On the way to IPv6-only household

Hello

I'm Pavel Odintsov, the author of open source DDoS detection tool, FastNetMon: https://github.com/pavel-odintsov/fastnetmon

Ways to contact me:

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- github.com/pavel-odintsov
- twitter.com/odintsov_pavel
- IRC, FreeNode, pavel_odintsov
- pavel.odintsov@gmail.com

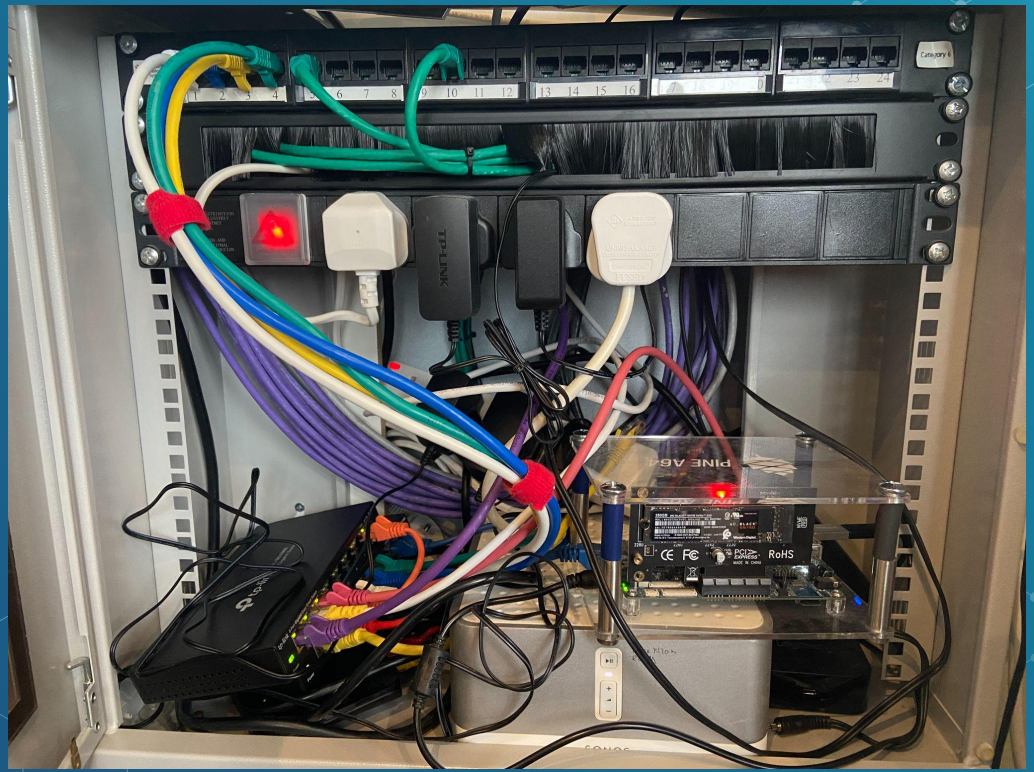
Location

Location


20
Contractor:
Telephone: 0845 330 8615
Project number:
Duration:
Permit number:

Upstream: Nokia HA-140W-B

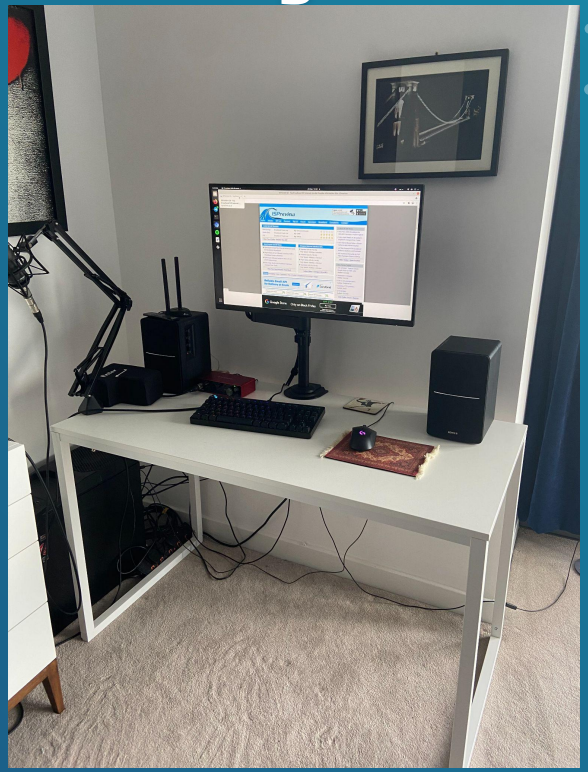
NOC



Network

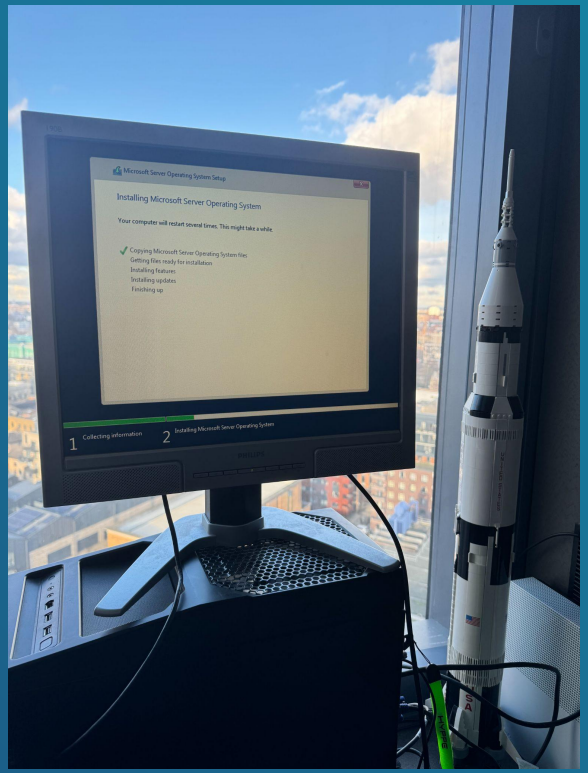

SAT1
SAT2
TV
Radio
LEFT REAR
LEFT
RIGHT
RIGHT REAR
SW
union
Home Systems

Battlestation: AMD Ryzen



Laptop: frame.work

Lab: AMD EPYC


Microsoft Server Operating System Setup
Installing Microsoft Server Operating System
Your computer will restart several times. This might take a while.
Copying Microsoft Server Operating System files
Getting files ready for installation
Installing features
Installing updates
Finishing up
1 Collecting information
2 Installing Microsoft Server Operating System

NAT64 gateway: RockPro 64

Setup: Unbound, DNS 64

```
module-config: "dns64 validator iterator"
```

```
# DNS64 prefix for NAT64:
dns64-prefix: 64:ff9b::/96
```

