

24 February 2021

Simon G7RZU

So, there are two main ways of running FreeDMR to support repeaters and hotspots. One is using `hotspot_proxy_v2.py`, which provides connectivity over a single port (62031 by convention) and provides the ability to set config like static TGs etc using Options primarily. Options will always override what is set in the config file or the DB. For this setup, using the hotspot proxy as configured as standard, you would use a config like this:

```
[SYSTEM] 20:23
MODE: MASTER
ENABLED: True
REPEAT: True
MAX_PEERS: 1
EXPORT_AMBE: False
IP: 127.0.0.1
PORT: 54000
PASSPHRASE:
GROUP_HANGTIME: 5
USE_ACL: True
REG_ACL: DENY:1
SUB_ACL: DENY:1
TGID_TS1_ACL: PERMIT:ALL
TGID_TS2_ACL: PERMIT:ALL
DEFAULT_UA_TIMER: 999
SINGLE_MODE: True
VOICE_IDENT: False
TS1_STATIC:
TS2_STATIC:
DEFAULT_REFLECTOR: 0
GENERATOR: 100
```

This generates 100 ports starting at 54000 20:23

Next you run `python3 ./hotspot_proxy_v2.py` 20:24

JL [Joao Carlos Lopes HB3XPL](#) 20:24
And we need mysql for that ???

SG [Simon G7RZU](#) 20:25
This allows all clients to connect on 62031 and maps them through to the backend ports on the local host.

No, not for that. 20:25

CV [Catalin Mihai Vatra](#) 20:25
 What do you use the database for?

SG [Simon G7RZU](#) 20:25
 The second way is to use MySQL

we use MySQL for repeaters (although you don't have to) 20:25

in MySQL, each system has a row. Each system in MySQL 20:26
 should be assigned a unique port.

Then, you can have a web interface or similar for admin. 20:26

and you can set your own passwords if required 20:26

CV [Catalin Mihai Vatra](#) 20:26
 In reply to [this message](#)
 Each repeater?

SG [Simon G7RZU](#) 20:26
 and any changes made in the database are propogated in to the
 running server within 30 secs per change

JL [Joao Carlos Lopes HB3XPL](#) 20:26
 And if you create à peer how to pass traffic to Master with sql

SG [Simon G7RZU](#) 20:27
 we use method 1 for hotspots

and method 2 for repeaters 20:27

but you don't have to 20:27

method one is fine for all, if that's what you want. 20:27

We don't recommend using the config file for MASTER 20:28
 systems, unless you are also using GENERATE, as per first
 example, generally.

In reply to [this message](#) 20:28
 What do you mean by that.

Why a peer? 20:28

JL [Joao Carlos Lopes HB3XPL](#) 20:29
 Ok but there are many files in freedmr repo, expl [bridge.py](#)
 bridge_all, bridge etc etc witch one use

SG [Simon G7RZU](#) 20:29
 bridge_master.py is the on for all of the FreeDMR functionality.

[bridge.py](#) is essentially stock HBLink, but with protocol 20:30
 fixes and enhancements that I have developed back ported to it.

bridge_all.py ins the stock bridge_all.py from HBLink 20:30

so basically, 99% of new functionality is accessed via using
bridge_master.py This is the one you want to use.

JL [Joao Carlos Lopes HB3XPL](#) 20:31
But whitout mysql

SG [Simon G7RZU](#) 20:31
as per the instructions on the wiki on github.

You turn on / off SQL in the config file. 20:31

only bridge_master.py supports SQL 20:31

JL [Joao Carlos Lopes HB3XPL](#) 20:31
Yeßsssssssssss

Got it 20:31

SG [Simon G7RZU](#) 20:31
glad I could help 😊

JL [Joao Carlos Lopes HB3XPL](#) 20:31
Thanks thats all the info i need

SG [Simon G7RZU](#) 20:32
no worries. Sorry it took a while to get you the info.

