

# LibreNMS

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# LibreNMS Linux

Linux SNMP Linux

LibreNMS Distro SNMP LibreNMS

## Distro

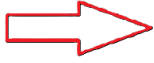
```
curl -o /usr/bin/distro https://raw.githubusercontent.com/librenms/librenms-agent/master/snmp/distro
chmod +x /usr/bin/distro
```

SNMP Distro (/etc/snmp/snmpd.conf)

```
#
extend distro /usr/bin/distro

#
systemctl restart snmpd
```

LibreNMS Linux FreeBSD



■■■■ :

■■■■ Jason Tools <https://blog.jason.tools/2019/10/2020-ironman-22.html>

LibreNMS 



## Linux EPEL Release

```
dnf update -y
dnf install epel-release -y
```

```
dnf install btop htop glances fastfetch iotop iftop -y
systemctl reboot
```

```
[root@librenms ~]# dnf install btop htop glances fastfetch iotop iftop -y
上次中繼資料更新檢查：0:04:42 前，時間點為西元2025年05月15日（週四）23時14分07秒。
依賴關係解析完畢
```

軟體包	架構	版本	軟體庫	大小
安裝:				
btop	x86_64	1.4.0-1.el9	epel	595 k
fastfetch	x86_64	2.41.0-1.el9	epel	508 k
glances	noarch	3.3.1-2.el9	epel	594 k
htop	x86_64	3.3.0-1.el9	epel	198 k
iftop	x86_64	1.0-0.26.pre4.el9	epel	52 k
iotop	noarch	0.6-30.el9	baseos	62 k
將安裝依賴項目:				
double-conversion	x86_64	3.1.5-6.el9	appstream	48 k
hicolor-icon-theme	noarch	0.17-15.el9	appstream	66 k
hwaloc-libs	x86_64	2.4.1-5.el9	baseos	2.1 M
python3-bottle	noarch	0.12.21-2.el9	epel	96 k
python3-defusedxml	noarch	0.7.1-3.el9	epel	50 k
python3-future	noarch	0.18.3-3.el9	epel	731 k
python3-urllib3	x86_64	5.8.0-1.el9	epel	33 k
yyjson	x86_64	0.10.0-1.el9	epel	99 k

```
處理事項摘要
安裝 14 軟體包
總下載大小：5.2 M
安裝的大小：14 M
```

```
dnf -y install dnf-utils http://rpms.remirepo.net/enterprise/remi-release-9.rpm
dnf module reset php
dnf module enable php:8.2
dnf install bash-completion cronie fping gcc git httpd ImageMagick mariadb-server mtr net-snmp net-snmp-utils
nmap php-fpm php-cli php-common php-curl php-gd php-gmp php-json php-mbstring php-process php-snmp
php-xml php-zip php-mysqlnd python3 python3-devel python3-PyMySQL python3-redis python3-memcached
python3-pip python3-systemd rrdtool unzip
```

