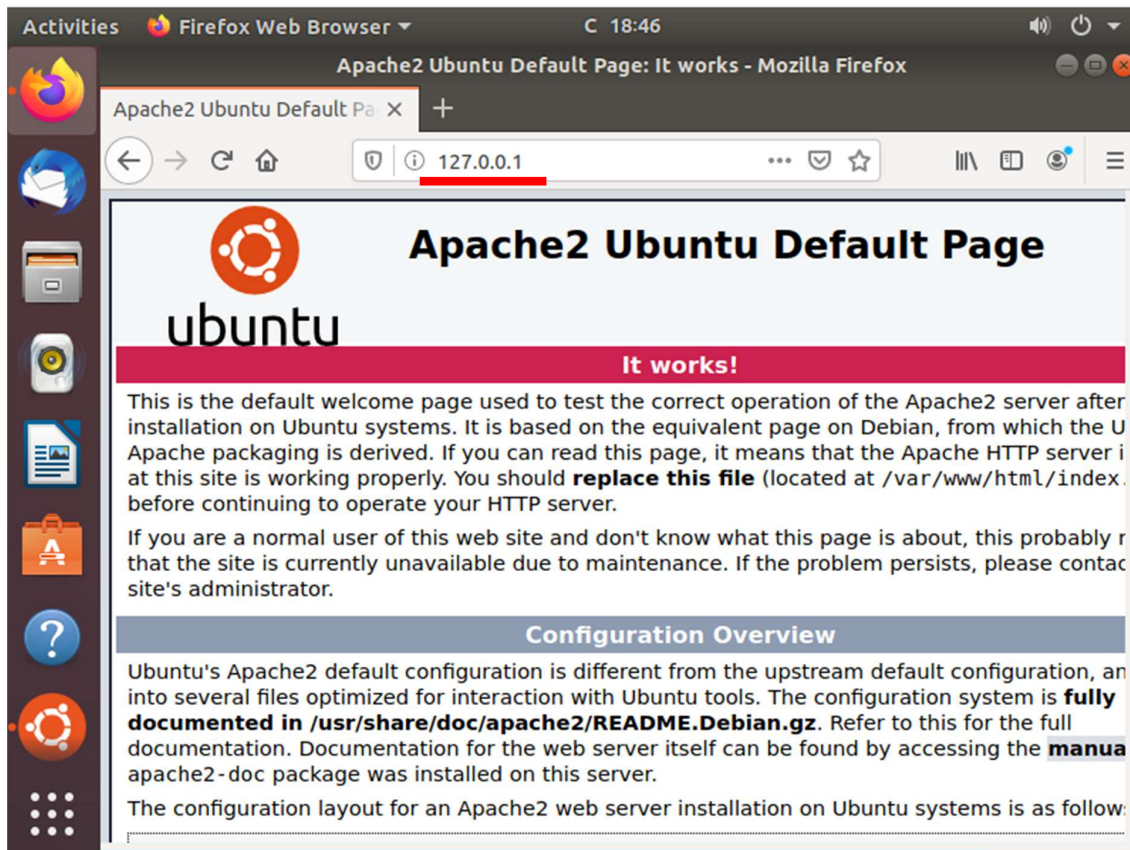


Linux UBUNTU server – web servera izveide

Apache programmatūras instalācija un darbības nodrošināšana

```
File Edit View Search Terminal Help
ogre@serverot:~$ sudo -v
[sudo] password for ogre:
ogre@serverot:~$ apt install apache2
E: Could not open lock file /var/lib/dpkg/lock-frontent - open (13: Permission
denied)
E: Unable to acquire the dpkg frontend lock (/var/lib/dpkg/lock-frontent), are
you root?
ogre@serverot:~$ sudo apt install apache2
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapr1 libaprutil1
  libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.2-0
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapr1 libaprutil1
  libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.2-0
0 upgraded, 9 newly installed, 0 to remove and 22 not upgraded.
Need to get 1 713 kB of archives.
After this operation, 6 917 kB of additional disk space will be used.
Do you want to continue? [Y/n]
```



Uzstādām Apache PHP modifikāciju, PHP un PHP MySQL papildinājumus

```
ogre@serverot: ~  
File Edit View Search Terminal Help  
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 (2.27-3ubuntu1) ...  
Processing triggers for systemd (237-3ubuntu10.38) ...  
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...  
Processing triggers for ufw (0.36-0ubuntu0.18.04.1) ...  
Processing triggers for ureadahead (0.100.0-21) ...  
ogre@serverot:~$ sudo apt install libapache2-mod-php php php-mysql  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
The following additional packages will be installed:  
  libapache2-mod-php7.2 php-common php7.2 php7.2-cli php7.2-common  
  php7.2-json php7.2-mysql php7.2-opcache php7.2-readline  
Suggested packages:  
  php-pear  
The following NEW packages will be installed:  
  libapache2-mod-php libapache2-mod-php7.2 php php-common php-mysql php7.2  
  php7.2-cli php7.2-common php7.2-json php7.2-mysql php7.2-opcache  
  php7.2-readline  
0 upgraded, 12 newly installed, 0 to remove and 22 not upgraded.  
Need to get 3 991 kB of archives.  
After this operation, 17,6 MB of additional disk space will be used.  
Do you want to continue? [Y/n]
```

