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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 a redn, which you should replace with your own username.

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

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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 fist 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)

Patrick, va7fi@rbox.me

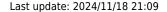
index.html

<body style="background-color:#F0F0F0";>

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```
<div style="margin-top: 0px; margin-left: auto; margin-right:auto;</pre>
text-align: left; max-width: 1000px; border: 1px solid grey;
padding:10px;">
<h1 style="text-align: center; margin-top: 0px;">
<img src="./logo.png" alt="" />
Welcome to the VA7FI-Linux Server
</h1>
>
This site is only accessible on the West Coast AREDN network via
<a href="http://va7fi-hapac3-1.local.mesh">VA7FI-HAPac3-1</a>.
This node is connected to:
<l
<a href="http://va7fi-ldf5-1.local.mesh">VA7FI-LDF5-1</a>,
which connects to <a href="http://ve7na-mt-benson-
se.local.mesh">VE7NA-MT-BENSON-SE</a>
on 5.8 GHz (Ch. 172 at 5 MHz).
<a href="http://va7fi-lhg-1.local.mesh">VA7FI-LHG-1</a>,
which attempts to connect to <a
href="http://ve7na-lost-lake-ne.local.mesh">VE7NA-LOST-LAKE-NE</a>
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:
<l
<a href="http://va7fi-linux.local.mesh/wiki/">West Coast AREDN</a>
Static Wiki</a>
<a href="http://va7fi-</a>
linux.local.mesh/nextcloud/">Nextcloud</a>
<a href="http://va7fi-linux.local.mesh/meshchat/">Mesh
Chat</a>
<a href="http://va7fi-linux.local.mesh/100mb">Speed Test</a>
File</a> (Over <span style="color: #ff0000;">RF only</span>)
Patrick, <a href="mailto:va7fi@rbox.me">va7fi@rbox.me</a>
```



</div></body>



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, ans 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 for get to Save Changes



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### **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	<u>Home Page</u> <u>Wiki</u>

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**AREDN** 

Permanent link:

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