

LibreNMS

This host is where the MySQL database runs. It could be the same machine as your network management server (this is the most common initial deployment scenario).

**** Whilst we are working on ensuring LibreNMS is compatible with MySQL strict mode, for now, please disable this after mysql is installed. You are free to choose between using MySQL or MariaDB:**

MySQL

```
apt-get install mysql-server mysql-client
mysql -u root -p
```

Input the MySQL root password to enter the MySQL command-line interface.

Create the database:

```
CREATE DATABASE librenms CHARACTER SET utf8 COLLATE utf8_unicode_ci;
CREATE USER 'librenms'@'localhost' IDENTIFIED BY 'training';
GRANT ALL PRIVILEGES ON librenms.* TO 'librenms'@'localhost';
FLUSH PRIVILEGES;
exit
```

This host is where the web server and SNMP poller run. It could be the same machine as your database server.

Install the required software:

```
apt-get install libapache2-mod-php5 php5-cli php5-mysql php5-gd php5-snmpphp-pear php5-curl snmp graphviz php5-mcrypt php5-json apache2 fping imagemagick whois mtr-tiny nmap python-mysqldb snmpd php-net-ipv4 php-net-ipv6 rrdtool git
```

The packages listed above are an all-inclusive list of packages that were necessary on a clean install of Ubuntu 12.04/14.04.

Adding the librenms-user

```
useradd librenms -d /opt/librenms -M -r
usermod -a -G librenms www-data
```

Cloning

LibreNMS is installed using git. If you're not familiar with git, check out the [git book](#) or the tips at [git ready](#). The initial install from github.com is called a `git clone`; subsequent updates are done through `git pull`.

You can clone the repository via HTTPS or SSH. In either case, you need to ensure that the appropriate port (443 for HTTPS, 22 for SSH) is open in the outbound direction for your server.

```
cd /opt
git clone --depth 1 https://github.com/librenms/librenms.git librenms
cd /opt/librenms
```

Web Interface

To prepare the web interface (and adding devices shortly), you'll need to create and chown a directory as well as create an Apache vhost.

First, create and chown the `rrd` directory and create the `logs` directory:

```
mkdir rrd logs
chown -R librenms:librenms /opt/librenms
chmod 775 rrd
```

Next, add the following to `/etc/apache2/sites-available/librenms.conf`:

```
<VirtualHost *:80>
    DocumentRoot /opt/librenms/html/
    ServerName www.group28.com.bd
    CustomLog /opt/librenms/logs/access_log combined
    ErrorLog /opt/librenms/logs/error_log
    AllowEncodedSlashes On
    <Directory "/opt/librenms/html/">
        Require all granted
        AllowOverride All
        Options FollowSymLinks MultiViews
    </Directory>
</VirtualHost>
```

On at least Ubuntu 14.04 (and possibly other distributions and versions as well), `mcrypt` is not enabled on install. Run the following to enable it:

```
php5enmod mcrypt
```

Change `www.group28.com.bd` to the appropriate hostname for your domain, then enable the vhost and restart Apache:

```
a2ensite librenms.conf
a2enmod rewrite
a2dissite 000-default
service apache2 restart
```

Manual vs. web installer

At this stage you can either launch the web installer by going to <http://librenms.group28.com.bd/install.php> or <http://192.168.127.1/install.php>, follow the onscreen instructions and put related configuration.

In previous lab we set SNMP community to **bdNOG6**

```
cp config.php.default config.php
echo > config.php
vim config.php
```

Paste the configuration in config.php file. Save and Exit.

Initialise the database

Initiate the follow database with the following command:

```
php build-base.php
php validate.php
```

Create cronjob

LibreNMS uses Job Snijders' [poller-wrapper.py](#). By default, the cron job runs `poller-wrapper.py` with 16 threads. The current recommendation is to use 4 threads per core as a rule of thumb. If the thread count needs to be changed, you can do so by editing the cron file (`/etc/cron.d/librenms`). Just add a number after `poller-wrapper.py`, as in the example below:

```
/opt/librenms/poller-wrapper.py 12 >> /dev/null 2>&1
```

Create the cronjob

```
cp librenms.nonroot.cron /etc/cron.d/librenms
```

Install complete

Please allow for 2-3 runs of the poller-wrapper for data to start appearing in the WebUI. If you don't see data after this, please refer to the [FAQ](#) for assistance.

That's it! You now should be able to log in to [http://www.group28.com.bd /](http://www.group28.com.bd/). Please note that we have not covered HTTPS setup in this example, so your LibreNMS install is not secure by default. Please do not expose it to the public Internet unless you have configured HTTPS and taken appropriate web server hardening steps.