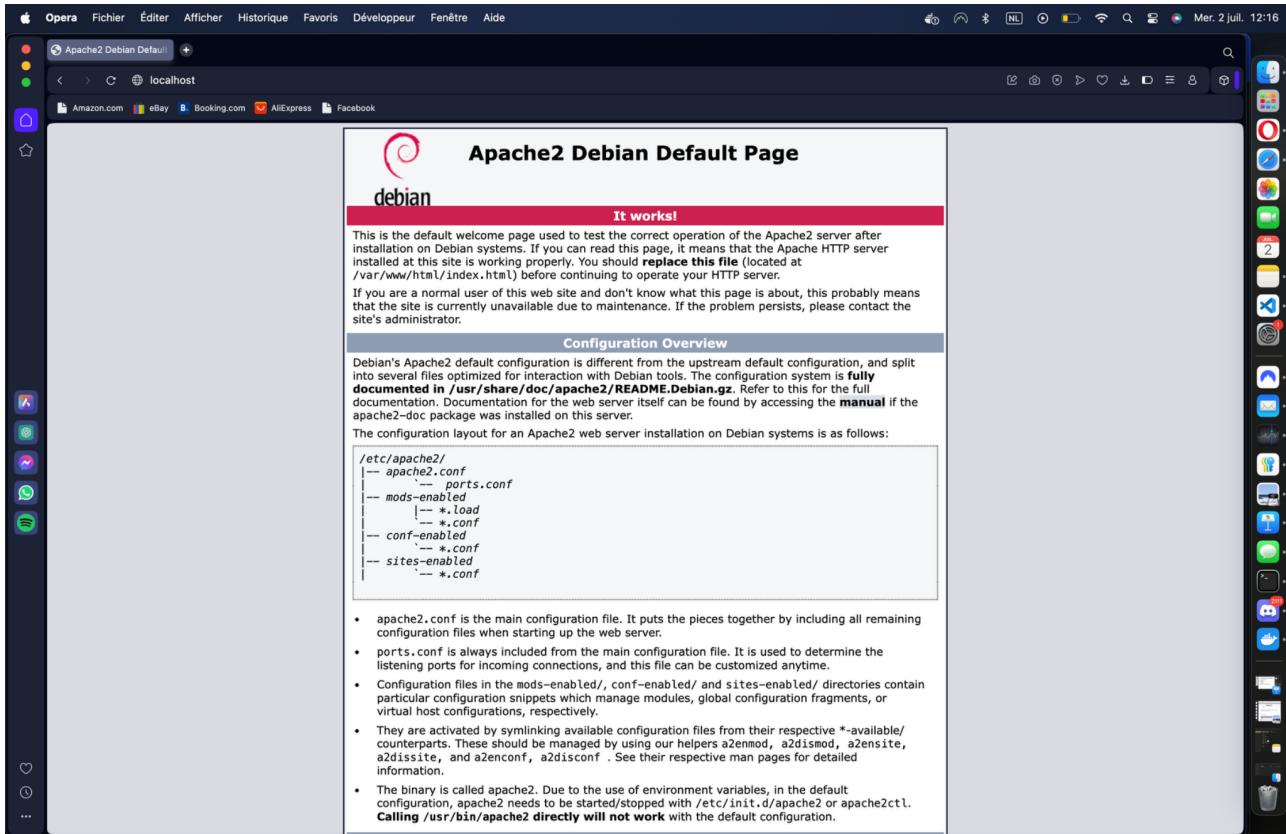
```
root@0b26d1de1b5:~# apt update
Hit:1 http://deb.debian.org/debian bullseye InRelease
Hit:2 http://deb.debian.org/debian-security/bullseye InRelease
Hit:3 http://deb.debian.org/debian-security/bullseye-updates InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
root@0b26d1de1b5:~# 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 file libapr1 libaprutil1 libaprutil1-db4-solite3 libaprutil1-ldap
  libgdbm-compat libgdbm libicu07 libjansson4 liblua5.3-0 libmagic-mgc libmagici libper15.32 libsqlite3-0 libxml2
  mailcap mime-types mime-support netbase perl perl-modules-5.32 ssl-cert xx-utils
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser bztp2-doc gdbs-10n perl-doc
  libterm-readline-gnu-perl | libterm-readline-perl-perl make libtsp-harness-archive-perl
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils bzip2 file libapr1 libaprutil1 libaprutil1-db4-solite3
  libaprutil1-ldap libgdbm-compat libicu07 libjansson4 liblua5.3-0 libmagic-mgc libmagici libper15.32
  libsqlite3-0 libxml2 mailcap mime-types mime-support netbase perl perl-modules-5.32 ssl-cert xx-utils
0 upgraded, 9 newly installed, 0 to remove and 0 not upgraded.
Need to get 20.3 MB of archives.
After this operation, 100 kB of additional disk space will be used.
Do you want to continue? [Y/n] yes
Get:1 http://deb.debian.org/debian-security/bullseye/main arm64 perl-modules-5.32 all 5.32.1-4+deb11u4 [2824 kB]
Get:2 http://deb.debian.org/debian-security/bullseye/main arm64 libgdbm-compat arm64 1.19-2 [44.6 kB]
Get:3 http://deb.debian.org/debian-security/bullseye/main arm64 libgdbm arm64 1.19-2 [44.6 kB]
Get:4 http://deb.debian.org/debian-security/bullseye/main arm64 libper15.32 arm64 5.32.1-4+deb11u4 [3917 kB]
Get:5 http://deb.debian.org/debian-security/bullseye/main arm64 libapr1 libaprutil1 libaprutil1-db4-solite3
Get:6 http://deb.debian.org/debian-security/bullseye/main arm64 libaprutil1-ldap libgdbm-compat libicu07 libjansson4 liblua5.3-0 libmagic-mgc libmagici libper15.32
Get:7 http://deb.debian.org/debian-security/bullseye/main arm64 libaprutil1 libaprutil1 1.6.1-5+deb11u1 [89.6 kB]
Get:8 http://deb.debian.org/debian-security/bullseye/main arm64 libsqlite3-0 arm64 3.34.1-3+deb11u1 [750 kB]
Get:9 http://deb.debian.org/debian-security/bullseye/main arm64 libmailcap arm64 1.0.1-5+deb11u1 [17.1 kB]
Get:10 http://deb.debian.org/debian-security/bullseye/main arm64 libaprutil1-ldap arm64 1.6.1-5+deb11u1 [17.1 kB]
Get:11 http://deb.debian.org/debian-security/bullseye/main arm64 libjansson4 arm64 2.13.1-1.1 [39.4 kB]
Get:12 http://deb.debian.org/debian-security/bullseye/main arm64 liblua5.3-0 arm64 5.3.3.3-1.1+deb11u1 [112 kB]
