AREDN

AREDN is a project aimed at using wifi devices flashed with an open firmware to create a computer network independent of the internet. Since hams have access to sections of the 2.4 GHz and 5.8 GHz bands that regular wifi devices don't, those channels are quieter and longer distances can be achieved with directional antennas.

- NARA on the Vancouver Island is leading the way in creating this network in our area, and a few people on the Coast and the mainland have started experimenting with some of the equipment.
- This message board is very active with local hams and is the best place to ask questions.
- This map shows the nodes that are live in the area.
- This site is useful to model line of sight, including the Fresnel zone.

Getting Started

The easiest way to get started is to get a Microtik hAP AC Lite TC. One can be purchased from Solimedia (for less than $90 with tax and shipping), or Mikrotic Canada.

Once flashed with the AREDN firmware, the hAP will use the 5.8 GHz band as regular wifi for your computer to connect to, and the 2.4 GHz band can be used to mesh with other hAPs nearby. Realistically, the hAP is not useful to make long distance links since it would require an external antenna. But it is useful to tunnel to others on the network via the internet to get started with the system.

- How to setup a tunnel

RF Links

Once you're connected into the AREDN network over the internet, the next step is to add an RF link. For that, a second device can be placed outside and connected back to the hAP via CAT5e. For this, you can use:

- A Ubiquiti Rocket M5 radio with a sector antenna, or a dish antenna,
- An integrated MikroTik dish and radio,
- A MikroTik LDF with a repurposed dish,
- …

See the support matrix and the device selection spreadsheet for more information.

Services

When connected to the AREDN network, individuals can run different services on individual servers like the Raspberry Pi. Note that these services are only visible to a given AREDN network and are **not** accessible to the wider internet. A few examples we have running right now are:

- Linux Server
- Mesh Chat
- VOIP phone network
- Winlink Gateway
- FlightAware Tracker

- [N2MH map](#) with links between nodes,[1]
- and more ...

Individual Setups

- [Devan (VE7LSE)](#)
- [Devan (VE7DNR)](#)
- [Patrick (VA7FI)](#)

Misc to Sort

- [Encryption](#)
- [NPR](#)
- [How to edit this wiki](#)

[1]
Here's a copy of the live map from Nov 5. The purple lines are Internet tunnel connections and the green lines are 5.8 GHz connections.