

# [How to Protect phpMyAdmin Using Nginx?](#)

written by sysadmin | 31 December 2025

[The previous article](#) explained how to install phpMyAdmin with the nginx web server. This article will explain how to protect phpMyAdmin from unauthorized users using nginx.

## **Problem**

How to protect phpMyAdmin using nginx?

## **Solution**

There are several methods to protect phpMyAdmin using nginx:

### **1. Allowing certain IPs**

The phpMyAdmin application can only be accessed by users who have certain IP addresses. For example, you want the IP localhost, and only 192.168.56.1 to be able to access phpMyAdmin. Then add the script below to the **/etc/nginx/sites-available/default** file in the **location /phpmyadmin** section:

```
allow 127.0.0.1;  
allow 192.168.56.1;  
deny all;
```

For more details, take a look at the image below:

```
location /phpmyadmin {
    root /usr/share/;
    index index.php;

    allow 127.0.0.1;
    allow 192.168.56.1;
    deny all;

    location ~ ^/phpmyadmin/(.+\.php)$ {
        try_files $uri =404;
        root /usr/share/;
        fastcgi_pass unix:/run/php/php8.3-fpm.sock;
        fastcgi_index index.php;
        fastcgi_param SCRIPT_FILENAME $document_root$fastcgi_script_name;
        include fastcgi_params;
    }

    location ~* ^/phpmyadmin/(.+\. (css|js|jpg|jpeg|gif|png|ico|html|xml|txt))$ {
        root /usr/share/;
    }
}
```

Allowing certain IPS

After that, use the command below to reload nginx:

```
sudo nginx -t
sudo systemctl reload nginx
```

If any user who uses an IP other than the localhost and 192.168.56.1 wants to access phpMyAdmin, then that user will not be able to access phpMyAdmin, as shown in the image below:

192.168.56.2/phpmyadmin/

## 403 Forbidden

nginx/1.24.0 (Ubuntu)



Forbidden access

## 2. Add a password

To make it safer, phpMyAdmin should be given additional HTTP Auth so that users who want to access the application must enter a password. Use the command below to install HTTP auth:

```
sudo apt install apache2-utils  
sudo htpasswd -c /etc/nginx/.phpmyadmin admin
```

Enter the password that you want, and then in the **/etc/nginx/sites-available/default** file, add the script below:

```
auth_basic 'Restricted';  
auth_basic_user_file /etc/nginx/.phpmyadmin;
```

So the default file will look like the image below:

```
location /phpmyadmin {
    root /usr/share/;
    index index.php;

    allow 127.0.0.1;
    allow 192.168.56.1;
    deny all;

    auth_basic "Restricted";
    auth_basic_user_file /etc/nginx/.phpmyadmin;

    location ~ ^/phpmyadmin/(.+\.php)$ {
        try_files $uri =404;
        root /usr/share/;
        fastcgi_pass unix:/run/php/php8.3-fpm.sock;
        fastcgi_index index.php;
        fastcgi_param SCRIPT_FILENAME $document_root$fastcgi_script_name;
        include fastcgi_params;
    }

    location ~* ^/phpmyadmin/(.+\. (css|js|jpg|jpeg|gif|png|ico|html|xml|txt))$ {
        root /usr/share/;
    }
}
```

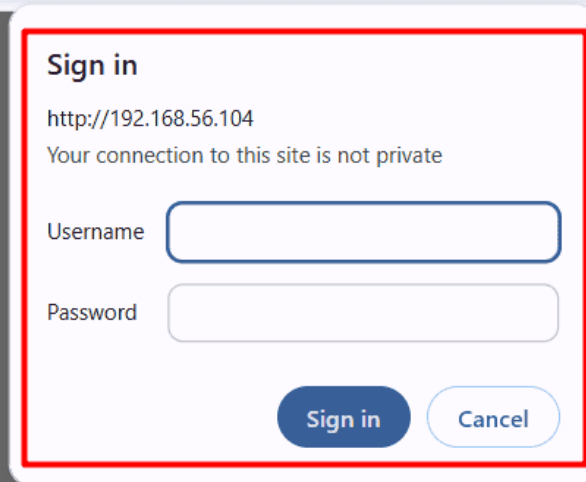


Adding HTTP Auth in Nginx

After that, use the command below to reload nginx:

```
sudo nginx -t
sudo systemctl reload nginx
```

Open the browser, and when you access phpMyAdmin, it should be there should be a display like below:



Enter username and password when accessing phpMyAdmin

Enter the username: **admin** and the password you created previously. If there are no errors, you can access phpMyAdmin.

### 3. Change the URL

By default, if you want to access phpMyAdmin, then you type the command below:

```
http://ip_server/phpmyadmin
```

However, for security reasons, it is best to replace the word phpMyAdmin with another word, for example, **pma**, so that the site address changes to:

```
http://ip_server/pma
```

Therefore, in the default file, change the file by deleting the **/phpmyadmin** section with the script below:

```
location /pma {
    alias /usr/share/phpmyadmin/;
    index index.php;

    allow 127.0.0.1;
```

```
allow 192.168.56.1;
deny all;

auth_basic "Restricted";
auth_basic_user_file /etc/nginx/.phpmyadmin;

location ~ /\.php$ {
include snippets/fastcgi-php.conf;
fastcgi_pass unix:/run/php/php8.3-fpm.sock;
fastcgi_param SCRIPT_FILENAME $request_filename;
}

location ~* \.(css|js|jpg|jpeg|gif|png|ico|html|xml|txt)$ {
expires 30d;
access_log off;
}
}
```

so that the default file changes to look like the image below:

```

server {
    listen 80;
    server_name _;
    root /var/www/html;
    index index.php index.html;

    location / {
        try_files $uri $uri/ =404;
    }

    location /pma {
        alias /usr/share/phpmyadmin/;
        index index.php;

        allow 127.0.0.1;
        allow 192.168.56.1;
        deny all;

        auth_basic "Restricted";
        auth_basic_user_file /etc/nginx/.phpmyadmin;

        location ~ /\.php$ {
            include snippets/fastcgi-php.conf;
            fastcgi_pass unix:/run/php/php8.3-fpm.sock;
            fastcgi_param SCRIPT_FILENAME $request_filename;
        }

        location ~* \.(css|js|jpg|jpeg|gif|png|ico|html|xml|txt)$ {
            expires 30d;
            access_log off;
        }
    }
}

```

Change the URL in Nginx

Use the command below to reload nginx:

```

sudo nginx -t
sudo systemctl reload nginx

```

Open **http://ip\_server/pma** in your browser, then you should be able to access phpMyAdmin as in the image below:



**Language**

English ▼

**Log in** ⓘ

Username:

Password:

Log in



Change the URL

## Note

There is one more method so that your phpMyAdmin application can be secure, namely, using SSL. You can use a Let's Encrypt SSL certificate for your phpMyAdmin site because the certificate is free. However, if you want the phpmyadmin application not to be accessed by the public, I think, then there is no need to use SSL.

## References

[digitalocean.com](http://digitalocean.com)  
[serverfault.com](http://serverfault.com)  
[httpd.apache.org](http://httpd.apache.org)

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# [How to Install phpMyAdmin With Nginx on Ubuntu?](#)

written by sysadmin | 31 December 2025

[The previous article](#) has explained how to install the phpMyAdmin application on Linux using the Apache web server. This article explains how to configure phpMyAdmin using nginx on Ubuntu.

