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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

SEND

Message will be posted in the general channel

Mesh Chat Users 2

Call Sign	Node	Last Seen
VA7FI	va7fi-linux	11/9/21 8:06 PM
Users in different instances see each other VE7LSE	ve7tom-hap	11/9/21 8:05 PM

Messages Search:

Channel:

Everything

Viewing all messages

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:

VA7FI-Linux	Runs on a linux laptop and has about 50 GB of available space
Linux78 (VA7UL)	Runs on a linux computer and has about 400 GB of available space
VA7LSP-hAPac3-1	Runs on the hAP and has 512 kB of available space

VE7SST-home	Runs on the hAP and has 512 kB of available space
VE7SST-NSM5	Runs on the hAP and has 512 kB of available space
VE7ZDH-wrt-1	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 Available 2 Files

File	Size	Node	Time	
MIMeshChat_storage_pi4linux9.txt	186.0 B	pi4linux9	11/8/21 11:08 PM	
Storage.png	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
File System Total Storage: 512.0 KB Free Storage: 512.0 KB DOWNLOAD MESSAGES	File System Total Storage: 25.2 GB Free Storage: 3.9 GB DOWNLOAD MESSAGES

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	MIMeshChat

And in the Mesh Chat app:

Mesh Chat v1.02
Zone: MIMeshChat **Node: va7fi-linux**

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: ¹⁾

```
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.²⁾

- 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.³⁾

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 web interface with the following sections:

- Navigation Bar:** Node Status, Basic Setup, **Port Forwarding, DHCP, and Services** (active), Tunnel Server, Tunnel Client, Administration, Advanced Configuration.
- Buttons:** Help, Save Changes, Reset Values, Refresh.
- DHCP Address Reservations:**

Hostname	IP Address	MAC Address	Do Not Propagate	Del
VA7FI-Linux	10.153.73.109	7c:c9	☐	Del
- Advertised Services:**

Name	Link	URL	Del
MIMeshChat	☒	http://VA7FI-Linux:80/meshchat	Del
- Current DHCP Leases:** there are no active leases
- Port Forwarding:**

Interface	Type	Outside Port	LAN IP	LAN Port	Del
WAN	TCP	8080	VA7FI-Linux	80	Del
- DNS Aliases:**

Alias Name	IP Address	Add
	- IP Address -	Add

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 - v2.18

Tim Wilkinson (KN6PLV)

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

¹⁾

The old location doesn't work anymore: https://s3.amazonaws.com/aredn/meshchat_1.02_all.deb

²⁾

The /tmp issue is discussed here: <https://www.arednmesh.org/content/pi-meshchat-error-sending-message>

³⁾

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