This all needs to make it's way onto the wiki. 20:32

JL [Joao Carlos Lopes HB3XPL](#) 20:32
And for the Opb config

SG [Simon G7RZU](#) 20:32
when you are ready to bridge with us, I will send you a ready-
made OBP config block for your server

JL [Joao Carlos Lopes HB3XPL](#) 20:33
Everythings ready heheheh all i need is that info ive donne it all
right

SG [Simon G7RZU](#) 20:33
complete your testing with it running local-only, then when you
are happy , send me a request and we can connect to the
network.

JL [Joao Carlos Lopes HB3XPL](#) 20:34
Its up tested and runing

SG [Simon G7RZU](#) 20:34
ok. I will send you bridge info later this evening, just send me
your IP or hostname.

JL Joao Carlos Lopes HB3XPL 20:35
In Private

SG Simon G7RZU 20:35
yes

JL Joao Carlos Lopes HB3XPL 20:36
Ok 1000000000 thanks in 20 sec you Light us

SG Simon G7RZU 20:36
👍

CV Catalin Mihai Vatra 20:39
What about SINGLE_MODE? should we set it to false?

CV Catalin Mihai Vatra 21:17
Somethong is wrong

A client connects to every master of the 100 generated 21:17

SG Simon G7RZU 21:19
Single mode should usually be true. This ensures that only 1 tg is active on a timeslot at a time

CV Catalin Mihai Vatra 21:19
In reply to [this message](#)
What do I do wrong?

SG Simon G7RZU 21:19
please set ALLOW_NULL_PASSPHRASE: True

try that 21:19

then if it doesn't work, post what is happening in your log here 21:19

you can check the settings for the proxy inside the hotspot_proxy_v2.py 21:20

also, can you post which version of FreeDMR you are running? is it a tag version (v1.1.2 for example) or is it latest development from github 21:21

CV Catalin Mihai Vatra 21:21
#*** CONFIG HERE ***

Master = "[127.0.0.1](#)"
ListenPort = 62031
DestportStart = 54000
DestPortEnd = 54100
Timeout = 30
Stats = False
Debug = False
BlackList = [1234567]

almost 600 hotspots with no issue.

[@G4TSN](#) any ideas?

21:27

CV [Catalin Mihai Vatra](#)

21:28

```
##### CONFIG HERE #####
```

```
Master = "127.0.0.1"  
ListenPort = 62031  
DestportStart = 54000  
DestPortEnd = 54100  
Timeout = 30  
Stats = False  
Debug = False  
BlackList = [1234567]
```

```
#####
```

SG [Simon G7RZU](#)

21:28

please run proxy in a terminal with STATS: True

```
Stats = True
```

21:28

CV [Catalin Mihai Vatra](#)

21:29

just a sec

```
b'RPTL\x12\x8f\xb6\xb7'
```

21:30

```
b'RPTACK\x19\x82\xbd '
```

```
b'RPTK\x12\x8f\xb6\xb7\xb3\xde\xe8\xadv7(\xd0S  
\x94p\x80\xb9a\rL\xa9\xc6\xc5\xcd\xc7\xa1#\xb7H>|  
\x8d\xaf\xa1\xce\xcf'
```

```
b'RPTACK\x12\x8f\xb6\xb7'
```

```
b'RPTC\x12\x8f\xb6\xb7KN4MSH
```

```
4388000043380000010141.73329-50.39989000Atlanta,  
GA, US MMDVM_Bridge 4https://groups.io/g/DVSwitch  
20201129_V1.6.2 MMDVM_DMO '
```

```
b'RPTACK\x12\x8f\xb6\xb7'
```

```
b'RPTL\r}=\xf7'
```

```
dead b'\r}=\xf7'
```

```
b'RPTL\r}=\xb0'
```

```
dead b'\r}=\xb0'
```

```
b'RPTPING\x12\x8f\xb6\xb7'
```

```
b'MSTPONG\x12\x8f\xb6\xb7'
```

```
b'RPTL\x0eW\xb1\x85'
```

```
dead b'\x0eW\xb1\x85'
```

```
b'RPTL\r}=\xf7'
```

```
dead b'\r}=\xf7'
```

```
b'RPTPING\x12\x8f\xb6\xb7'
```

```
b'MSTPONG\x12\x8f\xb6\xb7'
```

```
b'RPTL\x0eW\xb1\x85'
```

```
dead b'\x0eW\xb1\x85'
```

```
1 ports out of 100 in use (99 free)
```

```
b'RPTL\r}=\xf7'
```

```
dead b'\r}=\xf7'
```

```
b'RPTL\r}=\xb0'
```

```
dead b'\r}=\xb0'
```

```
b'RPTPING\x12\x8f\xb6\xb7'
```

