

Connect Pi-Star to Indiana Digital Ham Radio DMRLink

Prerequisites:

*****Must be running Pi-Star Image version of 3.4.5 or Newer.*****

Latest versions tested: PiStar 3.4.8, DVMega 3.18

We are making the assumption that you have already configured the General section. If you have not, please do that now. Should you have questions on that process, please ask on our FB group.

Add Indiana DMR Link information to Pi-Star Custom DMR Host file

1. Log in to Pi-Star via a web browser
 - a. Default credentials are uid: pi-star / pwd: raspberry
2. After logging in to Pi-Star, go to url <http://pi-star/admin/expert>
3. You should see this page:

Pi-Star:3.4.6 / Dashboard:20171101

Pi-Star Digital Voice - Expert Editor

Dashboard | Admin | Update | Backup/Restore | Configuration

Edit: DStarRepeater | MMDVMHost | DMRGateway | YSFGateway | P25Gateway | ircDDBGateway | TimeServer | PiStar-Remote | SSH Access

Expert Editors

****WARNING****

Pi-Star Expert editors have been created to make editing some of the extra settings in the config files more simple, allowing you to update some areas of the config files without the need to login to your Pi over SSH.

Please keep in mind when making your edits here, that these config files can be updated by the dashboard, and that your edits can be over-written. It is assumed that you already know what you are doing editing the files by hand, and that you understand what parts of the files are maintained by the dashboard.

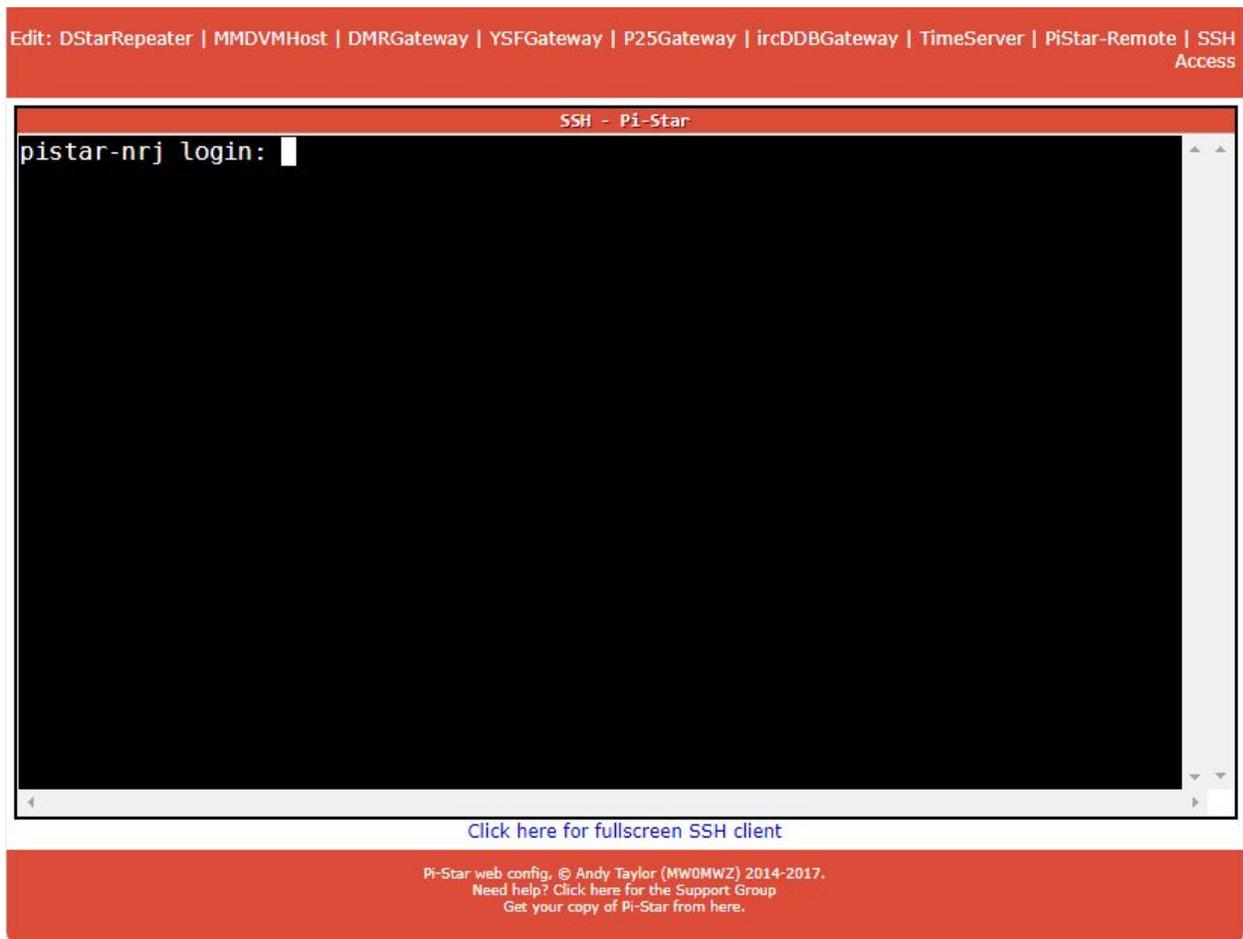
With that warning in mind, you are free to make any changes you like, for help come to the Facebook group (link at the bottom of the page) and ask for help if / when you need it.
73 and enjoy your Pi-Star experience.
Pi-Star UK Team.