## **Problem**

How to install phpMyAdmin with nginx on Ubuntu?

## **Solution**

Follow the steps below to install phpMyAdmin with Nginx on Ubuntu:

### **1. Update repo**

Use the command below to update the Ubuntu repo:

```
sudo apt update -y
```

### **2. Install MariaDB**

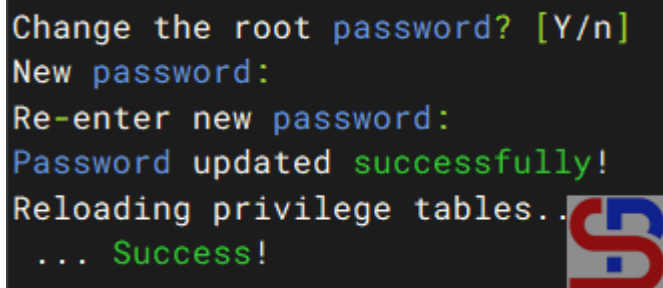
Next, install the MariaDB database using the command:

```
sudo apt install mariadb-server mariadb-client -y
```

Once finished, use the command below to change the root password in MariaDB:

```
sudo mysql_secure_installation
```

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



Change the root password

Then check whether the database is up or not using the command below:

```
sudo systemctl status mariadb
```

### 3. Install PHP

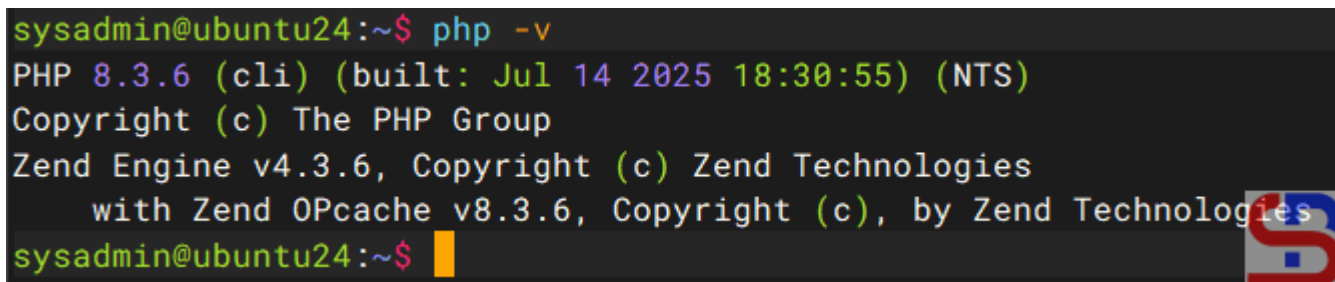
Install PHP by using the command below:

```
sudo apt install php php-fpm php-mysql php-cli php-curl php-gd php-mbstring
php-xml php-zip -y
```

Then check the version of PHP that you just installed by using the command below:

```
php -v
```

```
sysadmin@ubuntu24:~$ php -v
PHP 8.3.6 (cli) (built: Jul 14 2025 18:30:55) (NTS)
Copyright (c) The PHP Group
Zend Engine v4.3.6, Copyright (c) Zend Technologies
    with Zend OPcache v8.3.6, Copyright (c), by Zend Technologies
sysadmin@ubuntu24:~$
```



Check the php version

Usually, when installing PHP, the Apache package will also be installed on the server. Therefore, delete Apache using the command:

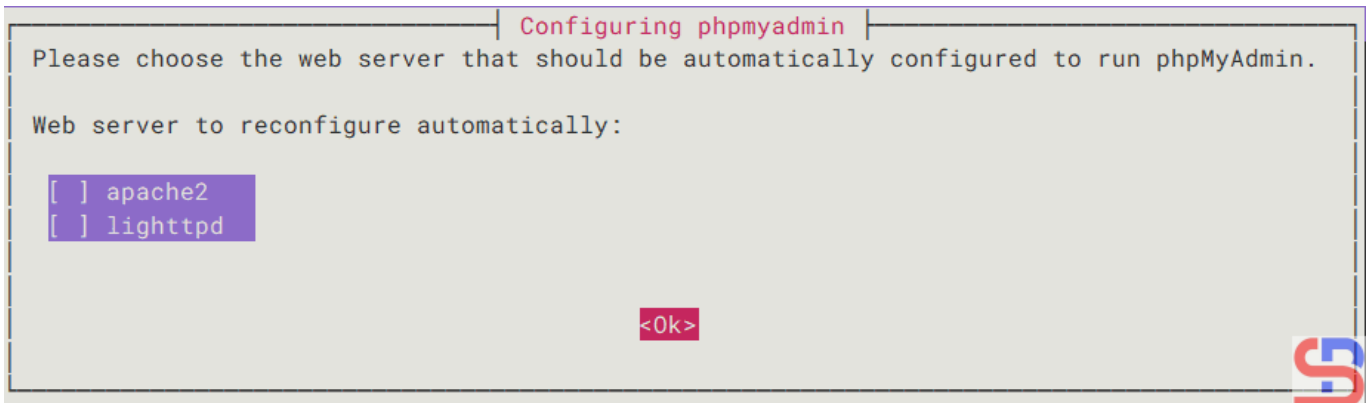
```
sudo apt remove apache2-* -y
```

## 4. Install phpMyAdmin

Use the command below to install phpMyAdmin:

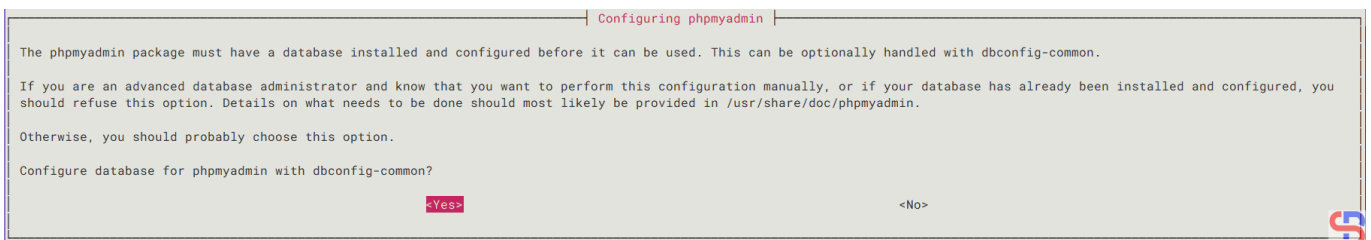
```
sudo apt install phpmyadmin -y
```

At the time of installation, there are several pop-ups that you must answer, such as the selection of the web server you are using, as shown in the image below:



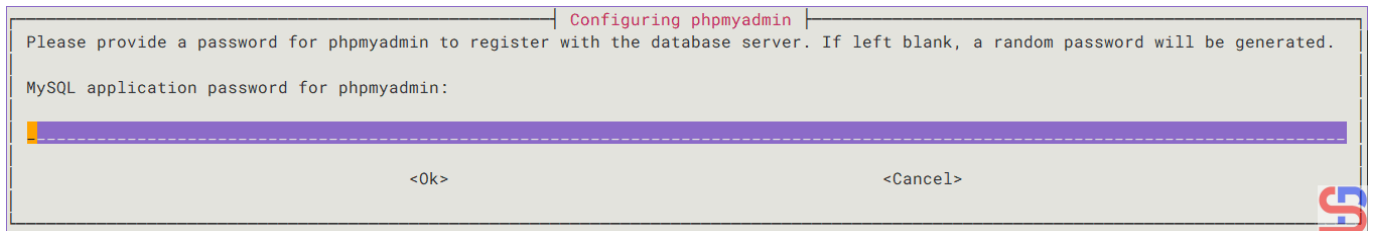
Choose the Ok button

Just select the button **Ok**, then the process of installation will continue. A few seconds later, there will be a pop-up as below to insert the phpMyAdmin in the database:



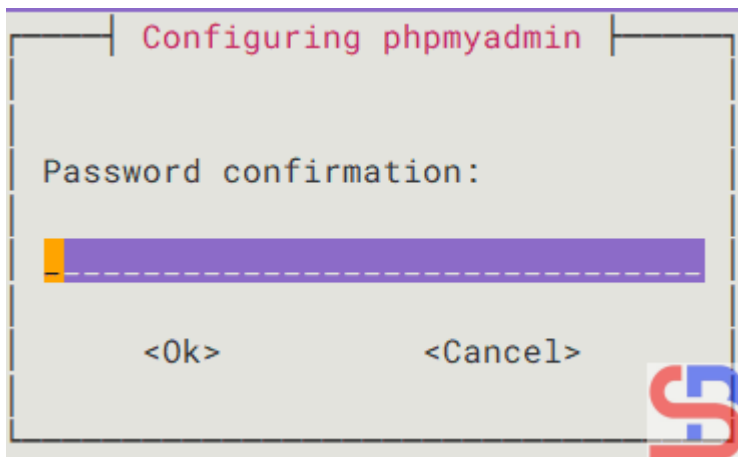
Choose the Yes button

Select the button **Yes**, and there's a pop-up to enter the password for the user phpmyadmin in the database as in the picture below:



Enter the password for the phpmyadmin user

Enter the password you want, select the **OK** button, and there will be another pop-up to confirm the password as in the image below:



Password confirmation

Enter the same password and select the **Ok** button, then the phpMyAdmin installation process will continue until completion.

## 5. Install nginx

Install nginx by using the command below:

```
sudo apt install nginx -y
```

After that, configure Nginx so that it can be integrated with phpMyAdmin. Copy the default file using the command below:

```
sudo cp /etc/nginx/sites-available/default /etc/nginx/sites-available/default.ori
```

Then in the default file, copy the script below:

```
server {
    listen 80;
    server_name _;
    root /var/www/html;
    index index.php index.html;

    location / {
        try_files $uri $uri/ =404;
    }

    location /phpmyadmin {
        root /usr/share/;
        index index.php;

        location ~ ^/phpmyadmin/(.+\.php)$ {
            try_files $uri =404;
            root /usr/share/;
            fastcgi_pass unix:/run/php/php8.3-fpm.sock;
            fastcgi_index index.php;
            fastcgi_param SCRIPT_FILENAME $document_root$fastcgi_script_name;
            include fastcgi_params;
        }

        location ~*
^/phpmyadmin/(.+\.(css|js|jpg|jpeg|gif|png|ico|html|xml|txt))$ {
            root /usr/share/;
        }
    }
}
```

### Warning

You have to be careful when writing the php-fpm version in the **fastcgi\_pass\_unix** section because there will be an error if the version is different from the one installed on the server. To see the version installed on the server, use the command below:

```
ls -l /run/php/
```

After that, use the command below to check whether the nginx configuration has errors or not:

```
sudo nginx -t
```

If there are no errors, then you can run the command below to reload nginx:

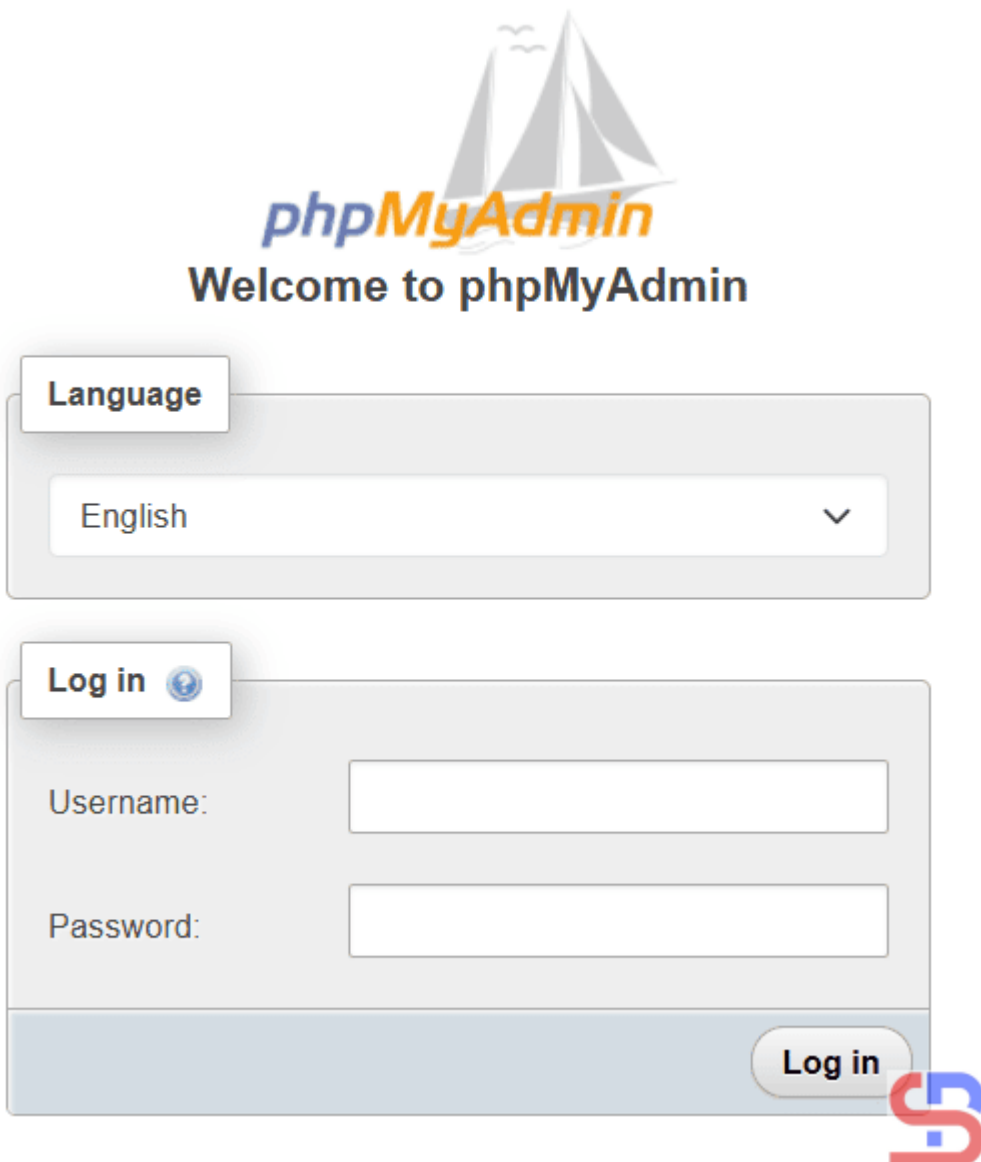
```
sudo systemctl reload nginx
```

## 6. Open phpMyAdmin

Open your browser and type:

```
http://ip_server/phpmyadmin
```

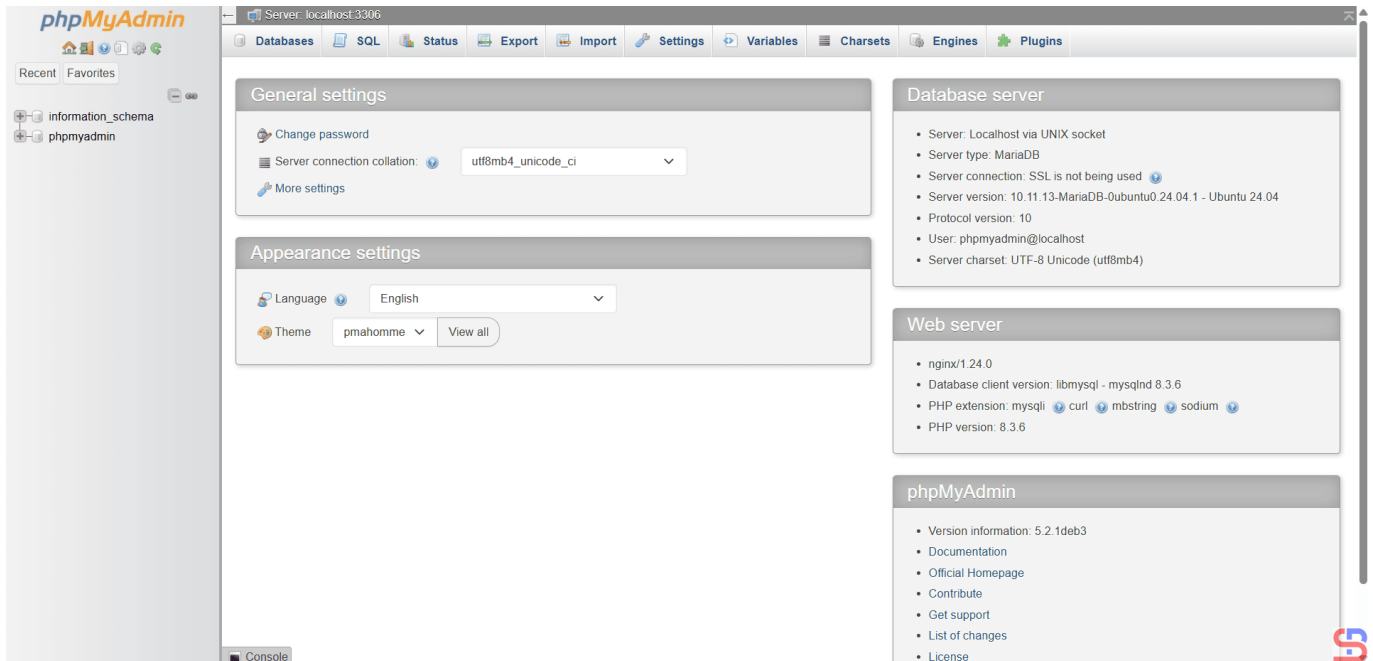
Then there should be a display like below:



The screenshot shows the phpMyAdmin interface. At the top, there is a logo of a sailboat with the text "phpMyAdmin" and "Welcome to phpMyAdmin". Below the logo, there is a "Language" dropdown menu with "English" selected. Underneath the language menu, there is a "Log in" section with a "Log in" button and a small blue icon. The "Log in" section contains two input fields: "Username:" and "Password:". A red and blue logo is visible in the bottom right corner.

Open phpMyAdmin in the browser

Enter the database username and password, for example, using the user phpmyadmin with the password that you created when installing phpMyAdmin, then there will be a display like the one below:



Display of phpMyAdmin using phpmyadmin user

## Note

If you want the phpMyAdmin application to be more secure, you can look at [this page](#).

## References

[markaicode.com](http://markaicode.com)

[linuxbabe.com](http://linuxbabe.com)

[hostman.com](http://hostman.com)

---

# How to Display MariaDB Database Metric Values?

written by sysadmin | 31 December 2025

I want to see the metric values of my MariaDB database.

## **Problem**

How to display MariaDB database metric values?

## **Solution**

As far as I know, there are 2 tools that you can use to display the values of metrics on your MariaDB database.

### **1. mariadb-report**

This tool is built into MariaDB, so when you install the MariaDB database or mariadb-client on your server, this tool will automatically be installed on your server. In general, use the format below to run this command:

```
mariadb-report --user=username --password your_password
```

If you want to display MariaDB database metrics using the root user, then use the command below:

```
mariadb-report --user=root --password
```

Enter the password for the root user, and a display will appear as below:

```
-- Key -----  
Buffer used      0 of 128.00M   %Used:   0.00  
  Current       23.35M           %Usage:  18.24  
Write hit        0.00%  
Read hit         0.00%  
  
-- Questions -----  
Total           38.14k      12.1/s  
  DMS           21.86k      7.0/s   %Total:  57.32  
  Com_          16.26k      5.2/s   42.64  
  COM_QUIT       66         0.0/s   0.17  
  -Unknown       49         0.0/s   0.13  
Slow 10 s       0           0/s     0.00   %DMS:   0.00 Log: OFF  
DMS             21.86k      7.0/s   57.32  
  SELECT        16.78k      5.3/s   43.99   76.75  
  INSERT         4.20k      1.3/s   11.02   19.23  
  UPDATE         668        0.2/s    1.75    3.06  
  DELETE         212        0.1/s    0.56    0.97  
  REPLACE        0           0/s     0.00    0.00  
Com_            16.26k      5.2/s   42.64  
  commit        8.08k      2.6/s   21.18  
  begin         8.08k      2.6/s   21.18  
  set_option     69         0.0/s    0.18  
  
-- Rows -----  
Rows            6.82M      2.2k/s  
  Using idx     3.26M      1.0k/s   %Index:  47.80  
Rows/question   178.83  
  
-- SELECT and Sort -----  
Scan            7.85k      2.5/s   %SELECT:  46.81  
Range           5.66k      1.8/s   33.70  
Full join       1.62k      0.5/s    9.67  
Range check     0           0/s     0.00  
Full rng join   0           0/s     0.00  
Sort scan       1.05k      0.3/s  
Sort range      4.20k      1.3/s  
Sort mrg pass   314        0.1/s
```



Display of mariadb-report

If you want to put the results into a file, you can use the command below:

```
mariadb-report --user=root --password --outfile /tmp/metric.txt
```

Enter the password, and the results will be entered into the /tmp/metric.txt file.

