

How to manually flash firmware on a CloudTrax-enabled access point

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There is no factory reset on Open-Mesh devices; instead, access points should be "re-flashed" to a recent firmware version which essentially puts them in factory state. Re-flashing units typically resolved 90% of support issues. Follow the instructions below to re-flash.

Step One:

Windows users: Install a utility program called WinPcap. Get it here: <http://www.winpcap.org/install/default.htm>

Linux users: Skip to step two.

Mac users: Currently unsupported.

Step Two:

Download and save the flash utility, for [Windows](#) or [Linux](#).

Step Three:

Windows users: The flash utility is a "console" application, so open up a console window¹.

In Vista or Windows 7, go to the Start menu and search for "command"; in Windows 8, press the <Windows Key> + <R> and enter "cmd". From the prompt window, type the location where you saved the flash utility, such as C:\Users\[username]\Downloads. Hit <Return>, then type "open-mesh-flash-ng".

Linux users: Type ". /open-mesh-flash-ng"

```
C:\Users\[username]\Downloads>open-mesh-flash-ng
```

Usage:

```
open-mesh-flash-ng [ethdevice] flashes embedded kernel + rootfs: open-mesh firmware rxxx
```

```
open-mesh-flash-ng [ethdevice] rootfs.bin kernel.lzmaflashes your rootfs and kernel
```

```
open-mesh-flash-ng [ethdevice] ubnt.binflashes your ubiquiti image
```

```
open-mesh-flash-ng [ethdevice] uboot.binflashes your uboot image
```

```
open-mesh-flash-ng -vprints version information
```

The 'ethdevice' has to be one of the devices that are part of the supported device list which follows. You can either specify its name or the interface number.

```
1: \Device\NPF_{9BB97EBC-1BA2-4F39-93C3-A9841A4E863F}
(Description: Sun)
```

```
2: \Device\NPF_{AAE405B9-0A93-4C4D-A3C7-E87BD8CB36E7}
(Description: Microsoft)
```

```
3: \Device\NPF_{E789801D-D437-4BDA-9A7E-34BEC2058A0C}
(Description: Atheros AtcL001 Gigabit Ethernet Controller)
```

```
4: \Device\NPF_{55143701-D657-4DEF-835A-14EEF2970416}
(Description: MS Tunnel Interface Drive)
```

¹ You may need to open the command prompt as an 'Administrator' (Right-click > Open as Administrator). Failing to do this may result in no interfaces being displayed. ~Rob

Note the number of your actual Ethernet Device from the list displayed (*in this case, "3"*). Hint: It will usually contain the word "Ethernet".

Step Four:

Type "open-mesh-flash-ng *n*" where "*n*" is the Ethernet Device number. Hit "<Enter>"

```
C:\Users\[username]\Downloads>open-mesh-flash-ng 3
```

Connect your Open-Mesh access point to your PC's Ethernet port and power it on. If it was already powered on, power-cycle it by removing the power and plugging it back in.

If flashing the MR500 Or OM2P, you MUST use the LAN port NEXT TO THE POWER PLUG. None of the other ports will work to reflash.

A crossover cable is NOT required to connect your unit to your computer via ethernet cable.

The output of the flash utility should look similar to below (note that the MR500 output will be much shorter). If after 10 seconds you don't see this, try power cycling your router and/or check the interface number to make sure you are using your computer's Ethernet port.

```
[ac:86:74:02:23:f8]: type 'OM2P router' detected
[ac:86:74:02:23:f8]: OM2P router: tftp client asks for 'fwupgrade.cfg', ser
fwupgrade.cfg portion of: embedded image (1 blocks) ...
[ac:86:74:02:23:f8]: OM2P router: tftp client asks for 'kernel', serving ke
portion of: embedded image (1861 blocks) ...
[ac:86:74:02:23:f8]: OM2P router: tftp client asks for 'rootfs', serving ro
portion of: embedded image (4097 blocks) ...
[ac:86:74:02:23:f8]: OM2P router: image successfully transmitted - writing
to flash ...
[ac:86:74:02:23:f8]: OM2P router: flash complete. Device ready to unplug.
```

The reflash will take about 3-15 minutes to complete (depending upon the router model) so please be patient.

The flash program will not exit on its own. You can either plug in another node to start the process again, or hit "<Ctrl> + <C>" to exit the console and flash utility.

You can display the version of the firmware embedded in the flash utility by typing "open-mesh-flash-ng -v".

VERY IMPORTANT: After reflashing a unit and connecting it back to your network you must click "Update Network Settings" in CloudTrax for the unit to checkin again.

Note: If you have changed the wireless channel on your network from the default 5, you will find that after reflashing wireless nodes may take up to 40 minutes to check-in. This is because the reflash returns the units back to the default settings. An alternative is to plug the unit in via Ethernet and wait for the device to update its channel before making it a wireless node again.