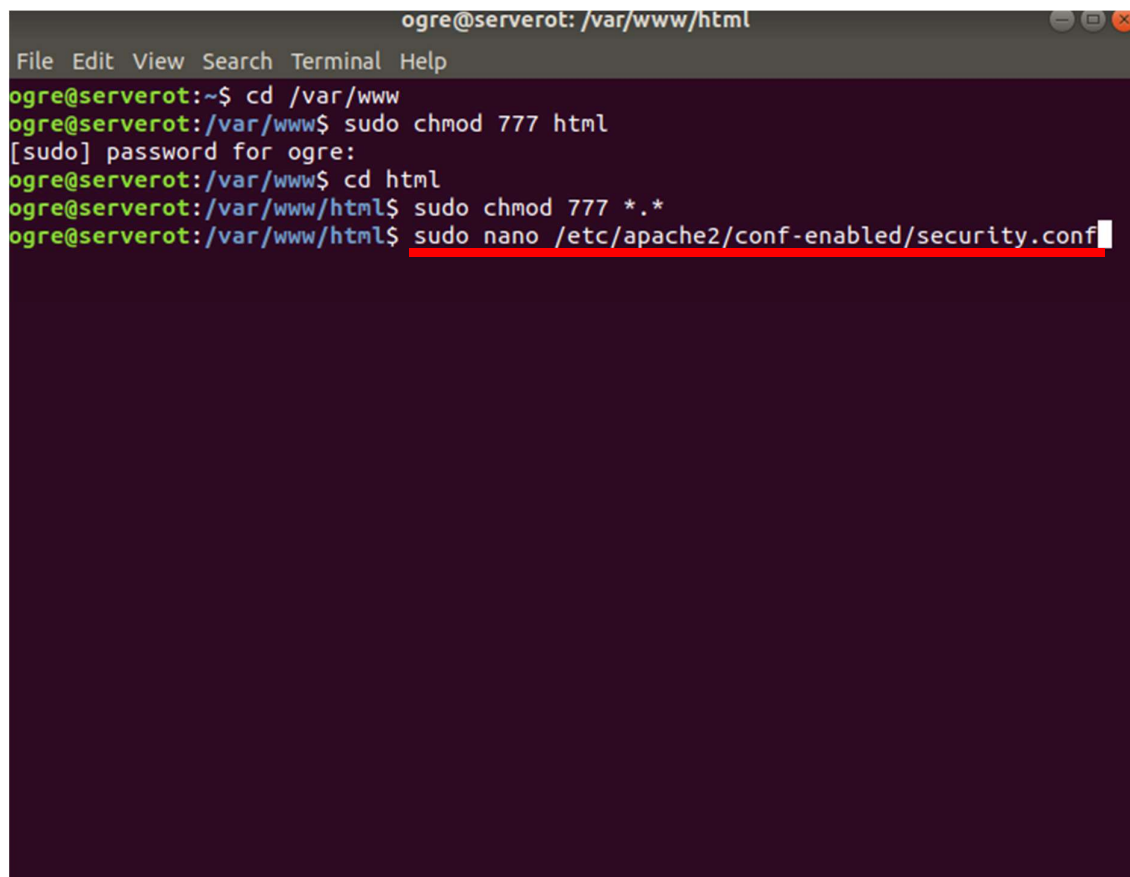
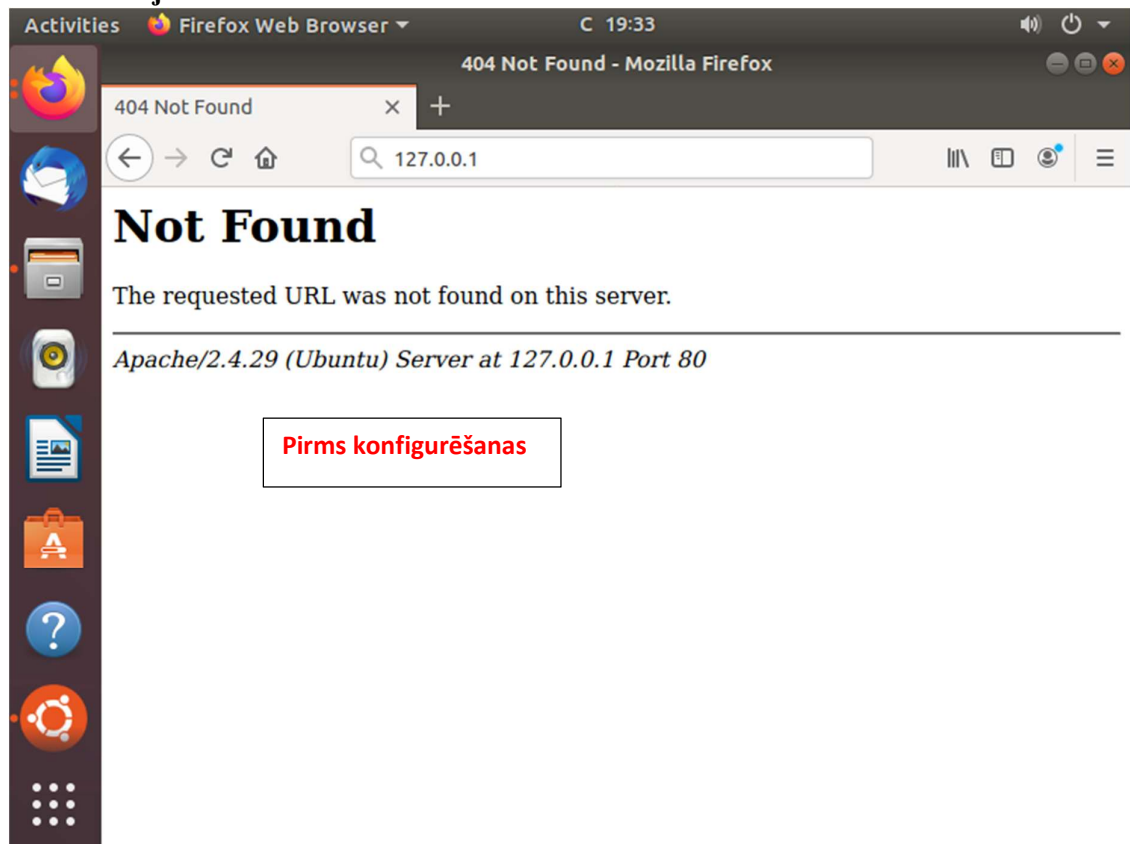
PHP datnes izveide - *index.php*, kas attēlo informāciju par *web* serveri un piekļuves tiesību maiņa web servera mapei hierarhiskajā struktūrā. Datnes saturs: `<?php phpinfo(); ?>`

```
ogre@serverot: /var/www  
File Edit View Search Terminal Help  
ogre@serverot:~$ cd /var/www  
ogre@serverot:/var/www$ sudo chmod 777 html  
[sudo] password for ogre:  
ogre@serverot:/var/www$
```

```
ogre@serverot: /var/www/html
File Edit View Search Terminal Help
ogre@serverot:~$ cd /var/www
ogre@serverot:/var/www$ sudo chmod 777 html
[sudo] password for ogre:
ogre@serverot:/var/www$ cd html
ogre@serverot:/var/www/html$ sudo chmod 777 *.*
ogre@serverot:/var/www/html$
```

```
Open index.php /var/www/html Save
<?php phpinfo ( ) ; ?>
```


