D-RATS Installation and Digital Check-In via Chat
Cherokee County ARES

Task DRA1010
Version 1.6
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W1JKU
Cherokee ARES

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Overview

D-RATS allows for real-time digital communication using a PC via D-STAR devices or through the Internet.
D-RATS supports:
  - o Instant messaging style chat
  - o Email capability to Winlink or Internet Email Addresses
  - o Generation and Sending of predefined Forms like ICS-214
  - o Position Reporting with included Maps

This document will focus on installation and configuring D-RATS to perform Chat functionality and digital check-ins to the GA-ARES Ratflector over the Internet.

At the end of the training guide is a Drill Cherokee ARES we will practice on upcoming NET's/Training opportunities.

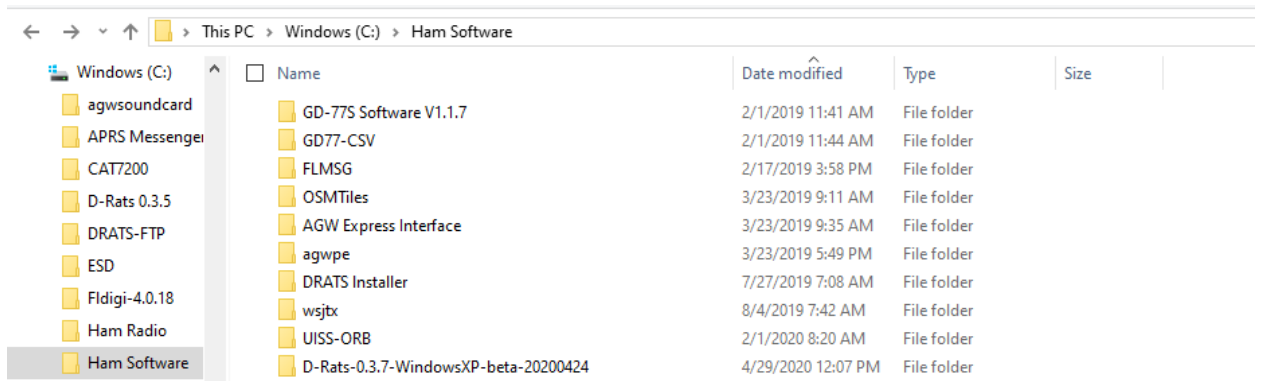If you have recommendations for changes or updates, please contact w1jku.us@gmail.com

References:

1. [D-RATS Download Page](#)
   http://dstarinfo.com/drats.aspx - Suggest you keep checking this page on a monthly basis and utilize the Beta Download. As of May 3, 2020, Beta Version 0.3.9 is available for download.

2. D-RATS Installation Guide - courtesy of GA-ARES:
   http://dstarinfo.com/Data/Sites/1/media/getting-started-with-d-rats-(ga).pdf

3. GAARES YouTube Training Material: https://www.gaares.org/training.php

4. GAARES D-RATS Training Material: https://gaares.org/drats.php

Installation and Configuration for GA ARES Ratflector

1. The new version of D-RATS does not come with an Installer. You must download the zip file, extract the folder from the zip file and place it on the drive and location of your choosing.
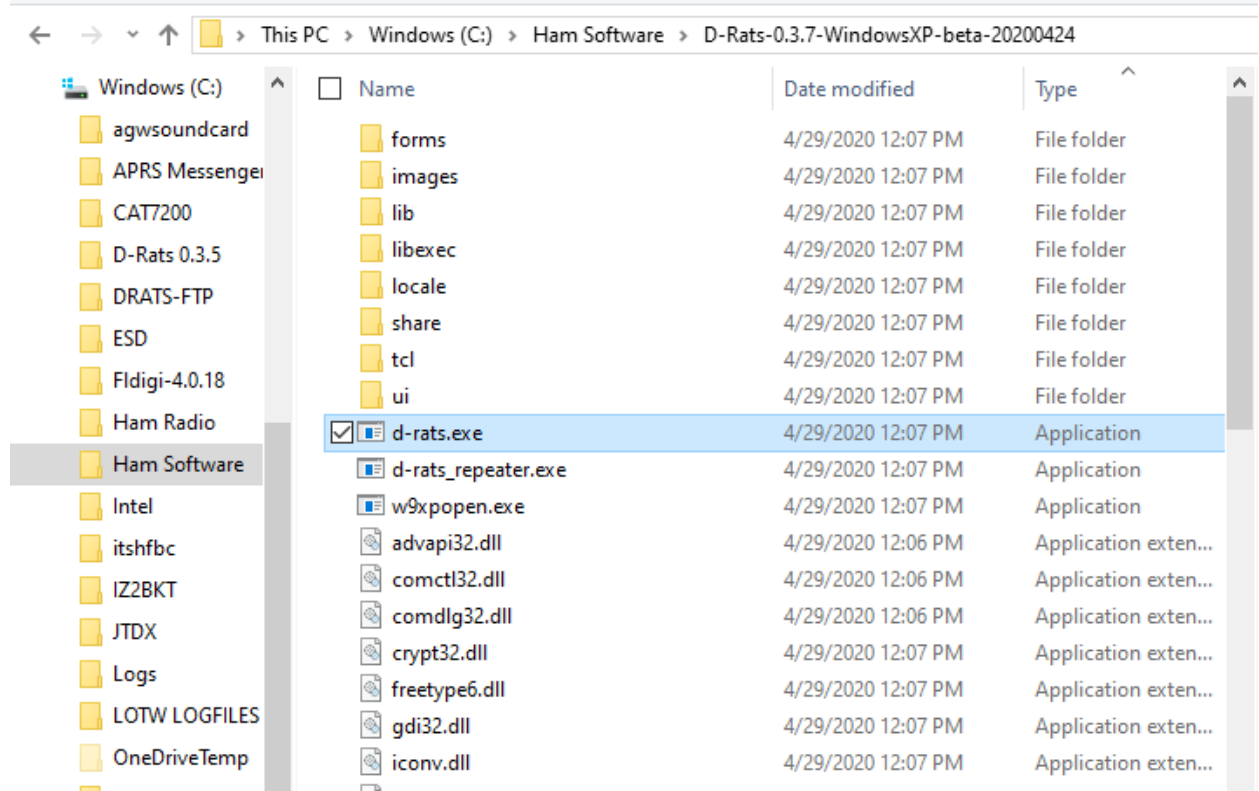
   In the example below, I extracted the folder **D-Rats-0.3.7-WindowsXP-beta-20200424** to my personal folder of **c:\HAM Software**

2. You may then run d-rats.exe from the folder above, there will be no shortcut automatically added to your PC since there is no Windows installer for this beta version of D-RATs.

