

Configuring Winlink Express for use on AREDN mesh networks

by Orv Beach W6BI

This document describes the steps for using Winlink software over an AREDN mesh network.

Prerequisites:

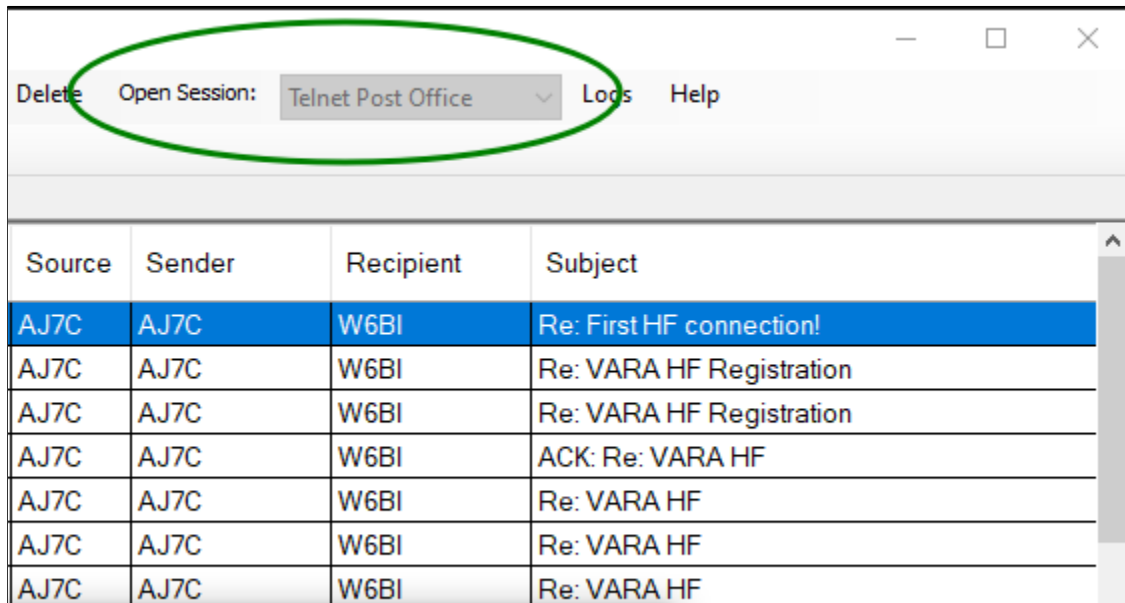
- You have a connection to the mesh network in your ham shack
- Your Winlink computer has an IP address from the mesh network
- Winlink Express is installed and operational

There are two methods of moving Winlink traffic via the ham network:

1. Via a Winlink Post Office, or
2. Point-to-point between two Winlink Clients

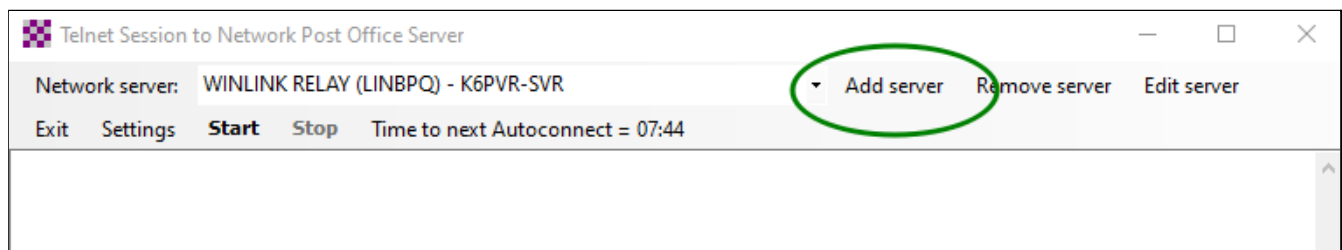
Sending traffic to a Post Office over the ham network

The number of Winlink Post Offices listening on the mesh network is growing. For best results, pick one that you know to be the closest to your location. In order to find a local Post Office, open a session to a Telnet Post Office:



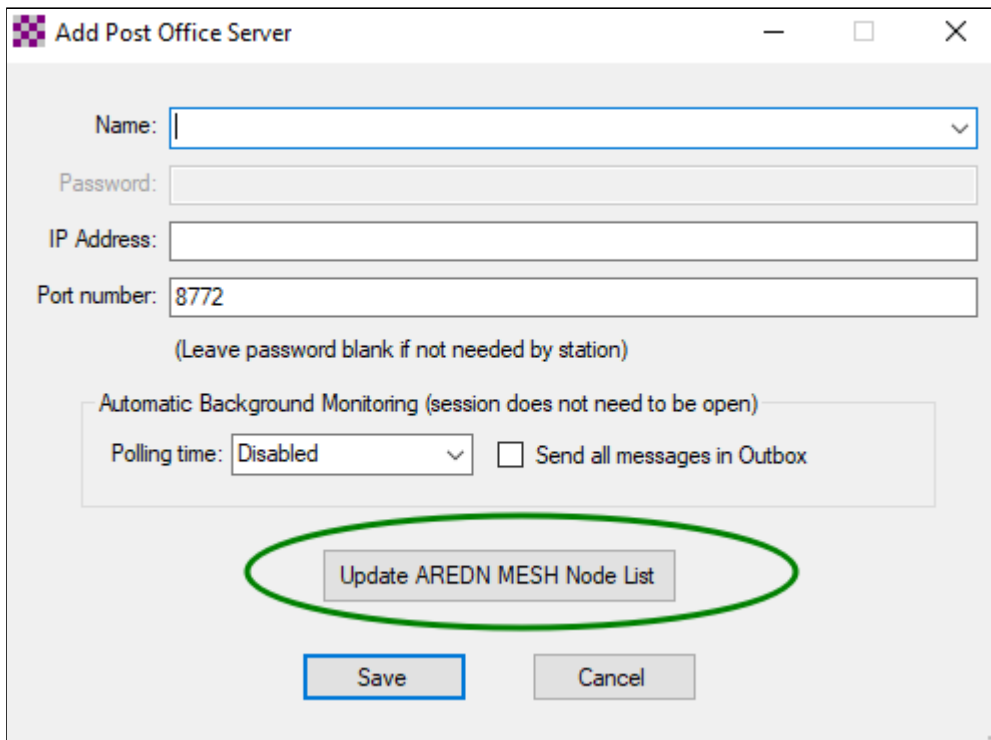
Source	Sender	Recipient	Subject
AJ7C	AJ7C	W6BI	Re: First HF connection!
AJ7C	AJ7C	W6BI	Re: VARA HF Registration
AJ7C	AJ7C	W6BI	Re: VARA HF Registration
AJ7C	AJ7C	W6BI	ACK: Re: VARA HF
AJ7C	AJ7C	W6BI	Re: VARA HF
AJ7C	AJ7C	W6BI	Re: VARA HF
AJ7C	AJ7C	W6BI	Re: VARA HF

In the window that opens select Add Server:



Configuring Winlink Express for use on AREDN mesh networks

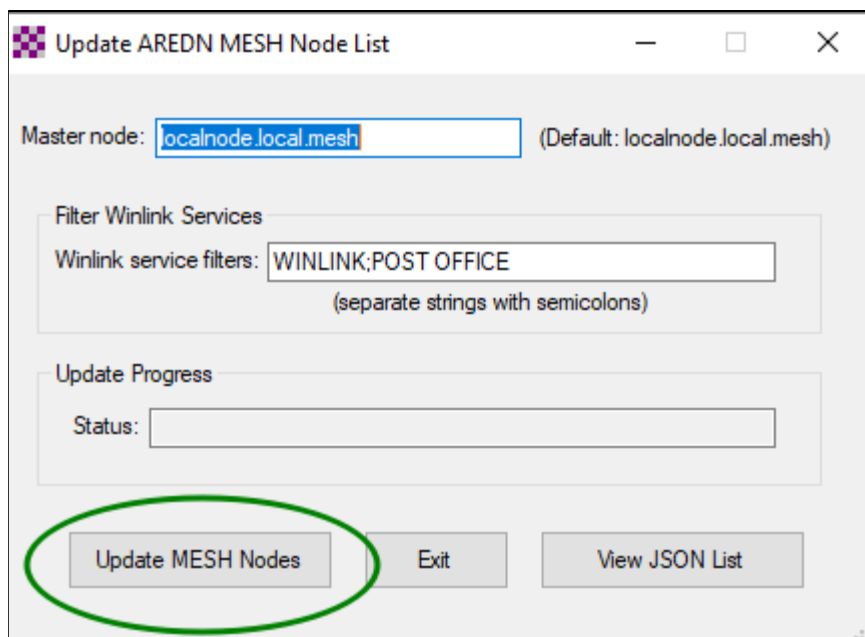
In the window that opens, click on Update AREDN MESH Node List