Rediģējam noklusējuma apache2 drošības politiku, noņemot kļūdas informācijas un serveru versijas attēlošanu



```
ogre@serverot: /var/www/html
File Edit View Search Terminal Help
GNU nano 2.9.3 /etc/apache2/conf-enabled/security.conf Modified

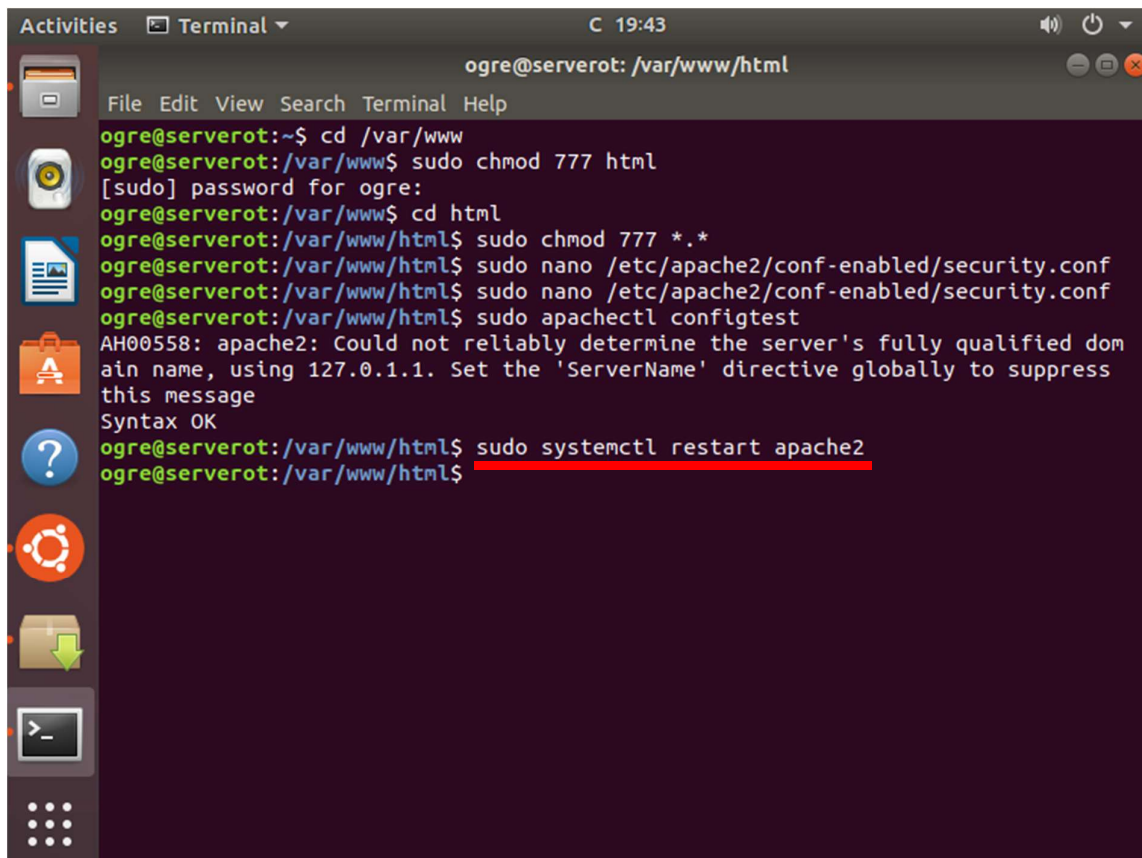
ServerTokens Prod
#ServerTokens Full

#
# Optionally add a line containing the server version and virtual host
# name to server-generated pages (internal error documents, FTP directory
# listings, mod_status and mod_info output etc., but not CGI generated
# documents or custom error documents).
# Set to "Email" to also include a mailto: link to the ServerAdmin.
# Set to one of: On | Off | Email
#ServerSignature Off
ServerSignature Off

#
# Allow TRACE method
#
# Set to "extended" to also reflect the request body (only for testing and
# diagnostic purposes).
#
# Set to one of: On | Off | extended
TraceEnable Off
#TraceEnable On

^G Get Help      ^O Write Out    ^W Where Is     ^K Cut Text     ^J Justify
^X Exit          ^R Read File    ^\ Replace      ^U Uncut Text   ^T To Spell
```