## Apache

## LibreNMS User

```
useradd librenms -d /opt/librenms -M -r -s "$(which bash)"
```

## LibreNMS

```
cd /opt
```

```
git clone https://github.com/librenms/librenms.git
```

```
[root@librenms ~]# cd /opt
git clone https://github.com/librenms/librenms.git
正複製到 'librenms' ...
remote: Enumerating objects: 231281, done.
remote: Counting objects: 100% (460/460), done.
remote: Compressing objects: 100% (282/282), done.
remote: Total 231281 (delta 342), reused 178 (delta 178), pack-reused 230821 (from 4)
接收物件中: 100% (231281/231281), 313.14 MiB | 5.73 MiB/s, 完成.
處理 delta 中: 100% (175010/175010), 完成.
正在更新檔案: 100% (15658/15658), 完成.
[root@librenms opt]#
```

```
|||||
```

```
chown -R librenms:librenms /opt/librenms
```

```
chmod 771 /opt/librenms
```

```
setfacl -d -m g::rwx /opt/librenms/rrd /opt/librenms/logs /opt/librenms/bootstrap/cache/ /opt/librenms/storage/
```

```
setfacl -R -m g::rwx /opt/librenms/rrd /opt/librenms/logs /opt/librenms/bootstrap/cache/ /opt/librenms/storage/
```

```
[root@librenms opt]# chown -R librenms:librenms /opt/librenms
chmod 771 /opt/librenms
setfacl -d -m g::rwx /opt/librenms/rrd /opt/librenms/logs /opt/librenms/bootstrap/cache/ /opt/librenms/storage/
setfacl -R -m g::rwx /opt/librenms/rrd /opt/librenms/logs /opt/librenms/bootstrap/cache/ /opt/librenms/storage/
[root@librenms opt]#
```

```
PHP|||||
```

```
||||| librenms
```

```
su - librenms
```

```
[root@librenms opt]# su - librenms
[librenms@librenms ~]$
```

```
|||||
```

```
./scripts/composer_wrapper.php install --no-dev
```

```
exit
```

```

[librenms@librenms ~]$ pwd
/opt/librenms
[librenms@librenms ~]$ ./scripts/composer_wrapper.php install --no-dev
exit
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: 130 installs, 0 updates, 0 removals
 - Downloading php-http/discovery (1.20.0)
 - Downloading amenadiel/jpggraph (v4.1.1)
 - Downloading clue/socket-raw (v1.6.0)
 - Downloading dappphp/radius (v3.0.0)
 - Downloading psr/log (3.0.2)
 - Downloading psr/cache (3.0.0)
 - Downloading doctrine/event-manager (2.0.1)
 - Downloading doctrine/deprecations (1.1.5)
 - Downloading doctrine/cache (2.2.0)
 - Downloading doctrine/dbal (3.9.4)
 - Downloading doctrine/infllector (2.0.10)
 - Downloading doctrine/lexer (3.0.1)
 - Downloading symfony/polyfill-ctype (v1.31.0)
 - Downloading webmozart/assert (1.11.0)
 - Downloading dragonmantank/cron-expression (v3.4.0)
 - Downloading easybook/geshi (v1.0.8.19)
 - Downloading enshrined/svg-sanitize (0.20.0)
 - Downloading voku/portable-ascii (2.0.3)
 - Downloading symfony/polyfill-php80 (v1.32.0)
 - Downloading symfony/polyfill-mbstring (v1.31.0)
 - Downloading phpoption/phpooption (1.9.3)

```

```

Requirement already satisfied: pymysql!=1.0.0 in /usr/lib/python3.9/site-packages (from -r requirements.txt (line 1)) (0.10.1)
Collecting python-dotenv
  Downloading python_dotenv-1.1.0-py3-none-any.whl (20 kB)
Requirement already satisfied: redis>=4.0 in /usr/lib/python3.9/site-packages (from -r requirements.txt (line 3)) (4.3.3)
Requirement already satisfied: setuptools in /usr/lib/python3.9/site-packages (from -r requirements.txt (line 4)) (53.0.0)
Requirement already satisfied: psutil>=5.6.0 in /usr/lib64/python3.9/site-packages (from -r requirements.txt (line 5)) (5.8.0)
Collecting command_runner>=1.3.0
  Downloading command_runner-1.7.3-py3-none-any.whl (26 kB)
Requirement already satisfied: async-timeout>=4.0.2 in /usr/lib/python3.9/site-packages (from redis>=4.0->-r requirements.txt (line 3)) (4.0.2)
Requirement already satisfied: deprecated>=1.2.3 in /usr/lib/python3.9/site-packages (from redis>=4.0->-r requirements.txt (line 3)) (1.2.15)
Requirement already satisfied: packaging>=20.4 in /usr/lib/python3.9/site-packages (from redis>=4.0->-r requirements.txt (line 3)) (20.9)
Requirement already satisfied: wrapt<2,>=1.10 in /usr/lib64/python3.9/site-packages (from deprecated>=1.2.3->redis>=4.0->-r requirements.txt (line 3)) (1.17.1)
Requirement already satisfied: pyparsing>=2.0.2 in /usr/lib/python3.9/site-packages (from packaging>=20.4->redis>=4.0->-r requirements.txt (line 3)) (2.4.7)
Installing collected packages: python-dotenv, command_runner
  WARNING: The script dotenv is installed in '/opt/librenms/.local/bin' which is not on PATH.
  Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.
Successfully installed command_runner-1.7.3 python-dotenv-1.1.0
登出
[root@librenms opt]# █

```

PHP

/etc/php.ini

```

vim /etc/php.ini
# ;date.timezone =
# ;date.timezone = "Asia/Taipei"
ESC => :wq

```



```

#
# These groups are read by MariaDB server.
# Use it for options that only the server (but not clients) should see
#
# See the examples of server my.cnf files in /usr/share/mysql/
#

# 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

