

Getting Started with N1MM Logger+ and Hamachi VPN for Field Day 2020 – SJRA/K2AA

The authors of N1MM Logger+ have written an excellent, detailed guide with specific instructions for getting Hamachi VPN installed and setup on your computer and what you need to connect your computer to other stations on the same VPN for logging contests with N1MM Logger+. This document gives much of the same information, but tailors it to setting things up for the SJRA operating as K2AA for Field Day 2020. You may find these instructions sufficient to get you up and running but you can still refer to the N1MM document if you wish. If you have limited or no experience with N1MM Logger+, I recommend you seek assistance from other club members. The N1MM Logger+ document can be found here:

[Distributed Multi-Op Contesting using N1MM+ with a Hamachi VPN_v1.5.pdf](https://n1mmwp.hamdocs.com/mmfiles/distributed-multi-op-contesting-using-n1mm-with-a-hamachi-vpn-pdf/)

<https://n1mmwp.hamdocs.com/mmfiles/distributed-multi-op-contesting-using-n1mm-with-a-hamachi-vpn-pdf/>

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Basic Network Concepts

Computer networking can be complicated at times but for our purpose, understanding a couple of basic ideas are all that you'll need.

LAN – Local Area Network – The key idea here is “local”. This is your home computer network or the one you use at work. Computers within a building or a group of nearby buildings are usually connected using a LAN. The LAN does not include the Internet. LANs are also usually thought of as “private”. You don't share your home computer network with everyone, everywhere in the world and your employer has security reasons for not doing the same thing. For this reason, LANs are sometimes referred to as “private networks”. Devices on a LAN are connected with either wired or wireless connections but all of the devices need to connect to some piece of hardware such as a switch or a WiFi router.

VPN – Virtual Private Network – A Virtual Private Network is much like a LAN. The key difference is that the network definition structure is not created by hardware and wired or wireless connections. Instead, software running on servers either nearby or far away, define the network and how it is connected. By eliminating the idea that computers need to be physically near each other in order to collaborate, a “virtual” network can be created. It's called virtual because it's created by a set of rules in software, not by wiring. By creating a network this way, it can behave *as if* computers many miles or even thousands of miles from one another are connected to the same LAN. The VPN software handles all of this for us.

The VPN concept is key in how we will be getting the N1MM logger software on our home PCs to communicate and synchronize with all the other computers who will be operating together as a single club station.

What You Will Need to Install and Setup on Your Computer

N1MM Logger+ Contest Logging Software – This document assumes you are already familiar with N1MM Logger+. However, if you don't already have this installed on the computer you'll be using, you'll need to install it and set it up. Basic instructions will be given here. If you need more help, please let us know so we can give you additional assistance.

1. **Download and install the Full Installer** base software.
<https://n1mmwp.hamdocs.com/downloads/n1mm-full-install/>
2. **Run the software and setup** the following:
 - A. A name for your database – I suggest you do not use the default name. Pick something more self-explanatory. For example, *<your call sign>_FD_year*. My current database is called KE2D_2020. You should make one just for Field Day, and use something like *KE2D_FD_2020* (using your call in place of KE2D of course). You can create more databases later if you want.
 - B. Enter your **Station Data** for this database. The program will ask for this the first time you run it. Once the settings box opens, there are **two essential things** which need to be set:
 - C. The **Call must be set to K2AA. This is absolutely mandatory**. You must use the club call. The program will generate network errors if you do not and your logged QSOs could be lost.
 - D. The **ARRL Section must be set to SNJ**. Even if you live outside of SNJ, this is the section we will be using in our Field Day exchange.
 - E. I suggest you also set your **CQ Zone** to 5, **ITU Zone** to 8, and **License** to Club.
 - F. **Optional**: Please enter *your name and personal call sign* in the **Name** box and provide your email address in the box at the bottom. This may help us contact you if we have questions later. All of the other information on in this panel is entirely optional and will not be used in the Field Day entry.
 - G. These instructions are repeated again on Page 7 and 8 if you already have N1MM Logger+ installed.

Edit Station Information

Tip: You need to fill out this form or the program will not perform properly... Also, make sure your computer date and time are set to the LOCAL date and time zone for your location.

Call: K2AA

Name: Bob Beyer - KE2D

Address: [Empty]

Address: [Empty]

City: Marilton State: NJ Zip: [Empty]

Country: UNITED STATES

Grid Square: FM29ML CQ Zone: 5 ITU Zone: 8

License: Club Latitude: 39.5000 N Longitude: 75.0000 W

Station TX/RX: [Empty] Power: 100

Antenna: Various Ant. Height: 50 a.s.l. 60

ARRL Section: SNJ

Rover QTH: [Empty]

Club: South Jersey Radio Assn.

