

# Mesh Chat

Using Mesh Chat is easy: simply click on a Mesh Chat service and enter your callsign.

## Your Call Sign

VA7FI|

LOGIN

CHAT FILES STATUS

Instances with the same Zone sync together

Mesh Chat v1.02

**Zone: MIMeshChat**  
 Call Sign: VA7FI

**Node: va7fi-linux**  
 Updated: 6 seconds ago

LOGOUT

Currently logged into the va7fi-linux instance

Send a Message

**New Message**

Enter message here

**Channel** Everything v

SEND

Message will be posted in the general channel

Mesh Chat Users 2

Call Sign	Node	Last Seen
VA7FI	<a href="#" style="color: #00a0e3;">va7fi-linux</a>	11/9/21 8:06 PM
VE7LSE	<a href="#" style="color: #00a0e3;">ve7tom-hap</a>	11/9/21 8:05 PM






Messages Viewing all messages

Search:

Channel: Everything v

Time	Message	Call Sign	Channel	Node
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At the moment, we have about half a dozen Mesh Chat instances that sync to each other:

 <a href="#">VA7FI-Linux</a>	Runs on a linux laptop and has a few GB of available space
 <a href="#">VA7LSP-hAPac3-1</a>	Runs on the hAP and has 512 kB of available space
 <a href="#">VE7SST-home</a>	Runs on the hAP and has 512 kB of available space
 <a href="#">VE7SST-NSM5</a>	Runs on the hAP and has 512 kB of available space
 <a href="#">VE7ZDH-wrt-1</a>	Runs on the hAP and has 512 kB of available space

And if you're running [Linux Mint](#), you can create a super convinient [Web App](#) to load it quickly without the clutter of a regular browser.

# File Sharing

MeshChat can also be used for file sharing by clicking on the **FILES** tab at the top. The file will be physically stored on the node you are using at the moment, but can be accessed by all nodes. To delete a file, you must be logged into the MeshChat node that is storing the file.

CHAT

FILES

STATUS

LOGOUT

Mesh Chat v1.02

Zone: MIMeshChat  
Call Sign: VA7FI

Node: va7fi-linux  
Updated: 22 seconds ago

Upload a File

Upload File

Browse...

No file selected.

UPLOAD

File System

Total Storage: 25.2 GB  
Free Storage: 3.9 GB

DOWNLOAD MESSAGES

Files Available2 Files

File	Size	Node	Time	
<a href="#">MIMeshChat_storage_pi4linux9.txt</a>	186.0 B	pi4linux9	11/8/21 11:08 PM	
<a href="#">Storage.png</a>	8.4 KB	va7fi-linux	11/7/21 2:30 PM	DELETE

Also be mindful of the storage capacity of different nodes. When MeshChat is installed on a hAP, it only has 512 kB of space. In the example above, MeshChat is installed on a cheap Linux laptop and has almost 4 GB of free space.

Mesh Chat on a hAP	Mesh Chat on a Linux Laptop
<div><div>File System</div><div>Total Storage: 512.0 KB Free Storage: 512.0 KB</div><div>DOWNLOAD MESSAGES</div></div>	<div><div>File System</div><div>Total Storage: 25.2 GB Free Storage: 3.9 GB</div><div>DOWNLOAD MESSAGES</div></div>

# Mesh Chat on a Linux Server

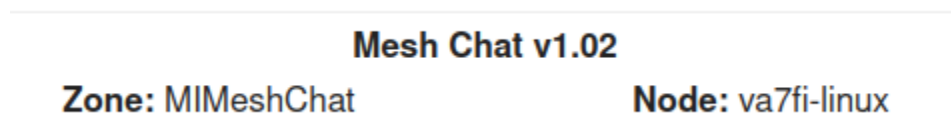
Before we get started with the details, let's have a look at the big picture. There are 3 different “names” that we'll have to keep track of:

- The AREDN Node name configured in the Basic Setup page. Mine in is VA7FI-HAP-1. Yours will be different.
- The Hostname of the linux computer running the service. Mine is VA7FI-Linux. Yours will be different.
- The Service name. Here we use MIMeshChat. Use the same if you want your instance to sync with that one. This is also called the Mesh Chat “Zone”.

Here's where that information shows up on the Node Status page once it's all done and ready:

Local Hosts	Services
VA7FI-HAP-1 ● VA7FI-Linux	<a href="#">MIMeshChat</a>

And in the Mesh Chat app:



In what follows, it'll be important to keep track of where to enter this information so it's configured properly.

## Server Install

- Follow the steps in the Prerequisites section of the [Linux Server page](#).

