

# LibreNMS Network monitoring Tools on CentOS 8

```
[root@localhost ~]# dnf -y update
```

```
[root@localhost ~]# dnf -y update
CentOS Stream 8 - AppStream
CentOS Stream 8 - BaseOS
CentOS Stream 8 - Extras
CentOS Stream 8 - Extras common packages
Dependencies resolved.
Nothing to do.
Complete!
```

3.9 kB/s	4.4 kB	00:01
7.9 kB/s	3.9 kB	00:00
5.1 kB/s	2.9 kB	00:00
5.0 kB/s	3.0 kB	00:00

```
[root@localhost ~]# dnf -y install https://dl.fedoraproject.org/pub/epel/epel-release-latest-8.noarch.rpm
```

```
Complete!
[root@localhost ~]# dnf -y install https://dl.fedoraproject.org/pub/epel/epel-release-latest-8.noarch.rpm
Last metadata expiration check: 0:06:08 ago on Wed 14 Dec 2022 11:04:05 AM +00.
epel-release-latest-8.noarch.rpm
Dependencies resolved.
```

Package	Architecture	Version	Repository	Size
Installing: epel-release	noarch	8-18.el8	@commandline	24 k

```
Transaction Summary
-----
Install 1 Package
```

```
[root@localhost ~]# dnf -y install https://rpms.remirepo.net/enterprise/remi-release-8.rpm
```

```
[root@localhost ~]#
[root@localhost ~]# dnf -y install https://rpms.remirepo.net/enterprise/remi-release-8.rpm
Extra Packages for Enterprise Linux 8 - x86_64
Last metadata expiration check: 0:00:24 ago on Wed 14 Dec 2022 11:04:35 AM +06.
remi-release-8.rpm
Dependencies resolved.
```

Package	Architecture	Version	Repository	Size
Installing: remi-release	noarch	8.6-1.el8.remi	@commandline	29 k

```
Transaction Summary
-----
Install 1 Package
```

```
[root@localhost ~]# dnf module enable php:remi-8.1
```

```
[root@localhost ~]#
[root@localhost ~]# dnf module enable php:remi-8.1
Remi's Modular repository for Enterprise Linux 8 - x86_64
Remi's Modular repository for Enterprise Linux 8 - x86_64
Importing GPG key 0x5F11735A:
  Userid : "Remi's RPM repository <remi@remirepo.net>"
  Fingerprint: 6B38 FEA7 231F 87F5 2B9C A908 5550 9759 5F11 735A
  From : /etc/pki/rpm-gpg/RPM-GPG-KEY-remi.el8
Is this ok [y/N]: y
Remi's Modular repository for Enterprise Linux 8 - x86_64
Safe Remi's RPM repository for Enterprise Linux 8 - x86_64
Safe Remi's RPM repository for Enterprise Linux 8 - x86_64
Importing GPG key 0x5F11735A:
  Userid : "Remi's RPM repository <remi@remirepo.net>"
  Fingerprint: 6B38 FEA7 231F 87F5 2B9C A908 5550 9759 5F11 735A
  From : /etc/pki/rpm-gpg/RPM-GPG-KEY-remi.el8
Is this ok [y/N]: y
Safe Remi's RPM repository for Enterprise Linux 8 - x86_64
Last metadata expiration check: 0:00:01 ago on Wed 14 Dec 2022 11:06:20 AM +06.
Dependencies resolved.
```