Get:13 http://deb.debian.org/debian-security/bullseye/main arm64 libxml2 libxml2-arm64 2.9.10+dfsg-5.7+deb11u1 [429 kB]
Get:14 http://deb.debian.org/debian-security/bullseye/main arm64 libapr1 libaprutil1 libaprutil1-db4-solite3
Get:15 http://deb.debian.org/debian-security/bullseye/main arm64 apache2-bin arm64 2.4.62-1+deb11u2 [1336 kB]
Get:16 http://deb.debian.org/debian-security/bullseye/main arm64 apache2-data all 2.4.62-1+deb11u2 [160 kB]
Get:17 http://deb.debian.org/debian-security/bullseye/main arm64 apache2-utils arm64 2.4.62-1+deb11u2 [271 kB]
Get:18 http://deb.debian.org/debian-security/bullseye/main arm64 libapr1 libaprutil1 libaprutil1-db4-solite3
Get:19 http://deb.debian.org/debian-security/bullseye/main arm64 libmailcap all 3.69 [31.7 kB]
Get:20 http://deb.debian.org/debian-security/bullseye/main arm64 mine-support all 3.66 [10.9 kB]
Get:21 http://deb.debian.org/debian-security/bullseye/main arm64 libaprutil1 libaprutil1-db4-solite3
Get:22 http://deb.debian.org/debian-security/bullseye/main arm64 libaprutil1-ldap arm64 1.6.1-5+deb11u1 [169.2 kB]
Get:23 http://deb.debian.org/debian-security/bullseye/main arm64 bzip2 arm64 1.0.8-4 [48.4 kB]
Get:24 http://deb.debian.org/debian-security/bullseye/main arm64 libmagic-mgc arm64 1:5.39-3+deb11u1 [273 kB]
Get:25 http://deb.debian.org/debian-security/bullseye/main arm64 libmagici libmagici arm64 1:5.39-3+deb11u1 [123 kB]
Get:26 http://deb.debian.org/debian-security/bullseye/main arm64 libapr1 libaprutil1 libaprutil1-db4-solite3
Get:27 http://deb.debian.org/debian-security/bullseye/main arm64 xx-utils arm64 5.2.5-2.1+deb11u1 [219 kB]
Get:28 http://deb.debian.org/debian-security/bullseye/main arm64 ssl-cert all 1.1.0+nmu1 [21.0 kB]
Fetched 281 MB in 24.0 MB/s (progress reporting disabled)
Reading package lists... Done
perl: warning: Please check that your locale settings:
LANGUAGE = "(unset)",
LC_ALL = "(unset)",
LC_CTYPE = "UTF-8"
are supported and installed on your system.
perl: warning: Falling back to the standard locale ("C").
depends on missing package configuration, since perl-modules-5.32 is not installed
Selecting previously unselected package perl-modules-5.32.
(Reading database ... 11849 files and directories currently installed.)
Preparing to unpack .../00-perl-modules-5.32_5.32.1-4+deb11u4_all.deb ...
Unpacking perl-modules-5.32_5.32.1-4+deb11u4_all.deb ...
Selecting previously unselected package libgdbm3:arm64.
Preparing to unpack .../01-libgdbm3:arm64_1.19-2_arm64.deb ...
Unpacking libgdbm3:arm64 (1.19-2) ...
Selecting previously unselected package libgdbm-compat4:arm64.
Preparing to unpack .../02-libgdbm-compat4:arm64_1.19-2_arm64.deb ...
Unpacking libgdbm-compat4:arm64 (1.19-2) ...
Selecting previously unselected package libper15.32:arm64.
```