```

■■■■ MariaDB Service ■■■■■■■■■■

```

systemctl enable mariadb
systemctl restart mariadb
systemctl status mariadb

```

```

[root@librenms opt]# systemctl enable mariadb
systemctl restart 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@librenms opt]# systemctl status mariadb
● mariadb.service - MariaDB 10.5 database server
   Loaded: loaded (/usr/lib/systemd/system/mariadb.service; enabled; preset: disabled)
   Active: active (running) since Fri 2025-05-16 00:08:27 CST; 1min 8s ago
     Docs: man:mariadb(8)
           https://mariadb.com/kb/en/library/systemd/
   Process: 10906 ExecStartPre=/usr/libexec/mariadb-check-socket (code=exited, status=0/SUCCESS)
   Process: 10928 ExecStartPre=/usr/libexec/mariadb-prepare-db-dir mariadb.service (code=exited, status=0/SUCCESS)
   Process: 11042 ExecStartPost=/usr/libexec/mariadb-check-upgrade (code=exited, status=0/SUCCESS)
  Main PID: 11019 (mariabdb)
    Status: "Taking your SQL requests now..."
     Tasks: 8 (limit: 100455)
  Memory: 78.2M
     CPU: 398ms
  CGroup: /system.slice/mariadb.service
          └─11019 /usr/libexec/mariabdb --basedir=/usr

5月 16 00:08:27 librenms.sysgration.com mariadb-prepare-db-dir[10967]: The second is mysql@localhost, it has no password either, but
5月 16 00:08:27 librenms.sysgration.com mariadb-prepare-db-dir[10967]: you need to be the system 'mysql' user to connect.
5月 16 00:08:27 librenms.sysgration.com mariadb-prepare-db-dir[10967]: After connecting you can set the password, if you would need to be
5月 16 00:08:27 librenms.sysgration.com mariadb-prepare-db-dir[10967]: able to connect as any of these users with a password and without sudo
5月 16 00:08:27 librenms.sysgration.com mariadb-prepare-db-dir[10967]: See the MariaDB Knowledgebase at https://mariadb.com/kb
5月 16 00:08:27 librenms.sysgration.com mariadb-prepare-db-dir[10967]: Please report any problems at https://mariadb.org/jira
5月 16 00:08:27 librenms.sysgration.com mariadb-prepare-db-dir[10967]: The latest information about MariaDB is available at https://mariadb.org/.
5月 16 00:08:27 librenms.sysgration.com mariadb-prepare-db-dir[10967]: Consider joining MariaDB's strong and vibrant community:
5月 16 00:08:27 librenms.sysgration.com mariadb-prepare-db-dir[10967]: https://mariadb.org/get-involved/
5月 16 00:08:27 librenms.sysgration.com systemd[1]: Started MariaDB 10.5 database server.
[root@librenms opt]#

```

■■■■■■■■■mysql■■■■■■■■■

```
mysql -u root
```

```
[root@librenms opt]# mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 3
Server version: 10.5.27-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 utf8mb4 COLLATE utf8mb4_unicode_ci;
CREATE USER 'librenms'@'localhost' IDENTIFIED BY 'librenms';
GRANT ALL PRIVILEGES ON librenms.* TO 'librenms'@'localhost';
exit
```

```
[root@librenms opt]# mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 3
Server version: 10.5.27-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 utf8mb4 COLLATE utf8mb4_unicode_ci;
Query OK, 1 row affected (0.000 sec)

MariaDB [(none)]> CREATE USER 'librenms'@'localhost' IDENTIFIED BY 'librenms';
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]> GRANT ALL PRIVILEGES ON librenms.* TO 'librenms'@'localhost';
Query OK, 0 rows affected (0.000 sec)

MariaDB [(none)]> exit
Bye
[root@librenms opt]# █
```

## PHP-FPM

```
cp /etc/php-fpm.d/www.conf /etc/php-fpm.d/librenms.conf
vim /etc/php-fpm.d/librenms.conf
```

```
librenms.conf
```

```
[librenms]
user = librenms
group = librenms
listen = /run/php-fpm-librenms.sock
```

```

; 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

; Set listen(2) backlog.
; Default Value: 511
;listen.backlog = 511

```

## Apache

librenms.conf

```
vim /etc/httpd/conf.d/librenms.conf
```

LibreNMS FQDN

```

<VirtualHost *:80>
    DocumentRoot /opt/librenms/html/
    ServerName LibreNMS FQDN

    AllowEncodedSlashes NoDecode

    <Directory "/opt/librenms/html/">