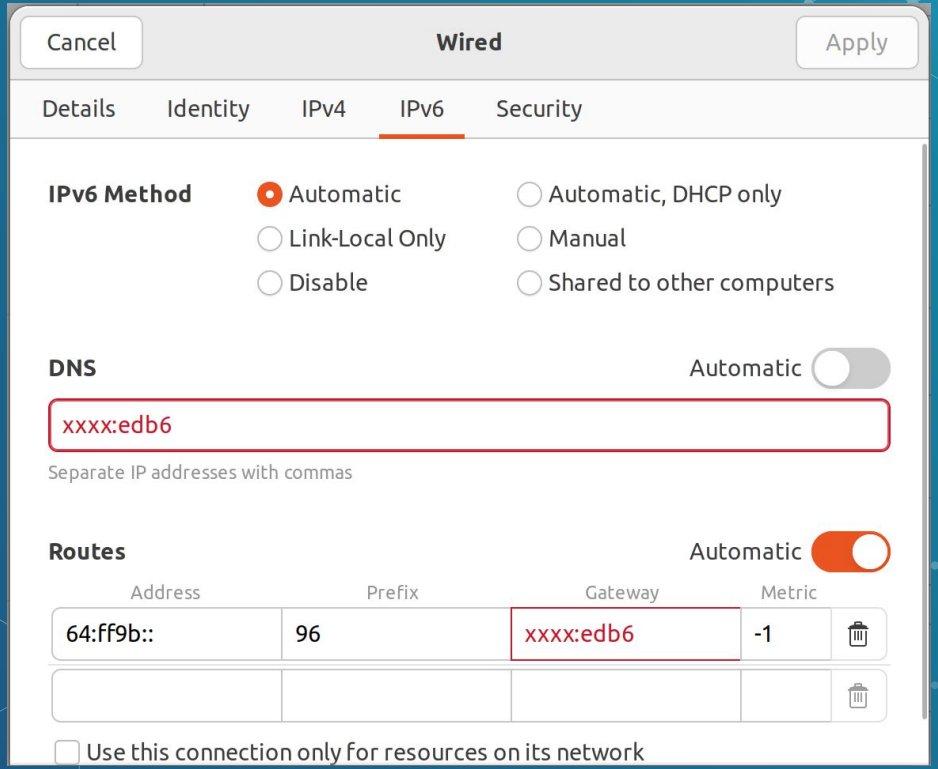
Setup: Unbound, DNS 64

```
dig -t aaaa github.com @2001:4860:4860::64

; <<>> DiG 9.18.12-0ubuntu0.22.04.3-Ubuntu <<>> -t aaaa github.com @2001
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 37258
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; QUESTION SECTION:
;github.com.            IN  AAAA

;; ANSWER SECTION:
github.com.     60  IN  AAAA    64:ff9b::8c52:7903

;; Query time: 12 msec
;; SERVER: 2001:4860:4860::64#53(2001:4860:4860::64) (UDP)
;; WHEN: Wed Oct 04 17:54:46 BST 2023
;; MSG SIZE  rcvd: 67
```

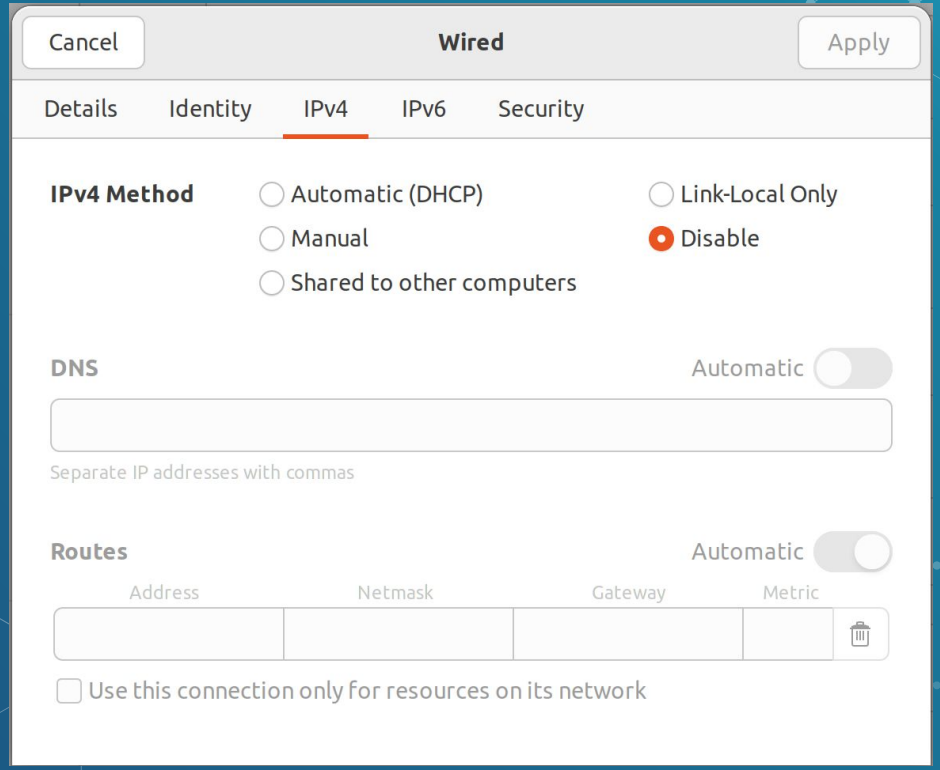
Setup: Tayga, NAT64

```
tun-device nat64

# TAYGA's IPv4 address
ipv4-addr 192.168.1.xx

# TAYGA's IPv6 address
ipv6-addr XXXX

# The NAT64 prefix.
prefix 64:ff9b::/96

# Dynamic pool prefix, not clear what is it
dynamic-pool 192.168.255.0/24

# Persistent data storage directory
data-dir /var/spool/tayga
```

