

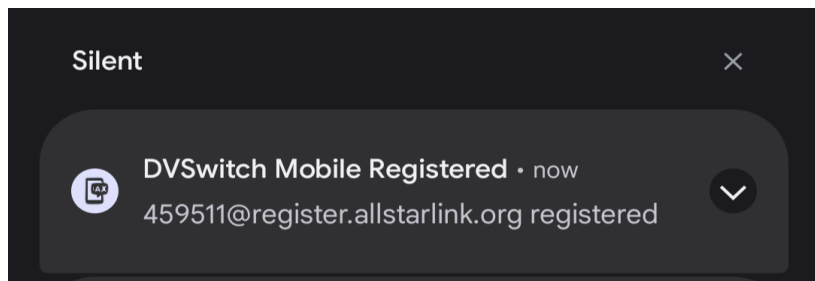
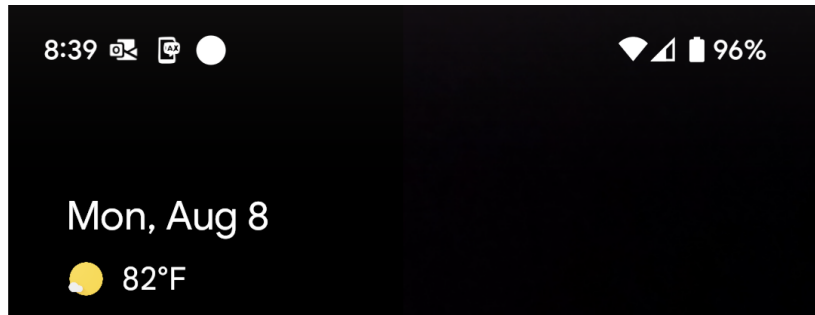
Welcome to DVSwitch Mobile (DVSM) version 2.0.0. In this major release we spent most of our time focused on the IAX2 side of the app. New connection options and ease of use changes are now on hand. In addition, we added / fixed several other parts of the application. We hope you enjoy the update. What follows is an extended version of the change log for version 2.0

- Node Mode!
 - With the addition of Node Mode you can become a full fledged node on the network. All you need to do is set up your user account with the proper info and you are good to go!
 - What you need
 - A node number and password
 - to use "Node mode" you **MUST** assign DVSM a **UNUSED** node number that is assigned to YOUR call sign.
 - Go to *allstarlink.org*
 - https://wiki.allstarlink.org/wiki/Beginners_Guide
 - https://wiki.allstarlink.org/wiki/Beginners_Guide#Creating_an_account
 - https://wiki.allstarlink.org/wiki/Beginners_Guide#Login_.26_Create_a_Server
 - https://wiki.allstarlink.org/wiki/Beginners_Guide#Request_a_Node_number
 - DVSM account to set up
 - Protocol: **IAX2**
 - Hostname: **register.allstarlink.org**
 - Port: **4569**
 - Username: **YOUR_NODE_NUMBER**
 - Password: **YOUR_NODE_PASSWORD**
 - CallerID: **your callsign**
 - Node: **Blank**
 - **Do not check auto connect**
 - Screenshot will need to change

Protocol	IAX2
Hostname	register.allstarlink.org
Port	4569
Username	414982
Password	•••••
CallerID	N4IRR
Caller Number	Optional
Node	414982

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- Usage notes
 - Registering with *allstarlink.org*
 - Because you entered *register.allstarlink.org* into the account settings, DVSM will maintain a registration session with the main registration server. This server keeps a list of all the registered nodes and their IP addresses. When a node connects to another node, this list is used to lookup the IP address of the node trying to connect and if the IP address matches the list, a connection is established. The connection to the registration server is refreshed once per minute.
 - Do not forget, you have at least two passwords; your *allstarlink.org* account password and your node password. Node mode uses your node password not your account password.
 - Node list propagation time
 - The node list is downloaded by nodes from the registration server on a schedule. Typically once every 5 minutes. **As a node, you have to be registered for at least this amount of time for a node to get the updated list and your IP address.** HamVoip nodes use a different mechanism to resolve node IP addresses and are much more responsive to address updates.
 - If you can not connect to a node that you know is online.
 - When you try to connect to an AllStar node from DVSM, you can not connect. If the target node has not refreshed its node list, you will not be able to connect to it. Sometimes, the target node needs to refresh its node list. For AllStarLink node, the command to run with root privileges is "systemctl restart updatenodelist (will work on this more)