Package	Architecture	Version	Repository	Size
Enabling module streams: php		remi-8.1		

```
Transaction Summary
-----
Is this ok [y/N]: y
Complete!
[root@localhost ~]#
```

```
[root@localhost ~]# dnf install bash-completion cronie fping git ImageMagick mariadb-server mtr net-snmp net-snmp-utils nginx nmap php-fpm php-cli php-common php-curl php-gd php-json php-mbstring php-process php-snmp php-xml php-zip php-mysqld python3 python3-PyMySQL python3-redis python3-memcached python3-pip rrdtool unzip -y
```

```
[root@localhost ~]# dnf install bash-completion cronie fping git ImageMagick mariadb-server mtr net-snmp net-snmp-utils nginx nmap php-fpm php-cli php-common php-curl php-gd php-json php-mbstring php-process php-snmp php-xml php-zip php-mysqld python3 python3-PyMySQL python3-redis python3-memcached python3-pip rrdtool unzip -y
Last metadata expiration check: 0:00:42 ago on Wed 14 Dec 2022 11:06:20 AM +00.
Package bash-completion-1:2.7-5.el8.noarch is already installed.
Package cronie-1.5.2-8.el8.x86_64 is already installed.
Package git-2.31.1-2.el8.x86_64 is already installed.
Package mtr-2:0.92-3.el8.x86_64 is already installed.
Package net-snmp-1:5.8-26.el8.x86_64 is already installed.
Package net-snmp-utils-1:5.8-26.el8.x86_64 is already installed.
Package nmap-2:7.70-8.el8.x86_64 is already installed.
Package python36-3.6.8-38.module_el8.5.0+895+a459eca8.x86_64 is already installed.
Package python3-pip-9.0.3-22.el8.noarch is already installed.
Package rrdtool-1.7.0-16.el8.x86_64 is already installed.
Package unzip-6.0-46.el8.x86_64 is already installed.
Dependencies resolved.
=====
Package                               Architecture      Version                               Repository      Size
=====
Installing:
ImageMagick                           x86_64            6.9.12.67-1.el8                       epel            113 k
fping                                  x86_64            4.2-2.el8                             epel            43 k
mariadb-server                         x86_64            3:10.3.28-1.module_el8.3.0+757+d382997d appstream      16 M
nginx                                  x86_64            1:1.14.1-9.module_el8.0.0+1060+3ab382d3 appstream      570 k
php-cli                                x86_64            8.1.13-1.el8.remi                     remi-modular   5.3 M
php-common                             x86_64            8.1.13-1.el8.remi                     remi-modular   1.3 M
php-fpm                                x86_64            8.1.13-1.el8.remi                     remi-modular   1.8 M
php-gd                                 x86_64            8.1.13-1.el8.remi                     remi-modular   106 k
php-mbstring                           x86_64            8.1.13-1.el8.remi                     remi-modular   524 k
php-mysqld                             x86_64            8.1.13-1.el8.remi                     remi-modular   256 k
php-pecl-zip                           x86_64            1.21.1-1.el8.remi.8.1                 remi-modular    76 k
php-process                            x86_64            8.1.13-1.el8.remi                     remi-modular   110 k
php-snmp                               x86_64            8.1.13-1.el8.remi                     remi-modular    89 k
php-xml                                x86_64            8.1.13-1.el8.remi                     remi-modular   252 k
python3-PyMySQL                        noarch            0.10.1-2.module_el8.5.0+761+faacb0fb appstream      98 k
python3-memcached                      noarch            1.58-8.el8                             epel            43 k
python3-redis                          noarch            3.5.3-1.el8                             epel           142 k
Installing dependencies:
ImageMagick-libs                       x86_64            6.9.12.67-1.el8                       epel            2.4 M
LibRaw                                 x86_64            0.19.5-3.el8                           appstream      316 k
OpenEXR-libs                           x86_64            2.2.0-12.el8                           appstream      672 k
gd3php                                 x86_64            2.3.3-8.el8.remi                       remi-safe      148 k
=====
```

```
[root@localhost ~]# useradd librenms -d /opt/librenms -M -r -s /usr/bin/bash
```

```
[root@localhost ~]# cd /opt && git clone https://github.com/librenms/librenms.git
```

```
[root@localhost ~]#
