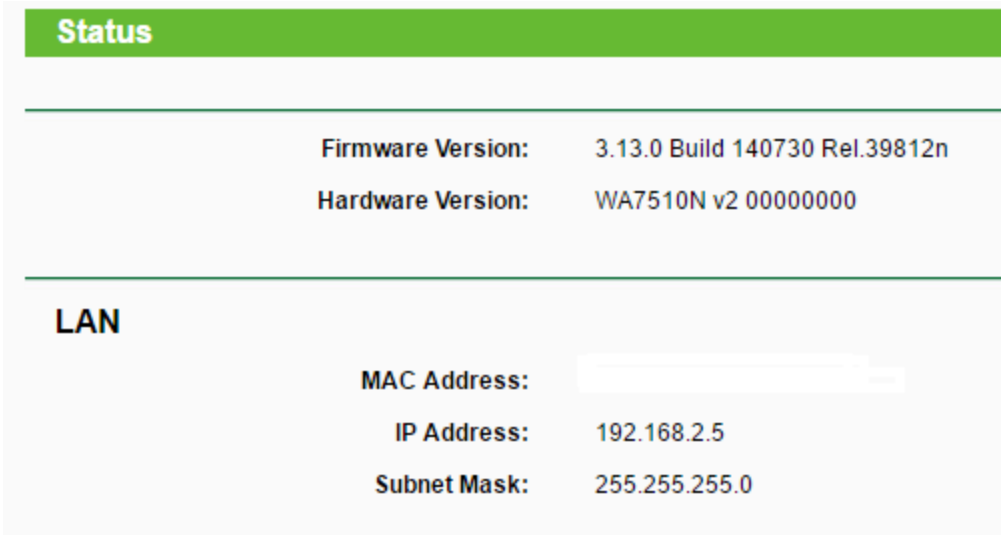
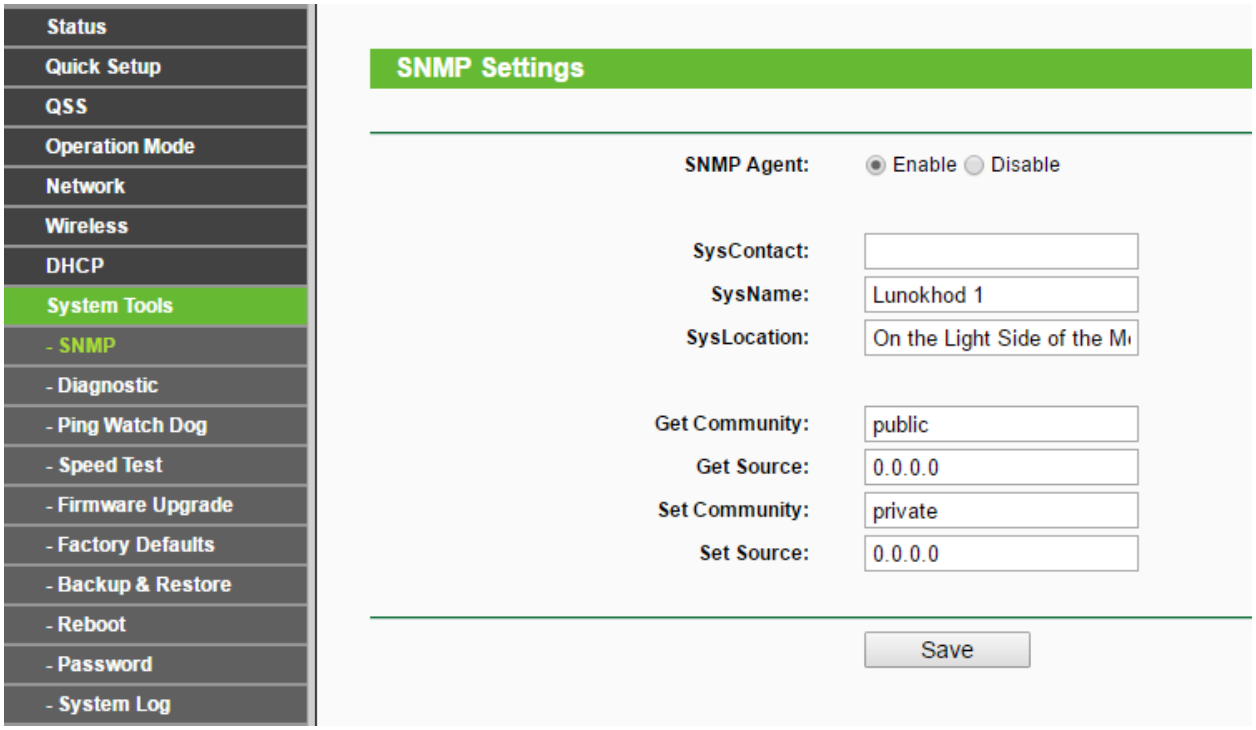
Prerequisites:

Wi-Fi Radios: 2 x TP-LINK WA7510 v2

- Both radios must be on the 192.168.2.0/24 subnet and accessable
- The provider side radio must have an IP address of 192.168.2.5
- The client side radio must have an IP address of 192.168.2.6



- Both radios must have SNMP enabled.



LMS Server Operating System: Debian Jessie or Raspbian Jessie

LMS Server Network

- Same subnet as the Wi-Fi radios
- LMS is not intended to be run on a publicly accessible machine. It should be installed on a machine in a private network.

Installation

Install Required Packages

The NMS server requires the following packages:

- mysql-server
- ruby-rails
- snmp
- snmpd
- snmp-mibs-downloader
- python-mysqldb
- git
- libmysqlclient-dev

In /etc/apt/sources.list, activate the non-free repository.

To install the packages, run the following on the NMS server:

```
sudo apt-get update
sudo apt-get install mysql-server ruby-rails snmp \
snmpd snmp-mibs-downloader python-mysqldb git libmysqlclient-dev
```

When prompted for the MySQL root user password, enter “rootpass”

Clone the Repository

```
cd /
sudo git clone https://github.com/183LMS/183LMS
```

Set Up Database

To create database tables, run the following:

```
mysql < /183LMS/setup_db.sql
```

Set Up Cron Jobs

To setup the cron jobs, open /etc/crontab as root with a text editor, and add the following lines to the crontab:

```
* *   * * *  root    /183LMS/lms_ping.pl
* *   * * *  root    /183LMS/lms_asnmp.pl && /cs183/update_cumulative.py atable
* *   * * *  root    /183LMS/lms_bsnmp.pl && /cs183/update_cumulative.py btable
```

Start Up Ruby On Rails App

To install the required Ruby gems, run the following:

```
cd /183LMS/website
sudo bundle install
```

To start a rails server daemon, run the following:

```
cd /183LMS/website
rails server -d
```

The application is now bound to localhost port 3000.
To verify the website is running, visit http://localhost:3000/ with a web browser.