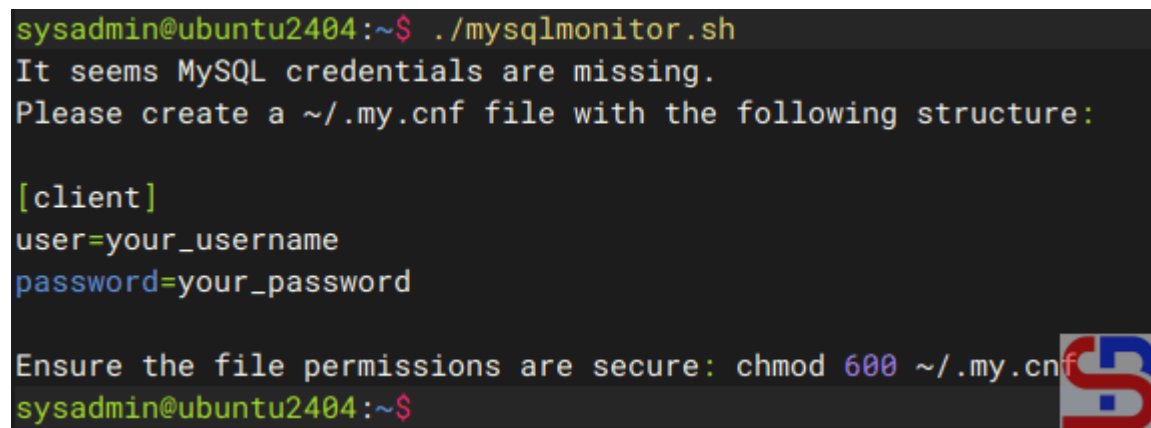
## 2. mysqlmonitor

This is a simple bash script created to give system administrators and database administrators a fast summary of MySQL metrics. It presents essential metrics such as InnoDB buffer utilization, query efficiency, and system memory, accompanied by concise descriptions of each parameter. To run this script, you must create MariaDB credentials in the my.cnf file, because if not, there will be an error like the one below:

```
sysadmin@ubuntu2404:~$ ./mysqlmonitor.sh
It seems MySQL credentials are missing.
Please create a ~/.my.cnf file with the following structure:

[client]
user=your_username
password=your_password

Ensure the file permissions are secure: chmod 600 ~/.my.cnf
sysadmin@ubuntu2404:~$
```



Error when running mysqlmonitor

Copy the script below and insert it into the my.cnf file:

```
[client]
user=username
password=your_password
```

To download and run the script, run the commands below:

```
curl -O
https://raw.githubusercontent.com/haydenjames/mysqlmonitor-script/main/mysqlm
onitor.sh &&
chmod +x mysqlmonitor.sh &&
./mysqlmonitor.sh
```

There will be a display like the image below:

```
----- MySQL Runtime Metrics -----
Aborted_clients          | 0          | Failed client connections.
Aborted_connects        | 2          | Failed MySQL server connections.
Connections              | 370        | Total connection attempts.
Created_tmp_disk_tables  | 1          | Temp tables created on disk.
Created_tmp_files        | 788        | Temp files created by MySQL.
Created_tmp_tables       | 1.21K      | Temp tables created in memory.
InnoDB_buffer_pool_pages_free | 4.68K     | Free pages in InnoDB buffer pool.
InnoDB_buffer_pool_read_requests | 2.94M     | Logical read requests to buffer.
InnoDB_buffer_pool_reads  | 3.36K      | Logical reads from disk.
InnoDB_buffer_pool_wait_free | 0         | Waits for free pages.
InnoDB_buffer_pool_write_requests | 197.23K   | Writes requested to InnoDB buffer.
InnoDB_data_reads        | 3.60K      | Data pages read from disk.
InnoDB_data_writes       | 0          | Data pages written to disk.
InnoDB_log_waits        | 0          | Log waits for buffer flushes.
InnoDB_log_writes       | 7.81K      | Log writes to InnoDB log file.
Key_reads                | 0          | MyISAM disk reads (Use InnoDB).
Key_writes               | 0          | MyISAM disk writes (Use InnoDB).
Max_used_connections     | 32         | Max concurrent connections so far.
Open_files               | 58         | Files currently open by MySQL.
Open_tables              | 147        | Tables currently open.
Opened_tables            | 154        | Total tables opened since start.
Questions (12.30 QPS)    | 48.33K     | Total number of client requests.
Select_full_join         | 2.03K      | Joins without usable indexes.
Select_scan              | 10.10K     | Full table scans in SELECT queries.
Slow_queries             | 0          | Queries exceeding long_query_time.
Sort_merge_passes        | 392        | Merge passes performed for sorting.
Sort_range               | 5.25K      | Range-based sort operations.
Sort_rows                | 562.52K    | Rows sorted by MySQL.
Sort_scan                | 1.31K      | Table-scan-based sort operations.
Table_locks_immediate    | 355        | Locks acquired immediately.
Table_locks_waited       | 0          | Locks that had to wait. (bad).
Table_open_cache_hits    | 33.98K     | Cache hits for table open.
Table_open_cache_misses  | 155        | Cache misses for table open.
Threads_cached           | 0          | Threads in the thread cache.
Threads_connected        | 32         | Currently open connections.
Threads_created           | 35         | Threads created for connections.
Threads_running           | 1          | Threads currently running queries.
Uptime (Wait 24h for accuracy) | 1h 5m 28s

----- MySQL Health Metrics -----
InnoDB Buffer Pool Free   | 73 MB      | Zero/low? = innodb_buffer_pool_size.
InnoDB Buffer Pool Hit Ratio | 99.9%     | High QPS? Aim for high hit ratio
Thread Cache Hit Ratio    | 90.5%     | Faster connection handling. > 90%
Table Cache Hit Ratio     | 99.5%     | Faster table access speeds. > 90%
```

Display of mysqlmonitor



From the image above, you can see that the results from the `mysqlmonitor` tool are more concise than the `mariadb-report` tool. To exit this tool, press the `q` key.

## Note

If you want detailed metric results, then you can use the `mariadb-report` tool. However, if you want more concise metrics, you can use the `mysqlmonitor` tool.

## References

[linuxblog.io](https://linuxblog.io)  
[mariadb.com](https://mariadb.com)  
[github.com](https://github.com)

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## [How to Install and Run tuning-primer?](#)

written by sysadmin | 31 December 2025

[The previous article](#) explained the `mysqltuner` script to provide recommendations to increase MariaDB performance. This article will explain the `primary-tuning` script, which is an alternative or may also be an addition to providing recommendations for MariaDB.

## Problem

How to install and run `tuning-primer`?

## Solution

The `primary-tuning` script was created by Matthew Montgomery using a bash script to provide recommendations against a MySQL/MariaDB database. This script takes information from

“SHOW STATUS LIKE...” and “SHOW VARIABLES LIKE...” to produce recommendations for tuning server variables. To download this script, use the command below:

```
git clone https://github.com/mattiabasone/tuning-primer.git
```

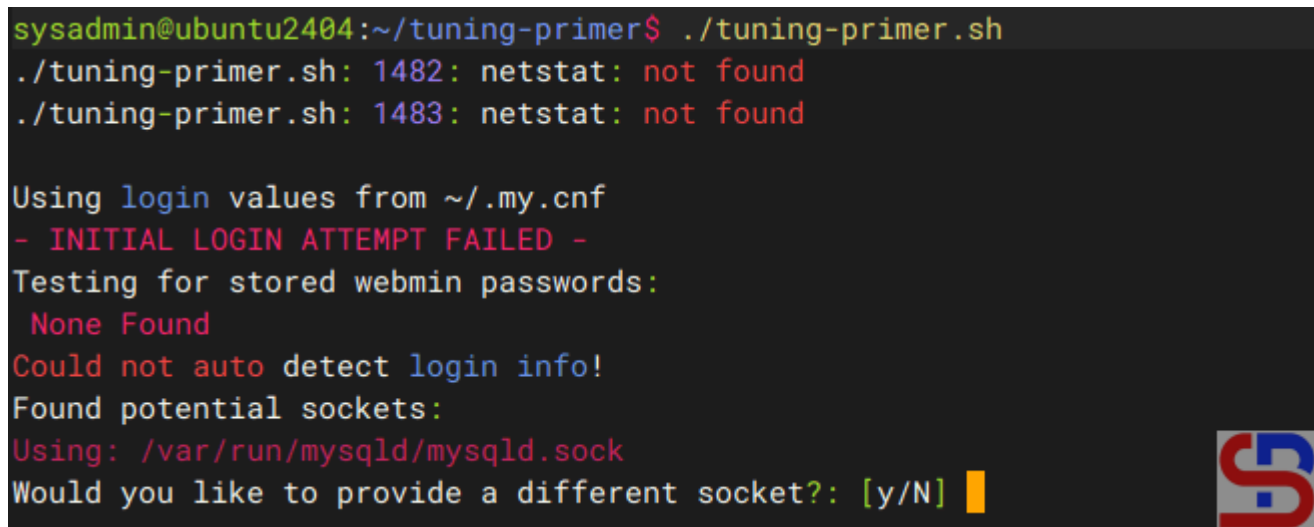
Go to the primary-tuning folder and permit so that the script can be run:

```
chmod +x tuning-primary.sh
```

