

How to use iaxrpt with Allstar on the hamvoip releases

iaxrpt is a Windows based client that allows a full duplex voice connection to Allstar. It allows voice communications with your node and any node it is connected to as well as the ability to send commands. Setup is rather simple and in most cases it should only take a few minutes to complete.

You can download the program for windows or wine in linux at:

<http://www.xelatec.com/xipar/iaxrpt>

The Android app can be found at -

<https://play.google.com/store/apps/details?id=org.dvswitch&hl=en>

iaxrpt runs in all versions of Windows and also works well in wine under Linux. There is also an Android version available. Anyplace you can run (or could run) the web transceiver you can run iaxrpt. The difference is iaxrpt is a secure connect to a node under your control or to a node for which you have the iaxrpt password.

The iax config file (`/etc/asterisk/iax.conf`) in all versions of the hamvoip code already includes the required settings to enable iaxrpt. If you are using your own configs and you would like to set it up the required code is shown below. If you are using the example code then all you need to do is put a password in the `[iaxrpt]` stanza in the `/etc/asterisk/iax.conf` file. It is defined as `'secret='` followed by your password. The password is defined by you and would then also appear in your Windows iaxrpt account setup shown below.

The script automated setup routines for the hamvoip versions asks if you want to setup an iaxrpt password. We generally recommend you do that. You could use the same password as your login password. If you did not do that you can edit the file and insert a password on the `'secret ='` line shown below. If you did already setup and iaxrpt password then you can skip down to the account setup for the iaxrpt program below.

The following is included in `/etc/asterisk/iax.conf` on all hamvoip images.

```
[iaxrpt]
user=iaxrpt
type=user
context=radio-iaxrpt
auth=md5
secret=xxxxxxx ; *** Important! Change this to your password!!!
host=dynamic
disallow=all
allow=ulaw
allow=gsm
transfer=no
```

And this code in /etc/asterisk/extensions.conf

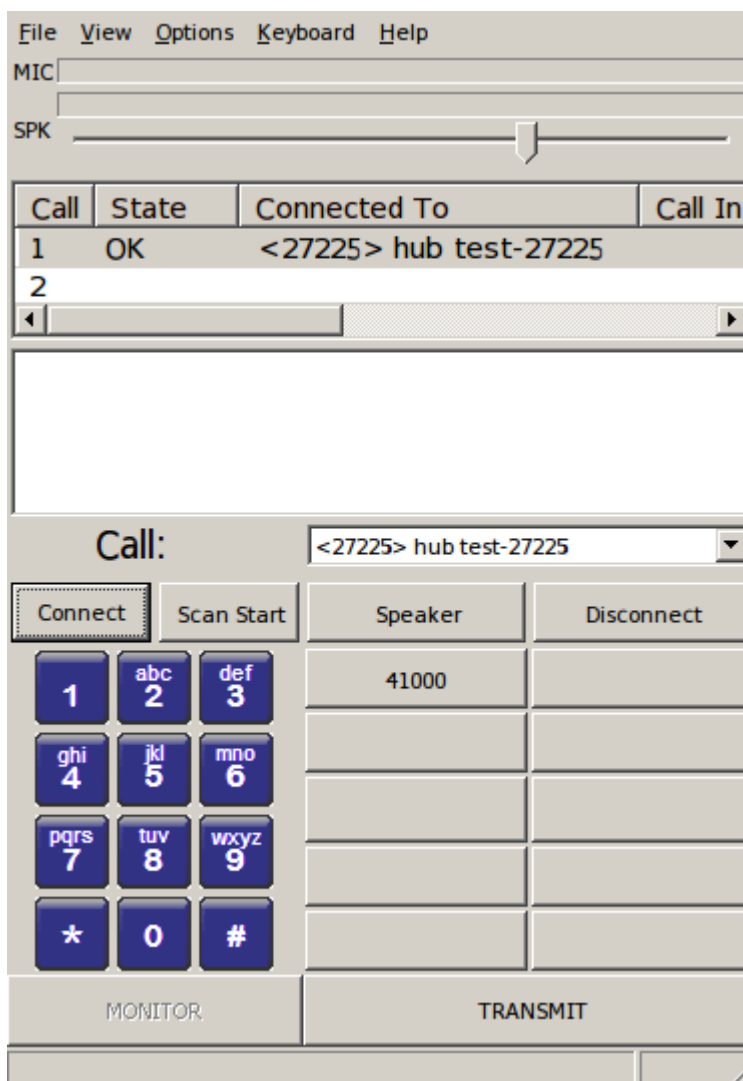
```
[radio-iaxrpt]  
exten=40638,1,Rpt,40638|X
```

Change 40638 to your node number in BOTH places!

