

Field Day Network Setup

By Joe Cupano, NE2Z (updated 11 June 2018)

INTRODUCTION

The change from paper to computer logging for Field Day by OCARC members has been a journey over the many years. Simple principles needed to be adopted to address member's concern to risk (what's so bad about pen and paper) and ease-of-use. These principles are:

- "KISS" for end-users and management of the logging solution alike
- Solution as resilient to "Murphy" as possible

This guide is a best effort in documenting the Field Day Logging solution network and server configurations and assumes the reader has experience troubleshooting applications and networking on Microsoft Windows platforms in a home networking environment. It is not being implied the solution presented here reflects the best solution, just the solution that meets the principles and delivers a reliable logging solution for Field Day.

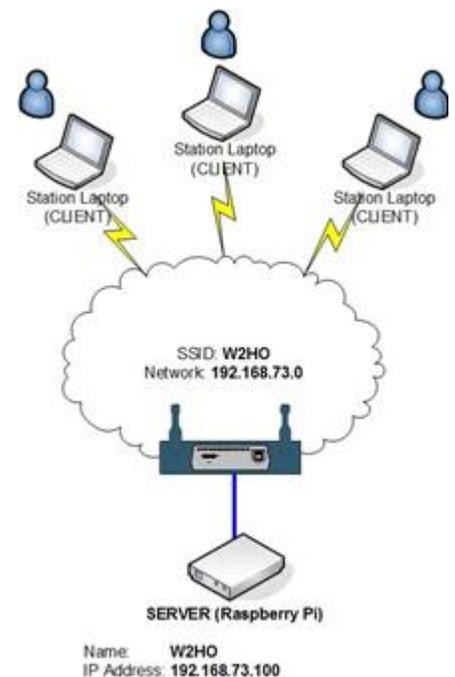
OVERVIEW OF THE FIELD DAY LOGGING NETWORK

A wireless router broadcasts **W2HO** as the SSID requiring **WPA** to connect. The password for the network is **XXXXXX**. Laptops connecting to the network are registered with an IP address in the range of **192.168.73.101** to **192.168.73.254**.

A Raspberry Pi serves as a file and web server As a Web Server accessible via the URL <http://192.168.73.100>, the Raspberry Pi serves simple pages for Windows laptops to validate they are connected to the network as well as host software packages we use for Field Day such as the **ARRL Field Day Logging software** and instructions for using it.

As a Microsoft File Server, the Raspberry Pi has a static IP address of **192.168.73.100** and shares a Microsoft Access file named **fieldday.mdb** via the Windows share path <\\192.168.73.100\fieldday.mdb>

To connect to the file server and mount the Windows share you use the ID and password of **W2HO** and **XXXXXX** respectively. Windows laptops running the ARRL Field Day Logging software connect to this file. The combination of Microsoft File Sharing, Microsoft Access file format, and the ARRL Field Day Logging software's capabilities provide resiliency to file corruption from power or network outages.



WIRELESS ROUTER

The wireless router is a standard Linksys WRT54G and setup much like any home configuration with the exception of no internet connectivity and DHCP range changed from default to a network range of **192.168.73.101** to **192.168.73.254**

A wireless router broadcasts **W2HO** as the SSID requiring **WPA** to connect. The password for the network is **XXXXXX**. Laptops connecting to the network are registered with an IP address in the range of **192.168.73.101** to **192.168.73.254**. Laptops connecting to W2HO will need to be configured to accept IP address automatically and not use static IP address. This is the default for Windows machines.

SERVER

A Raspberry Pi Model B Revision 2 is used with a 4GB SD Card loaded with the [Raspbian operating system](#) with a network cable connection to the wireless router. The server is configured with a static IP address of **192.168.73.100** which is outside the DHCP range of IP addresses issued by the wireless router.