Installation d'Apache 2

`apt install apache2` installe le serveur web.

Page par défaut d'Apache

La page par défaut d'Apache s'affiche sur `localhost` : le service HTTP est opérationnel.



Activation de PHP et redémarrage d'Apache

Création d'un `info.php`, activation des modules, Apache redémarre.

```
debconf: falling back to frontend: Readline
Creating config file /etc/php/7.4/mods-available/mysqlnd.ini with new version
debconf: unable to initialize frontend: Dialog
debconf: (No usable dialog-like program is installed, so the dialog based frontend cannot be used. at /usr/share/perl5/Debconf/FrontEnd/Dialog.pm line 78.)
debconf: falling back to frontend: Readline
Creating config file /etc/php/7.4/mods-available/pdo_mysql.ini with new version
debconf: unable to initialize frontend: Dialog
debconf: (No usable dialog-like program is installed, so the dialog based frontend cannot be used. at /usr/share/perl5/Debconf/FrontEnd/Dialog.pm line 78.)
debconf: falling back to frontend: Readline
Creating config file /etc/php/7.4/mods-available/readline.ini with new version
Setting up php7.4-readline (7.4.33-1+deb11u8) ...
debconf: unable to initialize frontend: Dialog
debconf: (No usable dialog-like program is installed, so the dialog based frontend cannot be used. at /usr/share/perl5/Debconf/FrontEnd/Dialog.pm line 78.)
debconf: falling back to frontend: Readline
Creating config file /etc/php/7.4/mods-available/opcache.ini with new version
Setting up php7.4-opcache (7.4.33-1+deb11u8) ...
debconf: unable to initialize frontend: Dialog
debconf: (No usable dialog-like program is installed, so the dialog based frontend cannot be used. at /usr/share/perl5/Debconf/FrontEnd/Dialog.pm line 78.)
debconf: falling back to frontend: Readline
Creating config file /etc/php/7.4/mods-available/json.ini with new version
Setting up php7.4-json (7.4.33-1+deb11u8) ...
update-alternatives: using /usr/bin/php7.4 to provide /usr/bin/php (php) in auto mode
update-alternatives: warning: skip creation of /usr/share/man/man1/php.1.gz because associated file /usr/share/man/man1/php7.4.1.gz (of link group php) doesn't exist
update-alternatives: using /usr/bin/php7.4 to provide /usr/bin/php7.4 (php) in auto mode
update-alternatives: warning: skip creation of /usr/share/man/man1/php7.4.1.gz because associated file /usr/share/man/man1/phar7.4.1.gz (of link group phar) doesn't exist
update-alternatives: using /usr/bin/phar.phar7.4 to provide /usr/bin/phar.phar (phar.phar) in auto mode
update-alternatives: warning: skip creation of /usr/share/man/man1/phar.phar.1.gz because associated file /usr/share/man/man1/phar.phar7.4.1.gz (of link group phar.phar) doesn't exist
debconf: unable to initialize frontend: Dialog
debconf: (No usable dialog-like program is installed, so the dialog based frontend cannot be used. at /usr/share/perl5/Debconf/FrontEnd/Dialog.pm line 78.)
debconf: falling back to frontend: Readline
Creating config file /etc/php/7.4/cli/php.ini with new version
Setting up php7.4-cli (7.4.33-1+deb11u8) ...
update-alternatives: using /usr/bin/php.default to provide /usr/bin/php (php) in auto mode
update-alternatives: warning: skip creation of /usr/share/man/man1/php.1.gz because associated file /usr/share/man/man1/php.default.1.gz (of link group php) doesn't exist
update-alternatives: using /usr/bin/php.default to provide /usr/bin/php7.4 (php) in auto mode
update-alternatives: warning: skip creation of /usr/share/man/man1/php7.4.1.gz because associated file /usr/share/man/man1/phar7.4.1.gz (of link group phar) doesn't exist
update-alternatives: using /usr/bin/phar.phar.default to provide /usr/bin/phar.phar (phar.phar) in auto mode
update-alternatives: warning: skip creation of /usr/share/man/man1/phar.phar.1.gz because associated file /usr/share/man/man1/phar.phar.default.1.gz (of link group phar.phar) doesn't exist
Setting up libapache2-mod-php7.4 (7.4.33-1+deb11u8) ...
debconf: unable to initialize frontend: Dialog
debconf: (No usable dialog-like program is installed, so the dialog based frontend cannot be used. at /usr/share/perl5/Debconf/FrontEnd/Dialog.pm line 78.)
debconf: falling back to frontend: Readline
Creating config file /etc/php/7.4/apache2/php.ini with new version
Module mpm_event disabled.
Enabling module mpm_prefork.
apache2_switch_mpm SetPrefork
Invoking default start script to determine current runlevel
invoke-rc.d: policy-rc.d denied execution of restart.
apache2_invoke: Enable module php7.4
invoke-rc.d: could not determine current runlevel
invoke-rc.d: nothing to do [already running].
Setting up libapache2-mod-php7.4 (7.4.33-1+deb11u8) ...
Setting up php (7.4.33-1+deb11u8) ...
Processing triggers for libapache2-mod-php7.4-clients (7.4.33-1+deb11u8) ...
Processing triggers for libapache2-mod-php7.4 (7.4.33-1+deb11u8) ...
root@6b24d1de1b15:~# touch /var/www/html/info.php
root@6b24d1de1b15:~# echo <?php phpinfo(); ?> > /var/www/html/info.php
root@6b24d1de1b15:~# service apache2 up
apache: unrecognized service
root@6b24d1de1b15:~# service apache2 up
```

Vérification de PHP via phpinfo()

La page `info.php` affiche la configuration PHP 7.4.33.