Email address: bob_beyer@verizon.net

Ok Help Cancel

3. **Update the software.** From the **Tools** menu, use the next-to-last item which says **Check for New Program Version and Install**. The software may recognize you are running an older version (the Full Installer) and nag you to do this automatically if you are installing it for the first time.

Hamachi VPN Software – This is the software which will be used to connect to a VPN (virtual private network) so that we can all connect our N1MM Logger+ software to each other. It is important that we all connect together for logging since we'll all be operating as K2AA. This way we won't be working dupes (though some may work us) and will know if we've worked a station before on another band and therefore what their exchange is.

1. Download, Install, and Setup Hamachi VPN.
<https://www.vpn.net/>
2. **DO NOT use the 14 day free trial!** Follow the next step and register as a user.
3. When you install the Hamachi VPN software, it will require you to setup an account with LogMeIn, the company that owns Hamachi. You'll need to pick a username and password. If you are an advanced user and have done this previously, then you'll be logging instead with the user name and password which you've created earlier.
4. **REPEAT: YOU MUST SETUP AN ACCOUNT WITH LogMeIn** and create a username (email address) and password or you will not be able to use Hamachi VPN to connect to any networks.
5. You do not need to create your own VPN network at this point. As Field Day approaches and we begin our testing and preparation, we'll provide you with the Network ID and password of the network we'll be using to connect to all of our stations.

Windows Firewall

In order for N1MM Logger+ to use the Hamachi VPN to communicate with other computers, you will need to check or change some settings on your Windows Firewall.

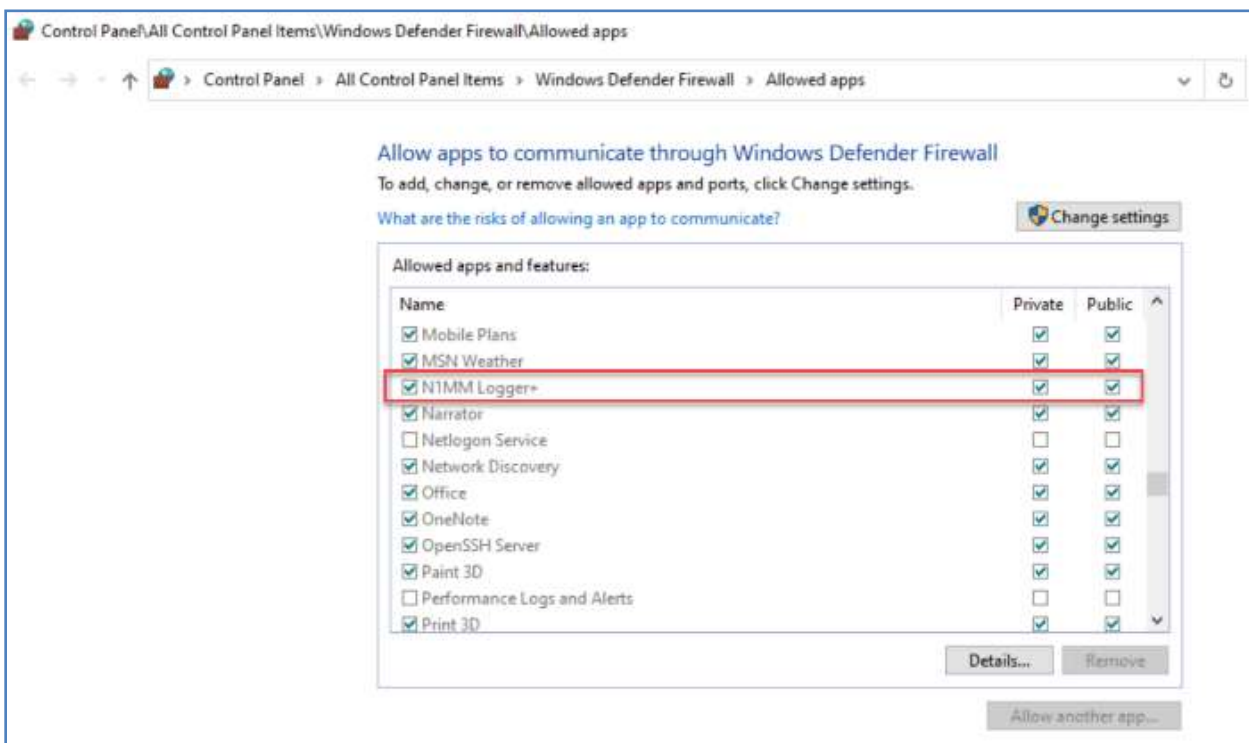
The N1MM authors have written good instructions for on this for Windows 10 so I will just paste them here. If you are still running Windows 7 (as I am), Similar steps are given after the Windows 10 instructions. If you are running Windows 8, the process is a similar.