## Mesh Chat Install

Following the instructions on [Trevorsbench](#):

- Download and install Mesh Chat: <sup>1)</sup>

```
wget https://gelm.net/AREDN/meshchat/meshchat_1.02_all.deb
sudo dpkg -i meshchat_1.02_all.deb
```

- Edit the configuration file:

```
sudo pico /usr/lib/cgi-bin/meshchatconfig.pm
```

and edit the last two lines so that the zone matches the other Mesh Chat instances, and the node is the name of your AREDN node. In my case:

```
our $pi_zone           = 'MIMeshChat';  
our $local_meshchat_node = 'VA7FI-HAP-1';
```

On LinuxMint there's an issue that needs to be fixed before continuing. Essentially, the current setup uses files in the /tmp folder, which the Apache server is not allowed to edit. So the solution was to create that folder somewhere else and set the permissions properly.<sup>2)</sup>

- Create these folders:

```
sudo mkdir /var/www/html/meshchat/tmp/  
sudo mkdir /var/www/html/meshchat/tmp/meshchat/
```

- And change the ownership and permissions:

```
sudo chown www-data:www-data -R /var/www/html/meshchat/tmp/  
sudo chmod 770 -R /var/www/html/meshchat/tmp/
```

- Edit the config file:

```
sudo pico /usr/lib/cgi-bin/meshchatconfig.pm
```

- And replace every instance of /tmp/ by /var/www/html/meshchat/tmp/ (line 2, and 18):

```
our $lock_fh;  
our $meshchat_path = '/var/www/html/meshchat/tmp/meshchat';  
...  
our $tmp_upload_dir = '/var/www/html/meshchat/tmp/web/upload';  
...
```

- For reference, the permissions for the files in /usr/lib/cgi-bin/ are:

```
-rwxr-xr-x 1 www-data www-data meshchat  
-rw-r--r-- 1 root      root      meshchatconfig.bac  
-rw-r--r-- 1 www-data www-data meshchatconfig.pm  
-rw-r--r-- 1 www-data www-data meshchatconfig-stretch.pm  
-rw-r--r-- 1 www-data www-data meshchatlib.pm
```

- Restart the services:

```
sudo systemctl daemon-reload
sudo /etc/init.d/apache2 restart
sudo /etc/init.d/meshchatsync restart
```

At this point, you should be able to run Mesh Chat from the computer where it's installed using this address: <http://localhost/meshchat/>

But it won't be able to talk to your AREDN node yet.

## AREDN Configuration



If you had previously installed MeshChat 1.02 on a Raspberry PI or Linux machine and later upgraded your node to 3.22.6.0, you may notice that MeshChat stopped synching. The following instructions have been updated to help fix that.<sup>3)</sup>

Install the meshchat -api package **Note that this part may need to be done every time the node is upgraded.** :

- For AREDN prior to v3.22.6.0, download [meshchat-api 1.02](#)
- For AREDN v3.22.6.0 or later, download [meshchat-api\\_2.x\\_all.ipk](#)
- From the Administration page, click on Upload Package Browse... to install it.

From the Port Forwarding, DHCP, and Services page:

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

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

The main content area is divided into three sections:

- DHCP Address Reservations:** A table with columns for Hostname, IP Address, MAC Address, and Do Not Propagate. There is one entry for VA7FI-Linux with IP 10.153.73.109 and MAC 7c:c9. A Del button is next to it.
- Advertised Services:** A table with columns for Name, Link, and URL. There is one entry for MIMeshChat with a checked Link and URL http://VA7FI-Linux:80/meshchat. A Del button is next to it.
- Current DHCP Leases:** A section stating "there are no active leases".

At the bottom, there are two more sections:

- Port Forwarding:** A table with columns for Interface, Type, Outside Port, LAN IP, and LAN Port. There is one entry for WAN, TCP, 8080, VA7FI-Linux, 80. A Del button is next to it.
- DNS Aliases:** A section with a table for Alias Name and IP Address. There is one entry for -IP Address- with an Add button next to it.

## References

Mesh Chat has gone through different maintainers since its original inception. As such, you might find information dispersed across different websites.

### v0.4 - v1.02

Original version by Trevor Paskett (K7FPV) was last updated in 2020.

- Github: <https://github.com/tpaskett/meshchat/tree/master>
- Personal Website: <http://www.trevorsbench.com/meshchat-messaging-for-mesh-networks/>

### v2.0 - v2.10

Tim Wilkinson (KN6PLV)

- Github: <https://github.com/kn6plv/meshchat>

### v2.11 - v2.12.1

Gerard Hickey (WT0F)

- <https://github.com/hickey/meshchat/releases>

### v2.15 - v2.16

Tim Wilkinson (KN6PLV)

- Github: <https://github.com/kn6plv/meshchat>

<sup>1)</sup>

The old location doesn't work anymore: [https://s3.amazonaws.com/aredn/meshchat\\_1.02\\_all.deb](https://s3.amazonaws.com/aredn/meshchat_1.02_all.deb)

<sup>2)</sup>

The /tmp issue is discussed here:

<https://www.arednmesh.org/content/pi-meshchat-error-sending-message>

<sup>3)</sup>

See [kn6plv/meshchat](https://github.com/kn6plv/meshchat) (for AREDN in Lua) on Github, and this [discussion](#) on arednmesh.

From:  
<https://wcaredn.ca/> - **West Coast  
AREDN**

Permanent link:  
<https://wcaredn.ca/services/meshchat/home?rev=1762841287>

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