- DVSM registers with a background service, so you can leave the app running (but disconnected) and a registration session will be maintained. You can see this state by looking at your Android notification pulldown.



- Changing IP addresses (mobile networks)
 - Most nodes are at fixed IP addresses, but your node is different. It is on a mobile phone and can change its IP address when moving between towers or wifi networks. When this happens, new connections may have to wait for the node list propagation time before you can create a new connection.
 - Sorry, no incoming connections at this time.
 - It's not that it can't be done, we just have not gotten around to it.
- New WT dialog
 - Web Transceiver has existed as a java based applet for a long time and offers a better way to authenticate transient users on a node. Beginning with this version DVSM supports this authentication type (**WT = Web Transceiver**). It is easy to set up and fun to use. No node (PC, Raspberry Pi, cloud) needed. Just dial and go.
 - Screenshot

Web Transceiver

User Name : Input call sign

Password : Input password

Update token

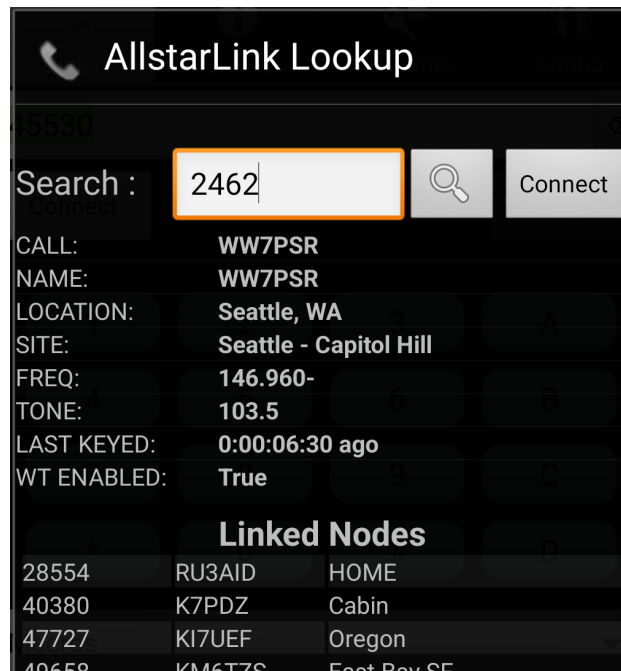
Transmit Level

Receive Level

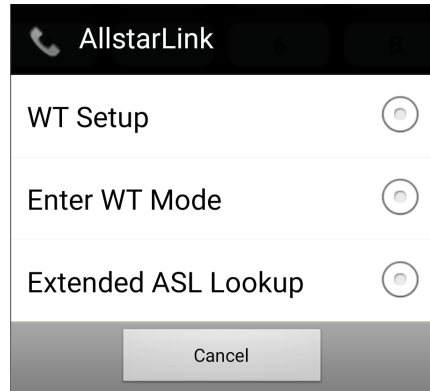
Cancel Save

- Usage notes
 - You need an account on *allstarlink.org*. You do not need to apply for a node number.
 - Login to get a user token.
 - The username is your *allstarlink.org* username (and password), not a node number and node password.
 - To set up WT mode, long press **D** on the dialer keypad and select “WT Setup”.
 - Enter your User Name and Password and press the “Update token” button. If the indicator light turns **green** you are good to go. Save the settings and begin using WT mode.
 - Entering and exiting WT mode