Pi-Star / Pi-Star Dashboard, © Andy Taylor (MW0MWZ) 2014-2017.
ircDDBGateway Dashboard by Hans-J. Barthen (DL5DI),
MMDVMDash developed by Kim Huebel (DG9VH),
Need help? Click here for the Support Group
Get your copy of Pi-Star from here.

4. Click on SSH Access



You should see a SSH session open up.



5. Click on “Click here for fullscreen SSH Client” underneath the session window to increase the size of the Session Window.

Edit: DStarRepeater | MMDVMHost | DMRGateway | YSFGateway | P25Gateway | ircDDBGateway | TimeServer | PiStar-Remote | SSH Access

SSH - Pi-Star

```
pistar-nrj login: █
```

[Click here for fullscreen SSH client](#)

Pi-Star web config, © Andy Taylor (MW0MWZ) 2014-2017.
Need help? Click here for the Support Group
Get your copy of Pi-Star from here.

Log into the SSH session using your pi-star credentials.

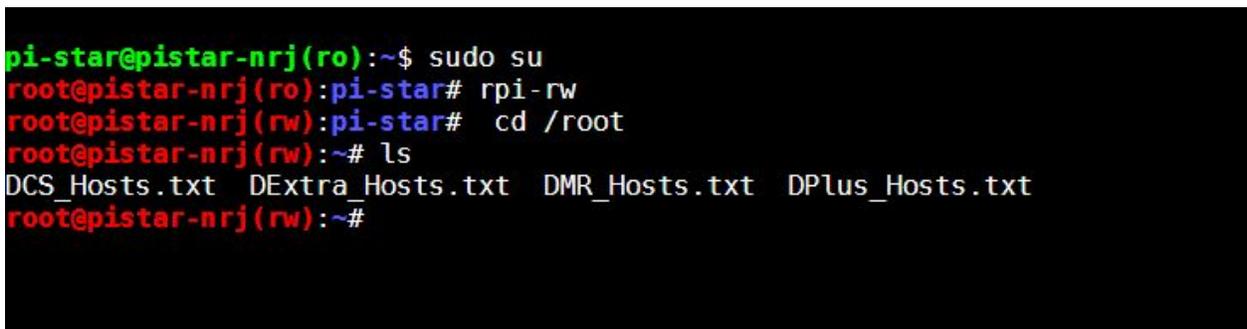
3. Type rpi-rw and press enter. This will disable write protection until the RPi is rebooted