To create a shortcut on your pc, Right click on d-rats.exe and click **Pin to Start**

3. When you start this new version of D-Rats for the first time, a new registry file will be created on your PC to store your settings. Follow the instructions on the screen using the Reference section #2 above in this document for details on how to configure D-RATS. The instructions are very clear and provide step by step instructions.   In this document, I will only cover the steps the additional steps that need to be performed not covered in the Referenced document:

Quick Start, Under **File** and **Preferences**:

    a.   Set your Callsign and Name
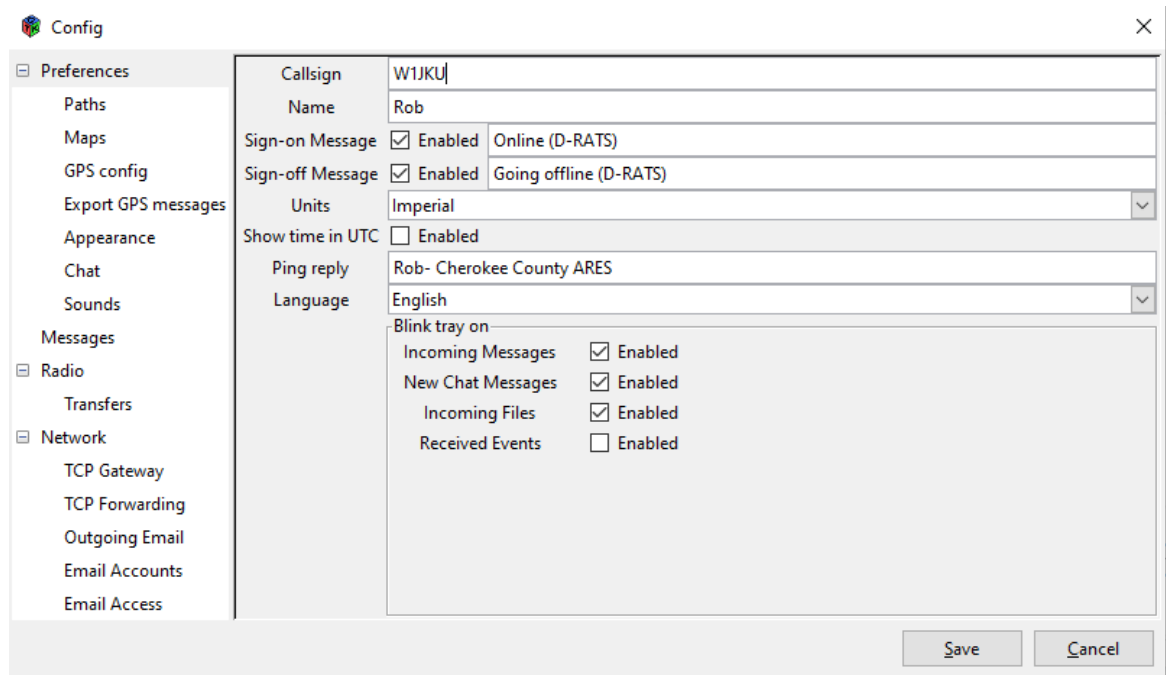
b. Under **GPS Config** Set your **Latitude, Longitude**, and **Altitude** so your will display properly on maps and position reports
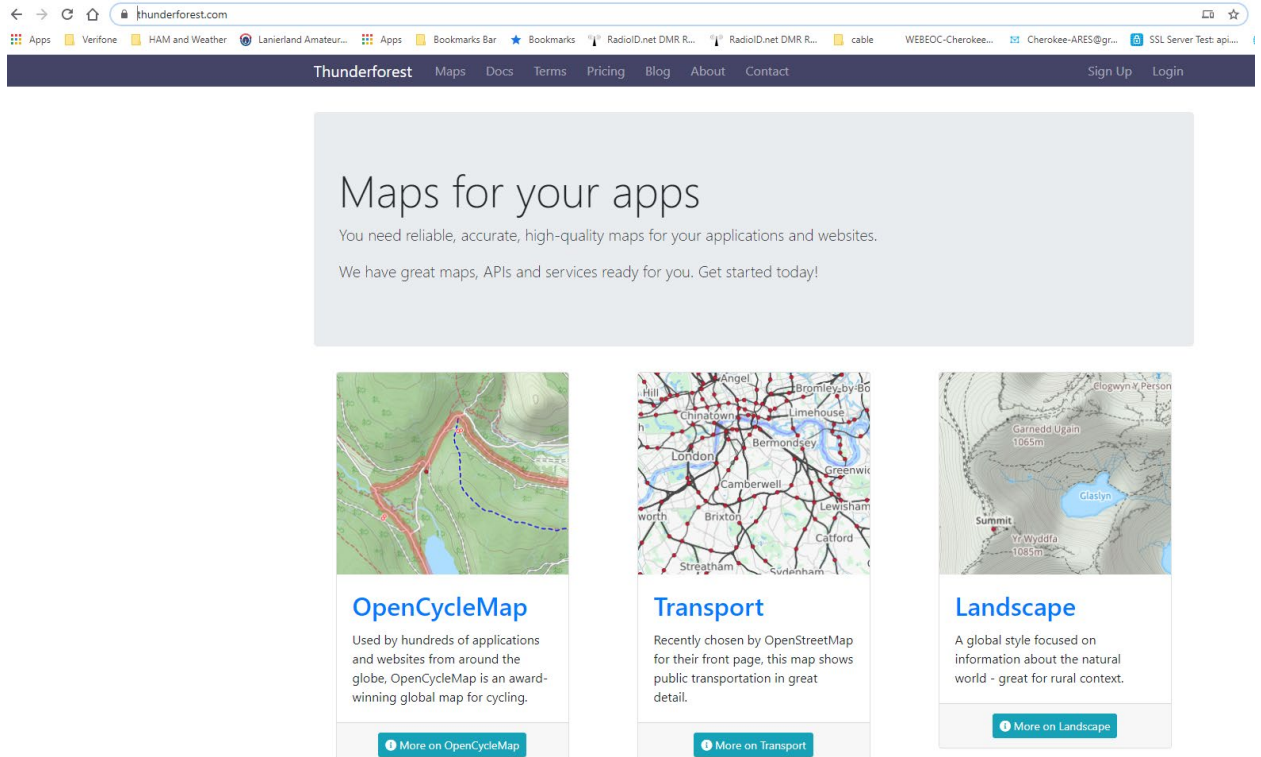
4. See [MAPS and Configuration with Thunderforest](#) below for a minor change on configuring and enabling D-RATS maps.