Windows [10] Firewall *(taken from the N1MM Logger+ document on using Hamachi VPN)*

By default, the Windows Defender Firewall blocks packets from N1MM+ on a VPN across a public network. Choose one of the following two methods to enable VPN packets through your firewall:

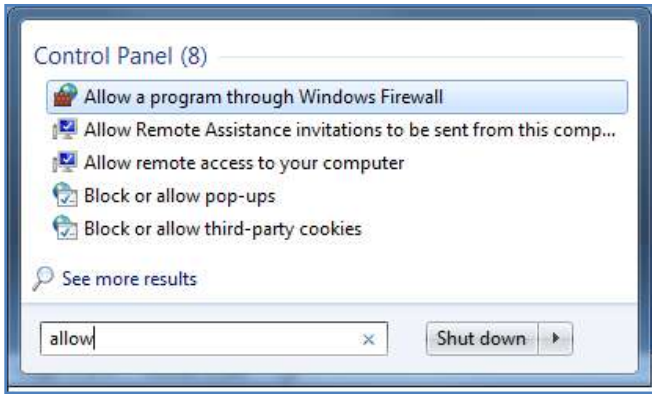
1. In Windows 10, navigate from the Start Button >Settings >Update & Security >Windows Security >Firewall & network protection, “Allow an app through firewall.”
2. Type “Windows Defender Firewall” in the Windows Search bar, and then click on “Allow an app or feature through Windows Defender Firewall.”

Upon reaching the *Firewall Allowed Apps* dialog window, click on [Change Settings] and check the Public check-box for N1MM Logger+.

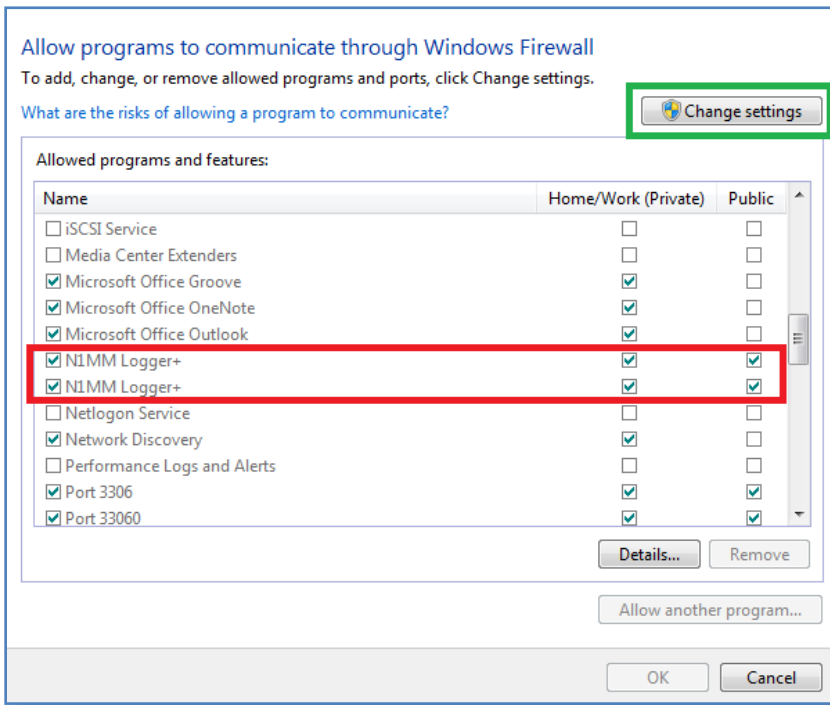


Windows 7 Firewall

In the Start menu for Windows (lower left corner of your screen), type the word "Allow". A box similar to the one below should appear (there will probably be more items listed). Near the top, you should see **Allow a program through Windows Firewall**, click on it.



Once the control panel opens, click on the **Change settings** button. Make sure that the box for the **Public** column is checked for N1MM Logger+ and then click on **OK** at the bottom. I don't know why my computer lists N1MM Logger+ twice. I only have one copy installed. If you see it listed more than once, check the box in the Public column for all of them. The main difference between Windows 7 and Windows 10 is that the Firewall has been renamed to Windows Defender Firewall instead of Windows Firewall. If you are running Windows 8, the process will be similar.