Ubuntu 22.04: specify DNS and route

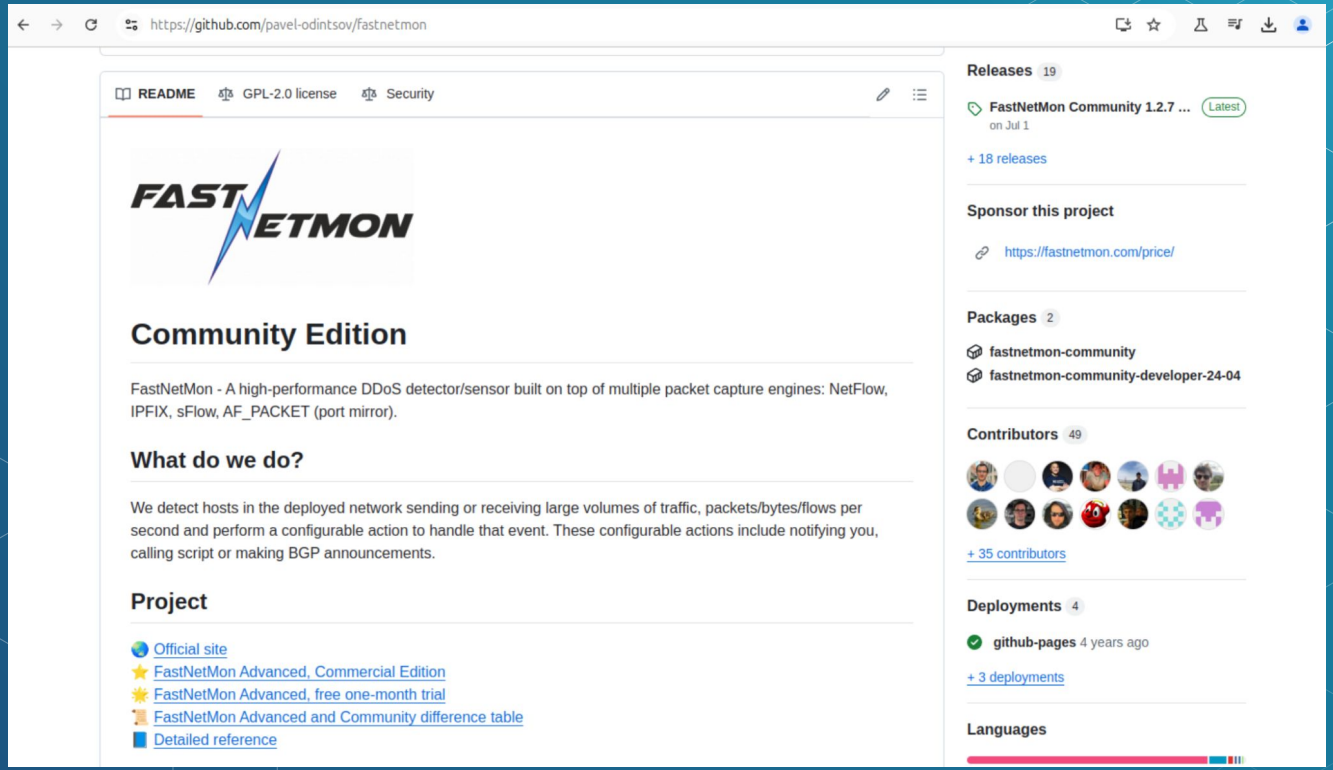


Ubuntu 22.04: switch off IPv4



Let’s connect

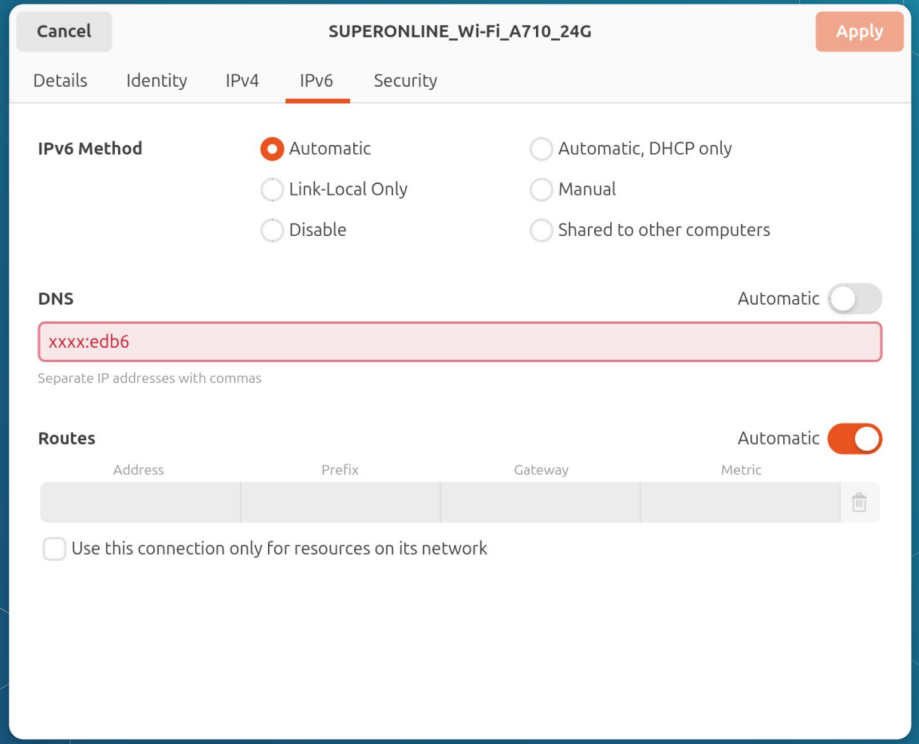
Github


https://github.com/pavel-odintsov/fastnetmon
README
GPL-2.0 license
Security
FASTNETMON
Community Edition
FastNetMon - A high-performance DDoS detector/sensor built on top of multiple packet capture engines: NetFlow, IPFIX, sFlow, AF_PACKET (port mirror).
What do we do?
We detect hosts in the deployed network sending or receiving large volumes of traffic, packets/bytes/flows per second and perform a configurable action to handle that event. These configurable actions include notifying you, calling script or making BGP announcements.
Project
Official site
FastNetMon Advanced, Commercial Edition
FastNetMon Advanced, free one-month trial
FastNetMon Advanced and Community difference table
Detailed reference
Releases 19
FastNetMon Community 1.2.7 ...
Latest
on Jul 1
+ 18 releases
Sponsor this project
https://fastnetmon.com/price/
Packages 2
fastnetmon-community
fastnetmon-community-developer-24-04
Contributors 49
+ 35 contributors
Deployments 4
github-pages 4 years ago
+ 3 deployments
Languages