[root@localhost ~]# cd /opt && git clone https://github.com/librenms/librenms.git
Cloning into 'librenms'...
remote: Enumerating objects: 202495, done.
remote: Counting objects: 100% (68/68), done.
remote: Compressing objects: 100% (61/61), done.
remote: Total 202495 (delta 16), reused 39 (delta 7), pack-reused 202427
Receiving objects: 100% (202495/202495), 287.12 MiB | 2.21 MiB/s, done.
Resolving deltas: 100% (148800/148800), done.
Updating files: 100% (13344/13344), done.
[root@localhost opt]#
```

```
[root@localhost opt]# chown -R librenms:librenms /opt/librenms
```

```
[root@localhost opt]# chmod 771 /opt/librenms
```

```
[root@localhost opt]# setfacl -d -m g::rwx /opt/librenms/rrd /opt/librenms/logs
/opt/librenms/bootstrap/cache/ /opt/librenms/storage/
```

```
[root@localhost opt]# setfacl -R -m g::rwx /opt/librenms/rrd /opt/librenms/logs
/opt/librenms/bootstrap/cache/ /opt/librenms/storage/
```

```
[root@localhost opt]# sudo yum install gcc python3-devel
```

```
[root@localhost opt]#
[root@localhost opt]# sudo yum install gcc python3-devel
Last metadata expiration check: 0:06:02 ago on Wed 14 Dec 2022 11:06:20 AM +06.
Package gcc-8.5.0-17.el8.x86_64 is already installed.
Dependencies resolved.
=====
Package                                Architecture      Version                               Repository      Size
-----
Installing:
python36-devel                          x86_64            3.6.8-38.module_el8.5.0+895+a459eca8  appstream      16 k
Installing dependencies:
platform-python-devel                  x86_64            3.6.8-49.el8                          appstream      251 k
python3-rpm-generators                  x86_64            5-7.el8                                appstream      25 k
Transaction Summary
-----
Install 3 Packages
```

```
[root@localhost opt]# su - librenms
```

```
[librenms@localhost ~]$ ./scripts/composer_wrapper.php install --no-dev
```

```
[root@localhost opt]#
[root@localhost opt]#
[root@localhost opt]# su - librenms
[librenms@localhost ~]$ ./scripts/composer_wrapper.php install --no-dev
Could not scan for classes inside vendor/dappphp/radius which does not appear to be a file nor a folder
> LibreNMS\ComposerHelper::preInstall
Installing dependencies from lock file
Verifying lock file contents can be installed on current platform.
Package operations: 110 installs, 0 updates, 0 removals
- Downloading amenadiel/jpggraph (v4.1.1)
- Downloading clue/socket-raw (v1.6.0)
- Downloading dappphp/radius (2.5.8)
- Downloading doctrine/event-manager (1.1.2)
- Downloading doctrine/deprecations (v1.0.0)
- Downloading doctrine/cache (2.2.0)
- Downloading doctrine/dbal (2.13.9)
- Downloading doctrine/inflector (2.0.5)
- Downloading doctrine/lexer (1.2.3)
- Downloading symfony/polyfill-ctype (v1.26.0)
- Downloading webmozart/assert (1.11.0)
- Downloading dragonmantank/cron-expression (v3.3.1)
- Downloading easybook/geshi (v1.0.8.19)
- Downloading symfony/polyfill-php80 (v1.26.0)
- Downloading symfony/polyfill-mbstring (v1.26.0)
- Downloading symfony/var-dumper (v5.4.11)
- Downloading symfony/polyfill-intl-normalizer (v1.26.0)
- Downloading symfony/polyfill-intl-grapheme (v1.26.0)
- Downloading symfony/string (v5.4.12)
- Downloading symfony/deprecation-contracts (v2.5.2)
- Downloading psr/container (1.1.1)
- Downloading symfony/service-contracts (v2.5.2)
- Downloading symfony/polyfill-php73 (v1.26.0)
- Downloading symfony/console (v5.4.12)
- Downloading psr/log (1.1.4)
- Downloading monolog/monolog (2.8.0)
- Downloading voku/portable-ascii (1.6.1)
- Downloading phpoption/phpoption (1.9.0)
- Downloading graham-campbell/result-type (v1.1.0)
- Downloading vlucas/phpdotenv (v5.4.1)
- Downloading symfony/css-selector (v5.4.11)
- Downloading tijsverkoyen/css-to-inline-styles (2.2.4)
- Downloading symfony/templating (v5.4.11)
- Downloading symfony/process (v5.4.11)
```

```
[librenms@localhost ~]$ exit
```

```
logout
```

```
[root@localhost opt]#
```

```
[root@localhost opt]# systemctl start mariadb
```

```
[root@localhost opt]# systemctl enable mariadb
```

```
[root@localhost ~]#  
[root@localhost opt]#  
[root@localhost opt]# systemctl enable mariadb  
Created symlink /etc/systemd/system/mysql.service → /usr/lib/systemd/system/mariadb.service.  
Created symlink /etc/systemd/system/mysqld.service → /usr/lib/systemd/system/mariadb.service.  
Created symlink /etc/systemd/system/multi-user.target.wants/mariadb.service → /usr/lib/systemd/system/mariadb.service.  
[root@localhost opt]#
```