b'MSTPONG\x12\x8f\xb6\xb7'
b'RPTL\x0eW\xb1\x85'
dead b'\x0eW\xb1\x85'
b'RPTPING\x12\x8f\xb6\xb7'

root@hera:/data/hamradio/FreeDMR# python3 21:31
./hotspot_proxy_v2.py
0 ports out of 100 in use (100 free)

1 ports out of 100 in use (99 free)
1 ports out of 100 in use (99 free)
1 ports out of 100 in use (99 free)

SG Simon G7RZU 21:31
Only 1 port is being used

CV Catalin Mihai Vatra 21:31
I see that... For all masters
maybe the generator does not work as expected 21:32

SG Simon G7RZU 21:32
in the log – does it look like 100 systems are pinging or just one
it could be a dashboard problem 21:32

CV Catalin Mihai Vatra 21:33
IT IS NOT A DASH PROBLEM
it reject other nodes 21:33

```
DEBUG (FreeDMR-72) Master maintenance loop started  
DEBUG (FreeDMR-74) Master maintenance loop started  
DEBUG (FreeDMR-77) Master maintenance loop started  
DEBUG (FreeDMR-80) Master maintenance loop started  
DEBUG (FreeDMR-83) Master maintenance loop started  
DEBUG (FreeDMR-86) Master maintenance loop started  
DEBUG (MOTEST) Trimming inactive stream IDs from system lists  
DEBUG (REPORT) Periodic reporting loop started  
DEBUG (REPORT) Send results  
INFO (MOTEST) Trimming inactive stream IDs from system lists  
WARNING (FreeDMR-89) Registration denied from Radio ID: 21400311 Maximum number of peers exceeded  
WARNING (FreeDMR-92) Registration denied from Radio ID: 226311673 Maximum number of peers exceeded  
WARNING (FreeDMR-14) Registration denied from Radio ID: 226311600 Maximum number of peers exceeded
```

JL Joao Carlos Lopes HB3XPL 21:33
Try sp2ong HBMonv2 its perfect

CM Carlos Minguela (KP4CA) 21:38
In reply to [this message](#)
x2 Waldek HBMonv2 is great.

JL Joao Carlos Lopes HB3XPL 21:39
In reply to [this message](#)
Perfect

SG Simon G7RZU 21:46
[@YO3CAT](#) please leave this with me. You are right, GENERATE is
a new feature and there may be an issue. Let me confirm before
we go any further. Thank you 😊

It's a pythonism! 21:53

hang on, a fix will be out shortly 21:53

CM [Carlos Minguela \(KP4CA\)](#) 21:54
Hi Simon. First, thanks for all the help and knowledge that you share with us. Question. It is posible to run a FreeDMR Server for Hotspots and Repeaters at the same time? If it could be done via the database way or the master?

SG [Simon G7RZU](#) 21:55
Yes Carlos, you can do both on the same server.
There is no reason repeaters can't connect in same way as hotspot either, if you are happy using options= to set statics etc 21:55

CM [Carlos Minguela \(KP4CA\)](#) 21:56
Great. Got it. Thank you.

JL [Joao Carlos Lopes HB3XPL](#) 21:57
Simon for president.....hihihi

SG [Simon G7RZU](#) 21:58
You can even run multiple instances of bridge_master on the same server if you wish

SG