MAPS and Configuration with Thunderforest

1. Maps. The Map feature has been improved and is more reliable than the prior version of maps that stopped working.   But you must first register for an API Key with https://thunderforest.com which is free. Click the Sign-up button and follow the directions:

2. After you have your free API Key, you can continue configuring D-RATS DO NOT attempt to manipulate the URL's in D-RATS with what you see in Thunderforest, you only need to apply your correct API Key, to the configuration, which will be depicted in Step 3 below:

3. In D-RATS under File, Preferences, Maps, you will update only the 3 locations depicted below that start with "***Key string to append to***…".
   a. The value in all 3 will be the same consisting of **?apikey=** *and your unique apikey you received in step 2 from Thunderforest.*
   b. *Notice the last few digits we cross out as that is my personal Thunderforest apikey, you must use your own value.*
   c. *After applying the configurations, you may need to reboot your PC before the maps function.*
   d. *Change https to http in the URL. (as thunderforest is no longer using SSL certificates)*

   Option: If Maps is properly configured, you can change "Map to use" in D-RATS using the dropdown list to utilize the various maps supported.
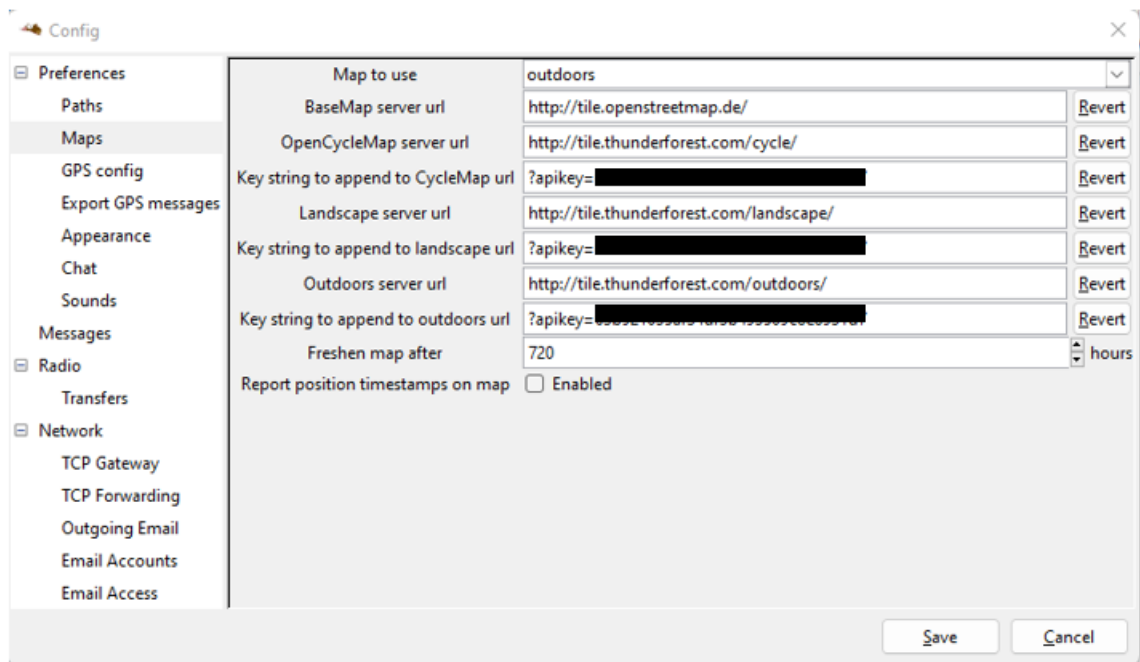
Using D-RATS Maps.

- To use maps in D-RATS, simply click on View, then Maps from the main D-RATS application.

- At that time the map will appear with the callsigns and locations D-RATS has received.

- You may then zoom in our out, or if necessary, return to the Maps Configuration and change the map to be displayed.
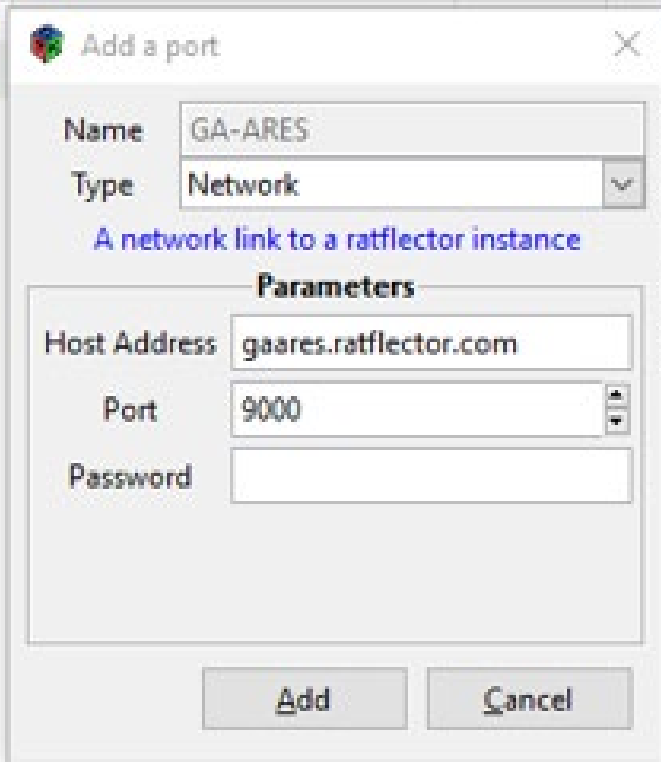
GA ARES Ratflector Configuration