[root@localhost opt]# mysql\_secure\_installation

```
Enter current password for root (enter for none):  
OK, successfully used password, moving on...  
  
Setting the root password ensures that nobody can log into the MariaDB  
root user without the proper authorisation.  
  
You already have a root password set, so you can safely answer 'n'.  
  
Change the root password? [Y/n] ☒  
... skipping.  
  
By default, a MariaDB installation has an anonymous user, allowing anyone  
to log into MariaDB without having to have a user account created for  
them. This is intended only for testing, and to make the installation  
go a bit smoother. You should remove them before moving into a  
production environment.  
  
Remove anonymous users? [Y/n] ☒  
... Success!  
  
Normally, root should only be allowed to connect from 'localhost'. This  
ensures that someone cannot guess at the root password from the network.  
  
Disallow root login remotely? [Y/n] ☒  
... Success!  
  
By default, MariaDB comes with a database named 'test' that anyone can  
access. This is also intended only for testing, and should be removed  
before moving into a production environment.  
  
Remove test database and access to it? [Y/n] ☒  
- Dropping test database...  
... Success!  
- Removing privileges on test database...  
... Success!  
  
Reloading the privilege tables will ensure that all changes made so far  
will take effect immediately.  
  
Reload privilege tables now? [Y/n] ☒  
... Success!  
  
Cleaning up...  
  
All done! If you've completed all of the above steps, your MariaDB  
installation should now be secure.  
  
Thanks for using MariaDB!
```

```
[root@localhost opt]# mysql -u root -p
```

Enter password:

```
MariaDB [(none)]> CREATE DATABASE librenms CHARACTER SET utf8 COLLATE utf8_unicode_ci;
```