```

```
Require all granted
AllowOverride All
Options FollowSymLinks MultiViews
</Directory>

# Enable http authorization headers
<IfModule setenvif_module>
  SetEnvIfNoCase ^Authorization$ "(.+)" HTTP_AUTHORIZATION=$1
</IfModule>

<FilesMatch ".+\.php$">
  SetHandler "proxy:unix:/run/php-fpm-librenms.sock|fcgi://localhost"
</FilesMatch>
</VirtualHost>
```

```
<VirtualHost *:80>
  DocumentRoot /opt/librenms/html/
  ServerName librenms.██████████.com

  AllowEncodedSlashes NoDecode
  <Directory "/opt/librenms/html/">
    Require all granted
    AllowOverride All
    Options FollowSymLinks MultiViews
  </Directory>

  # Enable http authorization headers
  <IfModule setenvif_module>
    SetEnvIfNoCase ^Authorization$ "(.+)" HTTP_AUTHORIZATION=$1
  </IfModule>

  <FilesMatch ".+\.php$">
    SetHandler "proxy:unix:/run/php-fpm-librenms.sock|fcgi://localhost"
  </FilesMatch>
</VirtualHost>
```

□□□□□ httpd □ php-fpm

```
systemctl enable --now httpd
systemctl enable --now php-fpm
```

□□□□□

```
chcon -t httpd_sys_rw_content_t /opt/librenms/.env
```

# SELinux

SELinux

```
vim /etc/selinux/config
```

SELINUX=disabled

```
SELINUX=disabled
```

```
# This file controls the state of SELinux on the system.
# SELINUX= can take one of these three values:
#   enforcing - SELinux security policy is enforced.
#   permissive - SELinux prints warnings instead of enforcing.
#   disabled - No SELinux policy is loaded.
# See also:
# https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/9/html/using_selinux_modes
#
# NOTE: Up to RHEL 8 release included, SELINUX=disabled would also
# fully disable SELinux during boot. If you need a system with SELinux
# fully disabled instead of SELinux running with no policy loaded, you
# need to pass selinux=0 to the kernel command line. You can use grubby
# to persistently set the bootloader to boot with selinux=0:
#
#   grubby --update-kernel ALL --args selinux=0
#
# To revert back to SELinux enabled:
#
#   grubby --update-kernel ALL --remove-args selinux
#
SELINUX=disabled
# SELINUXTYPE= can take one of these three values:
#   targeted - Targeted processes are protected,
#   minimum - Modification of targeted policy. Only selected processes are protected.
#   mls - Multi Level Security protection.
SELINUXTYPE=targeted
~
```

```
systemctl reboot
```

# fping

SELinux

root temp

```
cd /
mkdir temp
chmod 777 temp
cd /temp
```

```
[root@librenms /]# mkdir temp
[root@librenms /]# chmod 777 temp
[root@librenms /]# ll
總用量 76
dr-xr-xr-x.  2 root root  4096 11月  3  2024 afs
lrwxrwxrwx.  1 root root    7 11月  3  2024 bin -> usr/bin
dr-xr-xr-x.  6 root root  4096  5月 15 23:20 boot
drwxr-xr-x  18 root root  3200  5月 16 00:37 dev
drwxr-xr-x. 122 root root 12288  5月 16 00:37 etc
drwxr-xr-x.  2 root root  4096 11月  3  2024 home
lrwxrwxrwx.  1 root root    7 11月  3  2024 lib -> usr/lib
lrwxrwxrwx.  1 root root    9 11月  3  2024 lib64 -> usr/lib64
drwx-----  2 root root 16384  5月 15 22:27 lost+found
drwxr-xr-x.  2 root root  4096 11月  3  2024 media
drwxr-xr-x.  2 root root  4096 11月  3  2024 mnt
drwxr-xr-x.  4 root root  4096  5月 15 23:34 opt
dr-xr-xr-x 319 root root    0  5月 16 00:37 proc
dr-xr-x---.  4 root root  4096  5月 16 00:37 root
drwxr-xr-x  43 root root  1180  5月 16 00:37 run
lrwxrwxrwx.  1 root root    8 11月  3  2024 sbin -> usr/sbin
drwxr-xr-x.  2 root root  4096 11月  3  2024 srv
dr-xr-xr-x  13 root root    0  5月 16 00:37 sys
drwxrwxrwx.  2 root root  4096  5月 16 00:38 temp
drwxrwxrwt. 16 root root  4096  5月 16 00:38 tmp
drwxr-xr-x. 12 root root  4096  5月 15 22:28 usr
drwxr-xr-x. 21 root root  4096  5月 15 23:30 var
[root@librenms /]# cd temp
[root@librenms temp]# █
```