The screenshot shows a dialog box titled "Add Post Office Server". It contains the following fields and controls:

- Name: [Empty dropdown menu]
- Password: [Empty text field]
- IP Address: [Empty text field]
- Port number: 8772
- (Leave password blank if not needed by station)
- Automatic Background Monitoring (session does not need to be open):
 - Polling time: Disabled (dropdown menu)
 - Send all messages in Outbox
- Update AREDN MESH Node List (button, circled in green)
- Save (button)
- Cancel (button)

In the window that opens, click on Update MESH Nodes



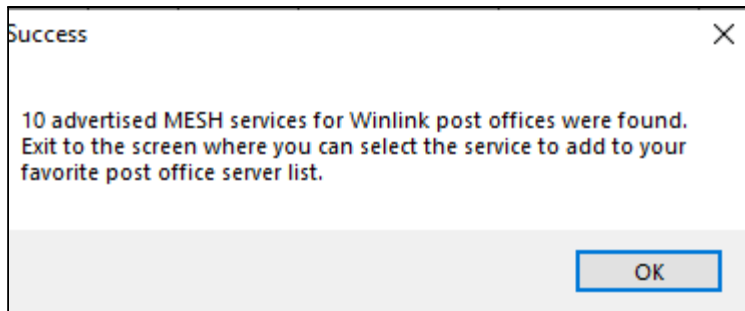
The screenshot shows a dialog box titled "Update AREDN MESH Node List". It contains the following fields and controls:

- Master node: localnode.local.mesh (Default: localnode.local.mesh)
- Filter Winlink Services:
 - Winlink service filters: WINLINK;POST OFFICE (separate strings with semicolons)
- Update Progress:
 - Status: [Empty text field]
- Update MESH Nodes (button, circled in green)
- Exit (button)
- View JSON List (button)

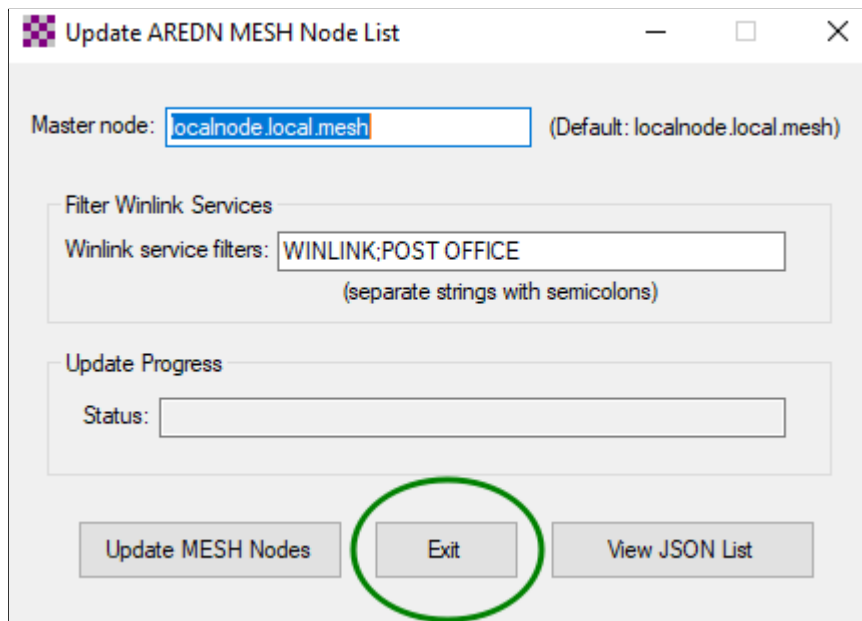
Configuring Winlink Express for use on AREDN mesh networks

You should see this pop-up window.