A screenshot of a terminal window with a black background and red text. At the top, the text "PI-STAR" is displayed in a large, stylized, red, blocky font. To the right of this text, "v3.4.6" is written in a smaller red font. Below the logo, there is white text providing instructions: "From your Windows Computer: Pi-Star Dashboard: http://pi-star/" and "From your Apple iPhone, iPad, Macbook, iMac etc. Pi-Star Dashboard: http://pi-star.local/". Further down, there is blue text: "Pi-Star's disk is read-only by default, enable read-write with 'rpi-rw'." and "Pi-Star built by Andy Taylor (MW0MWS), pi-star tools all start 'pistar-'." The terminal shows a user prompt "pi-star@pistar-nrj(ro):~\$" followed by the command "sudo su", which changes the prompt to "root@pistar-nrj(ro):pi-star#". The user then enters "rpi-rw", and the prompt changes to "root@pistar-nrj(rw):pi-star#".

```
PI-STAR v3.4.6
From your Windows Computer:
Pi-Star Dashboard:      http://pi-star/
From your Apple iPhone, iPad, Macbook, iMac etc.
Pi-Star Dashboard:     http://pi-star.local/
Pi-Star's disk is read-only by default, enable read-write with "rpi-rw".
Pi-Star built by Andy Taylor (MW0MWS), pi-star tools all start "pistar-".
pi-star@pistar-nrj(ro):~$ sudo su
root@pistar-nrj(ro):pi-star# rpi-rw
root@pistar-nrj(rw):pi-star#
```

4. Next, type cd /root and press enter to change to the root directory.

5. Type ls and press enter to make sure DMR_Hosts.txt is present.

A screenshot of a terminal window with a black background and red text. The terminal shows a user prompt "pi-star@pistar-nrj(ro):~\$" followed by the command "sudo su", which changes the prompt to "root@pistar-nrj(ro):pi-star#". The user then enters "rpi-rw", and the prompt changes to "root@pistar-nrj(rw):pi-star#". The user then enters "cd /root", and the prompt changes to "root@pistar-nrj(rw):~#". Finally, the user enters "ls", and the terminal displays the output: "DCS_Hosts.txt DExtra_Hosts.txt DMR_Hosts.txt DPlus_Hosts.txt".

```
pi-star@pistar-nrj(ro):~$ sudo su
root@pistar-nrj(ro):pi-star# rpi-rw
root@pistar-nrj(rw):pi-star# cd /root
root@pistar-nrj(rw):~# ls
DCS_Hosts.txt  DExtra_Hosts.txt  DMR_Hosts.txt  DPlus_Hosts.txt
root@pistar-nrj(rw):~#
```

6. Now, edit the DMR_Hosts.txt file using your favorite editor. The following instructions will use nano editor.

7. At the prompt, type nano DMR_Hosts.txt and press enter.

```

pi-star@pistar-nrj(ro):~$ sudo su
root@pistar-nrj(ro):pi-star# rpi-rw
root@pistar-nrj(rw):pi-star# cd /root
root@pistar-nrj(rw):~# ls
DCS_Hosts.txt  DExtra_Hosts.txt  DMR_Hosts.txt  DPlus_Hosts.txt
root@pistar-nrj(rw):~# nano DMR_Hosts.txt

```

8. The nano editor should appear with DMR_Hosts.txt in edit mode.

```

GNU nano 2.2.6                               File: DMR_Hosts.txt
# Custom DMR_Hosts.txt
#
# Written for Pi-Star Digital Voice Node by Andy Taylor (MW0MWZ)
#
# The format of this file is the name of the reflector followed by its
# IP address / Hotname / Password. TAB delimited only NO SPACES!!
#
# Please ensure BrandMeister Masters are prefixed with BM_
# Please ensure Phoenix / DMR+ Masters are prefixed with DMR+_
#
# Passwords / Ports ARE important too!
#
#####
#
# Custom DMR Hosts
#
#####
# Name                DMR-ID  IP/Hostname          Password            Port #
#####
#BM Custom_01         1234    1.2.3.4              password           62031
#DMR+_Custom_01      1234    1.2.3.4              PASSWORD           55555
#####

```

9. Move the cursor to the bottom of the file, underneath the last row of pound signs.

10. Add the following information from: <http://www.indianadmr.org/mmdvm-connectivity/>

Configuration Option	Value
Server	dmrlink-hotspot.nf9k.net
Port	62030
Password	1nd1anaDMR

11. Per the instructions in the file, do not use spaces between fields. Only use TABS. It may take multiple tabs to line up the columns with the examples.