[[http\_fping.tt]]

```
touch http_fping.tt
vim http_fping.tt
```

[[[[[[[[ http\_fping.tt ]]]]]]]

```
module http_fping 1.0;

require {
    type httpd_t;
    class capability net_raw;
    class rawip_socket { getopt create setopt write read };
}

#===== httpd_t =====
```

```
allow httpd_t self:capability net_raw;
allow httpd_t self:rawip_socket { getopt create setopt write read };
```

□□□□□

```
checkmodule -M -m -o http_fping.mod http_fping.tt
semodule_package -o http_fping.pp -m http_fping.mod
semodule -i http_fping.pp
```

## □□Firewall

□□Firewall□□

```
firewall-cmd --list-all
```

```
[root@librenms temp]# firewall-cmd --list-all
public (active)
  target: default
  icmp-block-inversion: no
  interfaces: ens33
  sources:
  services: cockpit dhcpv6-client ssh
  ports:
  protocols:
  forward: yes
  masquerade: no
  forward-ports:
  source-ports:
  icmp-blocks:
  rich rules:
[root@librenms temp]# █
```

□□ http□https□syslog□snmp □□

syslog□□□□□□□snmp□□□□DR□□LibreNMS□□□□□□□□

```
firewall-cmd --permanent --add-service http --add-service https --add-service syslog --add-service snmp
```

Reload□□□□□□□ firewall□□

```
firewall-cmd --reload
firewall-cmd --list-all
```



```

# Change RANDOMSTRINGG0ESHERE to your preferred SNMP community string
com2sec readonly default community

group MyR0Group v2c      readonly
view all included .1 80
access MyR0Group "" 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

#Hardware Detection
# (uncomment for x86 platforms)
#extend manufacturer '/bin/cat /sys/devices/virtual/dmi/id/sys_vendor'
#extend hardware '/bin/cat /sys/devices/virtual/dmi/id/product_name'
#extend serial '/bin/cat /sys/devices/virtual/dmi/id/product_serial'

# (uncomment for ARM platforms)
#extend hardware '/bin/cat /sys/firmware/devicetree/base/model'
#extend serial '/bin/cat /sys/firmware/devicetree/base/serial-number'
~
~
~

```

## LibreNMS Linux Distro

### BJ4SNMP Service

```

curl -o /usr/bin/distro https://raw.githubusercontent.com/librenms/librenms-agent/master/snmp/distro
chmod +x /usr/bin/distro
systemctl enable snmpd
systemctl restart snmpd
systemctl status snmpd

```

```

[root@librenms temp]# curl -o /usr/bin/distro https://raw.githubusercontent.com/librenms/librenms-agent/master/snmp/distro
chmod +x /usr/bin/distro
systemctl enable snmpd
systemctl restart snmpd
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100 5187  100 5187    0     0  7847      0 --:--:-- --:--:-- --:--:--  7835
Created symlink /etc/systemd/system/multi-user.target.wants/snmpd.service → /usr/lib/systemd/system/snmpd.service.
[root@librenms temp]# systemctl enable snmpd
systemctl restart snmpd
[root@librenms temp]# systemctl status snmpd
● snmpd.service - Simple Network Management Protocol (SNMP) Daemon.
   Loaded: loaded (/usr/lib/systemd/system/snmpd.service; enabled; preset: disabled)
   Active: active (running) since Fri 2025-05-16 01:04:01 CST; 42s ago
     Main PID: 2018 (snmpd)
       Tasks: 1 (limit: 100455)
      Memory: 4.1M
         CPU: 36ms
    CGroup: /system.slice/snmpd.service
            └─2018 /usr/sbin/snmpd -LS0-6d -f

5月 16 01:04:01 librenms.sysgration.com systemd[1]: Starting Simple Network Management Protocol (SNMP) Daemon....
5月 16 01:04:01 librenms.sysgration.com snmpd[2018]: NET-SNMP version 5.9.1
5月 16 01:04:01 librenms.sysgration.com systemd[1]: Started Simple Network Management Protocol (SNMP) Daemon..
[root@librenms temp]#