Note: the number of post offices found will vary as they come and go. Click OK



Click Exit.

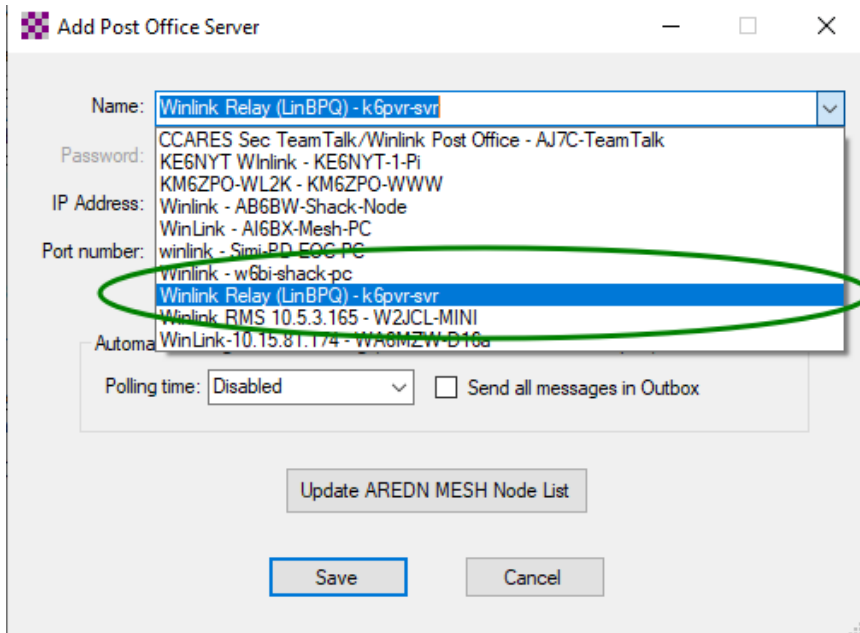


You'll be returned to the Add Post Office Server window. In the Name: drop-down, select the Post Office closest to you. For this tutorial we're using the Sulphur Mountain Post Office.

NOTE: If you leave Winlink Express running all the time, set the Polling time to something other than Disabled, so you'll periodically pull Winlink email destined for you.

Configuring Winlink Express for use on AREDN mesh networks

Click Save.