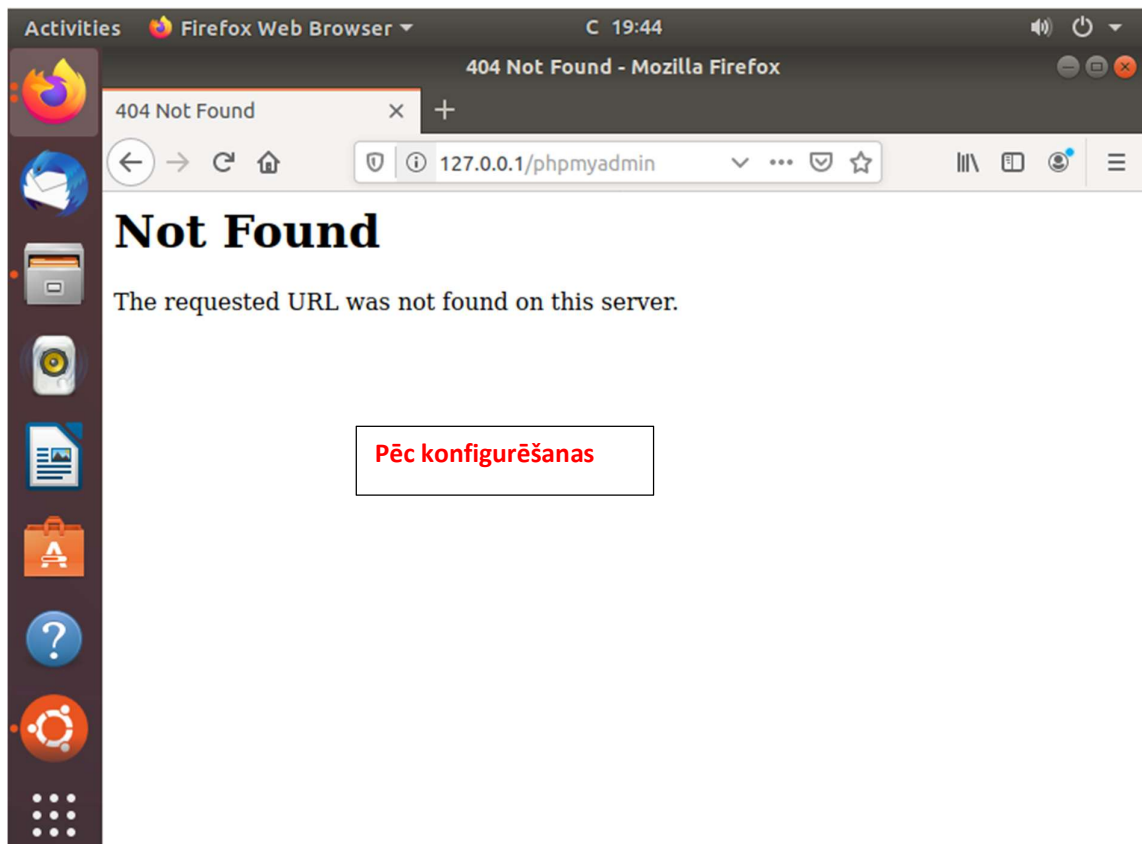
```
ogre@serverot: /var/www/html
File Edit View Search Terminal Help
ogre@serverot:~$ cd /var/www
ogre@serverot:/var/www$ sudo chmod 777 html
[sudo] password for ogre:
ogre@serverot:/var/www$ cd html
ogre@serverot:/var/www/html$ sudo chmod 777 *.*
ogre@serverot:/var/www/html$ sudo nano /etc/apache2/conf-enabled/security.conf
ogre@serverot:/var/www/html$ sudo nano /etc/apache2/conf-enabled/security.conf
ogre@serverot:/var/www/html$ sudo apachectl configtest
```



A terminal window titled "Terminal" with a timestamp of "C 19:43". The user "ogre" is logged in at "serverot" and is in the directory "/var/www/html". The terminal shows the following commands and output:

```
ogre@serverot:~$ cd /var/www
ogre@serverot:/var/www$ sudo chmod 777 html
[sudo] password for ogre:
ogre@serverot:/var/www$ cd html
ogre@serverot:/var/www/html$ sudo chmod 777 *.*
ogre@serverot:/var/www/html$ sudo nano /etc/apache2/conf-enabled/security.conf
ogre@serverot:/var/www/html$ sudo nano /etc/apache2/conf-enabled/security.conf
ogre@serverot:/var/www/html$ sudo apachectl configtest
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 127.0.1.1. Set the 'ServerName' directive globally to suppress this message
Syntax OK
ogre@serverot:/var/www/html$ sudo systemctl restart apache2
ogre@serverot:/var/www/html$
```

The last command, `sudo systemctl restart apache2`, is highlighted with a red underline.



MYSQL sākotnējā/drošā instalācija

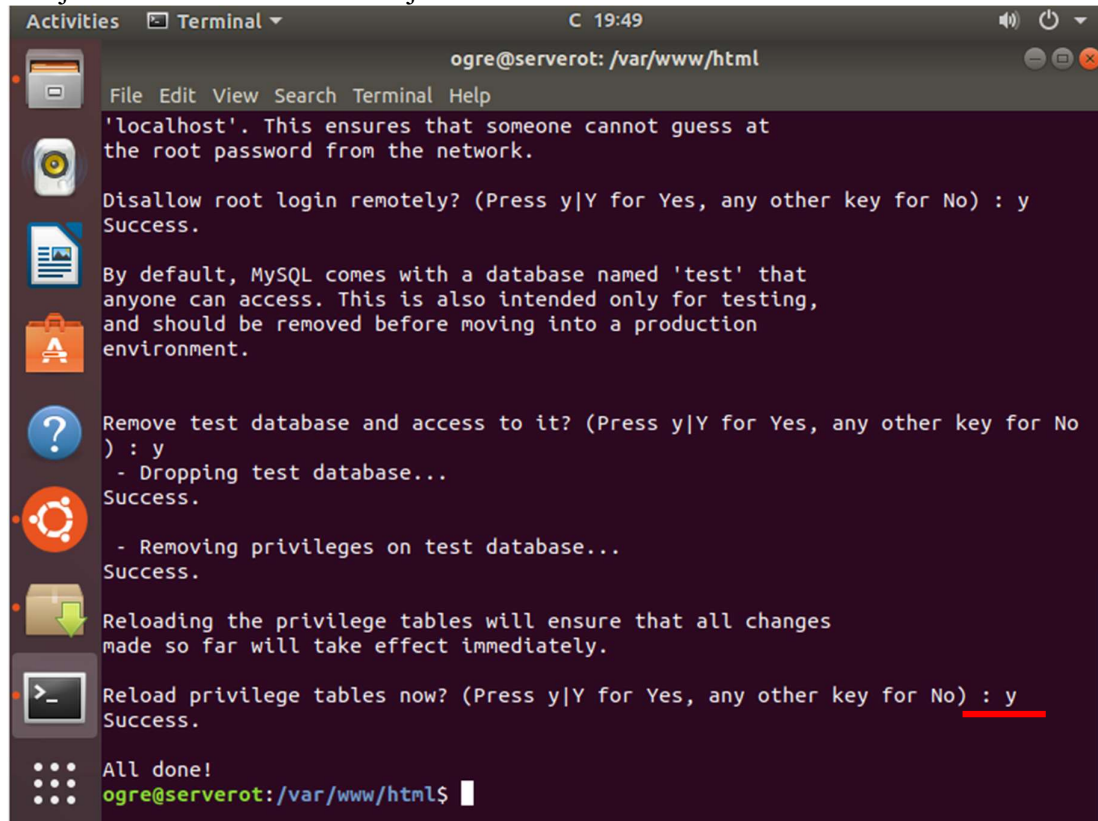
Izveidojam drošu paroli priekš ROOT konta, šim kontam ir pilnīga piekļuve visām datubāzēm, tabulām, utt.

```
ogre@serverot: ~  
File Edit View Search Terminal Help  
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...  
Processing triggers for ureadahead (0.100.0-21) ...  
ogre@serverot:~$ sudo mysql_secure_installation  
  
Securing the MySQL server deployment.  
  
Connecting to MySQL using a blank password.  
  
VALIDATE PASSWORD PLUGIN can be used to test passwords  
and improve security. It checks the strength of password  
and allows the users to set only those passwords which are  
secure enough. Would you like to setup VALIDATE PASSWORD plugin?  
  
Press y|Y for Yes, any other key for No: y  
  
There are three levels of password validation policy:  
  
LOW      Length >= 8  
MEDIUM  Length >= 8, numeric, mixed case, and special characters  
STRONG  Length >= 8, numeric, mixed case, special characters and dictionary  
          file  
  
Please enter 0 = LOW, 1 = MEDIUM and 2 = STRONG: 0  
Please set the password for root here.  
  
New password: _____  
Re-enter new password: █
```