```

## ☐☐ Cron Job

```
cp /opt/librenms/dist/librenms.cron /etc/cron.d/librenms
```

## ☐☐☐☐ Timer

```
cp /opt/librenms/dist/librenms-scheduler.service /opt/librenms/dist/librenms-scheduler.timer  
/etc/systemd/system/  
systemctl enable librenms-scheduler.timer  
systemctl start librenms-scheduler.timer
```

## ☐☐☐☐ Log☐☐☐

```
cp /opt/librenms/misc/librenms.logrotate /etc/logrotate.d/librenms
```

## ☐☐☐☐ LibreNMS

Browser ☐☐ <http://LibreNMS.☐☐.☐☐.☐☐.☐☐.☐☐>



# LibreNMS



## Pre-Install Checks

PHP (8.2 or higher required)	8.2.25	✓
pdo_mysql		✓
mysqlnd		✓
gd		✓

DB



# LibreNMS



## Configure Database

Database Credentials

Host localhost

Port 3306

Unix-Socket Only use for custom socket path

User librenms

Password ●●●●●●

剛剛MariaDB設定的密碼

Database Name librenms

Check Credentials

DB



## Configure Database

Database Credentials



Build Database



Build Database

Please Wait...

DB[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] admin [ ] [ ] [ ] [ ]