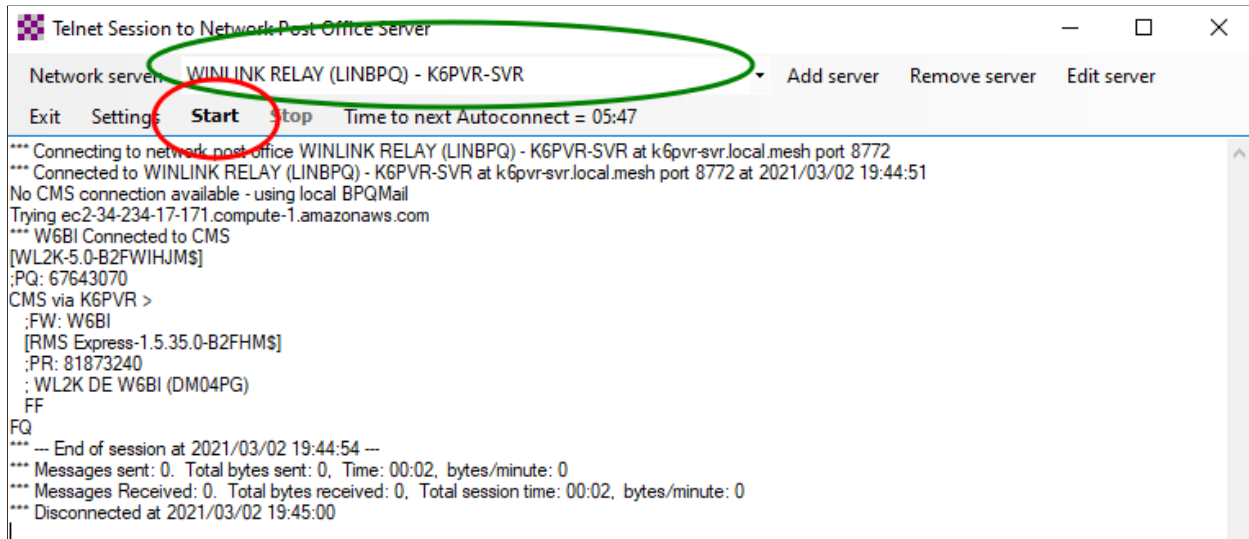


You'll be returned to the "Telnet Session to Network Post Office Server" window. In this example, K6PVR-SVR should be selected as the Network Server.

If you've selected a Polling period, the "Time to next Autoconnect" should be counting down.

In order to test it, click on Start to start a connection cycle. If successful, you should see the connection sequence shown below. It should take less than 10 seconds – a bit longer if there's mail waiting for you.

Configuring Winlink Express for use on AREDN mesh networks



Sending traffic to a peer client over the ham network

Sending traffic point to point is different from sending it to a post office. You first need to enter the destination station as an endpoint. To do that, you must know the IP address and port number for the destination Winlink program on the remote PC. You can find that by either asking the station operator, or frequently it's advertised on their mesh node, and you can determine its IP address by pinging it on the command line.

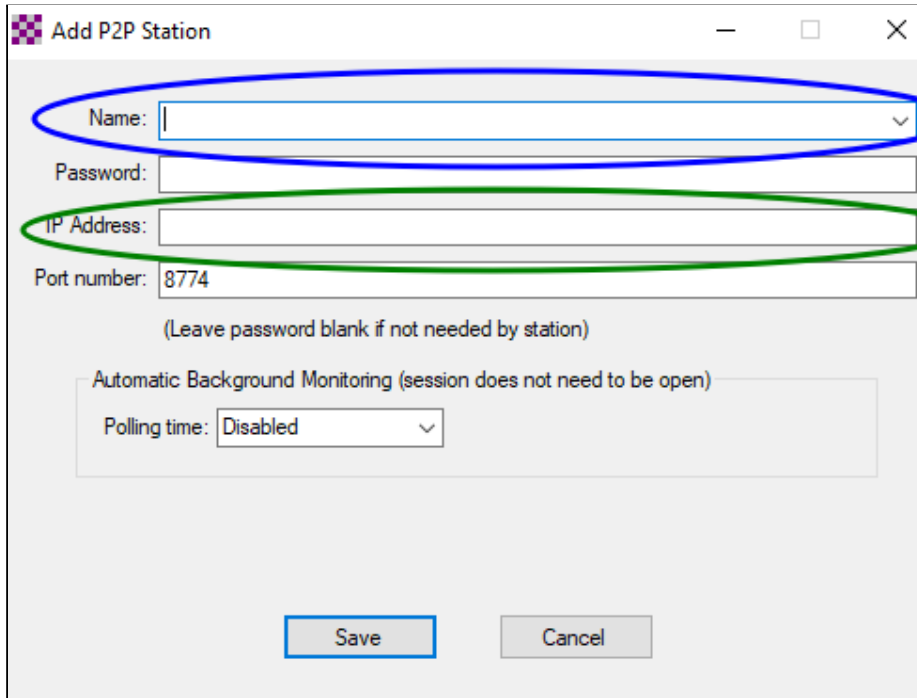
```
C:\Users\orvbe>ping AJ7C-10-QTH

Pinging AJ7C-10-QTH.local.mesh [10.8.157.38] with 32 bytes of data:
Reply from 10.8.157.38: bytes=32 time=23ms TTL=63
Reply from 10.8.157.38: bytes=32 time=19ms TTL=63
Reply from 10.8.157.38: bytes=32 time=18ms TTL=63

Ping statistics for 10.8.157.38:
    Packets: Sent = 3, Received = 3, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 18ms, Maximum = 23ms, Average = 20ms
```

Once you've determined the destination computer's IP address, open a session to Telnet Peer to Peer and click on Add station.