Query OK, 1 row affected (0.001 sec)

```
MariaDB [(none)]> CREATE USER 'librenms'@'localhost' IDENTIFIED BY 'password';
```

Query OK, 0 rows affected (0.001 sec)

```
MariaDB [(none)]> GRANT ALL PRIVILEGES ON librenms.* TO 'librenms'@'localhost';
```

Query OK, 0 rows affected (0.001 sec)

```
MariaDB [(none)]> FLUSH PRIVILEGES;
```

Query OK, 0 rows affected (0.001 sec)

```
MariaDB [(none)]> exit
```

```
[root@localhost opt]#  
[root@localhost opt]# mysql -u root -p  
Enter password: 123  
Welcome to the MariaDB monitor. Commands end with ; or \g.  
Your MariaDB connection id is 16  
Server version: 10.3.28-MariaDB MariaDB Server  
  
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 DATABASE librenms CHARACTER SET utf8 COLLATE utf8_unicode_ci;  
Query OK, 1 row affected (0.001 sec)  
  
MariaDB [(none)]>  
MariaDB [(none)]> CREATE USER 'librenms'@'localhost' IDENTIFIED BY 'password';  
Query OK, 0 rows affected (0.001 sec)  
  
MariaDB [(none)]>  
MariaDB [(none)]>  
MariaDB [(none)]> GRANT ALL PRIVILEGES ON librenms.* TO 'librenms'@'localhost';  
Query OK, 0 rows affected (0.001 sec)  
  
MariaDB [(none)]>  
MariaDB [(none)]>  
MariaDB [(none)]> FLUSH PRIVILEGES;  
Query OK, 0 rows affected (0.001 sec)  
  
MariaDB [(none)]> exit  
Bye  
[root@localhost opt]#
```

```
[root@localhost opt]# vim /etc/my.cnf.d/mariadb-server.cnf
```

```
innodb_file_per_table=1
```

```
lower_case_table_names=0
```

```
# this is read by the standalone daemon and embedded servers
[server]

# this is only for the mysqld standalone daemon
# Settings user and group are ignored when systemd is used.
# If you need to run mysqld under a different user or group,
# customize your systemd unit file for mysqld/mariadb according to the
# instructions in http://fedoraproject.org/wiki/Systemd

[mysqld]
datadir=/var/lib/mysql
socket=/var/lib/mysql/mysql.sock
log-error=/var/log/mariadb/mariadb.log
pid-file=/run/mariadb/mariadb.pid
innodb_file_per_table=1
lower_case_table_names=0

#
# * Galera-related settings
#
```

```
[root@localhost opt]# systemctl restart mariadb
```

```
[root@localhost opt]# cp /etc/php-fpm.d/www.conf /etc/php-fpm.d/librenms.conf
```

```
[root@localhost opt]# vim /etc/php-fpm.d/librenms.conf
```

```
; Start a new pool named 'www'.
; the variable $pool can be used in any directive and will be replaced by the
; pool name ('www' here)
[librenms]

; Per pool prefix
; It only applies on the following directives:
; - 'access.log'
; - 'slowlog'
; - 'listen' (unixsocket)
; - 'chroot'
; - 'chdir'
; - 'php_values'
; - 'php_admin_values'
; When not set, the global prefix (or @php_fpm_prefix@) applies instead.
; Note: This directive can also be relative to the global prefix.
; Default Value: none
;prefix = /path/to/pools/$pool

; Unix user/group of processes
; Note: The user is mandatory. If the group is not set, the default user's group
; will be used.
; RPM: apache user chosen to provide access to the same directories as httpd
user = librenms
; RPM: Keep a group allowed to write in log dir.
group = librenms

; The address on which to accept FastCGI requests.
; Valid syntaxes are:
; 'ip.add.re.ss:port'    - to listen on a TCP socket to a specific IPv4 address on
;                        a specific port;
; '[ip:6:addr:ess]:port' - to listen on a TCP socket to a specific IPv6 address on
;                        a specific port;
; 'port'                 - to listen on a TCP socket to all addresses
;                        (IPv6 and IPv4-mapped) on a specific port;
; '/path/to/unix/socket' - to listen on a unix socket.
; Note: This value is mandatory.
listen = /run/php-fpm-librenms.sock
```

```
[root@localhost opt]# vim /etc/nginx/conf.d/librenms.conf
```

```
server {
    listen      80;
    server_name 10.200.10.56;
    root        /opt/librenms/html;
    index       index.php;
    charset utf-8;
    gzip on;
    gzip_types text/css application/javascript text/javascript application/x-javascript image/svg+xml
    text/plain text/xsd text/xsl text/xml image/x-icon;
    location / { try_files $uri $uri/ /index.php?$query_string;
    }
    location ~ [^/]\.php(/|$) { fastcgi_pass unix:/run/php-fpm-librenms.sock;
    fastcgi_split_path_info ^(.+\.php)(/.+)$;
    include fastcgi.conf;
    }
    location ~ /\.(!well-known).* {
    deny all;
    }
}
```

```
server {
    listen      80;
    server_name 10.200.10.56;
    root        /opt/librenms/html;
    index       index.php;
    charset utf-8;
    gzip on;
    gzip_types text/css application/javascript text/javascript application/x-javascript image/svg+xml text/plain text/xsd text/xsl text/xml image/x-icon;
    location / { try_files $uri $uri/ /index.php?$query_string;
    }
    location ~ [^/]\.php(/|$) { fastcgi_pass unix:/run/php-fpm-librenms.sock;
    fastcgi_split_path_info ^(.+\.php)(/.+)$;
    include fastcgi.conf;
    }
    location ~ /\.(!well-known).* {
    deny all;
    }
}
```

```
[root@localhost opt]# vim /etc/nginx/nginx.conf
```

```
user nginx;
worker_processes auto;
error_log /var/log/nginx/error.log;
pid /run/nginx.pid;

# Load dynamic modules. See /usr/share/doc/nginx/README.dynamic.
include /usr/share/nginx/modules/*.conf;

events {
    worker_connections 1024;
}

http {
    log_format main '$remote_addr - $remote_user [$time_local] "$request" '
    '$status $body_bytes_sent "$http_referer" '
    '"$http_user_agent" "$http_x_forwarded_for"';

    access_log /var/log/nginx/access.log main;

    sendfile on;
    tcp_nopush on;
    tcp_nodelay on;
    keepalive_timeout 65;
    types_hash_max_size 2048;

    include /etc/nginx/mime.types;
    default_type application/octet-stream;

    # Load modular configuration files from the /etc/nginx/conf.d directory.
    # See http://nginx.org/en/docs/nginx_core_module.html#include
    # for more information.
    include /etc/nginx/conf.d/*.conf;

    server {
    }
}
```