# LibreNMS



## Configure Database

Database Credentials



Build Database



■■■■■■■■ Add User



# LibreNMS



## Create Admin User

Username

Password

Email

Add User





# LibreNMS



Create Admin User



**librenms**



# LibreNMS



## Finish Install

### Additional Settings

Update Channel  Daily  Monthly

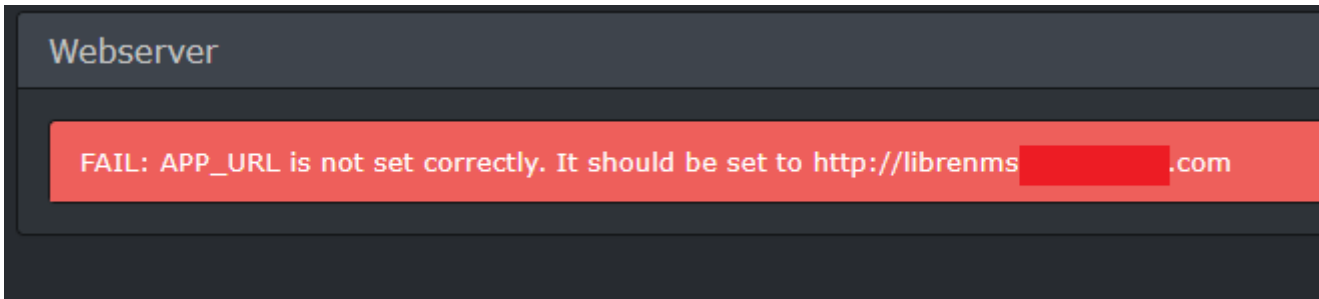
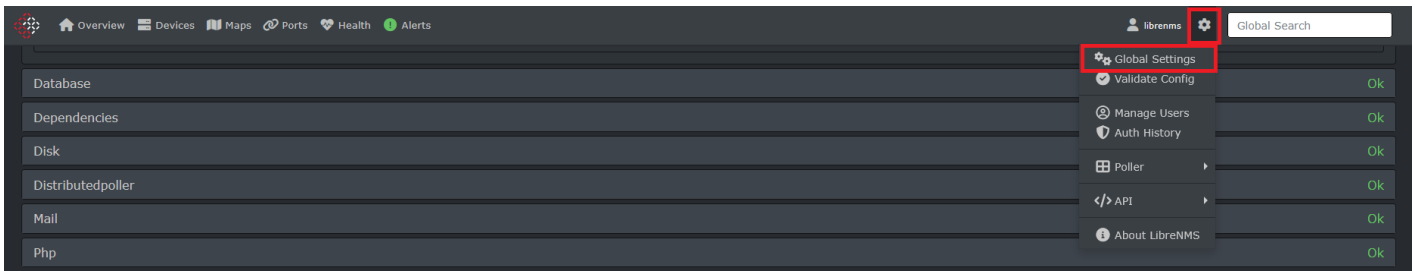
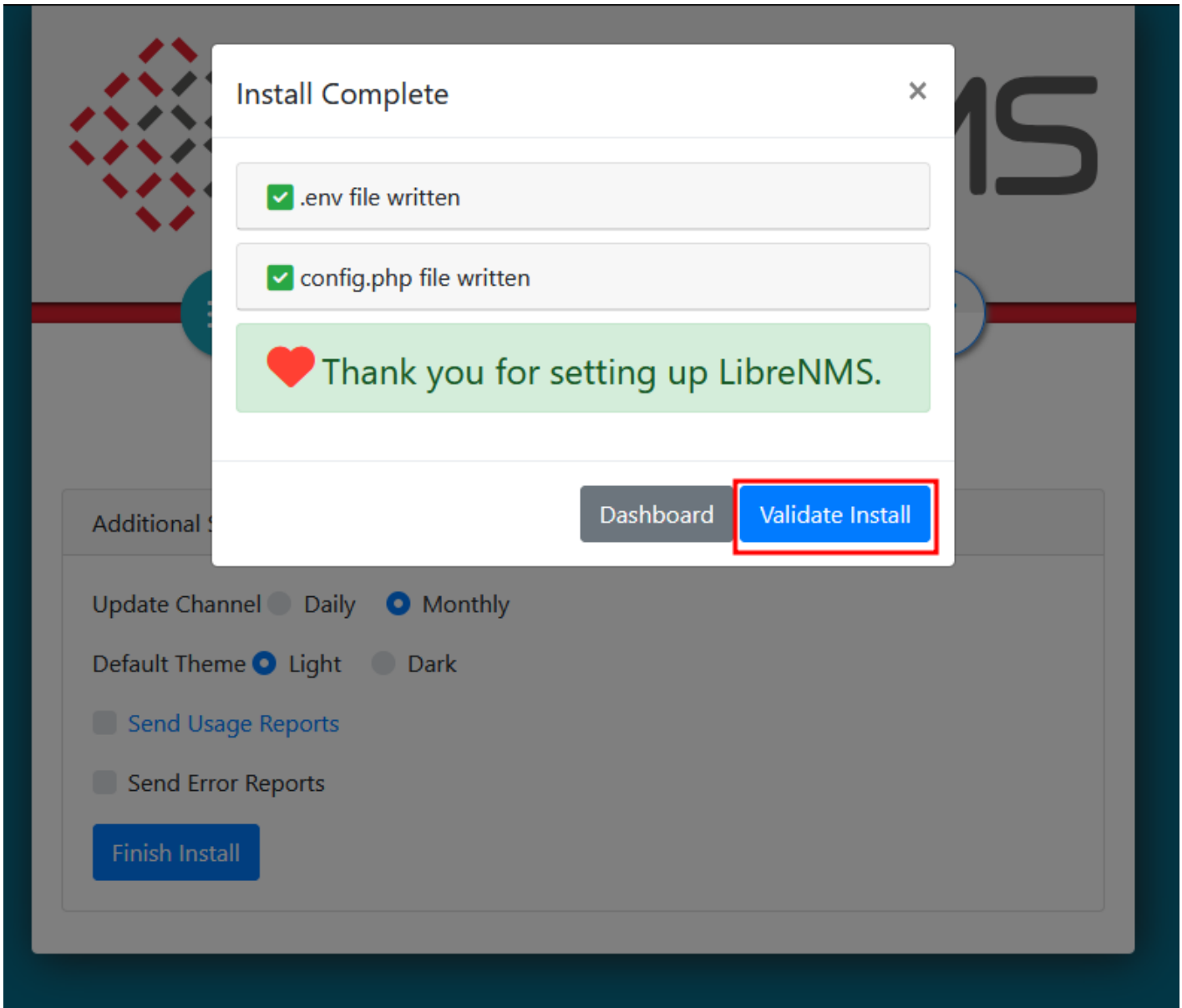
Default Theme  Light  Dark