Configuring Winlink Express for use on AREDN mesh networks

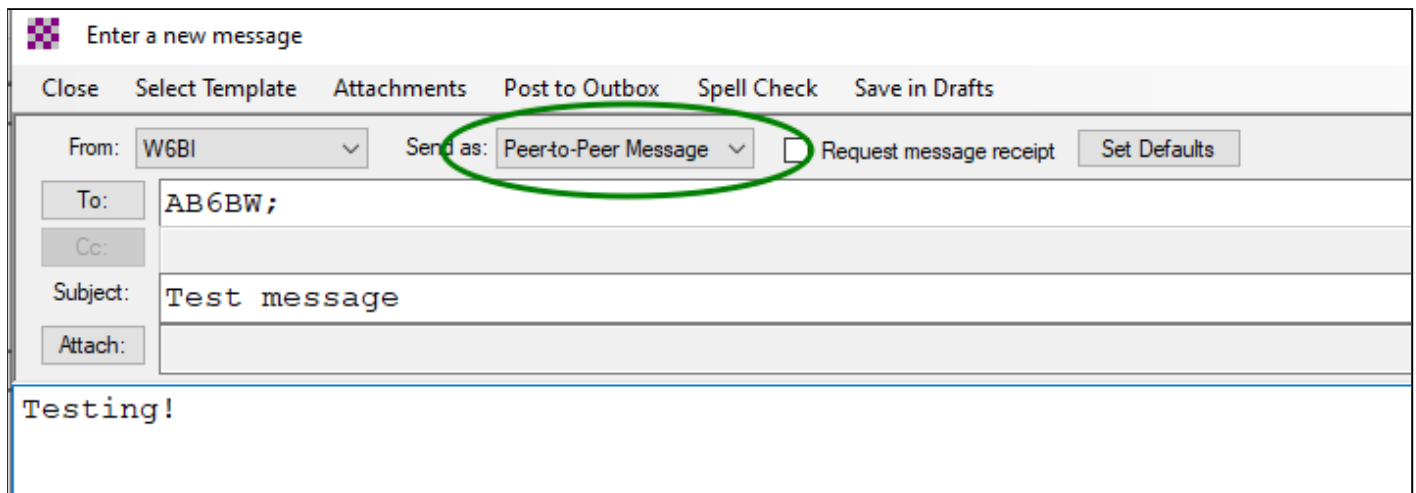


The screenshot shows a dialog box titled "Add P2P Station". It contains the following fields and options:

- Name:** A text input field with a dropdown arrow, circled in blue.
- Password:** A text input field.
- IP Address:** A text input field, circled in green.
- Port number:** A text input field containing the value "8774".
- (Leave password blank if not needed by station)** A note below the password field.
- Automatic Background Monitoring (session does not need to be open)** A section containing a dropdown menu for "Polling time" set to "Disabled".
- Buttons:** "Save" and "Cancel" buttons at the bottom.

Enter the IP Address. The Name does not have to be the hostname of the destination computer. It's a tactical name – it could be “Bob’s Winlink” or “Red Cross Chapter”, whatever is meaningful to you. If you want to set a Polling time, it can be done on this screen. Click Save.

When you’ve completed creating a message to go directly to a local station, it must be saved as a Peer-to-Peer Message. You can then post it to the Outbox as usual.



The screenshot shows a dialog box titled "Enter a new message". It contains the following fields and options:

- Buttons:** "Close", "Select Template", "Attachments", "Post to Outbox", "Spell Check", "Save in Drafts" at the top.
- From:** A dropdown menu showing "W6BI".
- Send as:** A dropdown menu showing "Peerto-Peer Message", circled in green.
- Request message receipt:** A checkbox that is unchecked.
- Set Defaults:** A button.
- To:** A text input field containing "AB6BW;".
- Cc:** A text input field.
- Subject:** A text input field containing "Test message".
- Attach:** A text input field.
- Message Body:** A text area containing "Testing!".

You can then open a Telnet Peer-to-Peer Session. Ensure your destination station is selected, and **Start** the session. Your Winlink client will connect to the destination and transfer your message(s).

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NOTE: the receiving station must also be in the Peer-to-Peer mode for the transfer to work.