All Delete Default Config

# Settings for a TLS enabled server.



```
[root@localhost opt]# systemctl start nginx
```

```
[root@localhost opt]# systemctl enable nginx
```

```
[root@localhost opt]#  
[root@localhost opt]#  
[root@localhost opt]# vim /etc/my.cnf.d/mariadb-server.cnf  
[root@localhost opt]# systemctl restart mariadb  
[root@localhost opt]#  
[root@localhost opt]#  
[root@localhost opt]# cp /etc/php-fpm.d/www.conf /etc/php-fpm.d/librenms.conf  
[root@localhost opt]#  
[root@localhost opt]# vim /etc/php-fpm.d/librenms.conf  
[root@localhost opt]#  
[root@localhost opt]# vim /etc/nginx/conf.d/librenms.conf  
[root@localhost opt]#  
[root@localhost opt]# vim /etc/nginx/nginx.conf  
[root@localhost opt]#  
[root@localhost opt]# systemctl start nginx  
[root@localhost opt]#  
[root@localhost opt]# systemctl enable nginx  
Created symlink /etc/systemd/system/multi-user.target.wants/nginx.service → /usr/lib/systemd/system/nginx.service.  
[root@localhost opt]#  
[root@localhost opt]#  
[root@localhost opt]# systemctl stop firewalld  
[root@localhost opt]#  
[root@localhost opt]#  
[root@localhost opt]# systemctl disable firewalld  
Removed /etc/systemd/system/multi-user.target.wants/firewalld.service.  
Removed /etc/systemd/system/dbus-org.fedoraproject.FirewallD1.service.  
[root@localhost opt]#  
[root@localhost opt]#  
[root@localhost opt]# cp /opt/librenms/snmpd.conf.example /etc/snmp/snmpd.conf  
cp: overwrite '/etc/snmp/snmpd.conf'?  
[root@localhost opt]#  
[root@localhost opt]#
```

```
[root@localhost opt]# systemctl stop firewalld
```

```
[root@localhost opt]# systemctl disable firewalld
```

```
[root@localhost opt]# cp /opt/librenms/snmpd.conf.example /etc/snmp/snmpd.conf
```

```
cp: overwrite '/etc/snmp/snmpd.conf'? y
```

```
[root@localhost opt]# vim /etc/snmp/snmpd.conf
```

```
# Change RANDOMSTRINGGOESHERE to your preferred SNMP community string  
com2sec readonly default linux  
  
group MyROGroup v2c readonly  
view all included .1 80  
access MyROGroup "" any noauth exact all none none  
  
syslocation Rack, Room, Building, City, Country [Lat, Lon]  
syscontact Your Name <your@email.address>  
  
#OS Distribution Detection  
extend distro /usr/bin/distro
```



```
[root@localhost opt]# curl -o /usr/bin/distro https://raw.githubusercontent.com/librenms/librenms-agent/master/snmp/distro
```

```
[root@localhost opt]#  
[root@localhost opt]# curl -o /usr/bin/distro https://raw.githubusercontent.com/librenms/librenms-agent/master/snmp/distro  
% Total % Received % Xferd Average Speed Time Time Time Current  
Dload Upload Total Spent Left Speed  
100 5017 100 5017 0 0 8375 0 --:--:-- --:--:-- --:--:-- 8375  
[root@localhost opt]#  
[root@localhost opt]#
```

```
[root@localhost opt]# chmod +x /usr/bin/distro
```

```
[root@localhost opt]# systemctl enable snmpd
```

```
[root@localhost opt]# systemctl restart snmpd
```

```
[root@localhost opt]# cp /opt/librenms/librenms.nonroot.cron /etc/cron.d/librenms
```

```
[root@localhost opt]# vim /etc/php.ini
```

```
[Date]  
; Defines the default timezone used by the date and time functions  
; https://php.net/date.timezone  
date.timezone = Asia/Dhaka  
; Uncomment this line to specify a default timezone for date functions  
; https://php.net/date.default-latitude  
; date.default_latitude = 31.7667
```

```
[root@localhost opt]# systemctl restart php-fpm
```

```
[root@localhost opt]# semanage fcontext -a -t httpd_sys_rw_content_t  
'/opt/librenms/logs/librenms.log(/.*)?'
```

```
[root@localhost opt]# restorecon -RFv /opt/librenms/logs/librenms.log
```

```
[root@localhost opt]# restorecon -RFv /opt/librenms/logs/librenms.log  
Relabeled /opt/librenms/logs/librenms.log from unconfined_u:object_r:usr_t:s0 to system_u:object_r:httpd_sys_rw_content_t:s0  
[root@localhost opt]#
```

```
[root@localhost opt]# sudo chown -R librenms:librenms '/opt/librenms'
```

```
[root@localhost opt]# sudo setfacl -d -m g::rwx /opt/librenms/bootstrap/cache /opt/librenms/storage  
/opt/librenms/logs /opt/librenms/rrd
```

```
[root@localhost opt]# sudo chmod -R ug=rwX /opt/librenms/bootstrap/cache /opt/librenms/storage  
/opt/librenms/logs /opt/librenms/rrd
```

```
[root@localhost opt]# semanage fcontext -a -t httpd_sys_rw_content_t  
'/opt/librenms/bootstrap/cache(/.*)?'
```

```
[root@localhost opt]# semanage fcontext -a -t httpd_sys_rw_content_t '/opt/librenms/storage(/.*)?'
```

```
[root@localhost opt]# semanage fcontext -a -t httpd_sys_rw_content_t '/opt/librenms/logs(/.*)?'
```

```
[root@localhost opt]# semanage fcontext -a -t httpd_sys_rw_content_t '/opt/librenms/rrd(/.*)?'
```

```
[root@localhost opt]# restorecon -RFv /opt/librenms
```

```
[root@localhost opt]#
[root@localhost opt]# semanage fcontext -a -t httpd_sys_rw_content_t '/opt/librenms/bootstrap/cache(/.*)?'
[root@localhost opt]# semanage fcontext -a -t httpd_sys_rw_content_t '/opt/librenms/storage(/.*)?'
[root@localhost opt]# semanage fcontext -a -t httpd_sys_rw_content_t '/opt/librenms/logs(/.*)?'
[root@localhost opt]# semanage fcontext -a -t httpd_sys_rw_content_t '/opt/librenms/rrd(/.*)?'
[root@localhost opt]# restorecon -RFv /opt/librenms
Relabeled /opt/librenms from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/branches from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/description from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/hooks from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/hooks/applypatch-msg.sample from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/hooks/commit-msg.sample from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/hooks/post-update.sample from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/hooks/pre-applypatch.sample from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/hooks/pre-commit.sample from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/hooks/pre-merge-commit.sample from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/hooks/pre-push.sample from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/hooks/pre-receive.sample from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/hooks/push-to-checkout.sample from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/hooks/update.sample from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/hooks/fsmonitor-watchman.sample from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/hooks/pre-rebase.sample from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/hooks/prepare-commit-msg.sample from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/info from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/info/exclude from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/refs from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/refs/heads from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/refs/heads/master from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/refs/tags from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/refs/remotes from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/refs/remotes/origin from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/refs/remotes/origin/HEAD from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
Relabeled /opt/librenms/.git/HEAD from unconfined_u:object_r:usr_t:s0 to system_u:object_r:usr_t:s0
```

```
[root@localhost opt]# systemctl restart php-fpm
```

```
[root@localhost ~]# vim /opt/librenms/.env
```

```
APP_KEY=base64:SZiwnchmznsoei2ozqycsgoWsmXjL+KS6gx5vJAlScM=
```

```
DB_HOST=localhost
```

```
DB_DATABASE=librenms
```

```
DB_USERNAME=librenms
```

```
DB_PASSWORD=password
```

```
#APP_URL=
```

```
NODE_ID=63995b7aaf479
```

```
VAPID_PUBLIC_KEY=BEqjnJ2wx79gfbtBX-
```

```
bbTlyJ9tNSLq0WVfjUSwzvHyKmxAcSaX0soYKJj1FFH7AES7NwR0DRq0Z0Mw7hxiJhA
```

```
VAPID_PRIVATE_KEY=nWrtBb4YM7S08fK5EwBaIXkrss5h5xbXYtPttvOsiyl
```

```
APP_KEY=base64:SZiwnchmznsoei2ozqycsgoWsmXjL+KS6gx5vJAlScM=
```

```
DB_HOST=localhost
```

```
DB_DATABASE=librenms
```

```
DB_USERNAME=librenms
```

```
DB_PASSWORD=password
```

```
#APP_URL=
```

```
NODE_ID=63995b7aaf479
```

```
VAPID_PUBLIC_KEY=BEqjnJ2wx79gfbtBX-bbTlyJ9tNSLq0WVfjUSwzvHyKmxAcSaX0soYKJj1FFH7AES7NwR0DRq0Z0Mw7hxiJhA
```

```
VAPID_PRIVATE_KEY=nWrtBb4YM7S08fK5EwBaIXkrss5h5xbXYtPttvOsiyl
```

```
~
```

```
[root@localhost opt]# systemctl restart php-fpm
```