1. After you install and configure D-RATS with the base instructions, please configure and enable the GA ARES Ratflector
   a. Click **File**
   b. Click **Preferences**
   c. Click **Radio**
   d. Click **Add**
   e. When the Add a port window appears, enter the information you see below for Name, Type, Host Address, and Port. Leave Password Blank, and then click **Add**

1. After you install and configure D-RATS with the base instructions, please configure and enable the GA ARES Ratflector
   a. Click **File**
   b. Click **Preferences**
   c. Click **Radio**
   d. Click **Add**
   e. When the Add a port window appears, enter the information you see below for Name, Type, Host Address, and Port. Leave Password Blank, and then click **Add**

2. Your Configuration under Radio should look like this for **GA-ARES and NW GA District**:
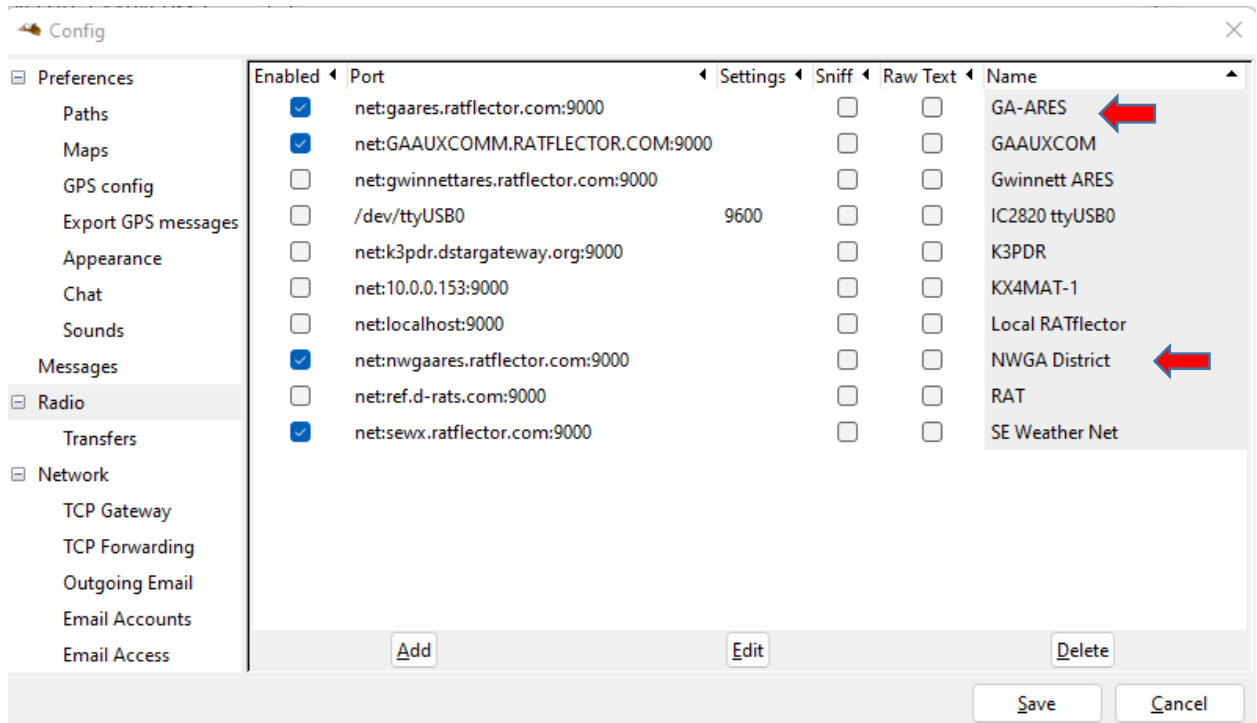
3. Ensure you have the check box **Enabled** for the GA-ARES and NW GA District ratflector and any other ratflector you wish to utilize and click **Save** at the bottom of the screen.

4. You are now configured and should be able to utilize the GA-ARES and NW GA District ratflector.

Digital Check-In via Chat

1. Depending on the ratflector, your wishing to connect to, you may wish to enable or disable various ratflectors enabled in the Configuration-Radio settings.

2. To see which stations are currently connected to D-RATS, on the left side of your screen under **Stations**, right click your mouse, and click **Ping all Stations** to see which stations are currently connected.