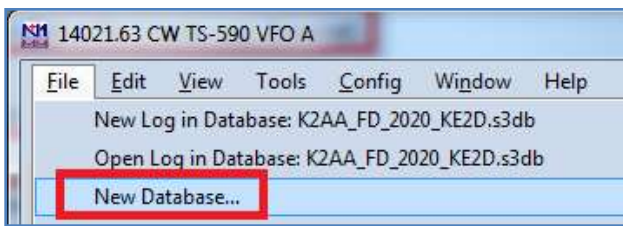


Configuring N1MM Logger+ to Prepare for Networked Mode

In order for N1MM, to work properly with the other computers you will be connecting to, there are some things which are important to set correctly *before* the computers connect over the VPN. If these are not set properly, it could create error messages and interfere with proper logging.

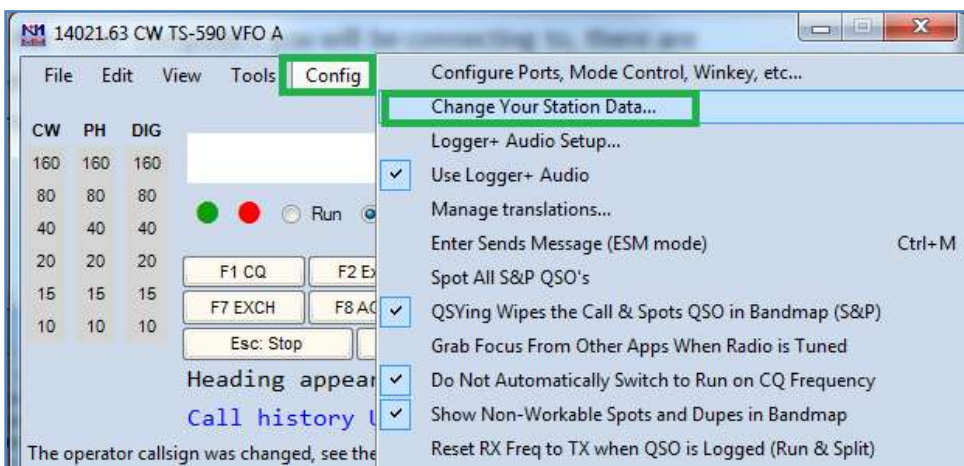
Database Setup – If you didn't create a *separate database* for Field Day already, I strongly recommend you do so now. We may need to collect the database files (not just the .log file) from everyone after the contest if we run into any unexpected challenges.

From the **File** menu, select **New Database**



Choose a name that will be easy to identify as *your* Field Day 2020 database. You can see in the image above that I included my call sign and year in the name. In the next step, you will be changing your station data *for this database*. By creating a new database, your station data in any databases you were already using will remain as it was when you return to your preexisting databases later, after Field Day.

Station Information – In N1MM Logger+, click on the **Config** menu and choose **Change Your Station Data...**



Once the settings box opens, there are **two essential things** which need to be set:

- A. The **Call** must be set to **K2AA**. This is absolutely mandatory. You must use the club call. The program will generate network errors if you do not and your logged QSOs could be lost.
- B. The **ARRL Section** must be set to **SNJ**. Even if you live outside of SNJ, this is the section we will be using in our Field Day exchange.
- C. I suggest you also set your **CQ Zone** to 5, **ITU Zone** to 8, and **License** to Club.
- D. **Optional**: Please enter *your name and personal call sign* in the **Name** box and provide your email address in the box at the bottom. This may help us contact you if we have questions later. All of the other information on in this panel is entirely optional and will not be used in the Field Day entry.
- E. These instructions were given earlier on page 3 for those who are installing N1MM Logger+ from scratch.

Tip: You need to fill out this form or the program will not perform properly... Also, make sure your computer date and time are set to the LOCAL date and time zone for your location.

Call: K2AA

Name: Bob Beyer - KE2D

Address: [Empty]

Address: [Empty]

City: Mariton State: NJ Zip: [Empty]

Country: UNITED STATES

Grid Square: FM29ML CQ Zone: 5 ITU Zone: 8

License: Club Latitude: 39.5000 N Longitude: 75.0000 W

Station TX/RX: [Empty] Power: 100

Antenna: Various Ant. Height: 50 a.s.l. 60

ARRL Section: SNJ

Rover QTH: [Empty]

Club: South Jersey Radio Assn.