////All Config File Location

```
Last login: Wed Dec 14 11:03:42 2022 from 10.200.10.27
[root@localhost ~]# vim /etc/my.cnf.d/mariadb-server.cnf
[root@localhost ~]# vim /etc/php-fpm.d/librenms.conf
[root@localhost ~]# vim /etc/nginx/conf.d/librenms.conf
[root@localhost ~]# vim /etc/nginx/nginx.conf
[root@localhost ~]# vim /etc/snmp/snmpd.conf
[root@localhost ~]# vim /etc/php.ini
[root@localhost ~]# vim /opt/librenms/.env
[root@localhost ~]#
```

## Device Add

```
[root@localhost librenms]# sudo su - librenms
```

```
[librenms@localhost ~]$ ./lnms device:add -2 -c linux -r 161 -t udp 10.200.10.56
```

```
Added device 10.200.10.56 (3)
```

```
[librenms@localhost ~]$
```

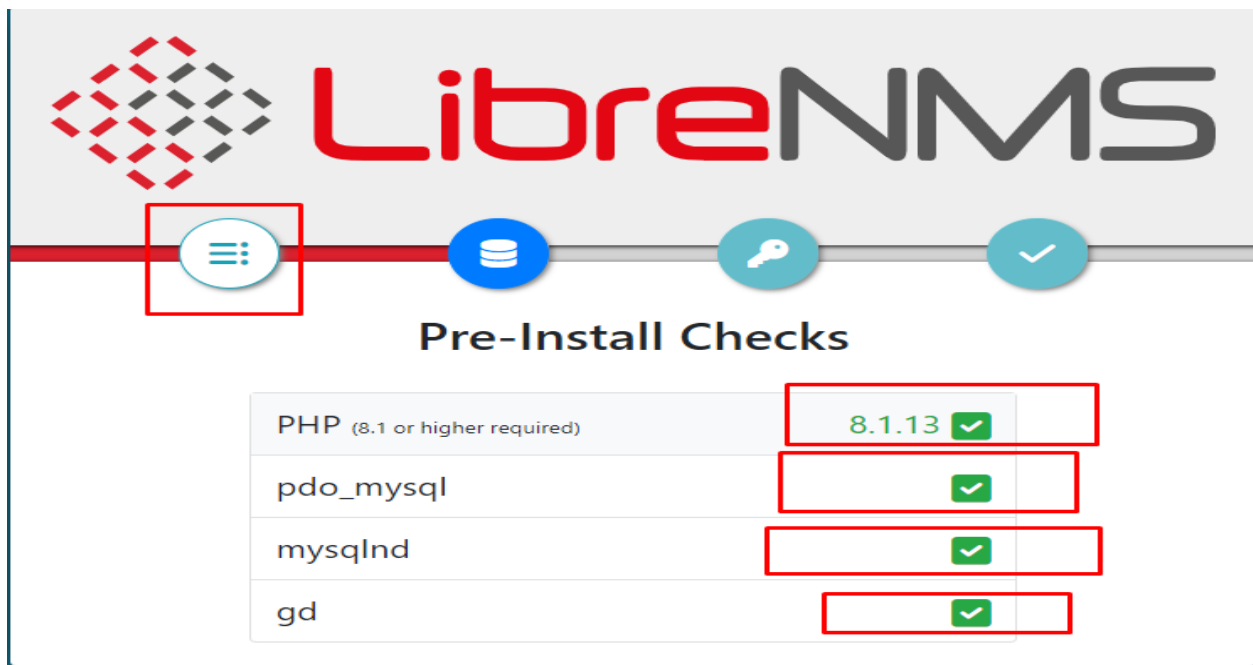
## Source Link:

[https://www.youtube.com/watch?v=ELSr22sqPOM&ab\\_channel=Let%27sDoRnD](https://www.youtube.com/watch?v=ELSr22sqPOM&ab_channel=Let%27sDoRnD)

<https://www.centlinux.com/2021/02/install-librenms-network-monitoring-tool-centos-8.html>

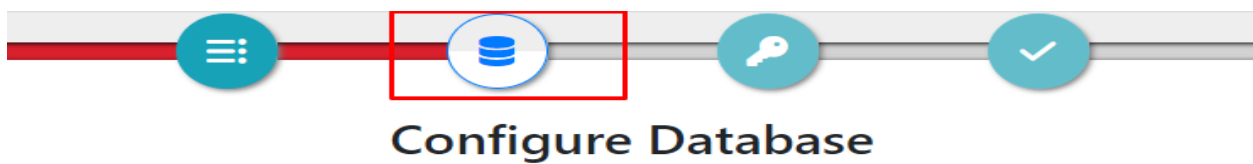
<https://www.linuxyogi.com/centos/how-to-install-librenms-on-centos-7/>

<https://docs.librenms.org/Installation/Installation-CentOS-7-Nginx/>

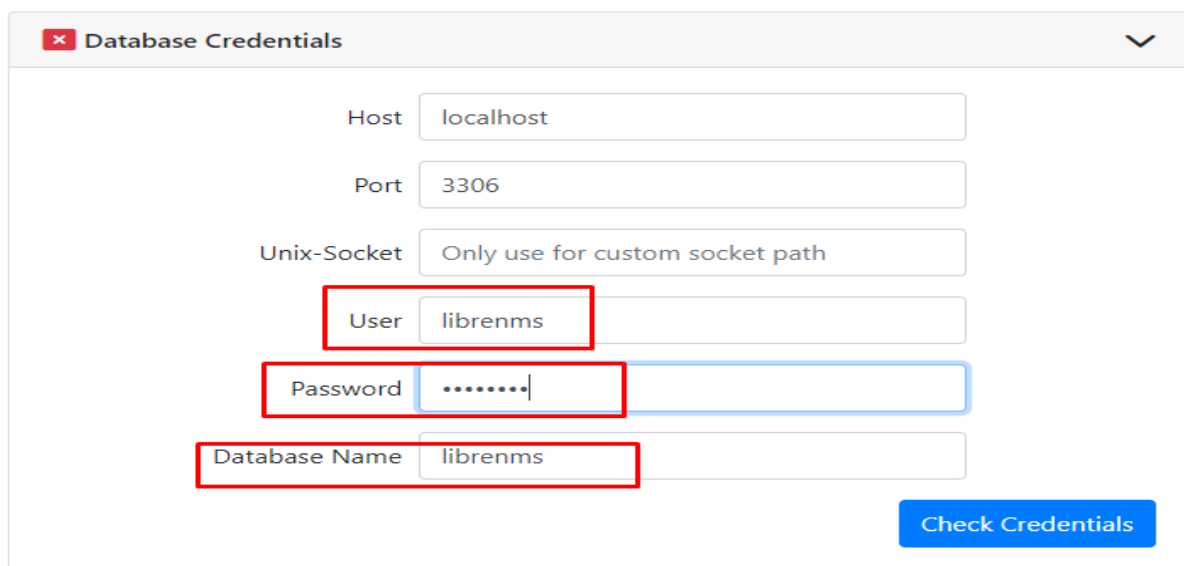


The LibreNMS logo is at the top left. Below it is a progress bar with four circular icons: a menu icon (highlighted with a red box), a database icon, a key icon, and a checkmark icon. The title "Pre-Install Checks" is centered below the progress bar. A table lists the required PHP extensions and their status.

Extension	Status
PHP (8.1 or higher required)	8.1.13 ✓
pdo_mysql	✓
mysqlnd	✓
gd	✓



The progress bar at the top shows the database icon highlighted with a red box. The title "Configure Database" is centered below the progress bar.



The "Database Credentials" form contains the following fields:

- Host: localhost
- Port: 3306
- Unix-Socket: Only use for custom socket path
- User: librenms
- Password: ..... (masked)
- Database Name: librenms

A "Check Credentials" button is located at the bottom right of the form.



# LibreNMS



## Configure Database

☒ Database Credentials


Build Database

Build Database

Please Wait...



# LibreNMS



## Create Admin User

Username

admin

Password

••••••••

Email

Add User

