

CharmBUG Meeting



CharmBUG

September 15th, 2020

Agenda

- CharmBUG News
- Upcoming BSD Events
- Upcoming CharmBUG Meetups
- VPN'othon

CharmBUG

- Founded: January 2016
- CharmBUG Organization LLC – June 2018
- CharmBUG Sponsors:



- CharmBUG Organizers:

Michael Shirk

Shawn Webb

Dylan Cochran

JT Pennington

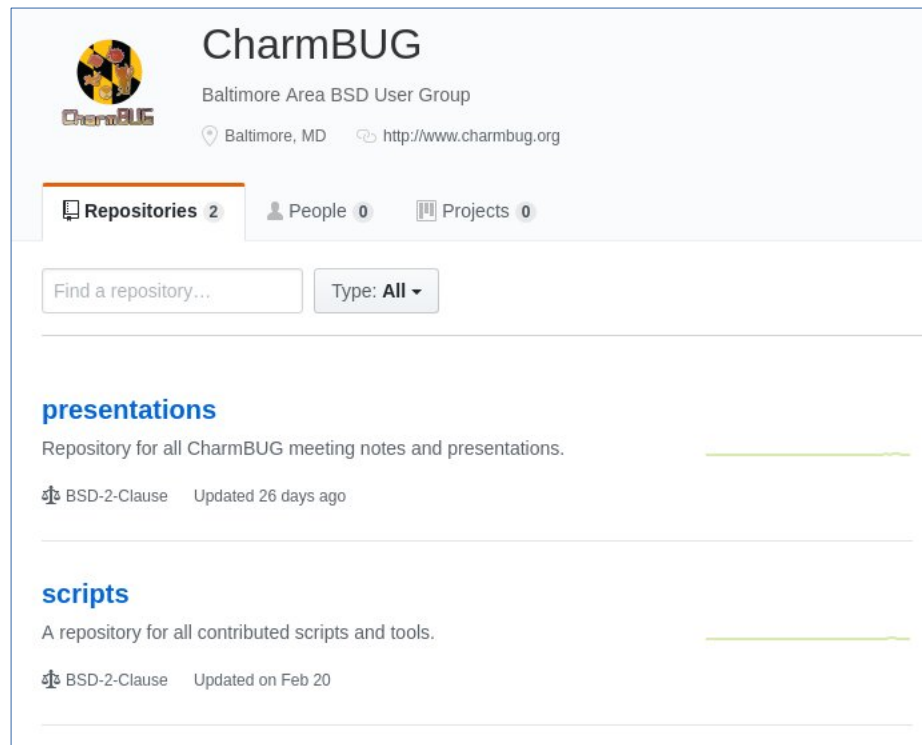
Ash Gokhale

CharmBUG

- Now 90+ BUG members on meetup.com
- Communication for CharmBUG
 - IRC #CharmBUG on irc.freenode.net
 - <https://www.charmbug.org> (redirects to the meetup.com site)
 - CharmBUG Mailing List (bringing it back, provided by NYCBUG).
- Locations and Schedule
 - Casual Meetups the Last Week of the month at 7:00PM (Online in the short-term)
 - Every two months, Baltimore Casual at Guinness Open Gate Brewery, SouthWest Casual at The Ale House of Columbia
 - Formal meetings will be held at Unallocated Space (Online in the short-term)
 - See Meetup.com for schedule
 - Every two months, the second Tuesday of the month.
 - Mix of Casual Meetings and Formal Talks.

CharmBUG

- CharmBUG Repo
- <https://github.com/charmbug>



CharmBUG

- CharmBUG Presentation Wiki
- Let us know what talks you would like to hear, or topics you would to see at an upcoming CharmBUG Meetup:
- <https://github.com/charmbug/presentations/wiki>

Upcoming BSD Events

- EuroBSDCon 2020 (Canceled)
 - 9/17/2020 – 9/20/2020
 - Vienna, Austria
- AsiaBSDCon 2021
 - No news yet.

Upcoming CharmBUG Meetups

- Casual BSD Meetup (Online)
 - 10/27/2020 7:00PM
 - <https://meet.jit.si/CharmBUG>
- CharmBUG Meeting – TBD (Online)
 - 11/17/2020 7:00PM
 - <https://meet.jit.si/CharmBUG>