Again the hamvoip initial setup script does this for you and assigns the first (primary) node number here. You may add additional exten lines if you have more than one node on the server you want to connect to ia xrpt.

That completes the changes in the Allstar configs. In most cases all these changes will already be made when you setup your node. Now you need to setup an account in ia xrpt.

The ia xrpt application looks like this -



This shows the DTMF keys in the lower left. The example is currently in the connected state to the

node shown. The OK shows in the upper screen. To the right of the DTMF pad are special function keys that can be defined. Iaxrpt allows many multiple connections to be opened simultaneously that you can switch between easily.

To setup account select the OPTIONS tab at the top.

Under the OPTIONS drop down select Accounts, then Add.

You will see the following account setup screen -

Account Name: 27225

Description: Philadelphia Allstar Hub

Host: Host IP address or Domain Name

Username: iaxrpt

Password: *****

Confirm: *****

Type: Duplex

One Touch Key List: 0

Has Monitor:

Mute On PTT:

Exclude from Scan:

Show Connections:

Log to Display:

Disable Keypad:

Disable Functions:

Save Cancel

The Account name is the Allstar node number you want to connect to. It must be located on the server you are defining here.

Description – Optional, anything you want to describe this account.

Host - the local IP address of the server your node is on. If outside the network then this would be the domain name or public IP. Note that if the public IP is not static it could change. Also if your server is on a different iax port than the default 4569 you MUST specify the port in this field. The port is entered with a semicolon after the IP address - 192.168.1.10:4568

Username - iaxrpt

Password - same as the secret in iax.conf

Type – duplex

Save your settings and exit back to the opening window.

Now select OPTIONS then Devices. Here you will setup you audio settings.

The screenshot shows a configuration window for audio settings. It is organized into five main sections:

- Normal Calls:** Includes 'Input Device' (set to 'Pulseaudio'), 'Input Source', and 'Output Device'.
- Speaker Phone:** Includes 'Input Device' and 'Output Device'.
- Incoming Ring:** Includes 'Ring Device' and a 'Ring Through PC Speaker' checkbox.
- Microphone Audio:** Includes an 'Input Level' slider and a 'Microphone Input Boost' checkbox.
- Miscellaneous:** Includes checkboxes for 'Cue Tones' and 'Joystick PTT'.

At the bottom of the window are three buttons: 'Save', 'Apply', and 'Done'.

The settings for the audio input and output device you will be using are set in the normal calls section at the top. The microphone slider adjust mic input level and if needed you can select the boost check box.

In the account pull-down to the right of Call: select the node you want to connect to and then click Connect. If all is well you should get and OK in the status line at the top.

Device values and levels will be different depending on the system you are using and system settings may effect this also. Once you have it set it should work equally for all accounts.

This completes the necessary setup steps. You can customize further if desired. To connect to a node select the one you want to connect to in the drop down window to the right of the Call: label and select the connect box. If all goes well you should see OK in the status window. The DTMF buttons send commands to the node just like you were on a radio connected to it. You only need to select the transmit button to talk.

Some notes about iaxrpt

Be careful when using iaxrpt. You can easily leave the node in Transmit (PTT). There is a safety feature that if you click off of the iaxrpt window it will go out of transmit. This can be annoying if you are trying to look at other things on the screen.

Only one iaxrpt instance can be opened at a time under Windows but you can open multiple nodes in an instance..

Commands to your node are entered at the DTMF keyboard and are executed a few seconds after input stops. You must hit the characters in a reasonable time or it will timeout. There is no setting for the timeout period.

You must set your audio input and output device and levels under Options, Devices

iaxrpt is a nice way to monitor your nodes and allows transmit when you don't have a radio handy but it is much preferred to use a radio when available. It is also a good way to check and set levels as the level meter is accurate. Signals should never peak out to full scale. Try to set peaks to no more than about 95% of full scale.

IMPORTANT - If you have your servers iax port set to other than the default 4569 add the port number after the IP address or domain in the host entry block under accounts. If your IP address was 192.168.1.20 and your port was 4568 you would enter:

192.168.1.20:4568 or my.domain.com:4568