The screenshot shows the PHP 7.4.33 - phpinfo() page in an Opera browser. The page title is "PHP Version 7.4.33". The content is organized into several sections:

- System**:
 - Build Date: Mar 19 2025 19:57:26
 - Server API: Apache 2.0 Handler
 - Virtual Directory Support: disabled
 - Configuration File (php.ini) Path: /etc/php/7.4/apache2
 - Loaded Configuration File: /etc/php/7.4/apache2/php.ini
 - Scan this dir for additional .ini files: /etc/php/7.4/apache2/conf.d
 - Additional .ini files parsed: /etc/php/7.4/apache2/conf.d/10-mysqlind.ini, /etc/php/7.4/apache2/conf.d/10-opcache.ini, /etc/php/7.4/apache2/conf.d/10-pdo.ini, /etc/php/7.4/apache2/conf.d/15-xml.ini, /etc/php/7.4/apache2/conf.d/20-bz2.ini, /etc/php/7.4/apache2/conf.d/20-dom.ini, /etc/php/7.4/apache2/conf.d/20-crypt.ini, /etc/php/7.4/apache2/conf.d/20-gd.ini, /etc/php/7.4/apache2/conf.d/20-exif.ini, /etc/php/7.4/apache2/conf.d/20-fil.ini, /etc/php/7.4/apache2/conf.d/20-finfo.ini, /etc/php/7.4/apache2/conf.d/20-ftp.ini, /etc/php/7.4/apache2/conf.d/20-gd.ini, /etc/php/7.4/apache2/conf.d/20-gettext.ini, /etc/php/7.4/apache2/conf.d/20-iconv.ini, /etc/php/7.4/apache2/conf.d/20-json.ini, /etc/php/7.4/apache2/conf.d/20-mbstring.ini, /etc/php/7.4/apache2/conf.d/20-phar.ini, /etc/php/7.4/apache2/conf.d/20-pdo_mysql.ini, /etc/php/7.4/apache2/conf.d/20-readline.ini, /etc/php/7.4/apache2/conf.d/20-shmop.ini, /etc/php/7.4/apache2/conf.d/20-simplexml.ini, /etc/php/7.4/apache2/conf.d/20-sysvmsg.ini, /etc/php/7.4/apache2/conf.d/20-sysvshm.ini, /etc/php/7.4/apache2/conf.d/20-tokenizer.ini, /etc/php/7.4/apache2/conf.d/20-xmlreader.ini, /etc/php/7.4/apache2/conf.d/20-xmwriter.ini, /etc/php/7.4/apache2/conf.d/20-xsl.ini, /etc/php/7.4/apache2/conf.d/20-zip.ini
- PHP API**: 20190902
- PHP Extension**: 20190902
- Zend Extension**: 320190902
- Zend Extension Build**: API320190902.NTS
- PHP Extension Build**: API20190902.NTS
- Debug Build**: no
- Thread Safety**: disabled
- Zend Signal Handling**: enabled
- Zend Memory Manager**: enabled
- Zend Multibyte Support**: provided by mbstring
- IPv6 Support**: enabled
- DTrace Support**: disabled
- Registered PHP Streams**: https, ftps, compress.zlib, php, file, glob, data, http, ftp, compress.bzip2, phar, zip
- Registered Stream Socket Transports**: tcp, udp, unix, udg, ssl, tls, tlsv1.0, tlsv1.1, tlsv1.2, tlsv1.3
- Registered Stream Filters**: zlib*, string.rot13, string.toupper, string.tolower, string.strip_tags, convert*, consumed, dechunk, bzip2*, convert.iconv*

At the bottom of the page, it says: "This program makes use of the Zend Scripting Language Engine: Zend Engine v3.4.0, Copyright (c) Zend Technologies with Zend OPcache v7.4.33, Copyright (c), by Zend Technologies".

Installation de MariaDB

``apt install mariadb-server`` installe MariaDB.