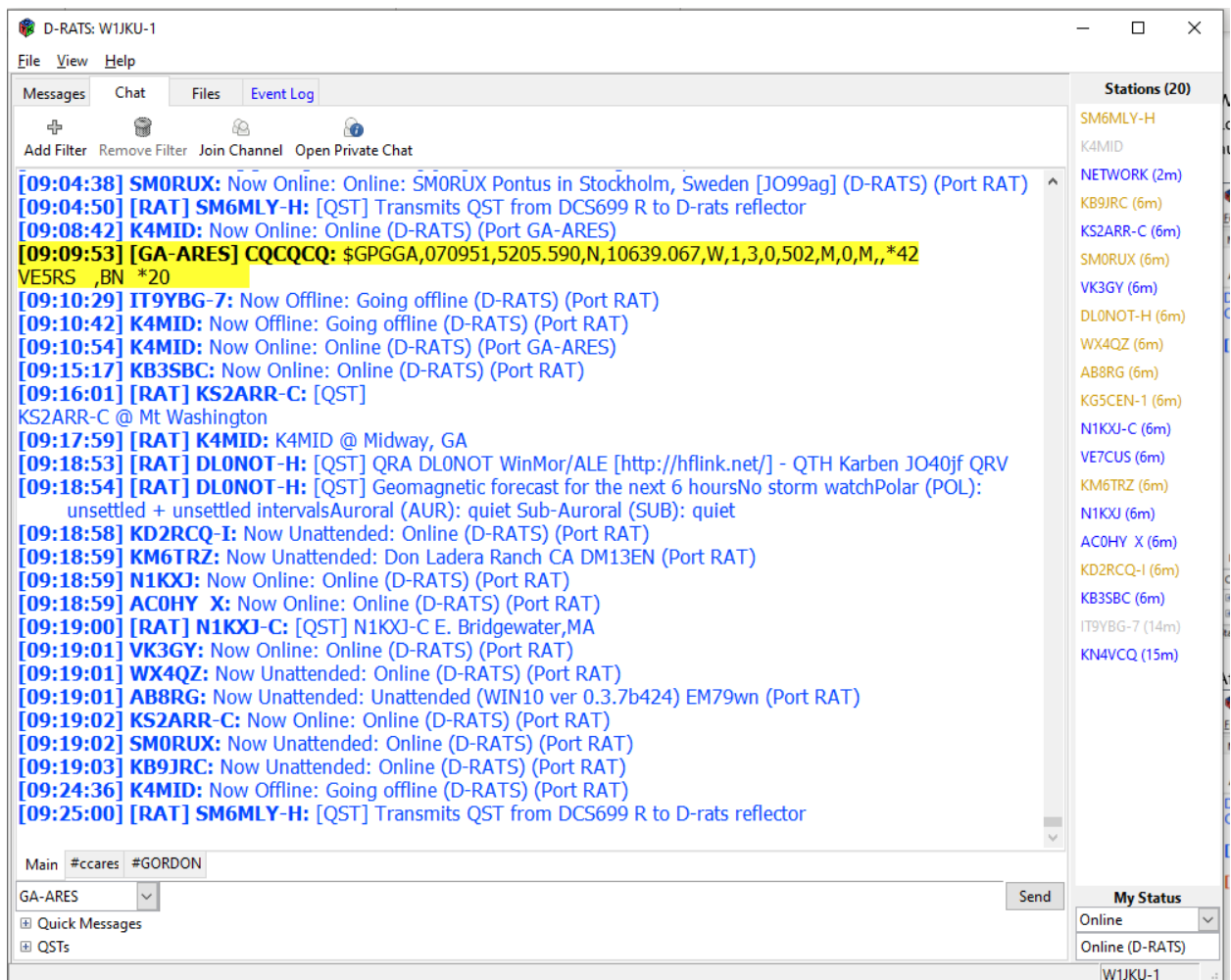3. To requested updated station locations that will appear on the Map, , on the left side of your screen under **Stations**, right click your mouse, and click **Request all positions.**

4. Select **GA-ARES** or **NW GA District** in the drop-down list on your screen to communicate on the respective Ratflector.

5. Your cursor should be blinking to the right of the **GA-ARES / NW GA District** drop down list, where you are able to enter your message and then click **Send**.

** When checking in. first type the Net Control Operators Callsign then for example 'Please Check me in to GA ARES D-RATS NET' plus your Name and Location then click **Send.** There is no need to type your call-sign, D-RATS will automatically add your call sign to the message.

6. After you click Send you will see your message posted in the main screen:
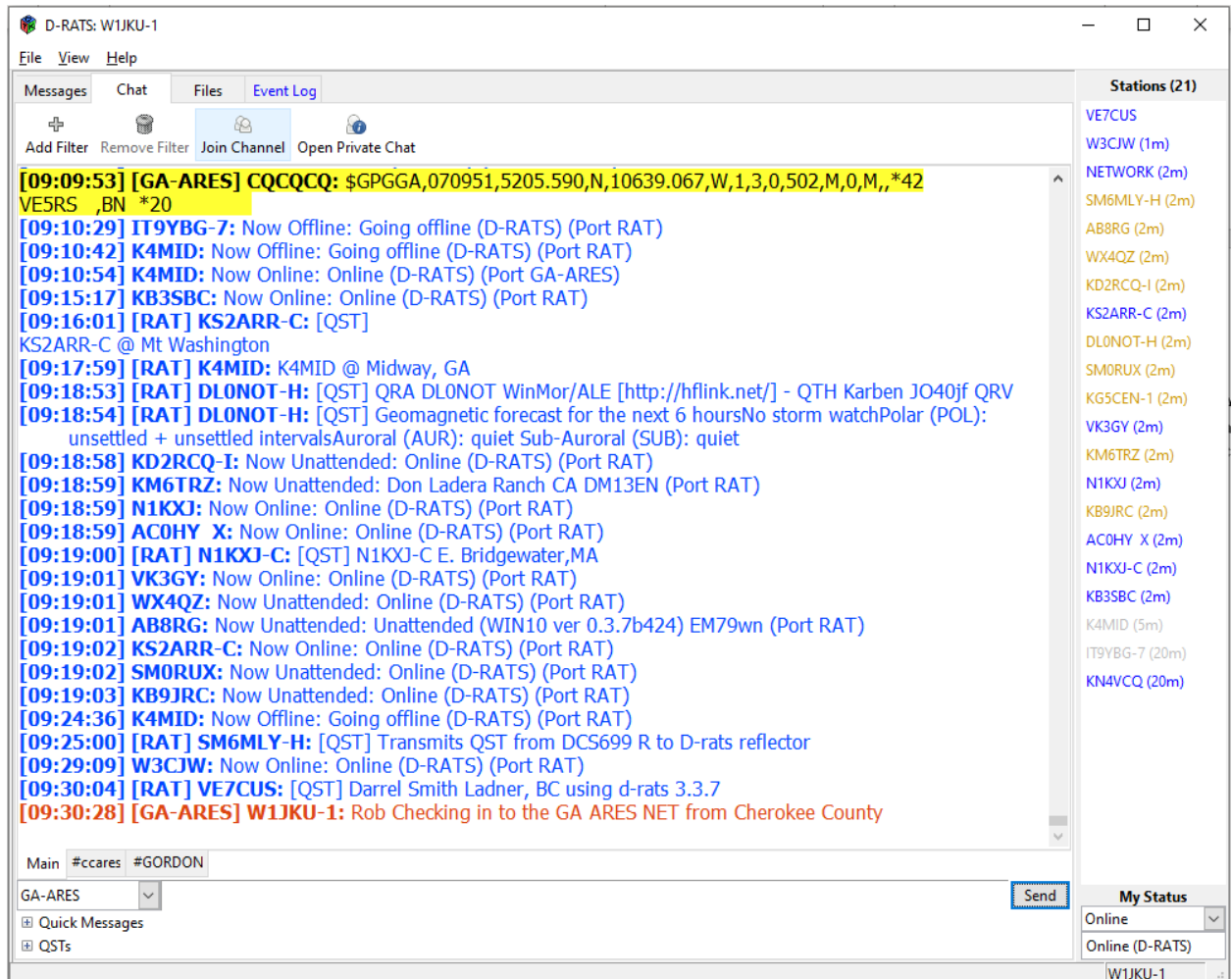
7. Wait for the Cherokee Digital Net Control operator to acknowledge you. You may have to wait a few minutes as the operator collects multiple call signs and then acknowledges multiple in the same message.