Send Usage Reports

Send Error Reports

Finish Install





■■■■■■■■■■■■■■■■ .env ■■

```
cd /opt/librenms
vim .env
```

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

```
APP_KEY=[REDACTED]
DB_HOST=localhost
DB_DATABASE=librenms
DB_USERNAME=librenms
DB_PASSWORD=[REDACTED]
APP_URL=http://librenms.[REDACTED].com ← 修改這一行
APP_LOCALE=en
APP_FALLBACK_LOCALE=en
APP_FAKER_LOCALE=en_US
APP_MAINTENANCE_DRIVER=file
APP_MAINTENANCE_STORE=database
PHP_CLI_SERVER_WORKERS=4
BCRYPT_ROUNDS=12
LOG_STACK=single
SESSION_ENCRYPT=false
SESSION_PATH=/
SESSION_DOMAIN=null
NODE_ID=[REDACTED]
VAPID_PUBLIC_KEY=[REDACTED]
VAPID_PRIVATE_KEY=[REDACTED]
~
~
~
```

```
■■■■■■CLI■■■■■■
```

```
cd /opt/librenms/
su librenms
./validate.php
```

```

[root@librenms conf.d]# cd /opt/librenms/
[root@librenms librenms]# su librenms
bash-5.1$ ./validate.php
=====
Component | Version
-----|-----
LibreNMS | 25.4.0-141-gca8ebec5f (2025-05-15T20:44:02+08:00)
DB Schema | 2025_05_03_152418_remove_invalid_sensor_classes (338)
PHP | 8.2.25
Python | 3.9.21
Database | MariaDB 10.5.27-MariaDB
RRDTool | 1.7.2
SNMP | 5.9.1
=====

[OK] Composer Version: 2.8.9
[OK] Dependencies up-to-date.
[WARN] You have no devices.
[FIX]:
Consider adding a device such as localhost: http://librenms.██████████.com/addhost
[OK] Database Connected
[OK] Database Schema is current
[OK] SQL Server meets minimum requirements
[OK] lower_case_table_names is enabled
[OK] MySQL engine is optimal
[OK] Database and column collations are correct
[OK] Database schema correct
[OK] MySQL and PHP time match
[OK] Locks are functional
[OK] Python poller wrapper is polling
[OK] Redis is unavailable
[OK] rrd_dir is writable
[OK] rrdtool version ok
bash-5.1$ █

```

██ LibreNMS ██████████ Plugins██ ██████

# Rocky Linux 9.5 LibreNMS

## Plugins

### RRDCached

```
In -s /opt/librenms/dist/rrdcached/rrdcached.service /etc/systemd/system/  
systemctl daemon-reload  
systemctl enable --now rrdcached.service
```

```
su librenms  
Inms config:set rrdcached "unix:/run/rrdcached.sock"
```

`/opt/librenms/config.php` #

```
#$config['rrdcached'] = "unix:/var/run/rrdcached.sock";
```

### SyslogNG

```
dnf install syslog-ng
```

`/etc/syslog-ng/conf.d/librenms.conf`

```
source s_net {  
    tcp(port(514) flags(syslog-protocol));  
    udp(port(514) flags(syslog-protocol));  
};
```

```
destination d_librenms {
    program("/opt/librenms/syslog.php" template ("$HOST||$FACILITY||$PRIORITY||$LEVEL||$TAG||$R_YEAR-
$R_MONTH-$R_DAY $R_HOUR:$R_MIN:$R_SEC||$MSG||$PROGRAM\n") template-escape(yes));
};

log {
    source(s_net);
    source(s_sys);
    destination(d_librenms);
};
```

□□□□□

```
service syslog-ng restart
su librenms
lnms config:set enable_syslog true
```

## □□ Nagios Plugins

```
# □□ nagios □□
sudo groupadd nagios
# □□ nagios □□□□□□□□
sudo useradd -r -s /sbin/nologin -g nagios nagios
# □□□□□□
sudo dnf install gcc make autoconf automake openssl-devel net-snmp net-snmp-utils

# □□□□□
cd /temp
wget https://github.com/nagios-plugins/nagios-plugins/releases/download/release-2.4.12/nagios-plugins-
2.4.12.tar.gz
tar -xzf nagios-plugins-2.4.12.tar.gz
cd nagios-plugins-release-2.4.9

# □□□□□
./tools/setup
./configure --with-nagios-user=nagios --with-nagios-group=nagios
make
```

```
make install
```

```
# [redacted] /opt
```

```
ln -s /usr/local/nagios/libexec /opt/nagios
```

```
[redacted] /opt/librenms/config.php [redacted] nagios plugins [redacted]
```

```
vim /opt/librenms/config.php
```

```
# [redacted]
```

```
$config['show_services'] = 1;
```

```
$config['nagios_plugins'] = "/usr/local/nagios/libexec";
```

```
[redacted] /etc/cron.d/librenms
```

```
vim /etc/cron.d/librenms
```

```
# [redacted]
```

```
*/5 * * * * librenms /opt/librenms/services-wrapper.py 1
```