Création utilisateur et installation phpMyAdmin

Création de l'utilisateur `etu`, puis installation de phpMyAdmin.

```
root@05b24d1deb15:~# mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 33
Server version: 10.5.29-MariaDB-0+deb11u1 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 USER 'etu'@'%' IDENTIFIED BY 'password';
Query OK, 0 rows affected (0.003 sec)

MariaDB [(none)]> GRANT ALL PRIVILEGES ON *.* TO 'etu'@'%' WITH GRANT OPTION;
Query OK, 0 rows affected (0.003 sec)

MariaDB [(none)]> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.002 sec)

MariaDB [(none)]> EXIT;
Bye
root@05b24d1deb15:~# apt install -y phpmyadmin
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
dbconfig-common dbconfig-config fonts-dejavu-core libdeflate0 libfontconfig1 libfreetype6 libgd3 libjbig0 libjpeg2-turbo libjs-bootstrap4 libjs-codemirror libjs-jquery
libjs-jquery-mousewheel libjs-jquery-timepicker libjs-jquery-ui libjs-openlayers libjs-sizzle libjs-sphinxdoc libjs-underscore libonig libpng16-16 libtiff6 libwebp libxml2.1 libzip4 node-jquery php-bz2 php-curl
php-gd php-google-recaptcha php-mariadb-mysql-kbs php-mbstring php-phplibadmin-motranslator php-phplibadmin-shapefile php-phplibadmin-sql-parser php-phplibclib php-psr-cache php-psr-container php-psr-log php-symfony-cache
php-symfony-cachemanager php-symfony-console php-symfony-dependency-injection php-symfony-expression-language php-symfony-finder php-symfony-proxy-manager-bridge php-symfony-console php-imagine php-twipdf php-twip
php-twip-118n-extension php-zip php7.4-bz2 php7.4-curl php7.4-gd php7.4-mbstring php7.4-xm php7.4-zip phpmcrypt
Suggested packages:
libgd-dev libjs-jquery ui-docs php-dbbase php-libodium php-mcrypt php-gmp php-symfony-finder php-symfony-proxy-manager-bridge php-symfony-console php-imagine php-twipdf php-recode www-browser php-gd2
Recommended packages:
php-mcrypt

The following NEW packages will be installed:
dbconfig-common dbconfig-mysql fonts-dejavu-core libdeflate0 libfontconfig1 libfreetype6 libgd3 libjbig0 libjpeg2-turbo libjs-bootstrap4 libjs-codemirror libjs-jquery
libjs-jquery-mousewheel libjs-jquery-timepicker libjs-jquery-ui libjs-openlayers libjs-sizzle libjs-sphinxdoc libjs-underscore libonig libpng16-16 libtiff6 libwebp libxml2.1 libzip4 node-jquery php-bz2 php-curl
php-gd php-google-recaptcha php-mariadb-mysql-kbs php-mbstring php-phplibadmin-motranslator php-phplibadmin-shapefile php-phplibadmin-sql-parser php-phplibclib php-psr-cache php-psr-container php-psr-log php-symfony-cache
php-symfony-cachemanager php-symfony-console php-symfony-dependency-injection php-symfony-expression-language php-symfony-finder php-symfony-proxy-manager-bridge php-symfony-console php-imagine php-twipdf php-twip
php-twip-118n-extension php-zip php7.4-bz2 php7.4-curl php7.4-gd php7.4-mbstring php7.4-xm php7.4-zip phpmcrypt
0 upgraded, 65 newly installed, 0 to remove and 0 not upgraded.

Need to get 23.1 MB of archives.
After this operation, 98.8 MB of additional disk space will be used.
Get:1 http://deb.debian.org/debian/bullseye/main arm64 dbconfig-common all 2.0.19 [609 kB]
Get:2 http://deb.debian.org/debian/bullseye/main arm64 dbconfig-mysql all 2.0.19 [1088 kB]
Get:3 http://deb.debian.org/debian/bullseye/main arm64 fonts-dejavu-core all 2.37-2 [1069 kB]
Get:4 http://deb.debian.org/debian/bullseye/main arm64 libfontconfig1 libdeflate0 libfreetype6 libgd3 libjbig0 libjpeg2-turbo libjs-bootstrap4 libjs-codemirror libjs-jquery
Get:5 http://deb.debian.org/debian/bullseye/main arm64 libjs-jquery-mousewheel libjs-jquery-timepicker libjs-jquery-ui libjs-openlayers libjs-sizzle libjs-sphinxdoc libjs-underscore libonig libpng16-16 libtiff6 libwebp libxml2.1 libzip4 node-jquery php-bz2 php-curl
Get:6 http://deb.debian.org/debian/bullseye/main arm64 libjs-jquery-ui libjs-jquery-timepicker libjs-jquery-ui libjs-openlayers libjs-sizzle libjs-sphinxdoc libjs-underscore libonig libpng16-16 libtiff6 libwebp libxml2.1 libzip4 node-jquery php-bz2 php-curl
Get:7 http://deb.debian.org/debian/bullseye/main arm64 libdeflate0 arm64 1.7-1 [47.7 kB]
Get:8 http://deb.debian.org/debian/bullseye/main arm64 libfontconfig1 arm64 2.10.4-37+deb11u1 [289 kB]
Get:9 http://deb.debian.org/debian/bullseye/main arm64 libfreetype6 arm64 2.10.4-37+deb11u1 [289 kB]
Get:10 http://deb.debian.org/debian/bullseye/main arm64 libfontconfig1 arm64 2.13.1-4+2 [344 kB]
Get:11 http://deb.debian.org/debian/bullseye/main arm64 libjpeg2-turbo arm64 1:2.0.0-4 [133 kB]
Get:12 http://deb.debian.org/debian/bullseye/main arm64 libjs-jbig0 arm64 0.1.3-1 [27 kB]
Get:13 http://deb.debian.org/debian/bullseye/main arm64 libjs-jquery arm64 1.1.0-2.1+dfsg1 [244 kB]
Get:14 http://deb.debian.org/debian-security/bullseye/main arm64 libtiff5 arm64 4.2.0-1+deb11u6 [278 kB]
Get:15 http://deb.debian.org/debian/bullseye/main arm64 libxml4 arm64 1:3.5.12-1.1+deb11u1 [47.4 kB]
Get:16 http://deb.debian.org/debian/bullseye/main arm64 libgd arm64 2.3.0-2 [127 kB]
Get:17 http://deb.debian.org/debian/bullseye/main arm64 libcurl4 arm64 7.64.0-3 [51.9 kB]
Get:18 http://deb.debian.org/debian-security/bullseye/main arm64 libjs-bootstrap4 all 4.5.2-dfsg1-8-deb11u2 [2613 kB]
Get:19 http://deb.debian.org/debian/bullseye/main arm64 libjs-codemirror all 5.59.2+csb.23.109-1 [729 kB]
Get:20 http://deb.debian.org/debian/bullseye/main arm64 libjs-jquery all 3.6.1+dfsg-1 [301 kB]
Get:21 http://deb.debian.org/debian/bullseye/main arm64 libjs-jquery-ui all 1.13.1.1-2+dfsg1 [730 kB]
Get:22 http://deb.debian.org/debian/bullseye/main arm64 libjs-jquery-ui all 1.12.1+dfsg-8+deb11u2 [232 kB]
Get:23 http://deb.debian.org/debian/bullseye/main arm64 libjs-jquery-timepicker all 1.6.3-1 [48.2 kB]
Get:24 http://deb.debian.org/debian/bullseye/main arm64 libjs-openlayers all 2.1.1+dfsg-1 [205 kB]
Get:25 http://deb.debian.org/debian/bullseye/main arm64 libjs-sizzle all 1.3.0-2 [31.5 kB]
Get:26 http://deb.debian.org/debian/bullseye/main arm64 libjs-underscore all 1.9.1+dfsg-3 [100 kB]
Get:27 http://deb.debian.org/debian/bullseye/main arm64 libjs-sphinxdoc all 3.4.3-2 [127 kB]
Get:28 http://deb.debian.org/debian/bullseye/main arm64 libjs-sphinxdoc all 3.4.3-3 [127 kB]
Get:29 http://deb.debian.org/debian-security/bullseye/main arm64 libxml2.1 arm64 1.1.34-4+deb11u2 [229 kB]
Get:30 http://deb.debian.org/debian/bullseye/main arm64 libzip4 arm64 1.7.3-1 [52.9 kB]
Get:31 http://deb.debian.org/debian/bullseye/main arm64 node-jquery all 3.5.1+dfsg-3.5.6-7 [159 kB]
```