Email address: bob_beyer@verizon.net

Buttons: Ok, Help, Cancel

New Log in Database – You will need to start a new log in N1MM Logger+ for Field Day. From the **File** menu, choose **New Log in Database** (first item). It is important that you set each of these **exactly** as shown in the image below (except for **Operators**, which should be your personal call). Please note the following:

- If you do not set these exactly (except for **Operators**), the program will generate network error messages.
- Even though you may only operate in one mode (SSB, CW, or Digital), you must select all three in the **Mode** selection. If you do not, your log will not reflect score credit for QSOs other stations make in those modes.
- Please be certain the **Start Date** is set to **June 27, 2020** and the time is **18:00:00**
- Please include *only your personal call* in the **Operators** box. This will help us later if we have questions.

New log For: ARRL Field Day (June)

Log Type: FD

Start Date: 2020-06-27 18:00:00

Use Up/Down cursor keys to see long description above.

Total number of contacts in database

Contest Associated Files

Category Show Setup Show Rules

Operator: MULTI-OP State for Log Type QSOPARTY

Band: ALL Note - the program does not validate categories. Check the contest rules for valid categories.

Power: LOW

Mode: SSB+CW+DIGITAL

Overlay: N/A

Station: FIXED

Assisted: ASSISTED Time Category: N/A

Transmitter: UNLIMITED

Sent Exchange: 7D SNJ Omit RST. E.g. CQWW: 05 SS: A 56 EMA

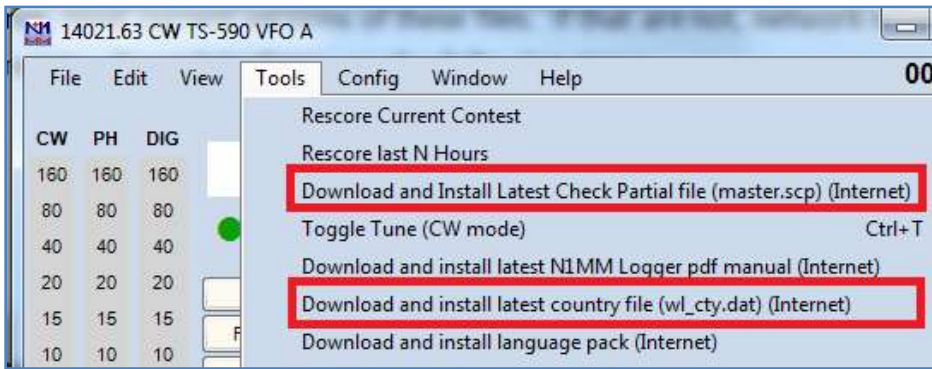
Operators: K2AA Update Ops from Log

Soapbox

Buttons: OK, Help, Cancel

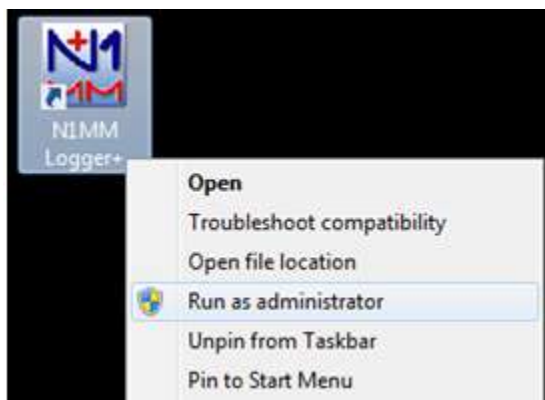
Set Yourself as the Operator – In log entry window, press **Control-O** and enter *your personal call sign*. Even though you entered your call sign in the **New Log** settings, this does not insure that you are currently set as the on-air operator who is logging contacts. We want to keep track of who logs what in case we need help sorting things out later on. N1MM experts may recognize that **Control-O** is the same as typing the word **OPON** in the log entry window and pressing enter.

WL_CTY.DAT and MASTER.SCP – N1MM Logger+ uses two files which are updated regularly on the internet. It is essential that all computers on the network be using the same, most current versions of these files. If they are not, network error messages will be generated and continue to accumulate. To update these, use the **Tools** menu in N1MM Logger+ and select the 3rd and 6th menu items for **Download and Install Latest Check Partial file** and **Download and Install latest country file**. You will need to do these as two separate steps. If you have a fast internet connection and a fast computer, these will each only take a few moments to complete.



Run as Administrator – In order for N1MM Logger+ to work smoothly on a network, it should be run with administrator rights. Once you have everything set above, quit the N1MM Logger+ program and then restart it using **Run as administrator**. The way to do this is the same whether you start the software from an icon on the desktop or from the start menu. This will not work for an icon in the task bar at the bottom of the Windows screen if you have one.