12. The entry should look like this:

```
#####  
#  
#                               Custom DMR Hosts  
#  
#####  
# Name                          DMR-ID  IP/Hostname                Password      Port #  
#####  
#BM_Custom_01                   1234    1.2.3.4                   password     62031  
#DMR+_Custom_01                 1234    1.2.3.4                   PASSWORD     55555  
#####  
US_IndianaDMRLink_01           1234    dmrlink-hotspot.indianadmr.org  IndianaDMR  62030
```

13. Press the control key + O (letter o) to save the changes.

You'll see a prompt asking what file to save to:

```
#####  
US_IndianaDMRLink_01           1234    dmrlink-hotspot.indianadmr.org  IndianaDMR  62030  
#####  
File Name to Write: DMR_Hosts.txt  
^G Get Help      M-D DOS Format      M-A Append  
^C Cancel        M-M Mac Format      M-P Prepend
```

14. Press the Enter key to save as the same file name.

15. Press control + X to exit the nano editor.

17. Type exit and press enter to logout as root. Repeat one more time to log out as pi-star.

When you receive the Session Closed message, you can close the web browser window/tab.

18. Open up pi-star config again using <http://pi-star/>

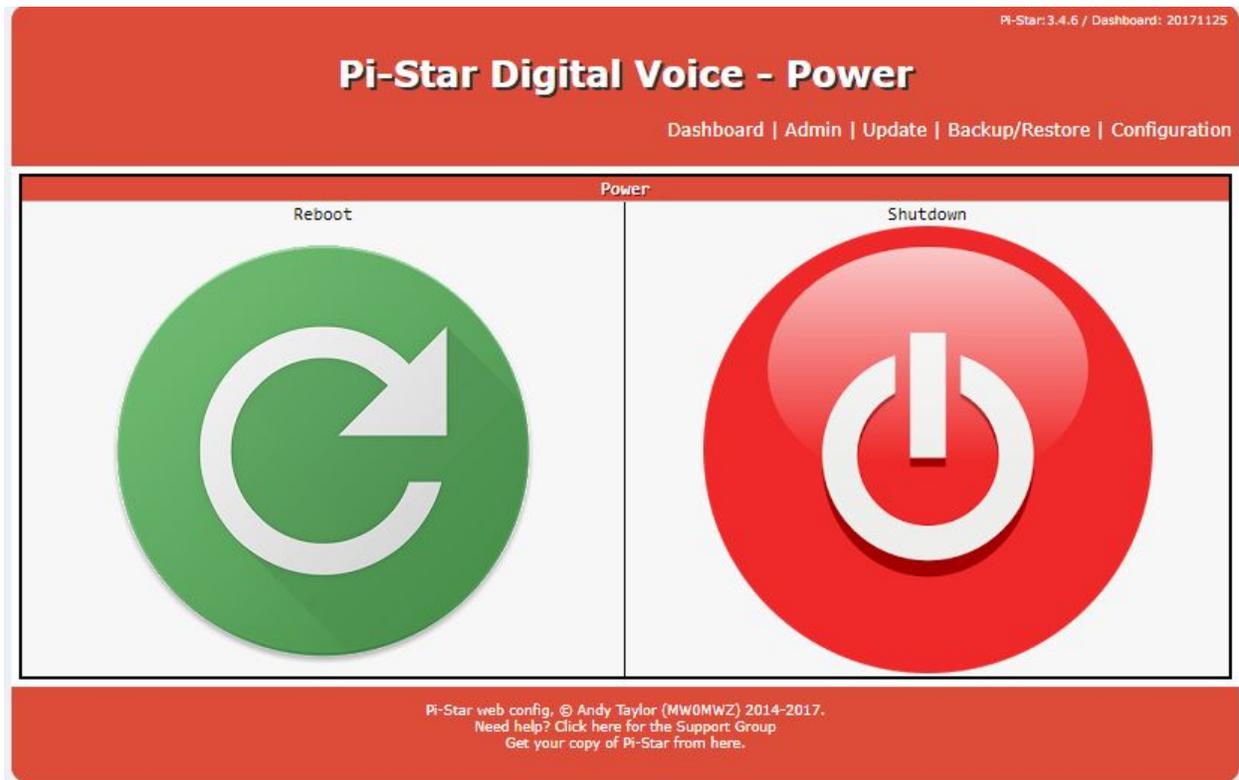
19. Select Admin.