Noņemam anonīmo lietotāju kontus, Atspējojam attālināto piekļuvi ROOT kontam, Noņemam neizmantojamoto noklusējuma testa datubāzi

```
File Edit View Search Terminal Help  
Do you wish to continue with the password provided?(Press y|Y for Yes, any other key for No) : y  
By default, a MySQL installation has an anonymous user,  
allowing anyone to log into MySQL 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? (Press y|Y for Yes, any other key for No) : 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? (Press y|Y for Yes, any other key for No) : y  
Success.  
  
By default, MySQL 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? (Press y|Y for Yes, any other key for No) : y
```

Pārlādējam datubāzu drošības iestatījumus



A terminal window titled 'ogre@serverot: /var/www/html' showing the output of the 'mysql_secure_installation' script. The script prompts for various security settings, all of which are confirmed with 'y'. The steps include: setting the root password, disallowing root login remotely, removing the 'test' database and its privileges, and reloading the privilege tables. The process concludes with 'All done!' and the prompt 'ogre@serverot: /var/www/html\$'.

```
ogre@serverot: /var/www/html
File Edit View Search Terminal Help

'localhost'. This ensures that someone cannot guess at
the root password from the network.

Disallow root login remotely? (Press y|Y for Yes, any other key for No) : y
Success.

By default, MySQL 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? (Press y|Y for Yes, any other key for No
) : y
- Dropping test database...
Success.
- Removing privileges on test database...
Success.

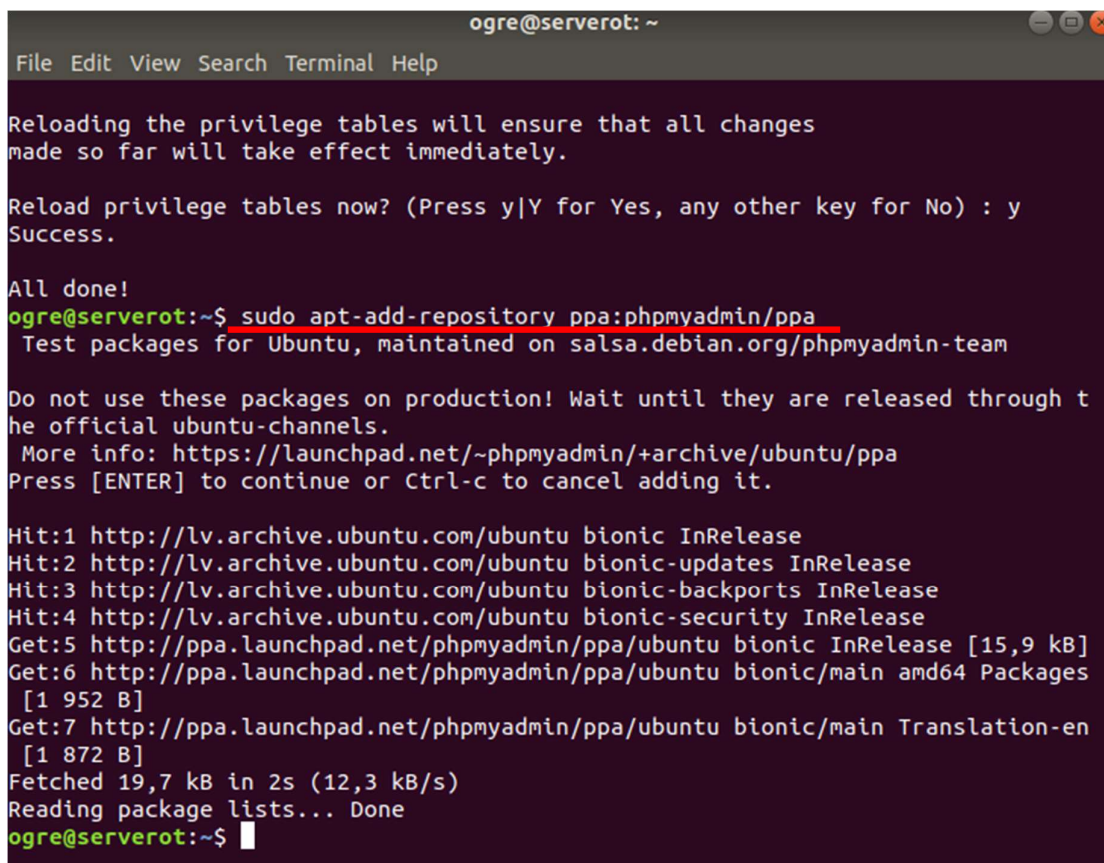
Reloading the privilege tables will ensure that all changes
made so far will take effect immediately.

Reload privilege tables now? (Press y|Y for Yes, any other key for No) : y
Success.

All done!
ogre@serverot: /var/www/html$
```