Then, run the command below to run the primary-tuning script:

```
./tuning-primer.sh
```

There will be a display like the image below:




```
sysadmin@ubuntu2404:~/tuning-primer$ ./tuning-primer.sh
./tuning-primer.sh: 1482: netstat: not found
./tuning-primer.sh: 1483: netstat: not found

Using login values from ~/.my.cnf
- INITIAL LOGIN ATTEMPT FAILED -
Testing for stored webmin passwords:
None Found
Could not auto detect login info!
Found potential sockets:
Using: /var/run/mysqld/mysqld.sock
Would you like to provide a different socket?: [y/N] █
```

Run tuning-primer script

Press **Enter**, then you have to enter your username and password so that this script can access your MariaDB database, as in the image below:

```
Do you have your login handy ? [y/N] : y
User: root
Password: qwerty
Would you like me to create a ~/.my.cnf file for you? [y/N] :
```



Enter username and password

### Warning

This script writes the password clearly, so you have to be careful when using this script.

After that, the script will display recommendations as in the image below:

```
-- MYSQL PERFORMANCE TUNING PRIMER --  
- By: Matthew Montgomery -
```

```
MySQL Version 10.11.13-MariaDB-0ubuntu0.24.04.1 x86_64
```

```
Uptime = 0 days 1 hrs 41 min 2 sec
```

```
Avg. qps = 14
```

```
Total Questions = 88210
```

```
Threads Connected = 33
```

```
Warning: Server has not been running for at least 48hrs.  
It may not be safe to use these recommendations
```

```
To find out more information on how each of these  
runtime variables effects performance visit:
```

```
http://dev.mysql.com/doc/refman/10.11/en/server-system-variables.html
```

```
Visit http://www.mysql.com/products/enterprise/advisors.html
```

```
for info about MySQL's Enterprise Monitoring and Advisory Service
```

#### SLOW QUERIES

```
The slow query log is NOT enabled.
```

```
Current long_query_time = 10.000000 sec.
```

```
You have 0 out of 88224 that take longer than 10.000000 sec. to complete
```

```
Your long_query_time seems to be fine
```

#### BINARY UPDATE LOG

```
The binary update log is NOT enabled.
```

```
You will not be able to do point in time recovery
```

```
See http://dev.mysql.com/doc/refman/10.11/en/point-in-time-recovery.html
```

#### WORKER THREADS

```
Current thread_cache_size = 151
```

```
Current threads_cached = 0
```

```
Current threads_per_sec = 0
```

```
Historic threads_per_sec = 0
```

```
Your thread_cache_size is fine
```



tuning-primer script result display

## Note

Because this script was created in 2018 and there has been no update, there are several errors that occur where on lines 1482 and 1483 (see first image) in the netstat command where at this time (November 2025), the netstat command has

been changed to `ss` and also the password is written as plain text which is very dangerous if known by the unauthorized user.

## References

[linuxblog.io](https://linuxblog.io)  
[github.com](https://github.com)

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# [How to Install And Run mysqltuner?](#)

written by sysadmin | 31 December 2025

If you have a MariaDB database, then you definitely want the performance of the database to improve. Therefore, you should have done several configurations to achieve your goals. There is a script called `mysqltuner` that you can use to improve the performance of your MariaDB database by providing recommendations.

## Problem

How to install and run `mysqltuner`?

## Solution

`mysqltuner` is a Perl script designed to quickly assess a MySQL setup and implement changes to enhance performance and stability. It supports ~300 indicators for MySQL/MariaDB/Percona Server in this latest version and is actively maintained, supporting many configurations such as Galera Cluster, TokuDB, Performance schema, Linux OS metrics, InnoDB, MyISAM, Aria, and so on. To download it, you can run the command:

```
git clone https://github.com/major/MySQLTuner-perl.git
```

Or use the commands below:

```
wget http://mysqltuner.pl/ -O mysqltuner.pl
wget
https://raw.githubusercontent.com/major/MySQLTuner-perl/master/basic_password
s.txt -O basic_passwords.txt
wget
https://raw.githubusercontent.com/major/MySQLTuner-perl/master/vulnerabilitie
s.csv -O vulnerabilities.csv
```

To run this script, you must have Perl installed on your server. So, to run this script, you can use the command (if you download mysqltuner using git, you have to go to **the MySQLTuner-perl** folder):

```
perl mysqltuner.pl
```

Or you permit this script to be executed by using the command:

```
chmod +x mysqltuner.pl
./mysqltuner.pl
```

After you run the command, there will be a display as below:

```
sysadmin@ubuntu2404:~$ perl mysqltuner.pl
>> MySQLTuner 2.7.0
    * Jean-Marie Renouard <jmrenouard@gmail.com>
    * Major Hayden <major@mhtx.net>
>> Bug reports, feature requests, and downloads at http://mysqltuner.pl/
>> Run with '--help' for additional options and output filtering

i Skipped version check for MySQLTuner script
i Using mysql to check login
Please enter your MySQL administrative login: root
Please enter your MySQL administrative password:
```

Enter username and password

Enter the username and password, and if there is no error,

mysqldtuner displays your MariaDB state as shown in the image below:

```
----- Storage Engine Statistics -----
i  Status: +Aria +CSV +InnoDB +MEMORY +MRG_MyISAM +MyISAM +PERFORMANCE_SCHEMA +SEQUENCE
i  Data in InnoDB tables: 107.3M (Tables: 227)
i  Data in Aria tables: 32.0K (Tables: 1)
✓ Total fragmented tables: 0

✓ Currently running supported MySQL/MariaDB version 10.11.13-MariaDB(LTS)

----- Log file Recommendations -----
✗ Log file doesn't exist

----- Analysis Performance Metrics -----
i  innodb_stats_on_metadata: OFF
✓ No stat updates during querying INFORMATION_SCHEMA.

----- Views Metrics -----

----- Triggers Metrics -----

----- Routines Metrics -----

----- Security Recommendations -----
i  Ubuntu 24.04 - 10.11.13-MariaDB
✓ There are no anonymous accounts for any database users
✓ All database users have passwords assigned
✗ User 'snipe_user'@% does not specify hostname restrictions.
i  There are 620 basic passwords in the list.

----- CVE Security Recommendations -----
✓ NO SECURITY CVE FOUND FOR YOUR VERSION

----- Performance Metrics -----
i  Up for: 2m 4s (2K q [16.960 qps], 104 conn, TX: 14M, RX: 233K)
i  Reads / Writes: 83% / 17%
i  Binary logging is disabled
i  Physical Memory      : 961.6M
i  Max MySQL memory     : 861.2M
i  Other process memory : 0B
i  Total buffers: 417.0M global + 2.9M per thread (151 max threads)
i  Performance_schema Max memory usage: 0B
```