20. Select Power

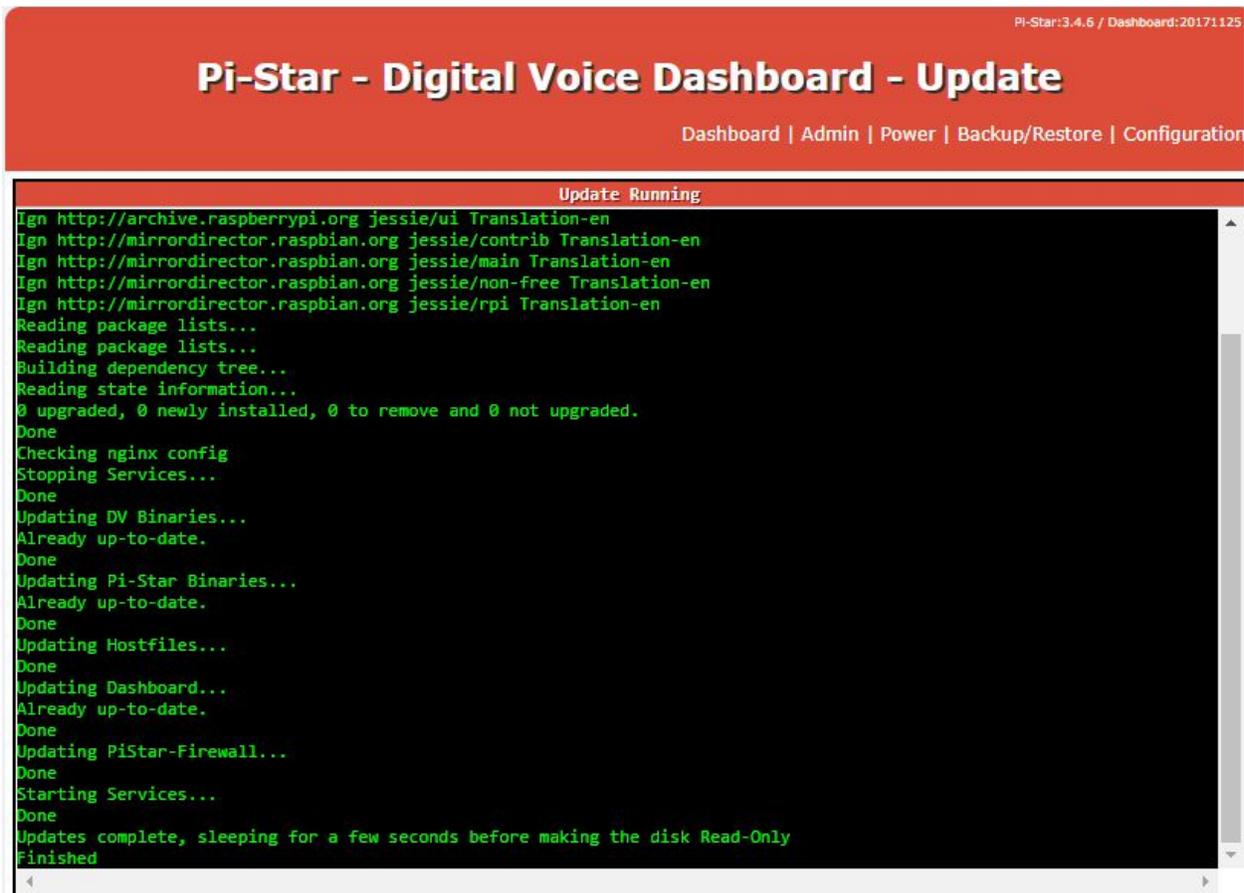


21. Then select Reboot.



22. The web interface should reload once the device reboots. If not, open the pi-star config again. You may have to login again.

23. Go to Admin and select update. (Once the update is completed, the custom host file that was edited, is written to the host file that PI-Star uses). You can also use the update option under the Configuration menu.