PHPMyadmin programmatūras instalācija un darbības nodrošināšana

Pievienojam repozitoriju



A terminal window titled 'ogre@serverot: ~' showing the command 'sudo apt-add-repository ppa:phpmyadmin/ppa' being executed. The output includes a warning not to use these packages on production, information about the repository, and a list of available packages. The command is successful, and the prompt returns to 'ogre@serverot: ~\$'.

```
ogre@serverot: ~
File Edit View Search Terminal Help

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

Reload privilege tables now? (Press y|Y for Yes, any other key for No) : y
Success.

All done!
ogre@serverot:~$ sudo apt-add-repository ppa:phpmyadmin/ppa
Test packages for Ubuntu, maintained on salsa.debian.org/phpmyadmin-team

Do not use these packages on production! Wait until they are released through t
he official ubuntu-channels.
More info: https://launchpad.net/~phpmyadmin/+archive/ubuntu/ppa
Press [ENTER] to continue or Ctrl-c to cancel adding it.

Hit:1 http://lv.archive.ubuntu.com/ubuntu bionic InRelease
Hit:2 http://lv.archive.ubuntu.com/ubuntu bionic-updates InRelease
Hit:3 http://lv.archive.ubuntu.com/ubuntu bionic-backports InRelease
Hit:4 http://lv.archive.ubuntu.com/ubuntu bionic-security InRelease
Get:5 http://ppa.launchpad.net/phpmyadmin/ppa/ubuntu bionic InRelease [15,9 kB]
Get:6 http://ppa.launchpad.net/phpmyadmin/ppa/ubuntu bionic/main amd64 Packages
[1 952 B]
Get:7 http://ppa.launchpad.net/phpmyadmin/ppa/ubuntu bionic/main Translation-en
[1 872 B]
Fetched 19,7 kB in 2s (12,3 kB/s)
Reading package lists... Done
ogre@serverot:~$
```

Uzstādām un konfigurējam PHPMyAdmin

```
Activities Terminal C 19:59
ogre@serverot: /var/www/html

File Edit View Search Terminal Help
resetconnection(\x) Clean session context.

For server side help, type 'help contents'

-> \q
Bye
ogre@serverot:/var/www/html$ sudo apt install phpmyadmin
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
dbconfig-common dbconfig-mysql icc-profiles-free javascript-common
libjs-jquery libjs-openlayers libjs-sphinxdoc libjs-underscore libzip4
php-bz2 php-curl php-gd php-google-recaptcha php-mbstring
php-phpmyadmin-motranslator php-phpmyadmin-shapefile
php-phpmyadmin-sql-parser php-phpseclib php-psr-cache php-psr-container
php-psr-log php-psr-simple-cache php-symfony-cache
php-symfony-expression-language php-symfony-polyfill-apcu php-tcpdf
php-twig php-twig-extensions php-xml php-zip php7.2-bz2 php7.2-curl
php7.2-gd php7.2-mbstring php7.2-xml php7.2-zip
Suggested packages:
php-dbase php-libsodium php-mcrypt php-gmp php-imagick php-twig-doc
php-symfony-translation php-recode php-gd2 php-tecnickcom-tcpdf
php-pragmarx-google2fa php-bacon-qr-code php-samyoul-u2f-php-server
Recommended packages:
php-mcrypt
The following NEW packages will be installed:
dbconfig-common dbconfig-mysql icc-profiles-free javascript-common
libjs-jquery libjs-openlayers libjs-sphinxdoc libjs-underscore libzip4
```