Beyond initial configuration of a Raspberry Pi as outlined in the many [quick start guides](#) out there, the following additional software packages that provide Web and Microsoft File Server capability are installed:

- [nginx](#) – Web Server
- [samba](#) and [samba-common-bin](#) –Microsoft File Share server

A user account of **w2ho** with a password of **XXXXXX** is setup to host the **fieldday.mdb** log file that is shared and updated by all laptops running the ARRL Field Day log software. The log file is in the home directory for w2ho and accessible via the file share [\\192.168.73.100\fieldday.mdb](#)

TROUBLESHOOTING LAPTOPS

This section only focuses on resolving logging issues and is NOT a guide to Windows in any way shape or form. Laptop owners are expected to be fluent with the operations of their own laptop. Before continuing through this section, check with others to see if they are having the same issue to insure the issue is just with your setup.

Cannot see the W2HO wireless network

- Check if your wireless card is enabled via tray icon or some laptops have a hardware switch.

Web browser cannot connect to <http://192.168.73.100> or <http://w2ho>

- You are not logged into the network. Most laptops are set to automatically configured to a connected network (DHCP.) If your laptop is configured for a static IP address then change to DHCP.

I am connected to the network, the ARRL Field Day Logging software starts but I do not see any log entries

- Be sure the logging software is connected to the shared log file and NOT a local file on your laptop.
- At the main screen, select **File** and **Open** and enter the following for **filename**
[\\192.168.73.100\w2ho\fieldday.mdb](http://192.168.73.100/w2ho/fieldday.mdb)
- If you didn't checkbox "**Remember my Credentials**" when you first setup, you will be challenged for a login and password, enter **w2ho** and **XXXXXX** respectively and check "**Remember my Credentials**" before clicking ok.

TROUBLESHOOTING SITE OUTAGE

IF it has been determined ALL laptops are experiencing issues with logging and each have gone through the TROUBLESHOOTING LAPTOPS section with NO RESOLUTION, then proceed with the troubleshooting advice in this section.

Cannot see the W2HO wireless network

- Is there power to the wireless router or has it been moved?

Web browser cannot connect to <http://192.168.73.100> or <http://w2ho>

- Is the power light lit on the Raspberry Pi?
- If power light lit then unplug power to the Pi, wait 15 seconds, then power back on. Pi should be back in service in 60 seconds.

The ARRL Field Day Logging software cannot connect to `\\192.168.73.100\fieldday.mdb`

- Is the power light lit on the Raspberry Pi?
- If power light lit then unplug power to the Pi, wait 15 seconds, then power back on. Pi should be back in service in 60 seconds.

We are connected to the network, the ARRL Field Day Logging software starts but we do not see any log entries

- Using File and Open be sure you are not pointing to a local file. Follow instructions to re-connect to the logging file on the server
 - At the main screen, select **File** and **Open** and enter the following for **filename**
[\\192.168.73.100\w2ho\fieldday.mdb](http://192.168.73.100/w2ho/fieldday.mdb)
 - If you didn't checkbox "**Remember my Credentials**" when you first setup, you will be challenged for a login and password, enter **w2ho** and **XXXXXX** respectively and check "**Remember my Credentials**" before clicking ok.

FILE CORRUPTION RECOVERY

This is rare and has only occurred once when we had the Internet connected to the Logging network a number of years ago. Still it is documented as a last resort option.

1. Stop logging software on all clients
2. From a laptop use **Windows Explorer**, and rename existing **fieldday.mdb** to a format similar to **fieldday_20180623-0300.mdb** which captures the day and time when corruption occurred.
3. Copy **fieldday_blank.mdb** to **fieldday.mdb** in same folder.
4. Restart Logging Software on all clients insuring all open **fieldday.mdb** successfully as their log file.

FALLBACK

If there are repeated problems using the network for logging, clients can fallback to logging locally.

1. Clients startup the logging software
2. Connect to the **LogData.mdb** file locally in **C:\Users\XXXX\Documents\Affirmatech\N3FJP Software\ARRL-Field-Day**
3. After Field Day rename the **LogData.mdb** to **YOURCALL.mdb** and EMAIL to one of the Field Day coordinators.