 - WT is modal. When you enter this mode, it changes the way DVSM interacts with other nodes. Dialing a node will always check if the target node allows connections from WT clients. If you are allowed, any existing connection will be terminated and the new connection will be attempted. To enter WT mode, long press **D** on the dialer keypad. Select “Enter WT Mode” from the menu. The dialer metadata view will say “ASL-WT”. To exit WT mode, use the same menu and select the “Exit WT Mode” item.
 - If you get the error: "The Web Transceiver token has not been set." then you forgot to setup WT mode. Go back to WT Setup and enter your callsign and password. The press “Update token”.
 - Dialing a node
 - You may use any of the typical ways to dial: keypad, node list, long press, etc. In addition you may now also use the “Extended ASL Lookup” dialog Note: it takes a node a little while to process an inbound WT connection.

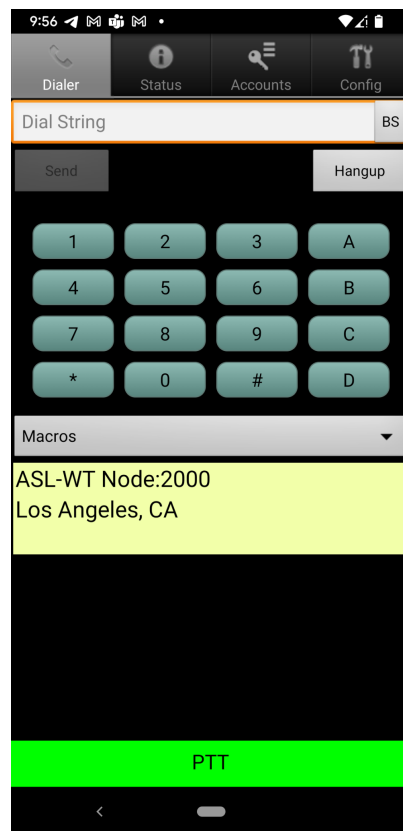
- restart asterisk
- Other changes for HamVoIP
 - To allow DVSM to send commands (*70) to you node
 - In rpt.conf add this to your node section:
 - Propagate_dtmf = yes
 - Propagate_phonedtmf = yes
 - Remote_dtmf_allowed = 1
- ASL user defined prefix
 - In the past, when dialing a node from the DVSM dialer screen we added *2 to the node number which selected the new node in receive only state. You can now specify your own prefix, for example *3 for transceive.
- New extended node lookup dialog
 - You can now lookup any active node by number right from DVSM and connect to that node. Lots of great info is available!
 - Screenshot



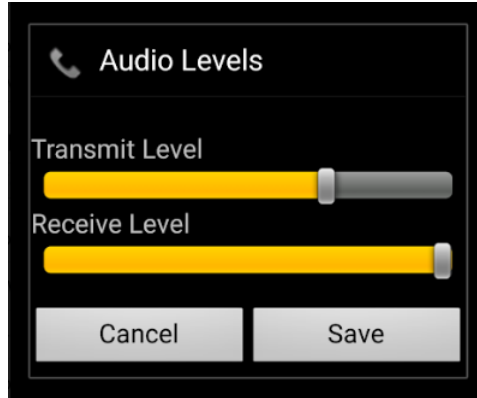
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- ASL menu on long press D
 - A new menu is available to access Web Transceiver mode and the extended node lookup screens.
 - Screenshot



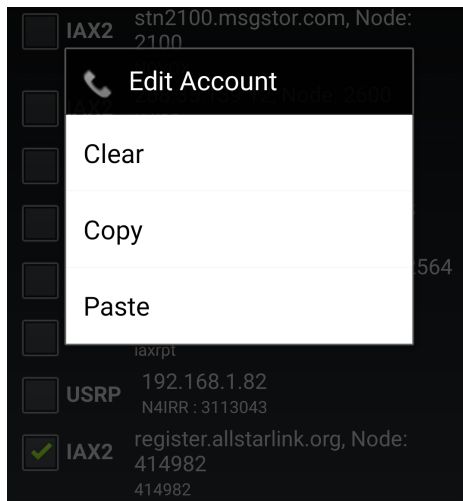
- IAX mode metadata display on dialer screen
 - Like the digital modes, IAX2 connections now show their metadata when connected
 - Screenshot