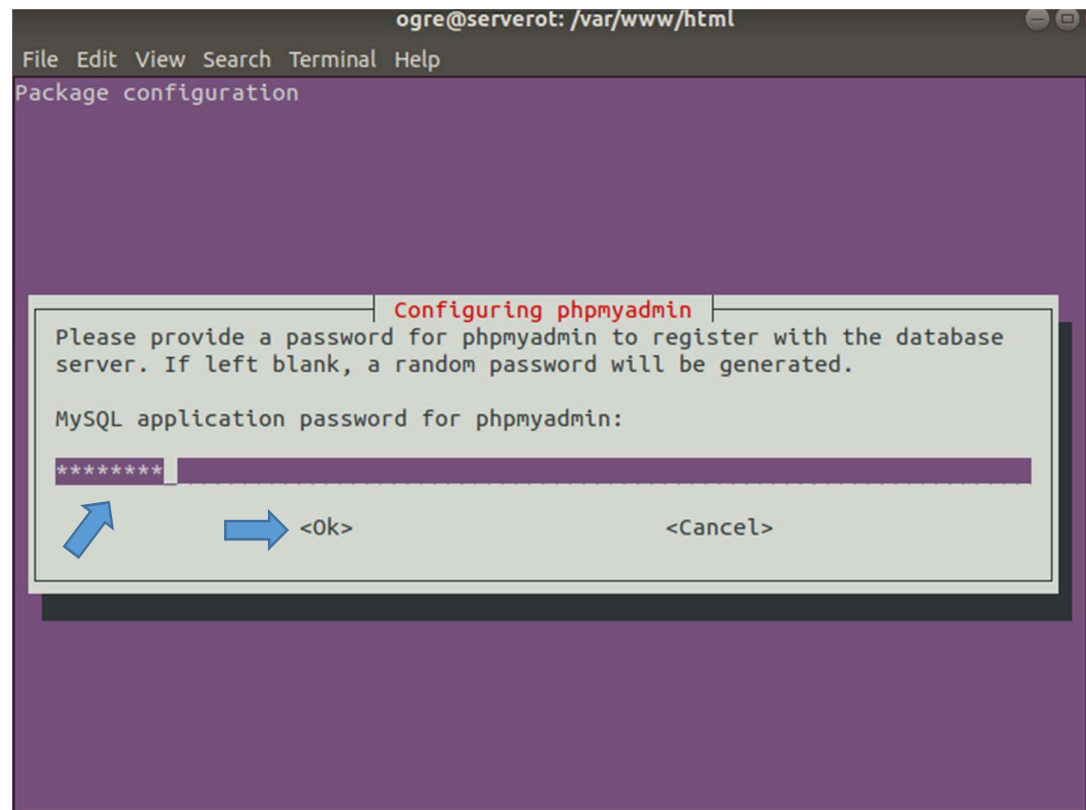
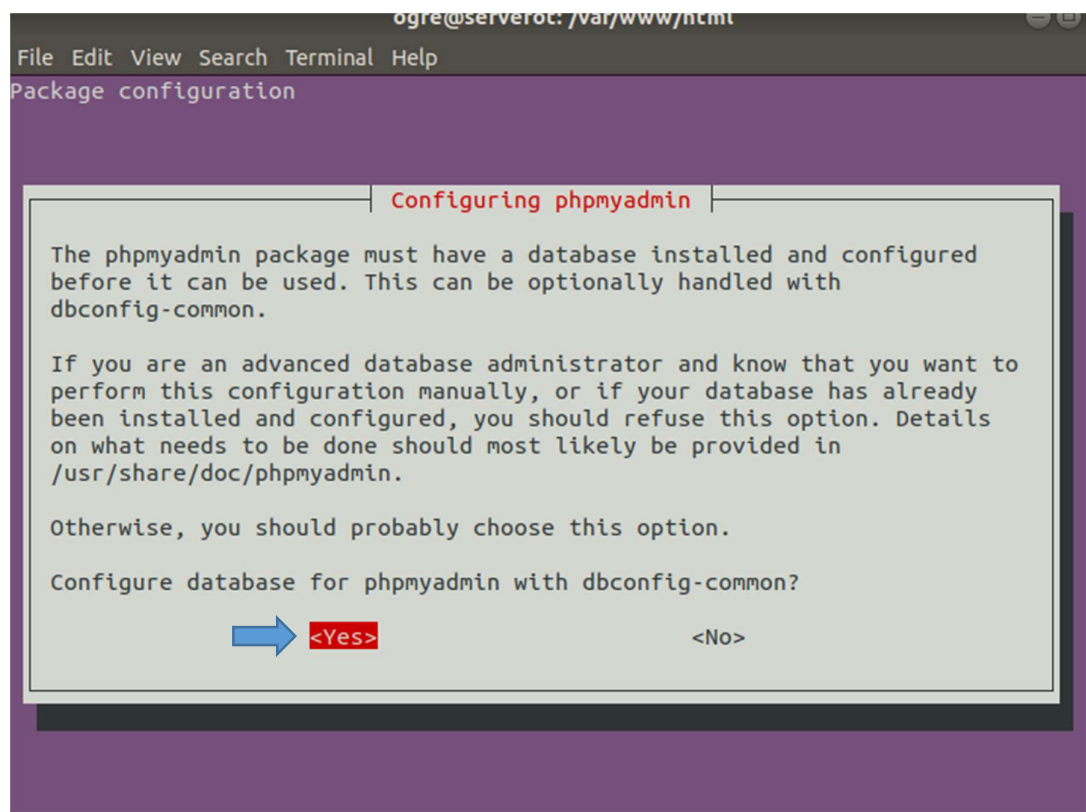
```
Activities Terminal C 20:00
ogre@serverot: /var/www/html

File Edit View Search Terminal Help
Package configuration

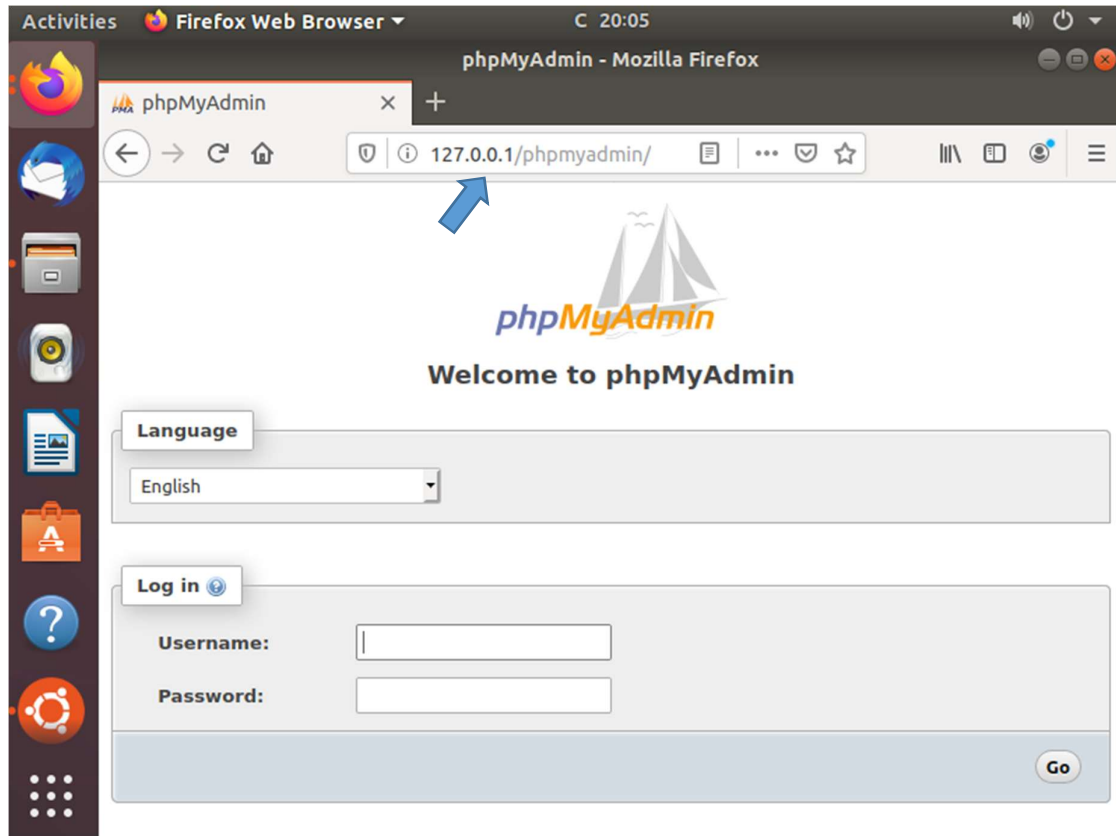
Configuring phpmyadmin
Please choose the web server that should be automatically configured to
run phpMyAdmin.

Web server to reconfigure automatically:
[*] apache2
[] lighttpd

<Ok>
```



Rezultāts ...