Right click the N1MM Logger+ icon or menu item and select **Run as administrator**. Please remember to use this method each time you start the program while preparing for and operating in Field Day.



A box may pop up and ask if you want to allow N1MM Logger+ to make changes to your computer. It is safe to answer **Yes**. This is only so that N1MM can adjust your computer's clock by a few seconds to allow it to synchronize with the other computers on the network and keep the logs synchronized. Technically, adjusting the clock is making a change to the computer and this requires administrator rights. Answer **Yes**.

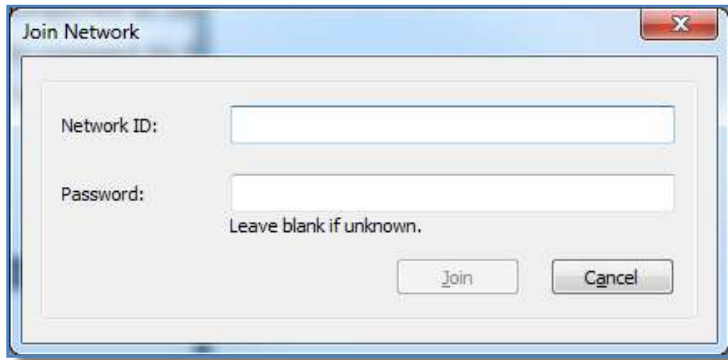
Final Steps

Connecting to a Network with Hamachi VPN – After you have N1MM Logger+ configured as described previously, you'll need to make sure you have the Hamachi VPN software running and you'll then need to connect to the host network that we'll be using for Field Day. You should start Hamachi VPN and connect to the host network before you run N1MM Logger+. If you are running N1MM Logger+ already, close it now and run Hamachi VPN. To join the host network, Click on the **Network** menu in Hamachi VPN and select **Join an existing network...**



This box will pop up asking for the **Network ID** and **Password**.

The network ID you will be joining and the password will be given to you separately later.

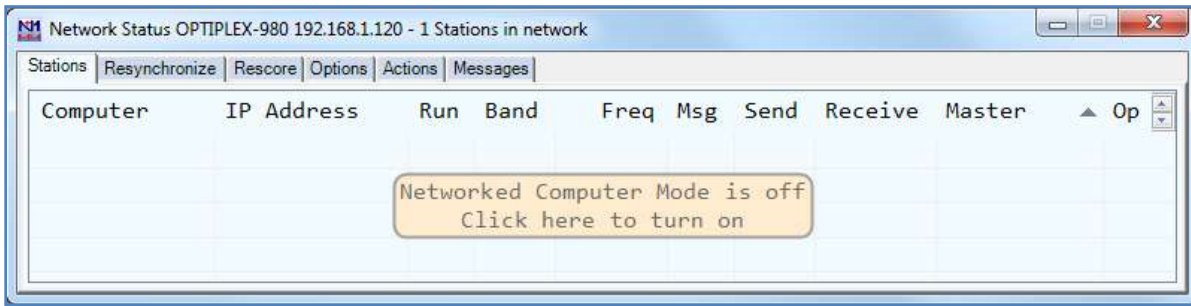


Starting Networking in N1MM Logger+ – Check that you have completed the steps above:

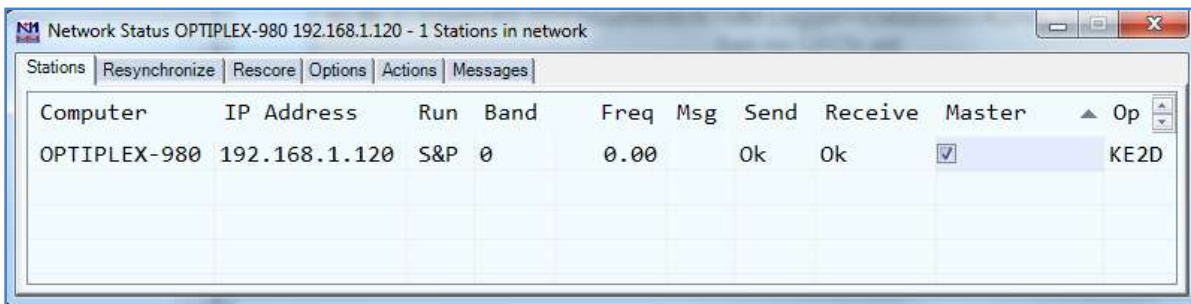
- **N1MM Logger+**
 - o **Installed** – Full Installer (if needed)
 - o **Updated** – Software updated from Tools menu. WL_CTY.DAT and MASTER.SCP have all been updated.
 - o **Configured** – Station Information, New Database, New Log in Database (FD)
- You have a **LogMeIn user name and password** for the Hamachi VPN software.
- **Hamachi VPN software is installed** and setup and Hamachi VPN is running.
- You are **connected to the Hamachi VPN Network ID** you were given.
- **Windows Firewall** is allowing N1MM Logger+ to connect to Public networks.