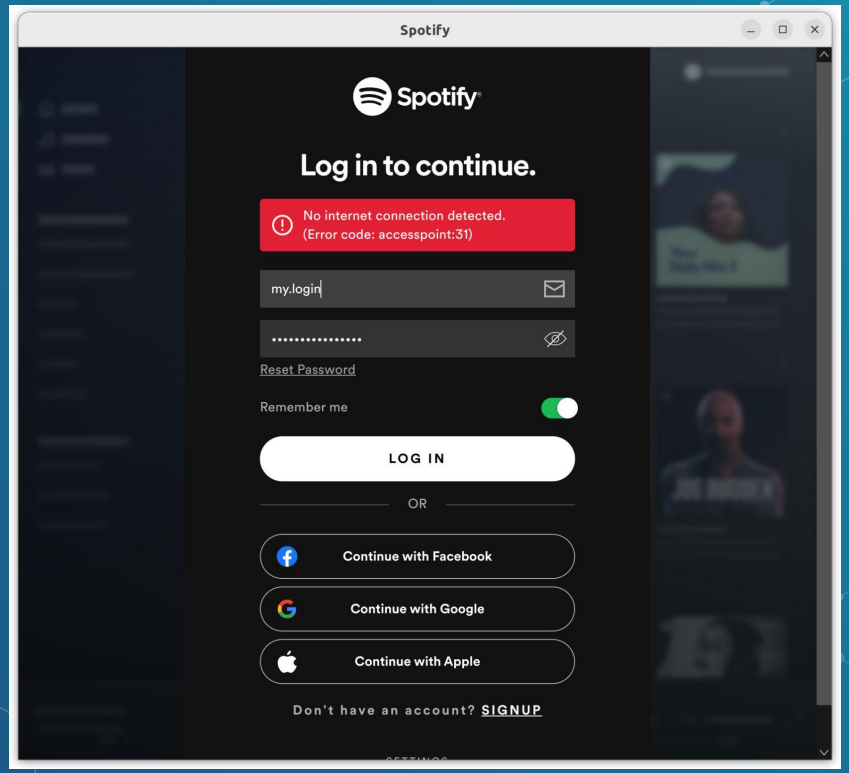
Ubuntu 22.04: radvd, Route Advertisement

```
interface end0 {
    MinRtrAdvInterval 3;

    MaxRtrAdvInterval 5;

    AdvSendAdvert on;

    AdvDefaultLifetime 0;

    route 64:ff9b::/96 {};
};
```