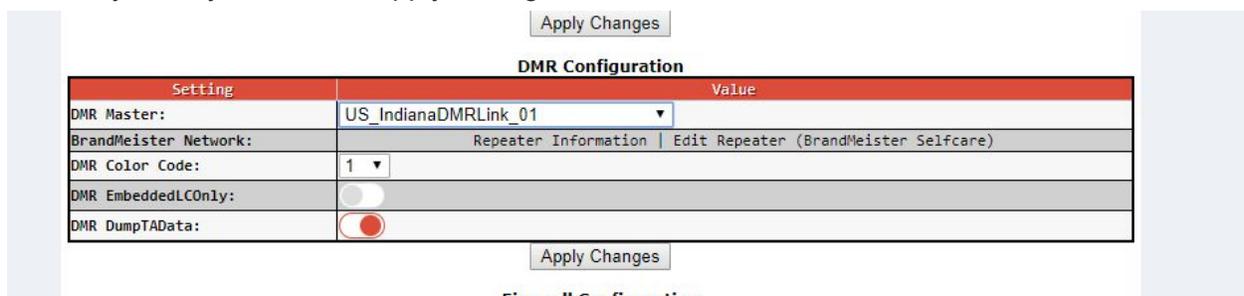


24. Once the update completes, reboot Pi-Star.

25. Your login may be preserved during the reboot. If not, log back into Pi-Star.

26. Go to Configuration

27. Go to the DMR Configuration Section and in the DMR Master drop down list, select US_IndianaDMRLink_01 and apply the changes. If you do not see the DMR Configuration section, you may have to hit Apply Changes under the Control Software section.



28. Pi-Star will restart its services and should connect to the IndianaDMR Hotspot link server.

29. Go to the Pi-Star Dashboard and DMR should show green, which indicates that it's connected and the Master Server should show US_IndianaDMR_Link_01

Pi-Star Digital Voice Dashboard for K9NRJ

Dashboard | Admin

Modes Enabled		Gateway Activity					
Time (EST)	Mode	Callsign	Target	Src	Dur(s)		
D-Star	DMR						
YSF	P25						

Network Status		Local RF Activity					
Time (EST)	Mode	Callsign	Target	Src	Dur(s)		
D-Star Net	DMR Net						
YSF Net	P25 Net						
Internet							

Radio Info	
Trx	
Tx	436.000000 MHz
Rx	436.000000 MHz
FW	DVMEGA HR3.18

DMR Repeater	
DMR ID	3118098
DMR CC	1
TS1	disabled
TS2	enabled
not linked/not linked	
DMR Master	
US IndianaDMRLink 01	

Pi-Star / Pi-Star Dashboard, © Andy Taylor (MW0MWZ) 2014-2017.
 ircDDBGateway Dashboard by Hans-J. Barthen (DL5DI),
 MW0MWZ, DL5DI, DL5DZ, DL5DQ, DL5DR, DL5DS, DL5DT, DL5DU, DL5DV, DL5DW, DL5DX, DL5DY, DL5DZ

Change log

<u>Version</u>	<u>User</u>	<u>Date</u>	<u>Details</u>
1.0	MarkB	11/30/2017	Initial Document
1.1	MarkB	12/07/2017	Added a change log table
1.2	NF9K KD9GFX	12/08/2017	<p>Hostname in hyperlink had a, "j," in it.</p> <p>Made a note that it might take multiple tab presses to line up columns in nano when editing custom files.</p> <p>Included suggestion to type exit and hit enter twice to fully log out of shell as well as closing the browser when done.</p> <p>Step #22 - Updated to reflect auto-load which may be observed if you wait after the update.</p> <p>Updated location of the Update option based upon observations in v3.48.</p> <p>Step 25 - Did not need to re-login after rebooting. This may happen and wanted to at least mention it. Similar results discovered during Step 22.</p> <p>Step 27 - Even though MMDVMHost was selected, DSTAR config was will on-screen until Apply was clicked. Once Apply is pressed, then the DMR configuration is displayed.</p> <p>(Pi-Star 3.4.8 and DVMega 3.18).</p>
1.3	NF9K	1/20/2018	<p>Changed title and filename to reflect new FB page and internet domains.</p> <p>Updated FQDN for DMRLink server.</p> <p>Minor formatting update for page breaks.</p>