Configuration de phpMyAdmin

dbconfig-common configure phpMyAdmin et redémarre Apache.

```
Creating config file /etc/php/7.4/mods-available/gd.ini with new version
Setting up phpmyadmin (4:5.0.4+dfsg2-2+deb11u2) ...
dbconfig-common: frontend: dialog
dbconfig: No usable dialog-like frontend is installed, so the dialog based frontend cannot be used. at /usr/share/perl5/Debconf/FrontEnd/Dialog.pm line 78.)
dbconfig: falling back to frontend: Reading
Configuring phpmyadmin

The phpmyadmin package must have a database installed and configured before it can be used. This can be optionally handled with dbconfig-common.
If you are an advanced database administrator and know that you want to perform this configuration manually, or if your database has already been installed and configured, you should refuse this option. Details on what needs to be done should most likely be provided in /usr/share/doc/phpmyadmin.

Otherwise, you should probably choose this option.

Configure database for phpmyadmin with dbconfig-common? [yes/no] yes

Please provide a password for phpmyadmin to register with the database server. If left blank, a random password will be generated.

MySQL application password for phpmyadmin:

Password confirmation:

Determining localhost credentials from /etc/mysql/debian.cnf: succeeded.
Please choose the web server that should be automatically configured to run phpMyAdmin.

1. apache2 2. lighttpd
(Enter the items or ranges you want to select, separated by spaces.)

Web server to reconfigure automatically: 1

dbconfig-common: writing config to /etc/dbconfig-common/phpmyadmin.conf

Creating config file /etc/dbconfig-common/phpmyadmin.conf with new version

Creating config file /etc/phpmyadmin/config-db.php with new version
checking privileges on database phpmyadmin for phpmyadmin@localhost: user creation needed.
granting access to database phpmyadmin for phpmyadmin@localhost: success.
verifying access for phpmyadmin@localhost: success.
creating database phpmyadmin: success
verifying database phpmyadmin exists: success.
verifying database phpmyadmin exists: success.
populating database via sql...
dbconfig-common: setting administrative password
apache2_invoke: Enable configuration phpmyadmin
invoke-rc.d: could not determine current runlevel
invoke-rc.d: policy=demand execution of reload.
Setting phpmyadmin (2.27.4)
Processing triggers for libc-bin (2.31-13+deb11u3) ...
Processing triggers for libapache2-mod-php7.4 (7.4.33-1+deb11u8) ...
Processing triggers for php7.4-common (7.4.33-1+deb11u8) ...
root@5b2dd1de1b5:~# service mariadb status
-bash: service: command not found
root@5b2dd1de1b5:~# service mariadb status
/usr/bin/mariadb-admin Ver 9.1. Distrib 10.5.29-MariaDB, for debian-linux-gnu on aarch64
Copyright (c) 2008, 2018, Oracle, MariaDB Corporation Ab and others.

Server version      10.5.29-MariaDB-0+deb11u1
Protocol version   10
Connection          Localhost via UNIX socket
UNIX socket        /run/mysqld/mysqld.sock
Uptime:             3 min 39 sec

Threads: 1 Questions: 102 Slow queries: 0 Opens: 32 Open tables: 25 Queries per second avg: 0.465.
root@5b2dd1de1b5:~# service mariadb start
Starting MariaDB database server: mariadbd already running.
root@5b2dd1de1b5:~# apt install phpmyadmin
Reading package lists...
Building dependency tree...
Reading state information... Done
phpmyadmin is already the newest version (4:5.0.4+dfsg2-2+deb11u2).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
root@5b2dd1de1b5:~# service phpmyadmin start
phpmyadmin: unrecognized service
```