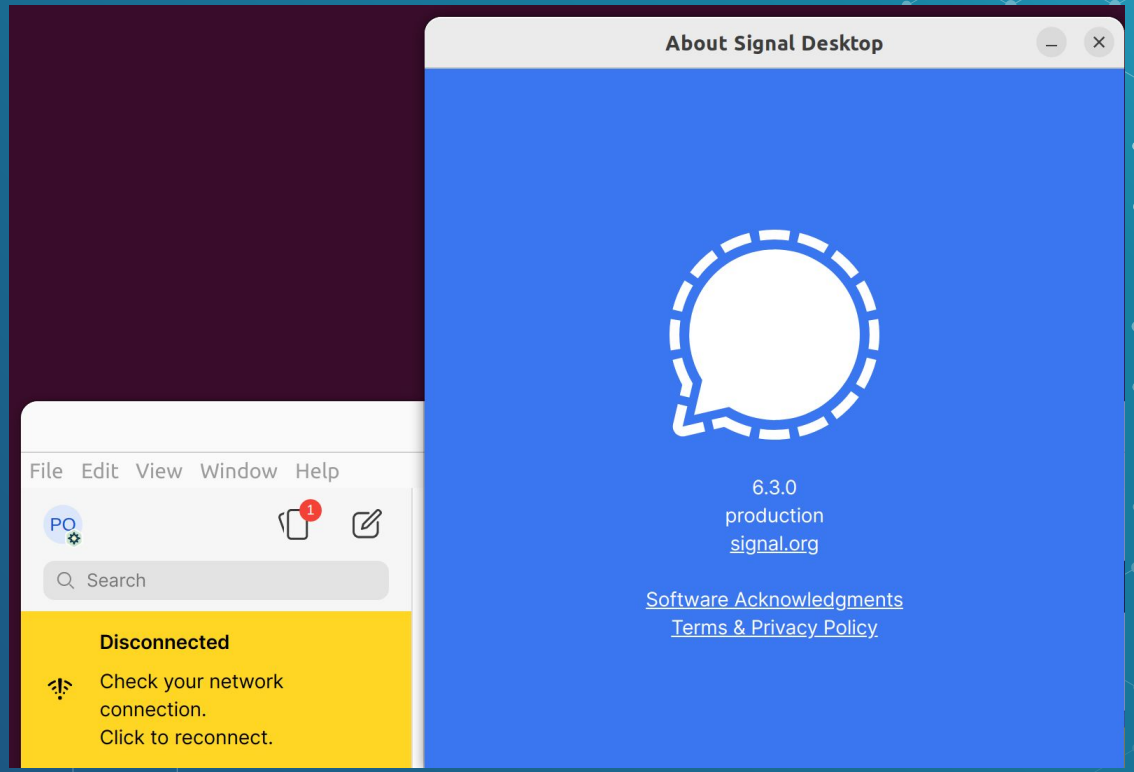
Ubuntu 22.04: easy setup



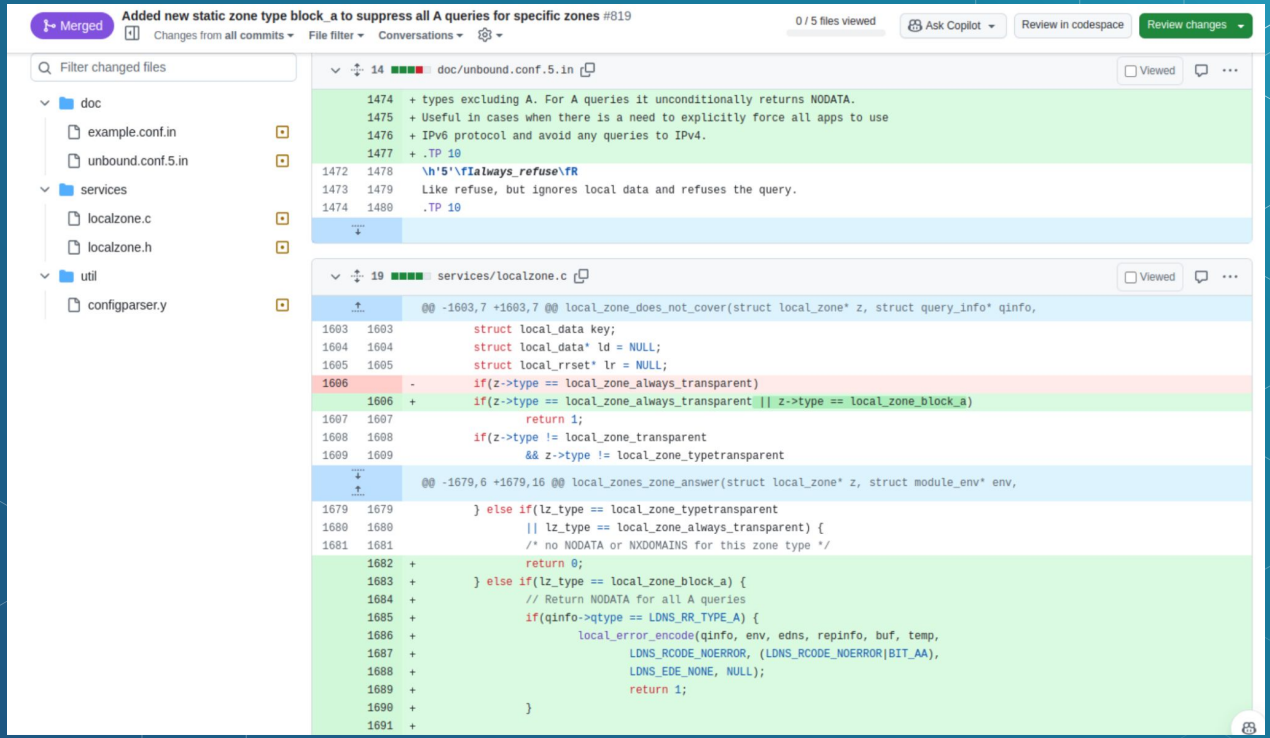
Spotify App


Spotify
Spotify
Log in to continue.
No internet connection detected.
(Error code: accesspoint:31)
my.login
Reset Password
Remember me
LOG IN
OR
Continue with Facebook
Continue with Google
Continue with Apple
Don't have an account? SIGNUP

Signal


About Signal Desktop
6.3.0
production
signal.org
Software Acknowledgments
Terms & Privacy Policy
File Edit View Window Help
PO
1
Search
Disconnected
Check your network connection.
Click to reconnect.