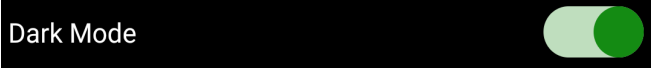


- Audio Level Adjustment
 - Prior to DVSM 2.0, in order to adjust your audio levels you had to go into the current account, move the sliders, save, exit, redial the node or talkgroup and test the new level. That was a lot of work. With version 2.0 you can adjust the audio levels while on the dialer screen. Just long press the # key and you will be presented with the Audio Levels dialog. Slide the Transmit/Receive levels and your audio levels will be adjusted in real time. Once you are happy with the sound, save your changes and they will be written to the current account.
 - Screenshot



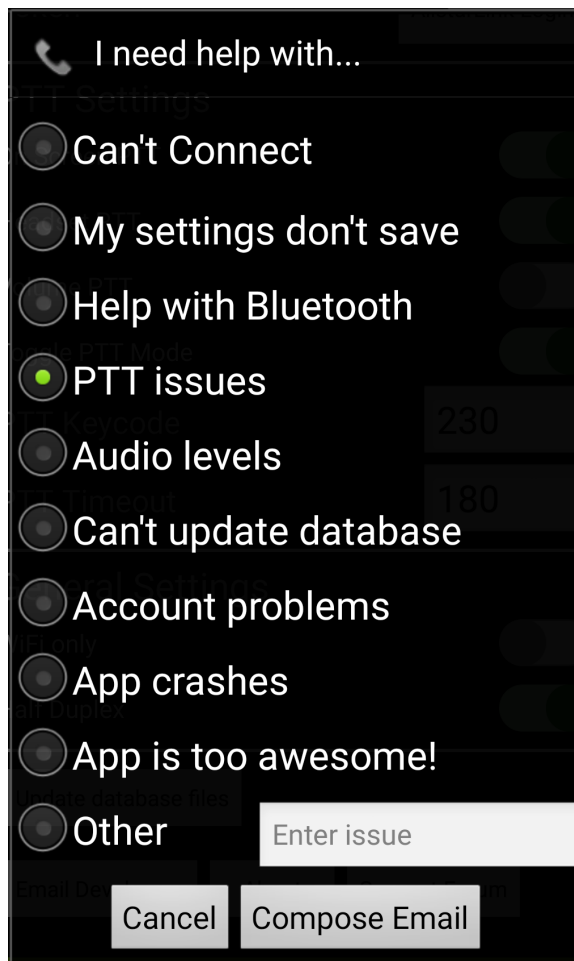
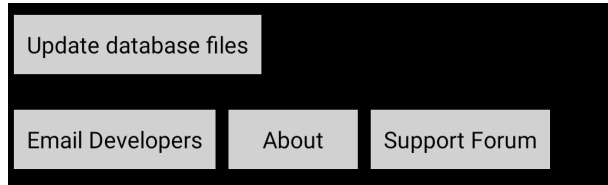
- 20 accounts
 - More!
 - Let's get real. With the addition of Web Transceiver and Node Mode you no longer need to create an account for each IAX2 server you want to connect to. WT does not even require a slot in the account list. However, we have been asked for more accounts so, to those of you who wanted it, we hope this is enough.
- Clear/Copy/Paste accounts
 - Long press on any account to get the new edit functions.
 - Makes it easier to manage your accounts on device
 - Clear will initialize an account to an EMPTY state
 - Copy will copy all information in an account to an **internal** clipboard
 - Paste will overwrite the account information with the clipboard contents.
- Screenshot



