

Installation Guide

The following steps are meant to be executed in order.

Hardware Requirements

- Note that wireless cards that are "intel pro/wireless" or broadcom cannot support a MESH network.

Operating System

You will need Ubuntu 10.04. Navigate to www.ubuntu.com. Click "Download Ubuntu". Select "Ubuntu 10.04LTS" from the dropdown-box. Note: Ubuntu-10.10 will not work for 80211s mesh points. Follow the steps to install.

Note: If Ubuntu refuses to shutdown, power down your computer manually, reboot, and execute the following on a terminal:

```
sudo -s
cp /etc/default/grub /etc/default/grub.backup
sed -i 's/splash/acpi=force/g' /etc/default/grub
```

Iperf

Execute the following on a terminal:

```
sudo -s
apt-get update
apt-get install iperf
```

Traceroute

Execute the following on a terminal:

```
sudo apt-get install traceroute
```

Wireless Drivers

Connect to the internet via ethernet (or wireless if available). Execute the following on a terminal.

```
sudo -s
```

```

cd /usr/src
wget http://wireless.kernel.org/download/compat-wireless-2.6/compat-wireless-2011-03-29.tar.bz2
tar xvf compat-wireless-2011-03-29.tar.bz2
cd compat-wireless-2011-03-29
sed -i 's/# CONFIG_MAC80211_DEBUGFS=y/CONFIG_MAC80211_DEBUGFS=y/g' config.mk
sed -i 's/# CONFIG_CFG80211_DEBUGFS=y/CONFIG_CFG80211_DEBUGFS=y/g' config.mk
sed -i 's/# CONFIG_ATH9K_DEBUGFS=y/CONFIG_ATH9K_DEBUGFS=y/g' config.mk
sed -i 's/# CONFIG_IWLWIFI_DEBUGFS=y/CONFIG_IWLWIFI_DEBUGFS=y/g' config.mk
sed -i 's/# CONFIG_IWLWIFI_LEGACY_DEBUGFS=y/CONFIG_IWLWIFI_LEGACY_DEBUGFS=y/g' config.mk
sed -i 's/# CONFIG_CARL9170_DEBUGFS=y/CONFIG_CARL9170_DEBUGFS=y/g' config.mk
sed -i 's/# CONFIG_ATH9K_HTC_DEBUGFS=y/CONFIG_ATH9K_HTC_DEBUGFS=y/g' config.mk
sed -i 's/CONFIG_ATH9K_RATE_CONTROL=y/CONFIG_ATH9K_RATE_CONTROL=n/g' config.mk
make && make install
shutdown now -r

```

Do not interrupt these commands or you will not be able to reboot successfully.

Python 2.5.5.

Execute the following on a terminal:

```

sudo -s
cd ~
wget http://www.python.org/ftp/python/2.5.5/Python-2.5.5.tar.bz2
tar xvf Python-2.5.5.tar.bz2
cd Python-2.5.5
./configure
make
make install

```

iw

Execute the following on a terminal:

```
sudo apt-get install iw
```

Enter "y" when prompted.

git-1.7.1

Execute the following on a terminal:

```
sudo apt-get install git-core
```

Enter "y" when prompted.

MeshKit

Execute `cd ~ && ssh-keygen` and (1) enter "id_rsa" for the file in which to save the key, (2) enter a password, (3) re-enter your password. Execute `mkdir .ssh && mv id_rsa .ssh/ && mv id_rsa.pub .ssh/ && cat .ssh/id_rsa.pub`. Copy the output (the public key). Open a browser, navigate to www.github.com, and login. Click "Account Settings" on the top of the page. Click "SSH Public Keys" on the left-hand-side of the page. Click "Add another public key", enter "Ubuntu-10.04" into the text-field labeled "Title", and paste the public key you copied previously into the text-field labeled "Key". Return back to your terminal and execute `git clone git@github.com:Fishermen/MeshKit.git`

getip

Execute the following on a terminal:

```
cp ~/MeshKit/MeshKit/src/heartbeat-sender/getip /bin/getip
```

batman-advanced-2011.0.0

Execute the following at a terminal:

```
cd MeshKit/build
make
```