mysqldtuner view

And at the end, mysqldtuner will recommend that your MariaDB improve its performance:

```
----- Recommendations -----
General recommendations:
  Restrict Host for 'snipe_user'@ '%' to 'snipe_user'@LimitedIPRangeOrLocalhost
  RENAME USER 'snipe_user'@ '%' TO 'snipe_user'@LimitedIPRangeOrLocalhost;
  MySQL was started within the last 24 hours: recommendations may be inaccurate
  Reduce your overall MySQL memory footprint for system stability
  Configure your accounts with ip or subnets only, then update your configuration with skip-name-resolve=ON
  We will suggest raising the 'join_buffer_size' until JOINS not using indexes are found.
    See https://dev.mysql.com/doc/refman/8.0/en/server-system-variables.html#sysvar\_join\_buffer\_size
  Performance schema should be activated for better diagnostics
  Be careful, increasing innodb_log_file_size / innodb_log_files_in_group means higher crash recovery mean time
Variables to adjust:
  skip-name-resolve=ON
  join_buffer_size (> 256.0K, or always use indexes with JOINS)
  table_definition_cache (400) > 519 or -1 (autosizing if supported)
  performance_schema=ON
  innodb_log_file_size should be (=32M) if possible, so InnoDB total log file size equals 25% of buffer pool size.
  innodb_log_buffer_size (> 16M)
sysadmin@ubuntu2404:~$
```

Recommendations on myqltuner

## Note

If you want to run myqltuner with the verbose option, use the command below:

```
perl myqltuner.pl --verbose
```

If you want to display Maximum Output Information around MySQL, like display database(s) and table(s) on myqltuner, use the command below:

```
perl myqltuner.pl --buffers --dbstat --idxstat --sysstat --pfstat --tbstat
```

Use the command below to use CVE(Common Vulnerabilities and Exposures) in myqltuner:

```
perl myqltuner.pl --cvfile=vulnerabilities.csv
```

Use the command below to save the results from myqltuner in a file without displaying it on the screen:

```
perl myqltuner.pl --silent --outputfile /tmp/result_myqltuner.txt
```

To update myqltuner, run the command below:

```
perl mysqltuner.pl --checkversion --updateversion
```

## References

[mysqltuner.com](https://mysqltuner.com)

[github.com](https://github.com)

[hevodata.com](https://hevodata.com)

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# [How to Display All Crontabs Running Using a Bash Script?](#)

written by sysadmin | 31 December 2025

I would like to know who is running crontab on the Linux server.

## Problem

How to display all crontabs running using a Bash script?

## Solution

By default, run the command below if you want to display the crontab command:

```
crontab -l
```

However, if you want to display another user, for example, user john, use the command below:


```
sudo crontab -l -u john
```

If you want to see all users running crontab, then you can run the command below:

## Ubuntu/Debian

```
ls -l /var/spool/cron/crontabs
```

```
sysadmin@ubuntu2404:~$ sudo ls -l /var/spool/cron/crontabs
[sudo] password for sysadmin:
total 8
-rw----- 1 john      crontab 1154 Nov 26 07:50 john
-rw----- 1 sysadmin  crontab 1215 Nov 26 08:02 sysadmin
sysadmin@ubuntu2404:~$
```



Displays all users running crontab

## RockyLinux/AlmaLinux/RHEL/CentOS

```
ls -l /var/spool/cron/
```

Use the command below if you want to see all users running crontab and display each user's crontab at the same time:

```
awk -F: '$3>=1000 || $1=="root" {print $1}' /etc/passwd |
while read u; do
    if sudo crontab -l -u "$u" &>/dev/null; then
        echo
        echo "=== $u ==="
        sudo crontab -l -u "$u" | grep -v '^#' | sed '/^\s*$/d'
        echo ""
    fi
done
```

```

sysadmin@ubuntu2404:~$ awk -F: '$3>=1000 || $1=="root" {print $1}' /etc/passwd |
while read u; do
    if sudo crontab -l -u "$u" &>/dev/null; then
        echo
        echo "=== $u ==="
        sudo crontab -l -u "$u" | grep -v '^#' | sed '/^\s*$/d'
        echo ""
    fi
done

=== sysadmin ===
@reboot sleep 900 &&    cd /home/sysadmin;./time.sh
0 0 * * 6            cd /home/sysadmin;./saturday.sh
15 7 24-31 * 6      date > time.txt

=== john ===
30 10 * * *          sudo systemctl restart apache2

sysadmin@ubuntu2404:~$

```

Displays all users running crontab and their script(s) on crontab

If you want the result of the above command to be entered as a CSV file, then run the command below:

```

echo "user,cron_entry" > all_user_crontab.csv; \
awk -F: '$3>=1000||$1=="root"{print $1}' /etc/passwd | while read u; do \
    if sudo crontab -l -u "$u" &>/dev/null; then \
        sudo crontab -l -u "$u" | \
        grep -v '^[[[:space:]]*# ' | grep -v '^[[[:space:]]*$ ' | \
        while read line; do \
            echo "$u,\"$line\"" >> all_user_crontab.csv; \
        done; \
    fi; \
done

```

```

sysadmin@ubuntu2404:~$ echo "user,cron_entry" > all_user_crontab.csv; \
awk -F: '$3>=1000||$1=="root"{print $1}' /etc/passwd | while read u; do \
  if sudo crontab -l -u "$u" &>/dev/null; then \
    sudo crontab -l -u "$u" | \
    grep -v '^[[[:space:]]*# ' | grep -v '^[[[:space:]]*$ ' | \
    while read line; do \
      echo "$u,\"$line\" " >> all_user_crontab.csv; \
    done; \
  fi; \
done
sysadmin@ubuntu2404:~$ cat all_user_crontab.csv
user,cron_entry
sysadmin,"@reboot      sleep 900 &&      cd /home/sysadmin;./time.sh"
sysadmin,"0 0 * * 6    cd /home/sysadmin;./saturday.sh"
sysadmin,"15 7 24-31 * 6      date > time.txt"
john,"30 10 * * *      sudo systemctl restart apache2"
sysadmin@ubuntu2404:~$

```



Run the command to display all the users and their crontab, and save it to the CSV file

However, if you want to display all crontabs, whether run by the user or the Linux system, then you can use the command below:

```

#!/bin/bash

clean_output() {
  grep -v '^[[[:space:]]*# ' | grep -v '^[[[:space:]]*$ '
}

echo "=== SYSTEM CRONTABS ==="
echo ""

# Main crontab system
if [[ -f /etc/crontab ]]; then
  echo "--- /etc/crontab ---"
  clean_output < /etc/crontab
  echo ""
fi

# Cron.d directory
if [[ -d /etc/cron.d ]]; then
  echo "--- /etc/cron.d/ ---"
  for f in /etc/cron.d/*; do
    [[ -f "$f" ]] || continue
    echo "File: $f"
    clean_output < "$f"
  done
fi