8. As additional call signs are acknowledged, NET Control will respond with the acknowledged call signs including previous, plus any new call signs. Just look for your call-sign. If you are not acknowledged and accidently skipped, try again.

9. When Net Control Acknowledge you, you may then send your traffic:

10. This process continues on and on…   This is a good method to communicate and supplement FM, SSB, WINLINK, APRS Communications.

11. More advance functions will be covered in future training.

D-RATS Channels

D-RATS Channels are not secure or encrypted. No sensitive information should be passed using D-RATS. The D-RATS Channel simply allows personnel, teams, and organizations to utilize D-RATS for passing traffic via CHAT without everyone seeing the message on the Main D-RATS Chat Window, which can quickly become cluttered with all of the traffic passed.

Click the **Join Channel** button from the Chat Window. You will then be instructed to enter the Channel Name.
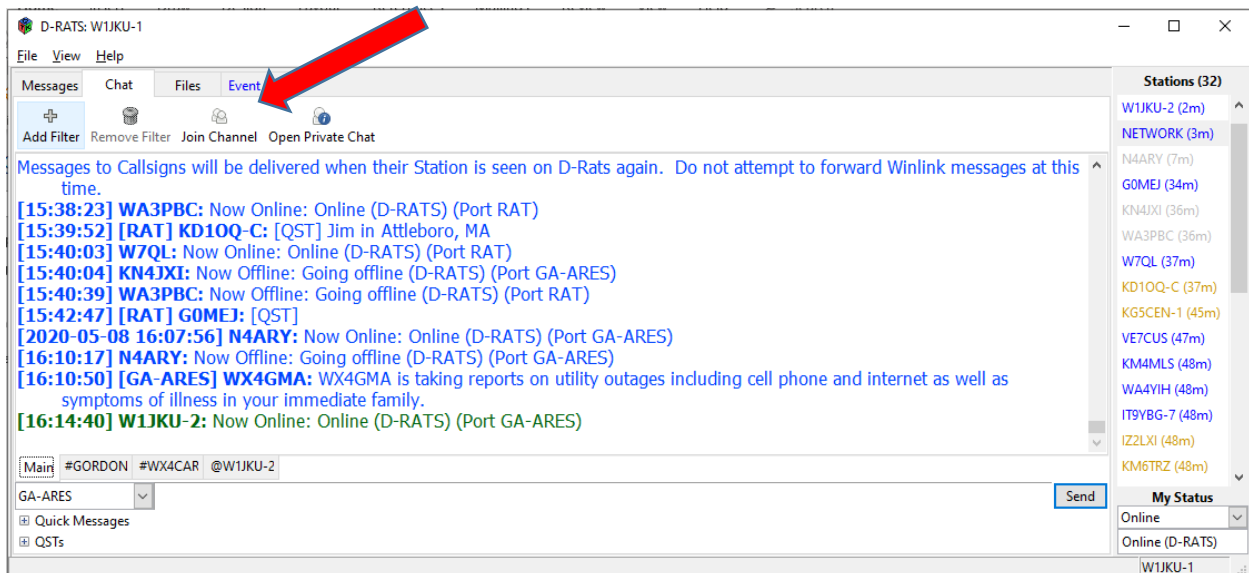
After clicking the **Join Channel,** you will then be instructed to enter the Channel Name. In the example below, I will Join Channel ccares. You may setup unique and custom channels if you desire, you just need to ensure whomever you want to talk to knows to join that channel. The Channel name is *CASE SENSITIVE*. We will recommend using all-lowercase channel names we are establishing to avoid confusion.
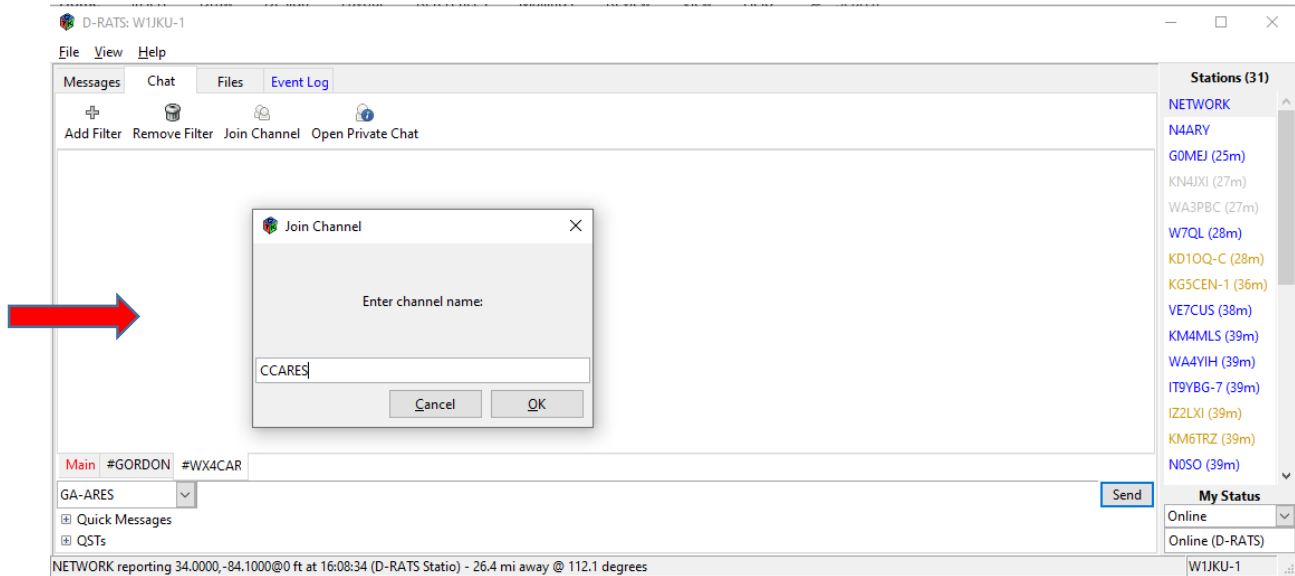
When the Channel name is created in D-RATS, it will appear with # + Channel name on your screen. Simply click on the channel at the bottom of your screen to either read chats posted to that channel or to post a message to that channel.
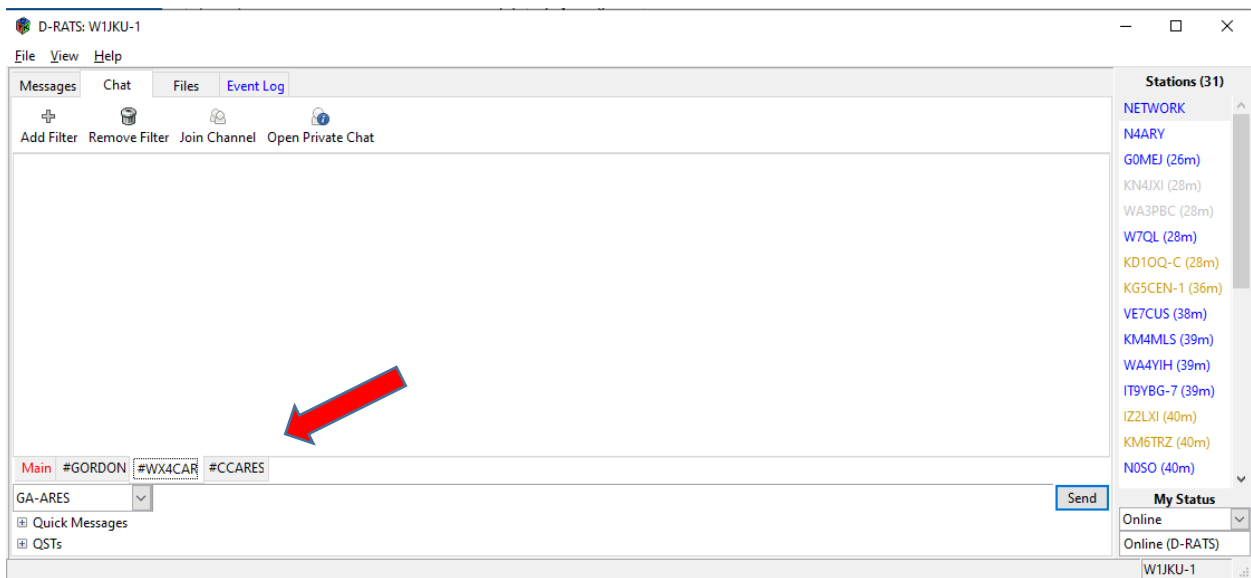
Common Channels:

1. CCARES - The Cherokee County ARES Channel. This channel is used by the Cherokee County ARES team. This is case sensitive, all Uppercase when setting up the channel.

2. WX4CAR - The WX4CAR Channel. WX4CAR plans on using our CARS channel during Field-Day, and weekly nets as another method of communicating real-time with our members. This is case sensitive, all Uppercase when setting up the channel.

3. GORDON - The Gordon County ARES Channel. This channel has been setup by Gordon County ARES. This is case sensitive, all Uppercase when setting up the channel.

Private Chat

D-RATS **Private Chat** is not secure or encrypted. No sensitive information should be passed using D-RATS. The D-RATS Private Chat simply allows two stations to establish communication without everyone seeing the messages on the Main Chat Window., which can quickly become cluttered with all the traffic passed.

When establishing a Private Chat with another station already connected to D-RATS, you will simply press the **Open Private Chat** button and enter the **station** you would like to communicate with
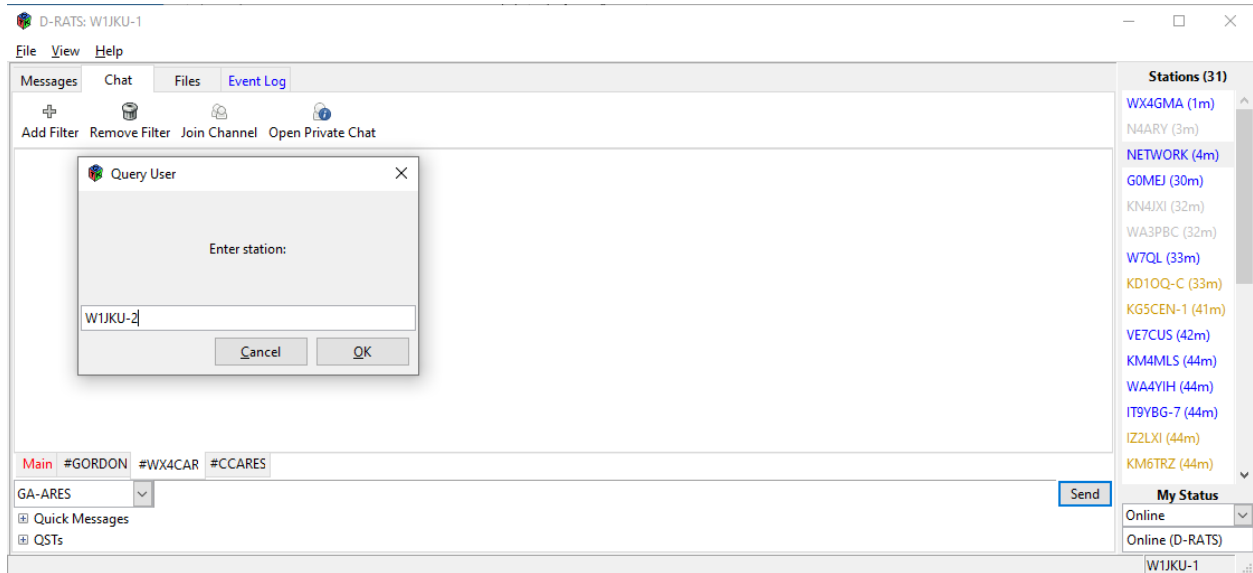
The Private Chat will be created at the bottom of your Chat window starting with an @ sign. Simply Highlight that filter to see and type messages to the station you wish to communicate with.   The cool thing is that the receiving station will automatically be added to the Private Chat upon receiving the message you send. All they must do is click on the Private Chat filter at the bottom of their screen to view and send message to you.
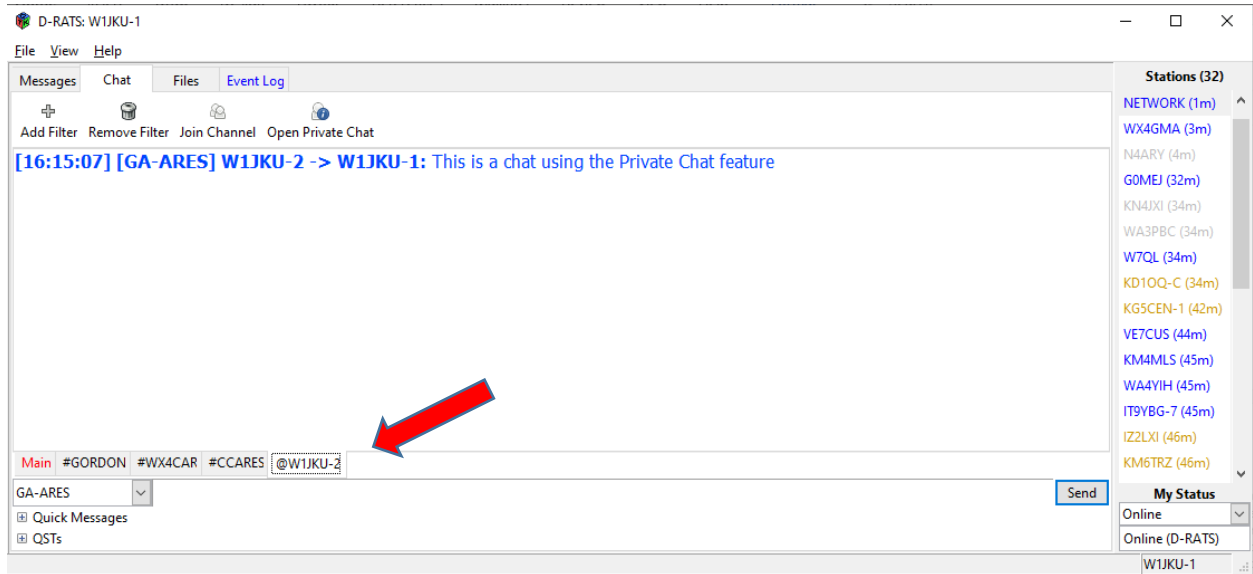
D-RATS Exception Handling- Reconfigure D-RATS