- Dark mode / remove dialer background
 - For those of us who like simpler backgrounds. Manage this setting on the Config tab
- 
- Checkboxes -> switches
 - Moving into the 21th century UI design (maybe) we changed the checkboxes to switches. Just looks better



- Email / Support questionnaire
 - In order to “help us help you” we added a few questions before you send us an email. The Compose Email button will become active when you select one of the items from the list..
 - Screenshot



- BTH-600 bluetooth mic (Pryme)
 - A new BT mic supported
 - The Pryme mic is the first one we have seen that uses a more complex PTT signaling and I have refactored the code to hopefully support more devices like this in the future.
- Server side user macro

- Long pressing the **C** key will send **user* to DVSwitch. The macro can be handled in your server and do anything you want. For example, it may be used to execute a custom shell script. You could have placed this on the * menu, but this makes it easier to invoke since it is a single key press.
- Add Noise suppression to audio chain
 - Noise suppression (NS) is an audio pre-processor which removes background noise from the captured signal. The component of the signal considered as noise can be either stationary (car/airplane engine, AC system) or non-stationary (other people's conversations, car horn) for more advanced implementations.
- Fix STFU node list
 - Updated all node lists with current data
- Fix audio focus
 - Fix what happens when audio focus changes
- Update google billing library
 - Because Google made us
 - Being transparent, this is a significant change in the source code of DVSM and during the beta period, we hope to get a few new users to exercise this new library.
 - We get many users who do not understand the tip jar. I have added a prompt when the user tries to tip us more than once. Hopefully this will help users understand that this is to reward the developers for a job well done but is not needed to successfully use the app.
- WT and NodeMode timeouts for demo users
 - As a demo user you will be limited to 5 minute connections while in WT and Node modes. This should allow new users to test out the application without the need to pay for the full version.
 - For full version users, you can remain connected for as long as you want, THANKS for the support!
- A note about audio levels
 - With these new connection modes we want you to be very aware of audio quality. You may now be connecting to many new nodes and your transmit audio will be heard by many new stations. We find that hands free mode on a mobile phone often has VERY HOT AUDIO. If not adjusted properly you sound bad to other stations. Please use the Parrot node (node number **42565**) to listen to your own audio and adjust the transmit level (long press #) to match other stations. We all thank you.
- A note about accidental transmissions
 - The PTT button on DVSM can act in several ways; Toggle On/Off, On Screen PTT, Volume PTT and Bluetooth PTT. Toggle PTT is the cause of most unintentional transmissions. If you want to be safe, turn off Toggle PTT and you will have to hold down on the screen button to transmit. You can also choose to turn off the on screen PTT and only use "volume PTT" to be more secure. If you do keep the default toggle PTT, adjust your timeout settings to be short as this will help if the transmit button is pressed by mistake.
- HamVoip and DVSwitch Mobile
 - HV, being a fork of Allstar, has diverged over time from the base code. Several of these changes affect how clients connect and get metadata from a HV node. Below are notes on being successful with DVSM and HV.

- Connections
 - HV by default has enabled calltoken support. Calltokens are discussed [here](#). DVSM has enabled calltoken support by default so no additional action needs to be taken by the user. However, if you are using older versions of DVSM or other clients you may want to disable this option. In your `iax.conf` add this to your **user** section:
 - `Calltokenoptional = 0.0.0.0/0.0.0.0`
 - `Requirecalltoken = no`
- Dialing
 - HV has disabled dialing by other connections / links by default. This means that a DVSM client connected to a HV node (in WT or NM) will not be able to command that node to connect / disconnect / COP to any other node. To enable dialing add these lines to your `rpt.conf` in your node section:
 - `Propagate_dtmf = yes`
 - `Remote_dtmf_allowed = 1`
- Metadata
 - HV has disabled link messages being broadcast by a node. This will cause DVSM to not be able to populate its connected node list on the Status tab of the app. Add this line to your node section in `rpt.conf`
 - `Phonesendlinks = 1`