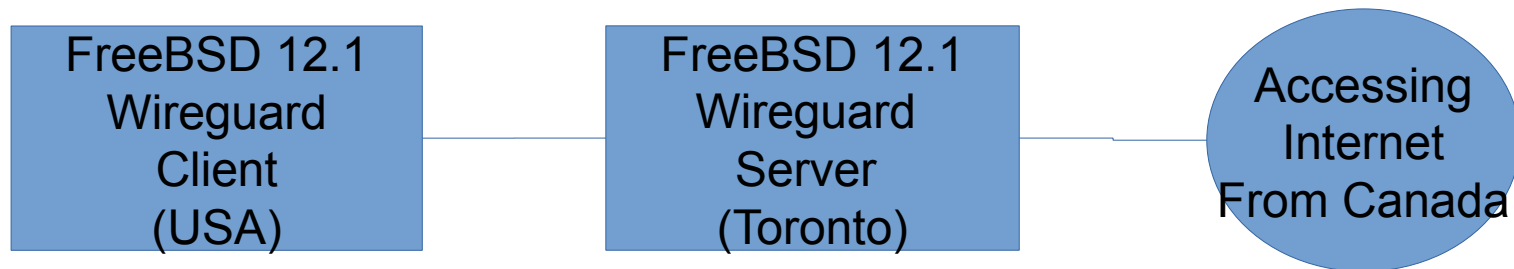
Tonight's Activity

- VPN'othon
 - The goal for tonight is to work on and share VPN configurations that work for FreeBSD/OpenBSD and see what works, and what doesn't.
 - Information will be collected and added to this slide deck for future reference.

Thanks for coming.

VPN'othon

- Wireguard
 - Decided on setting up a VPC with Digital Ocean, using FreeBSD as the client and server for Wireguard.



VPN'othon

- Wireguard
 - Setup for the wireguard server
 - Includes the install of wireguard, and the setup of pf, routing.

```
# pkg install -y wireguard
# sysrc wireguard_enable="YES"
# sysrc wireguard_interfaces="wg0"
# sysrc wireguard_env=""
# sysrc gateway_enable="YES"
# sysrc pf_enable="YES"
# sysrc pf_rules="/etc/pf.conf"
# sysrc pf_program="/sbin/pfctl"
# sysrc pf_flags=""
```

VPN'othon

- Wireguard
 - Setup for the wireguard server
 - Includes the install of wireguard, and the setup of pf, routing.

```
# cat << EOF > /etc/pf.conf;  
nat on vtnet0 from (wg0) to any -> (vtnet0:0)  
pass in all  
pass out on vtnet0 proto tcp all  
pass out on vtnet0 proto udp all  
EOF  
# reboot  
(this ensures pf is running and all rc.conf variables are  
applied)
```

VPN'othon

- Wireguard
 - Setup for the wireguard server
 - Public/Private key generation for Server
 - (Public key required for clients).

```
# cd /usr/local/etc/wireguard
# wg genkey | tee privatekey | wg pubkey > publickey
# chmod 500 *
```

VPN'othon

- Wireguard
 - Setup for the wireguard server
 - wg0.conf for server

```
# cat << EOF > /usr/local/etc/wireguard/wg0.conf;  
[Interface]  
Address = 192.168.13.1/24  
PrivateKey = <server private key>  
ListenPort = 51820  
  
[Peer]  
PublicKey = <client public key>  
AllowedIPs = 192.168.13.0/24  
EOF
```

VPN'othon

- Wireguard
 - Startup of wireguard service (Using the wg-quick script to test)

```
# wg-quick up wg0
[#] wireguard-go wg0
INFO: (wg0) 2020/09/16 01:15:20 Starting wireguard-go
version 0.0.20200320
[#] wg setconf wg0 /tmp/tmp.Z0j64ZKU/sh-np.MtU0lH
[#] ifconfig wg0 inet 192.168.13.1/24 192.168.13.1 alias
[#] ifconfig wg0 mtu 1420
[#] ifconfig wg0 up
[#] route -q -n add -inet 192.168.13.0/24 -interface wg0
[+] Backgrounding route monitor
```

VPN'othon

- Wireguard client
 - Configuration for the wireguard client
 - (Static IP was set for the client as 192.168.13.30)

```
# cat << EOF > /usr/local/etc/wireguard/wg0.conf;  
[Interface]  
PrivateKey = <client private key>  
Address = 192.168.13.30/24  
DNS = 8.8.8.8  
  
[Peer]  
PublicKey = <server public key>  
AllowedIPs = 0.0.0.0/0  
Endpoint = <server IP>:51820  
PersistentKeepalive = 15
```


VPN'othon

- Wireguard client
 - Starting the client should allow for all of the client traffic to route over the VPN
 - The “AllowedIPs = 0.0.0.0/0” setting on the client will route all traffic over the VPN. If you just want to route traffic for the VPN, change this to reflect the range “AllowedIPs = 192.168.13.0/24”.

VPN'othon

- References

- <https://upcloud.com/community/tutorials/get-started-wireguard-vpn/>
- <https://genneko.github.io/playing-with-bsd/networking/freebsd-wireguard-jail/>