If everything is setup and working, start N1MM Logger+ by using **Run as administrator** (right click on icon or start menu item).

In the **Windows** Menu in N1MM Logger+, select the **Network Status** Window.



A new window will open that shows a list of computers N1MM Logger+ is connected to. By default, networking is turned off. Clicking anywhere inside the **Network Status** window will start the networking. The window should change to something like the one below. The name and IP address of your computer will be different and the order and title of some of the columns may be different as well.



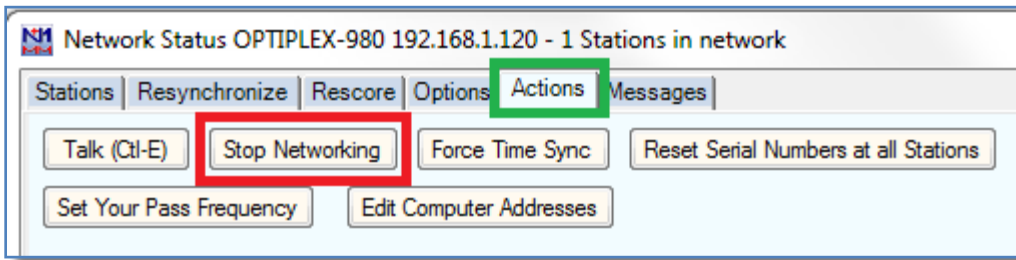
If you are connected to the Hamachi VPN network ID you were given, the names and IP addresses of other computers should appear in this in a short time. If they don't, there is a problem somewhere which you'll need help troubleshooting. Double check the instructions above under [Windows Firewall](#), that you started Hamachi VPN before launching N1MM Logger+, and that you used [Run as Administrator](#) to launch N1MM Logger+.

Assuming everything is working, any QSOs you log will be seen by all other stations on the network and will be incorporated into their logs. Likewise, you will see all QSOs logged by the other stations on the network.

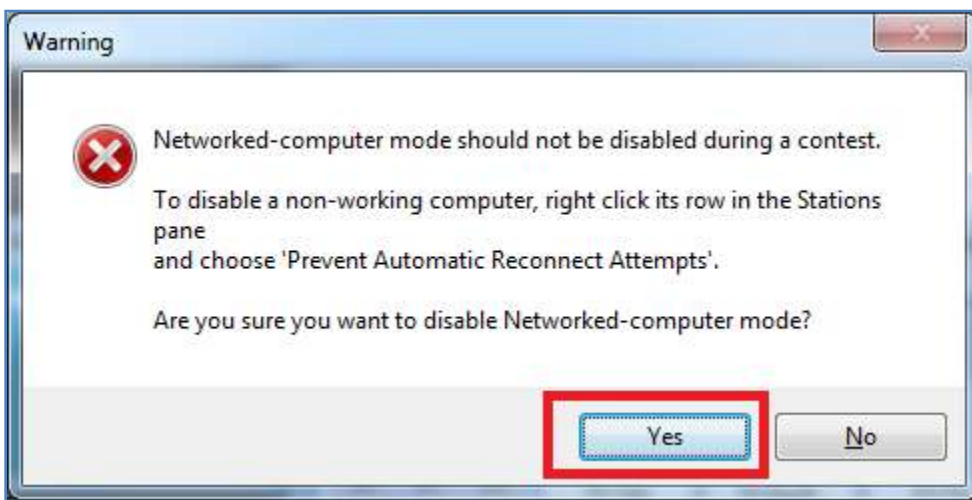
Optional Items

Personal FD Operating Under Your Own Call – If you plan to operate FD alone, with your own personal call sign, when not operating for K2AA, **YOU MUST stop networking before you open an entirely separate N1MM Logger+ database with an entirely new log.**

To do this, select the **Actions** tab in the **Network Status** window, then click on the **Stop Networking** button.



N1MM Logger+ will pop up a warning about stopping **Networked-computer mode** during a contest. Answer **Yes** to the **Are you sure you want to disable Networked-computer mode** question.