Should your version of D-RATS not function correctly, you may have a corrupted D-RATS configuration. Since there is no installation program, you may need to manually clear the configuration in order to start fresh. (If maps will not function after validating the steps were followed correctly, you may need to execute this step.)

1. Under **C:\Users\ (the UserId you are logged in as)\APPData\Roaming**, look for a folder called **D-RATS-EV.**

2. Delete that folder and relaunch D-RATS and you should be walked through the installation as a new configuration starting with Installation and Configuration for GA-ARES Ratflector Step 1 above.
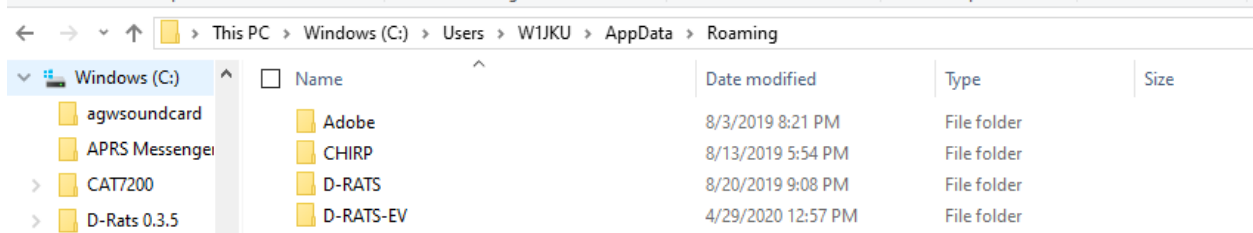
Cherokee ARES Drill DRA1010

Task: DRA1010: Digital Check-In via D-RATS instead of UHAM41

Condition: This Drill will be used to test the ARES team capability of using D-RATS to supplement normal FM Communications. During this drill, all stations capable of performing this task will use D-RATS to Check in to the GA ARES NET instead of FM. After Check-In, NET Control will then Acknowledge you via D-RATS. NET Control will announce on FM all stations that have checked in via D-RATS and provide additional instructions.

On Monday Nights at 8pm eastern, look for an opportunity to check into one of the weekly D-RATS Nets conducted on the GA-ARES Ratflector…

Standard: Within 5 minutes, Station will perform a Digital Check-in using the GA-ARES ratflector. Station will wait for acknowledgement from NET Control and follow instructions given.

Importance: This skill will allow you to provide quick emergency updates to the ARES team as a supplement to other communication methods available including FM, HF, Winlink, APRS, FLDIGI, SMS, Zello, Cell, etc.… No one communication method is the best in all circumstances. The ability to remain flexible, move, and communicate is an important task to be able to perform under adverse conditions.