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Instructions for converting a new MikroTik hAP-ac3 Router to AREDN firmware, using Windows

A personal note ... I much prefer using Linux and macOS, but I used Windows for this example.

"Your mileage may vary", but this is how it worked for me, using a Windows-10 PC with both Ethernet _and_ WiFi available. Reflashing a hAP-ac3 can be a bit tricky but it works well if you do it correctly. Please read all of these instructions before you begin the process.

On your Windows-7/10/11 PC, install the "Tiny PXE Server" app.

Boot the new unmodified ac3 router and connect via WiFi (will be 192.168.88.x)

Point your browser at <http://192.168.88.1/>

Apply an admin password if requested by the hAP.

WebFig tab IMPORTANT !!

System --> Routerboard --> Settings --> Boot-device = try-ethernet-once-then-nand
Click Apply.

Remove the router's power.

Manually set your PC's Ethernet IPv4 network interface to:

IP Address: 192.168.1.10
Subnet mask: 255.255.255.0
Default gateway: 192.168.1.1
(DNS server not needed)

Using a dumb Ethernet switch as shown in the AREDN instructions works well.
There must be no other devices connected to the switch.

Now you should turn the PC's WiFi connection off so it doesn't reconnect elsewhere.

Connect the PC's Ethernet to the router's WAN port 1, and configure the PXE app's 192.168.1.x settings as shown in the AREDN PXE Server example. Make sure the PXE app is bound to your Ethernet port's 192.168.1.10 IP address. Select your rb.elf boot file as the firmware source.

Put the PXE server on line.

Push and Hold the router's Reset button and then apply power. Continue holding the button.

Do NOT release it until you see the PXE server show the "DoReadFile:rb.elf" message.

Let the router load the new file and wait for it to reboot (takes a few minutes).

Close the PXE Server app.

Move the PC's network cable from WAN to LAN (port 2)

You can now point your PC's browser at <http://192.168.1.1/> and follow instructions.

But

What if something goes wrong and the reflash doesn't seem to work?

Easy ... remove power, hold the reset switch and apply power, and as soon as the LED turns yellow release the reset switch. If you haven't somehow bricked the router, this will return it to the default MikroTik configuration.

Now you can go back to the beginning of this procedure. The Routerboard "Boot-device"

setting must be corrected each time before you reboot to load the initial rb.elf file.