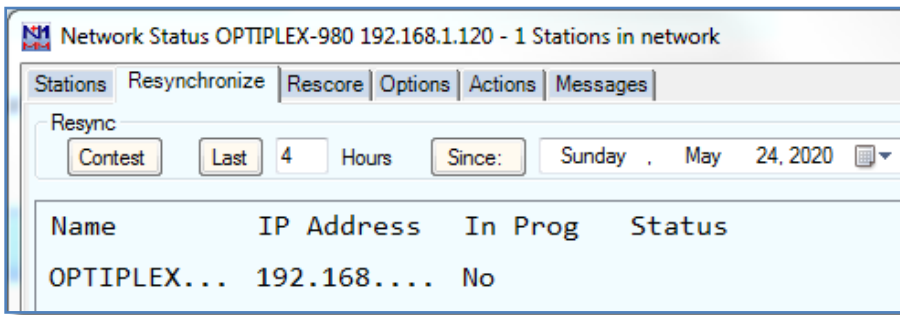


[Create an entirely separate database](#) with its own [separate FD log](#) as described earlier in this document.

It is easy to switch between databases and logs. In the **File** menu of N1MM Logger+, there is a list of the 9 most recent contest logs that have been opened, even if they are in a different database than the one you currently have opened. The first one in the list is the log you currently have opened. The second one is the previous log. By using **File** menu and pressing the numeral **2** on your keyboard, you can toggle back and forth between two logs very easily. Number **2** is always the previous log. If you are a skilled typist, you can simply press **Alt-F, 2** to toggle back and forth easily.

If you are scheduled to work an additional shift with K2AA later in Field Day, **switch back to the K2AA log BEFORE you restart networking.** Remember, to start networking use **Window, Network Status Display.** **BE SURE you do not log any K2AA QSOs before you restart networking.**

Once you have re-opened the K2AA log, have started networking again, and see the other stations on the network, you should resynchronize the log. To do this, use the **Resynchronize** tab on the **Network Status** window.



You can either choose to resynchronize the **Last X Hours** of hours if you are certain how many hours it has been since you closed the K2AA log, or you can resynchronize the entire contest. Resynchronizing the entire contest may take a considerable amount of time as there could be several thousand QSOs in the collective log and there may be dozens stations on the network to synchronize with. I suggest you use the **Last X hours** if at all possible.

Here is the short version to remember:

- **STOP** networking **BEFORE** opening your personal log.
- **START** networking **AFTER** you open the K2AA log.
- **RESYNCHRONIZE** once you are connected and see the other stations on the network.

Zoom – We intend to use a Zoom conference as our shared intercom during FD. I will start a Zoom conference before the start of FD and keep it up for the duration of FD. This is how we will be able to communicate and coordinate with each other. Also, it will give you a way to ask for help. Listening to Zoom audio and operating at the same time will be tricky to borderline impossible so we can watch the built-in chat window in Zoom for messages and SOS. Zoom will also allow us to share our screens so that others can help troubleshoot. You can download the **Zoom Client for Meetings** software at this link: <https://zoom.us/download>. Zoom is available for mobile devices and tablets as well as PCs. You may find it more convenient to talk/chat over your mobile device or tablet. However, you will not be able to share your Windows desktop this way.

Team Viewer – Some of you may already be familiar with this program. It allows others to connect to your computer remotely and operate it in order to give you technical assistance. You are not required to have this but if you install it, it will make it easier to give you quick, direct technical support during the setup, testing, and operating times. You can download the Team Viewer software from the link at the top of this page: <https://www.teamviewer.com/en-us/>

Computer Name – Please try to give your computer a unique name. Things like: *Computer, Desktop, Laptop, or Shack* may make it difficult to identify you on the network. If your computer has a generic name like this, I recommend you consider changing it. To set the name of your computer, click on the Windows Start menu and type “**rename this computer**”. A menu item will appear with the same title which will take you to the place where you set the name of your computer. If you are not comfortable with this, please ask for help. **If your computer is currently connecting to things like network storage (cloud or local), changing the name could cause issues so please think carefully before changing it. It is not absolutely necessary for you to do this.**

Digital Modes: FT-8, FT-4 and RTTY – If you plan on operating any of the digital modes during FD, you will need to have *significant prior experience* with these before Field Day. Getting started on digital modes is not something you should plan to do the week before Field Day. For operators who already have the requisite experience with these modes, there are special settings and provisions within N1MM Logger+ which are outside the scope of this document. Please contact KE2D directly for guidance and assistance with this in advance of Field Day: **bob_beyer@verizon.net**