```

```

        echo ""
    done
fi

# Cron.daily, cron.hourly, cron.weekly, cron.monthly
for dir in daily hourly weekly monthly; do
    path="/etc/cron.$dir"
    if [[ -d "$path" ]]; then
        echo "--- /etc/cron.$dir/ ---"
        # List script names only (normally no '#' inside)
        ls -l "$path"
        echo ""
    fi
done

echo "=== USER CRONTABS ==="
echo ""

# All user in /etc/passwd
for user in $(cut -f1 -d: /etc/passwd); do
    uid=$(id -u "$user" 2>/dev/null)
    [[ $? -ne 0 ]] && continue
    if [[ $uid -lt 1000 && $user != "root" ]]; then
        continue
    fi

    crontab_content=$(sudo crontab -l -u "$user" 2>/dev/null | clean_output)

    if [[ -n "$crontab_content" ]]; then
        echo "--- Crontab for user: $user ---"
        echo "$crontab_content"
        echo ""
    fi
done

```

And use the script below if you want to insert the result into a CSV file:

```

#!/bin/bash

OUTPUT="cron_inventory.csv"

echo "type,owner,source,cron_entry" > "$OUTPUT"

filter_clean() {
    grep -v '^[[:space:]]*#' | grep -v '^[[:space:]]*$'
}

```

```
#####
```

```

# SYSTEM CRONTAB
#####

if [[ -f /etc/crontab ]]; then
    cat /etc/crontab | filter_clean | while read line; do
        echo "system,root,/etc/crontab,\"$line\" " >> "$OUTPUT"
    done
fi

#####
# /etc/cron.d
#####

if [[ -d /etc/cron.d ]]; then
    for file in /etc/cron.d/*; do
        [[ -f "$file" ]] || continue
        cat "$file" | filter_clean | while read line; do
            echo "system,root,$file,\"$line\" " >> "$OUTPUT"
        done
    done
fi

#####
# cron.daily / cron.hourly / cron.weekly / cron.monthly
#####

for dir in daily hourly weekly monthly; do
    path="/etc/cron.$dir"
    if [[ -d "$path" ]]; then
        for script in "$path"/*; do
            [[ -f "$script" ]] || continue
            echo "system,root,$path,$(basename "$script")" >> "$OUTPUT"
        done
    fi
done

#####
# USER CRONTABS
#####

for user in $(cut -f1 -d: /etc/passwd); do
    uid=$(id -u "$user" 2>/dev/null)
    [[ $? -ne 0 ]] && continue
    if [[ $uid -lt 1000 && $user != "root" ]]; then
        continue
    fi

    crontab -l -u "$user" 2>/dev/null | filter_clean | while read line; do
        echo "user,$user,crontab,\"$line\" " >> "$OUTPUT"
    done
done

```

```
echo "==" CSV generated: $OUTPUT =="
```

## Note

By displaying users who use crontab on a Linux server, you can save your time and effort investigating if there are commands running at a certain time on that server.

## References

[stackoverflow.com](https://stackoverflow.com)

[unix.stackexchange.com](https://unix.stackexchange.com)

[cyberciti.biz](https://cyberciti.biz)

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## [How to Change MariaDB Port?](#)

written by sysadmin | 31 December 2025

By default, MariaDB uses port 3306. I want to change the default port to another port for security reasons.

## Problem

How to change MariaDB port?

## Solution

To see the default MariaDB port, you can use the command below:

```
sudo ss -ptuln | grep mariadb
```

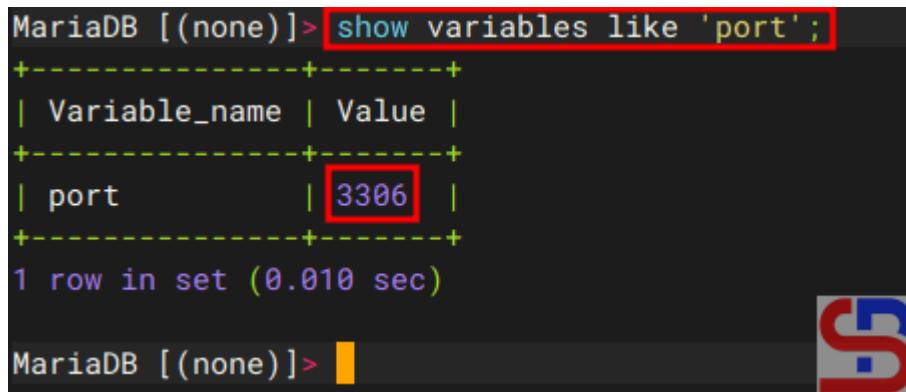
```
sysadmin@ubuntu2404:/etc/mysql$ sudo ss -ptuln | grep mariadb  
tcp LISTEN 0      80          0.0.0.0:3306      0.0.0.0:*      users:(("mariadb",pid=967,fd=22))
```

Display the MariaDB port via netstat

Or you run the query below:

```
show variables like 'port';
```

```
MariaDB [(none)]> show variables like 'port';
+-----+-----+
| Variable_name | Value |
+-----+-----+
| port          | 3306  |
+-----+-----+
1 row in set (0.010 sec)
```



Display the MariaDB port via query

From the images above, you can see MariaDB is using port 3306. If you want to change the port from 3306 to 4306, for example, then in the file `/etc/mysql/mariadb.conf.d/50-server.cnf` if you are using Ubuntu, add the item below:

```
port = 4306
```

### Warning

If you're using a distro other than Ubuntu/Debian, you can search for the file by using the command:

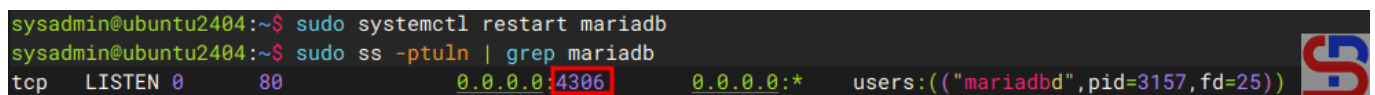
```
sudo find / -type f -name "*server.cnf"
```

Then restart mariadb using the command:

```
sudo systemctl restart mariadb
```

After that, you can check the MariaDB port by using one of the commands above, and the MariaDB port should have changed according to the port you want, as shown in the image below:

```
sysadmin@ubuntu2404:~$ sudo systemctl restart mariadb
sysadmin@ubuntu2404:~$ sudo ss -ptuIn | grep mariadb
tcp  LISTEN  0      80      0.0.0.0:4306      0.0.0.0:*    users:(("mariadb",pid=3157,fd=25))
```



Display the MariaDB port via netstat after changing the port

## Note

If you have changed the default port of MariaDB from 3306 to 4306, for example, then you don't need to write the port in the Linux command to access MariaDB if you access from localhost:

```
sysadmin@ubuntu2404:~$ sudo ss -ptuln | grep mariadb
tcp  LISTEN  0      80          0.0.0.0:4306      0.0.0.0:*    users:(("mariadb",pid=3157,fd=25))

sysadmin@ubuntu2404:~$ sudo mariadb -uroot -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 46
Server version: 10.11.13-MariaDB-0ubuntu0.24.04.1 Ubuntu 24.04

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

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

MariaDB [(none)]>
```

Access to MariaDB after changing the port from localhost

But, if you access MariaDB from another host, you have to write the option for the port, like in the picture below:

```
sysadmin@docker:~$ mariadb -h 192.168.56.11 -P 4306 -u john -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 50
Server version: 10.11.13-MariaDB-0ubuntu0.24.04.1 Ubuntu 24.04

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

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

MariaDB [(none)]>
```

Access to MariaDB after changing the port on another host

## References

[geeksforgeeks.org](https://www.geeksforgeeks.org)  
[stackoverflow.com](https://stackoverflow.com)

[tecmint.com](http://tecmint.com)