

Supermon2 Customizing Streaming and Archiving

The original concept of Supermon was to allow viewing of local nodes with some provision to view and control remote nodes. This process has grown over the years to include considerably more control over remote nodes. This customizing section reflects the current state of Supermon2. It is assumed the user has updated to the latest version.

Streaming and Archiving

Streaming is done using the Allstar “outstream” command in rpt.conf. It can be used with “nptee” allowing multiple streams if required. The “outstream” command is typically used with the Broadcastify service to send all node audio to an Internet URL for public listening. There are a howto's at <http://www.crompton.com/hamradio/hamvoip-howto/> for both of these commands.

Archiving is done using the “archivedir” directive in rpt.conf. This sends all connected node audio and status messages to a specific directory. You can also limit it to just status messages by setting archiveaudio=0.

Streaming uses no local storage but archiving does and the data should ONLY be stored to an external drive on the Pi. This could be a USB stick, hard drive, remote storage. etc. Audio files take a considerable amount of storage space and you should never write this data to the SD card.

Setting Up Streaming

Streaming is done by adding the “outstream” command line to the node stanza in rpt.conf that you want to stream. You also need to setup a stream destination using a service like Broadcastify. It is free as long as you supply a feed. You need to register and get login information. The actual procedure to do this is in the howto. This would be done on each node of each server you want to stream. It could be Pi's in located different locations monitored by Supermon2.

At the Supermon2 end you tell the users this link is available by adding it to the allmon.ini file. Here is an example:

```
[59000]
....
....
....
listenlive="https://www.Broadcastify.com/listen/feed/21175/web"
```

The feed number in the URL is given to you by Broadcastify and is not your node number. Listen Live will appear as a URL in the selected node.

Node 27225 => WA3DSP Philadelphia Hub Richboro, PA 18954 Bubble Chart IsNodes Listen Live Archive						
Node	Node Information	Received	Link	Dir	Connected	Mode

Once this URL is in the allmon.ini file it will show up as shown above as “Listen Live” “Listen Live” is a clickable URL that takes the user to the Broadsactify site to play the audio from this node.

If you display multiple nodes on many servers on your Supermon2 display then you can setup Broadcastify feeds for any of them you desire. You just need to have the rpt.conf outstream command working on that node/server and the listenlive= URL in your main Supermon2 pointing to the proper Broadcastify URL.

Broadcastify via outstream is generally reliable but it can sometime crash. It is recommended that it be used with the nptee script or run on a separate Pi connect to the audio you want to stream. There is no need to have “outstream” running on a node where all your users connect. As long as the node it is running on is connected to the node you want to broadcast.

As of Supermon2 version 1.08 the STREAMING_NODE variable in global.inc is no longer used and can be removed.

Setting up Archiving

Archiving of your node audio is done by setting the “archivedir=” in rpt.conf. This should ONLY be to an external storage device. Typically a USB stick installed on the Pi. USB sticks come in many sizes and 32G and 64G are very common as are other much large ones. Depending on how much use your node gets would determine the size of your device but 32G will store quite a bit of audio. How long you want to archive is also a factor.

I labeled my USB stick MS1 for “mass storage 1” and it mounts under /media. Since I primarily use Linux I format all my USB sticks to ext4. Sticks usually come formatted fat32 but ext4 is a better file system and in some case it would need to be formatted in Linux to work properly. You can use Gparted on a Linux desktop to format and label very easily.

In this example I have the archivedir defined like this in the 59000 stanza in rpt.conf -

```
archivedir=/media/MS1 ; base directory for archives
archivetype=gsm ; the default or pcm
archiveaudio=0
```

Since this is defined in the [59000] stanza of rpt.conf the archive directory will automatically be defined as /media/MS1/59000 and the 59000 directory would be created on the first run. With archiveaudio=0 no audio is archived only a daily time labeled text file of all status and transmissions. If archiveaudio=1 then each transmission would be saved as individual gsm encoded .wav files. You also have the choice of archivetype=pcm which results in high quality ulaw encoded .pcm files. This obviously takes more storage space and is used for more precise analysis of audio problems.

Supermon2 version 1.08 does away with the Archive button and instead adds an Archive URL to the node window. This allows archive URL's for as many of the nodes you monitor as desired. Here is an example of how it will appear -

Node 27225 => WA3DSP Philadelphia Hub Richboro, PA 18954 Bubble Chart IsNodes Listen Live Archive						
Node	Node Information	Received	Link	Dir	Connected	Mode

This needs to be setup in each allmon.ini server stanza that has an archive with the following syntax -

[59000]

....
....
....

archive="<http://59000.ip.hamvoip.org:8080/supermon2/custom/59000>"

This example uses node 59000 and the Hamvoip IP address lookup method. This would allow a connection from anywhere as long as you forwarded the port in this case 8080 TCP. Leaving the port off defaults to 80. You also could use a LAN ip address instead for just local access. This points to the Supermon2 custom directory. There you MUST add a symbolic link to the actual location of the archive directory. To do this do the following -

```
cd /srv/http/supermon2/custom
```

Create a symbolic link in the custom directory to the actual location -

```
ln -s /media/MS1/59000 59000
```

This assumes in this case that the archivedir in rpt.conf is defined as archivedir=/media/MS1 in the rpt.conf [59000] stanza.

/media/MS1/59000 is where the archives would be stored and in this case it is on a USB stick. The link says redirect anything sent to supermon2/custom/27225 to /media/MS1/27225. Hence when you select the archive icon it will open a window with the listing for the directory of archived files. You can then select a file to view or play. The “archivedir” command saves connection status to .txt files and audio to .wav or .pcm files.

Here is an example of daily text files being saved -

```
1968 -rw-r--r-- 1 root root 2011087 Dec  8 23:59 20201208.txt
 952 -rw-r--r-- 1 root root  969308 Dec  9 23:36 20201209.txt
1240 -rw-r--r-- 1 root root 1261866 Dec 10 23:59 20201210.txt
1432 -rw-r--r-- 1 root root 1458427 Dec 11 23:59 20201211.txt
```

If you were archiving audio for another node on this server you would add the “archivedir” directive to that node stanza and create another symbolic link using that node number to the location of where the files were stored. I use node number in this example but it could be any valid file name if you didn't want to use the node number.

VERY IMPORTANT!!! The directory tree, that is all directories in the link path to the files must have execute permission. In particular the /media directory would need this permission. If you get an unauthorized message when you click the URL check this and any typos in your lines, etc.

Like with streaming you can specify this for as many nodes as you monitor and have archiving setup. Just setup archiving on the monitored node/server and on the server Supermon2 is running on specify the archive= in the allmon.ini file node contexts that apply.

The ARCHIVING_NODE, ARCHIVE_DIR, ARCHIVE_URL in global.inc in supermon2 are now obsolete.