MySQL konfigurēšana / lietotāju pievienošana

```
ogre@serverot: /etc/phpmyadmin
File Edit View Search Terminal Help
mysql> CREATE USER 'viks'@'localhost' WITH mysql_native_password BY '$skills30'
-> CREATE USER 'viks'@'localhost' WITH mysql_native_password BY '$skills30';

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near 'mys
ql_native_password BY '$skills30'
CREATE USER 'viks'@'localhost' WITH mysql_na' at line 1
mysql> exit
Bye
ogre@serverot:/etc/phpmyadmin$ mysql -u root -p
Enter password:
ERROR 1698 (28000): Access denied for user 'root'@'localhost'
ogre@serverot:/etc/phpmyadmin$ sudo mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 15
Server version: 5.7.29-0ubuntu0.18.04.1 (Ubuntu)

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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 'viks'@'localhost' WITH mysql_native_password BY '$skills30';

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
```

```

File Edit View Search Terminal Help
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owners.

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

mysql> CREATE USER 'viks'@'localhost' WITH mysql_native_password BY '$kills30';

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near 'mys
ql_native_password BY '$kills30'' at line 1
mysql> CREATE USER 'viks'@'localhost' WITH mysql_native_password BY '$kills30';
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near 'mys
ql_native_password BY '$kills30'' at line 1
mysql> CREATE USER 'viks'@'localhost' WITH mysql_native_password BY '06v12c75';

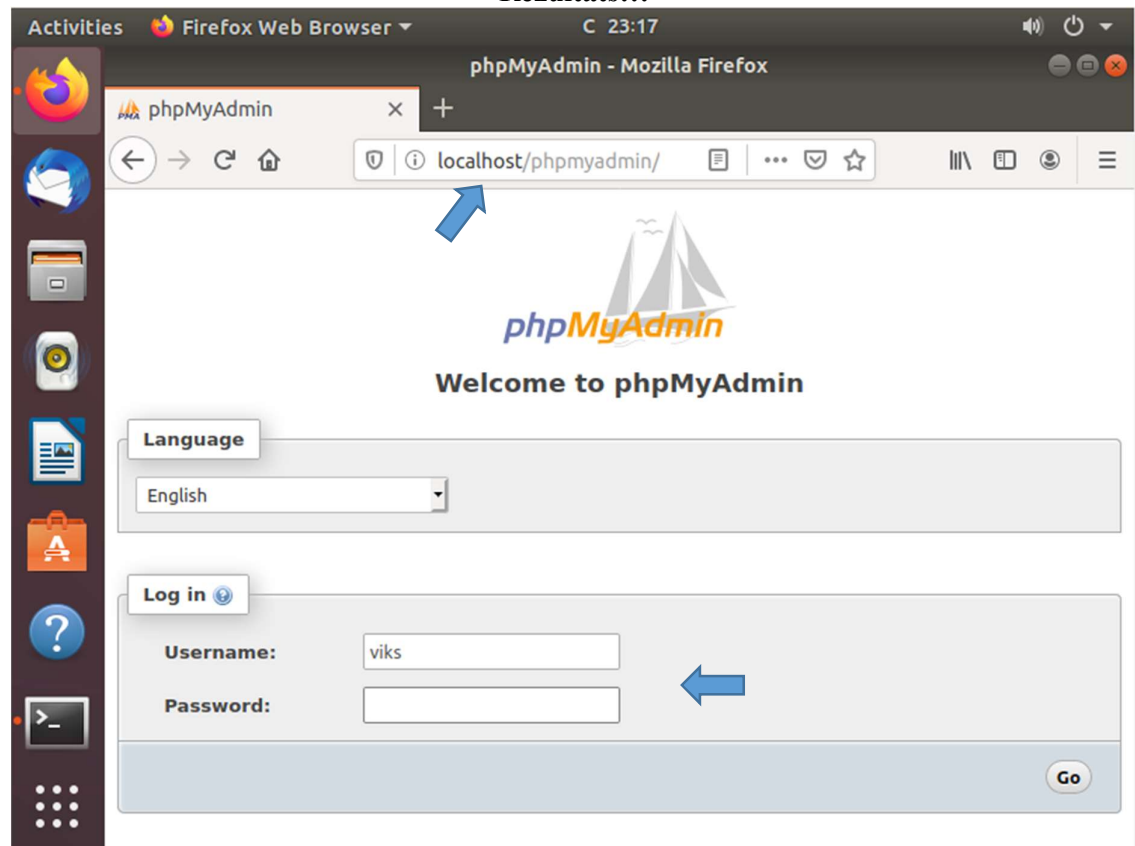
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near 'mys
ql_native_password BY '06v12c75'' at line 1
mysql> CREATE USER 'viks'@'localhost' IDENTIFIED BY '$kills30';
Query OK, 0 rows affected (0.00 sec)

mysql> grant all privileges on *.* to 'viks'@'localhost';
Query OK, 0 rows affected (0.00 sec)

mysql> exit
Bye
ogre@serverot:/etc/phpmyadmin$

```

Rezultāts...



Activities Firefox Web Browser C 23:18

localhost / localhost | phpMyAdmin 4.9.1deb2 - Mozilla Firefox

localhost / localhost | php x +

localhost/phpmyadmin/serve...

Server: localhost:3306

Databases SQL Status User accounts Export Import

Databases

Create database

Database name latin1_swedish_ci Create

Database	Collation	Action
☐ information_schema	utf8_general_ci	Check privileges
☐ mysql	latin1_swedish_ci	Check privileges
☐ performance_schema	utf8_general_ci	Check privileges
☐ phpmyadmin	latin1_swedish_ci	Check privileges
☐ sys	utf8_general_ci	Check privileges
Total: 5	latin1_swedish_ci	

☐ Check all With selected: [Drop](#)

Console