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Linux Server

Prerequisites

Running a home Linux Server on AREDN is pretty simple.

- Install [LinuxMint Xfce](#) on a cheap laptop or use a Raspberry Pi.
- Update and reboot it if necessary.
- Change the Linux hostname, which will identify the computer in various places on AREDN. I renamed mine to VA7FI-Linux:

```
sudo hostnamectl set-hostname VA7FI-Linux
```

- Install Apache:

```
sudo aptitude install curl apache2
```



If you're here because you're installing Mesh Chat, you can now go back to the [Mesh Chat Install page](#). The rest of this page is optional.

Website

The html Folder

The website folder is located here: `/var/www/html/` Anything you put in there (with the right permissions) will be visible to others on AREDN. Let's get a few things out of the way first.

- Create a link to your home folder for ease of access:

```
ln -s /var/www/html ~/
```

- Change the ownership of everything in that folder so you (the user) and the web process can access them

easily. My username is aredn, which you should replace with your own username.

```
sudo chown aredn:www-data -R /var/www/html/
```

- Change the permissions:

```
sudo chmod 770 -R /var/www/html/
```

In general, those permissions are ok, but depending on what you're running as a web service, they could be too permissive. That being said, since you're not exposing your site to the open internet, you're probably ok with those.

The index.html File

You're now ready to write our first webpage! You can delete the `index.html` file that's already in the webfolder and create one of your own. There's a simple [online html editor](#) that's very convenient to use for small pages: simply edit the text you want on the left, and copy the html code on the right into your `index.html` file.

Here's VA7FI's page as an example:

Welcome to the VA7FI-Linux Server

This site is only accessible on the West Coast AREDN network via [VA7FI-HAPac3-1](#). This node is connected to:

- [VA7FI-LDF5-1](#), which connects to [VE7NA-MT-BENSON-SE](#) on 5.8 GHz (Ch. 172 at 5 MHz).
- [VA7FI-LHG-1](#), which attempts to connect to [VE7NA-LOST-LAKE-NE](#) on 5.8 GHz (Ch. 178 at 10 MHz) but is currently not able to due to trees in the way.

It also tunnels to a few stations over the internet.

This server hosts the following services:

- [West Coast AREDN Static Wiki](#)
- [Nextcloud](#)
- [Mesh Chat](#)
- [Speed Test File](#) (Over **RF** only)

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When you manually create new files in your web folder, you might have to correct the ownership and permissions using the lines with `chown` and `chmod` above. Often times, if you can't see a page, it's because the ownership or permissions are wrong.

- At this point, you should test that you can view your webpage locally on your Linux computer:
<http://localhost/>
- You should also be able to see it from any computer on the same local area network (LAN) by typing your new server's LAN IP address in the address bar of your other computer. To find your server's IP address, type this command in your linux server's terminal:

```
ifconfig | grep 'inet '
```

AREDN Node Configuration

Now that the site is working locally, we can share it on AREDN.

From the Port Forwarding, DHCP, and Services page:

1. Setup a DHCP Address Reservation for the Linux computer
2. Advertise the services
3. Forward WAN port 8080 to LAN port 80
4. Don't forget to Save Changes

The screenshot shows the AREDN Node Configuration web interface. At the top, there are navigation tabs: Node Status, Basic Setup, Port Forwarding, DHCP, and Services (which is active), Tunnel Server, Tunnel Client, Administration, and Advanced Configuration. Below the tabs are buttons for Help, Save Changes, Reset Values, and Refresh.

DHCP Address Reservations: A table with columns: Hostname, IP Address, MAC Address, Do Not Propagate, and Del. One reservation is shown for VA7FI-Linux with IP 10.153.73.109 and MAC 7c:c9.

Current DHCP Leases: A table showing one lease for VA7FI-Linux with IP 10.153.73.109 and MAC 7c:c9.

Advertised Services: A table with columns: Name, Link, and URL. Three services are listed: Primary hAP (no link), Home Page (link checked), and Wiki (link checked). Each service has a dropdown for the host (VA7FI-Linux) and a port (8080, 80, 80 respectively).

Port Forwarding: A table with columns: Interface, Type, Outside Port, LAN IP, and LAN Port. One rule is shown: WAN, TCP, 8080, VA7FI-Linux, 80.

DNS Aliases: A section with a table for Alias Name and IP Address, and an Add button.

About The Advertised Services Section

Here, I'm doing three different things:

- The first line with “Primary hAP” is an optional title that I'm displaying for my hAP and has nothing to do with the Linux server. Notice how this line doesn't have the Link checkbox marked because it's only a title, not a link.
- The second line is advertising the /var/www/html/ web folder. By default, the index.html file gets read when opening a folder. “Home Page” is the title displayed, and everything that follows is how to link to it.
- The third line is advertising a wiki/ folder that I have in the /var/www/html/ folder, and its display name is “Wiki”.

[Here's how that translates to the Node Status page:](#)

Local Hosts	Services
VA7FI-HAP-1	Primary hAP
● VA7FI-Linux	Home Page
	Wiki