Configuration finale de phpMyAdmin

phpMyAdmin reçoit ses privilèges ; MariaDB est actif ('service mariadb status').

```
should most likely be provided in /usr/share/doc/phpmyadmin.
Otherwise, you should probably choose this option.
Configure database for phpmyadmin with dbconfig-common? [yes/no] yes
Please provide a password for phpmyadmin to register with the database server. If left blank, a random password will be generated.
MySQL application password for phpmyadmin:
Password confirmation:
Determining localhost credentials from /etc/mysql/debian.cnf: succeeded.
Please choose the web server that should be automatically configured to run phpMyAdmin.
  1. apache2 2. lighttpd
(Enter the items or ranges you want to select, separated by spaces.)
Web server to reconfigure automatically: 1
dbconfig-common: writing config to /etc/dbconfig-common/phpmyadmin.conf
Creating config file /etc/dbconfig-common/phpmyadmin.conf with new version
Creating config file /etc/phpmyadmin/config-db.php with new version
checking privileges on database phpmyadmin for phpmyadmin@localhost: user creation needed.
granting access to database phpmyadmin for phpmyadmin@localhost: success.
verifying access to database phpmyadmin for phpmyadmin@localhost: success.
creating database phpmyadmin: success.
verifying database phpmyadmin exists: success.
populating database with schema
dbconfig-common: flushing administrative password
apache2_invoke: Enable configuration phpmyadmin
invoke-rc.d: could not determine current runlevel
invoke-rc.d: policy requires manual execution of reload.
Setting up libapache2-mod-php7.0 (2.2.17-1+deb9u1)
Processing triggers for libc-bin (2.27-3+deb9u1) ...
Processing triggers for libapache2-mod-php7.0 (2.2.17-1+deb9u1) ...
Processing triggers for libapache2-mod-php7.4 (7.4.33-1+deb11u8) ...
root@bb2dd1e1b5:~# service mariadb status
-bash: service: command not found
root@bb2dd1e1b5:~# service mariadb status
/usr/bin/mariadb-admin Ver 10.5.29-MariaDB, for debian-linux-gnu on aarch64
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Server version          10.5.29-MariaDB-0+deb11u1
Protocol version        10
Connection              Localhost via UNIX socket
UNIX socket             /run/mysqld/mysqld.sock
Uptime:                 3 min 39 sec

Threads: 1 Questions: 102 Slow queries: 0 Opens: 32 Open tables: 25 Queries per second avg: 0.465.
root@bb2dd1e1b5:~# service mariadb start
Starting MariaDB database server: mariadb already running.
root@bb2dd1e1b5:~# apt install phpmyadmin
Reading package lists...
Building dependency tree...
Reading state information... Done
Reading state information... Done
phpmyadmin is already the newest version (4:5.0.4+dfsg-2+deb11u2).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
root@bb2dd1e1b5:~# service phpmyadmin start
phpmyadmin: unrecognized service
root@bb2dd1e1b5:~# /etc/init.d/phpmyadmin start
perl: warning: Setting locale failed.
perl: warning: Please check that your locale settings:
        LANGUAGE = (unset),
        LC_CTYPE = (unset),
        LC_NUMERIC = (unset),
        LC_TIME = (unset),
        LC_COLLATE = (unset),
        LC_MONETARY = (unset),
        LC_MESSAGES = (unset),
        LC_PAPER = (unset),
        LC_NAME = (unset),
        LC_ADDRESS = (unset),
        LC_TELEPHONE = (unset),
        LC_MEASUREMENT = (unset),
        LC_IDENTIFICATION = (unset)
        are supported and installed on your system.
perl: warning: Falling back to the standard locale ("C").
perl: warning: This message is displayed only once per session.
root@bb2dd1e1b5:~# service apache2 reload
Reloading Apache httpd web server: apache2.
root@bb2dd1e1b5:~#
```

Page de connexion phpMyAdmin

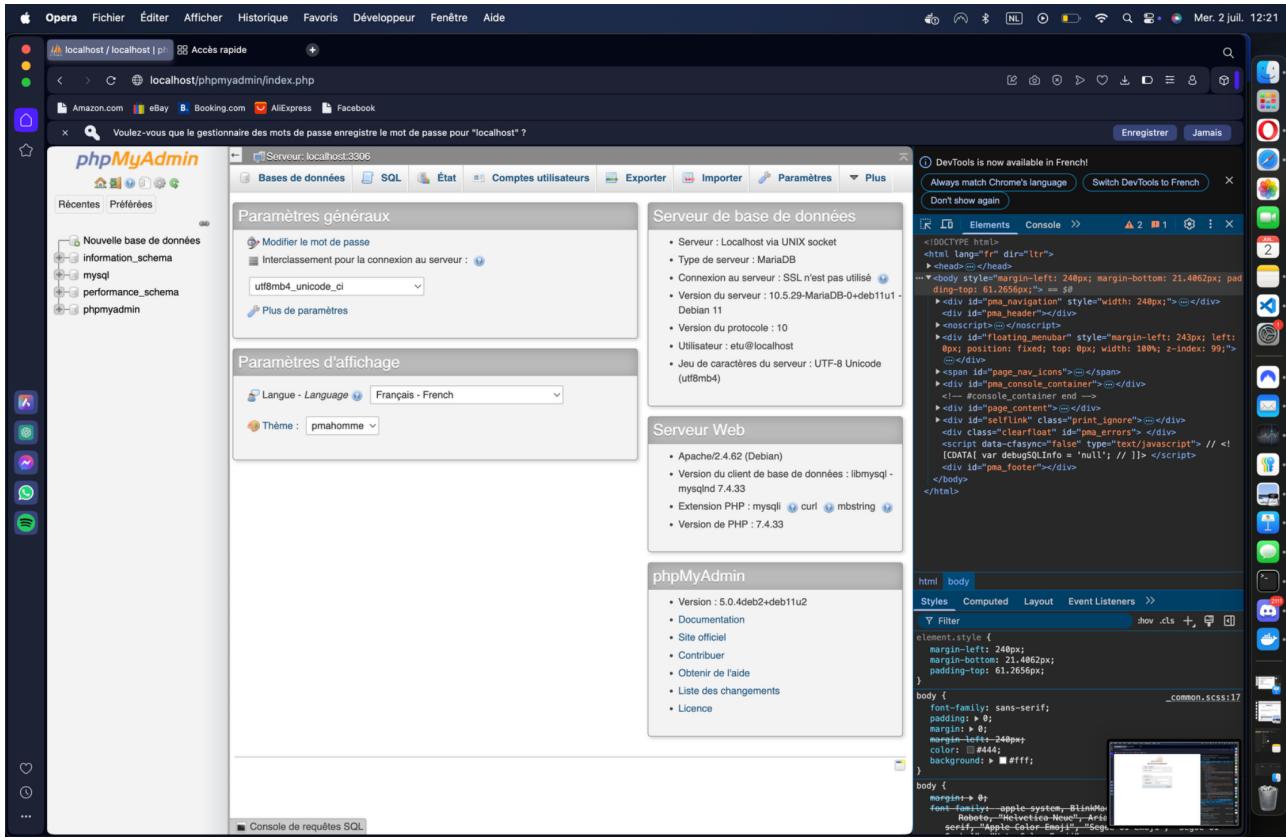
Interface de connexion phpMyAdmin avec l'utilisateur `etu`.

The screenshot shows a browser window for Opera displaying the phpMyAdmin login page at `localhost/phpmyadmin/index.php`. The page features a logo and the text "Bienvenue dans phpMyAdmin". It includes a "Langue - Language" dropdown set to "Français - French" and a "Connexion" form with fields for "Utilisateur" (set to "etu") and "Mot de passe" (set to "password"). A "Exécuter" button is present. To the right, the browser's DevTools are open, showing the "Elements" tab with the DOM tree. The tree highlights the login form and its fields. The "Styles" tab shows the CSS rules applied to the elements, including styles from `_common.scss` for input fields like border, width, and height. The "Computed" tab shows the final computed styles, and the "Event Listeners" tab lists any attached event listeners.

```
<!DOCTYPE html>
<html lang="fr" dir="ltr">
  <head></head>
  <body id="log-in">
    <div id="page_header"></div>
    <div id="page_content">
      <div class="container">
        <a href="#">phpMyAdmin</a>
        <div class="hide" id="js-https-mismatch"></div>
        <div class="hide js-show" style="display: block;"></div>
        <br>
        <div class="form">
          <form method="post" id="login_form" action="index.php" name="login_form" class="disableAjax hide login js-show" style="display: inline;">
            <fieldset>
              <legend></legend>
              <div class="item">
                <label for="input_password">Mot de passe :</label>
                <input type="text" name="pma_password" id="input_password" value="password" value-size="24" class="textfield" style="width: 14em; height: 1.4em; border: 1px solid #ccc; border-radius: 3px; margin: 0; padding: 0; font-size: 1em; font-family: inherit; transition: all 0.2s; -ms-transition: all 0.2s; -webkit-transition: all 0.2s; -moz-transition: all 0.2s; ">
              </div>
            </fieldset>
          </form>
        </div>
      </div>
    </div>
  </body>
</html>
```

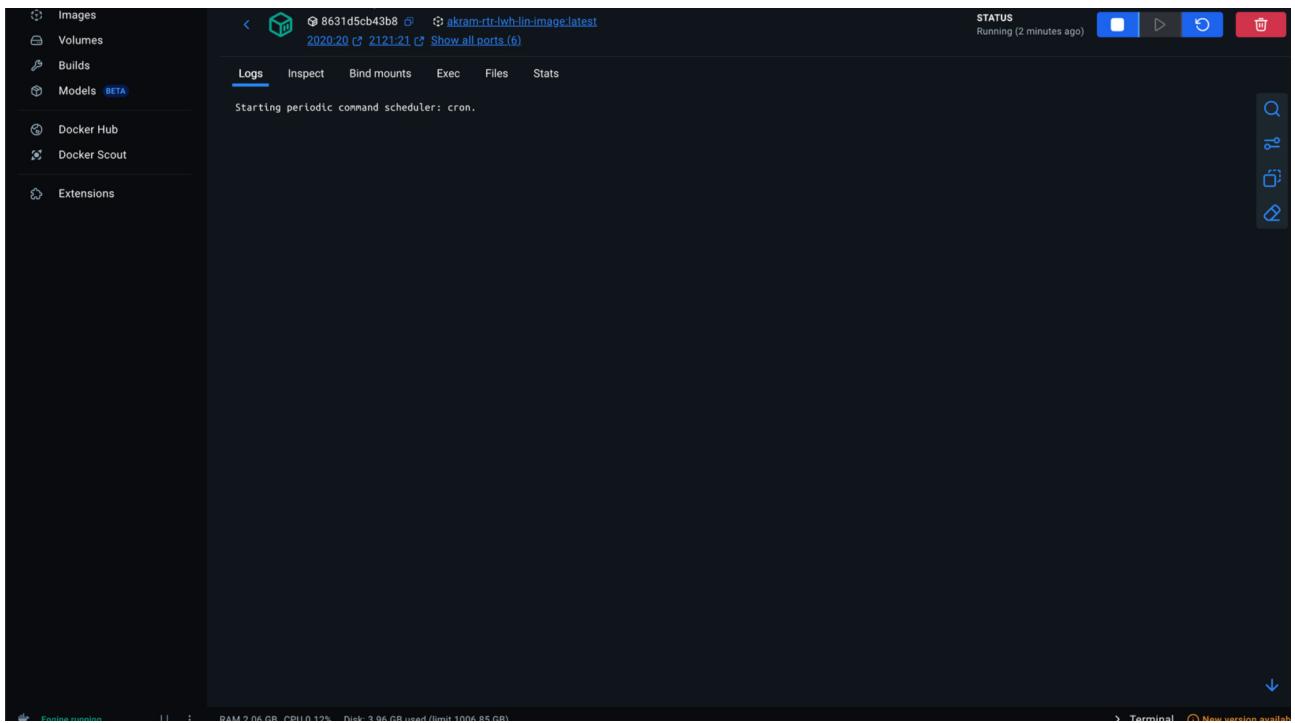
Tableau de bord phpMyAdmin

phpMyAdmin connecté : version MariaDB 10.5, Apache 2.4, PHP 7.4.



Logs Docker : démarrage de cron

`cron` démarre correctement dans le conteneur (logs Docker Desktop).



documentation
faites
par :Akram
Akhrouf