Unbound: patch time!



Unbound: upstream

Unbound 1.18.0 released

Published: Wed 30 August 2023
Last updated: Mon 04 November 2024

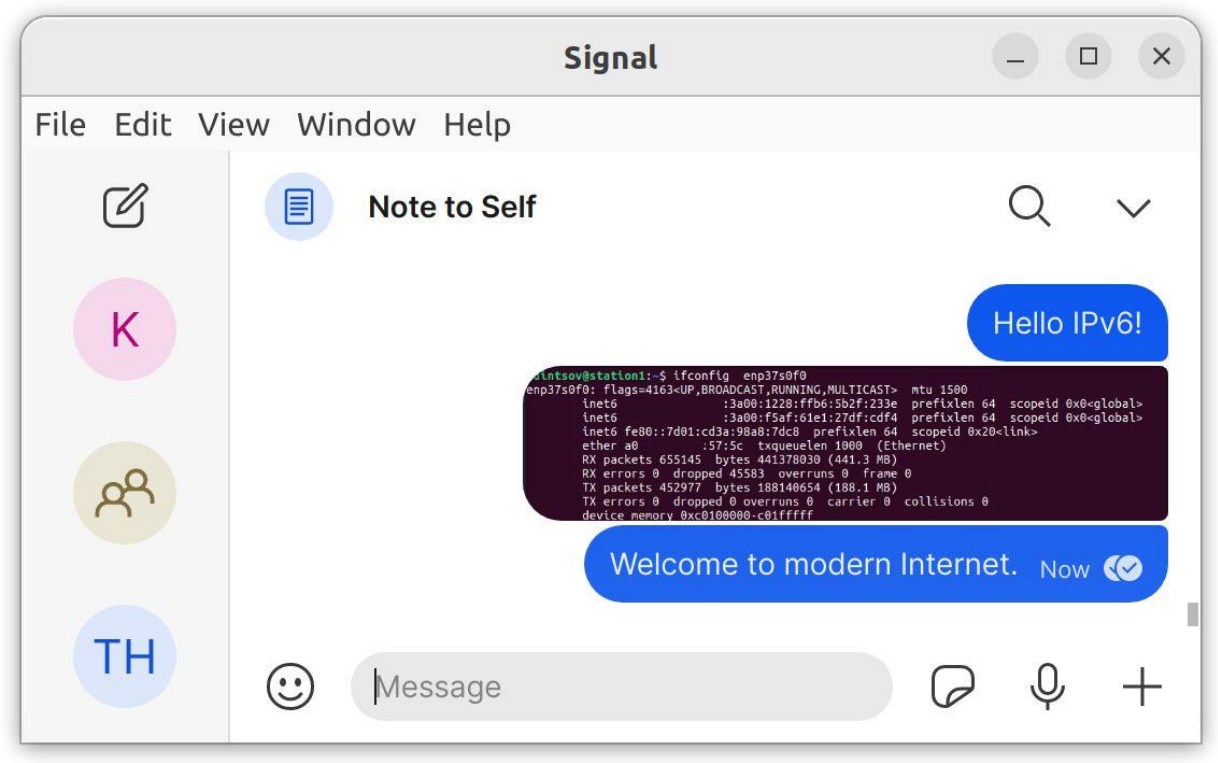
We are pleased to announce the release of version 1.18.0 of the Unbound recursive DNS resolver.

The local-zone type *block_a* is for when queries to IPv4 have to be stopped to force IPv6 usage. It stops type A queries with nodata, and transparently allows other queries.

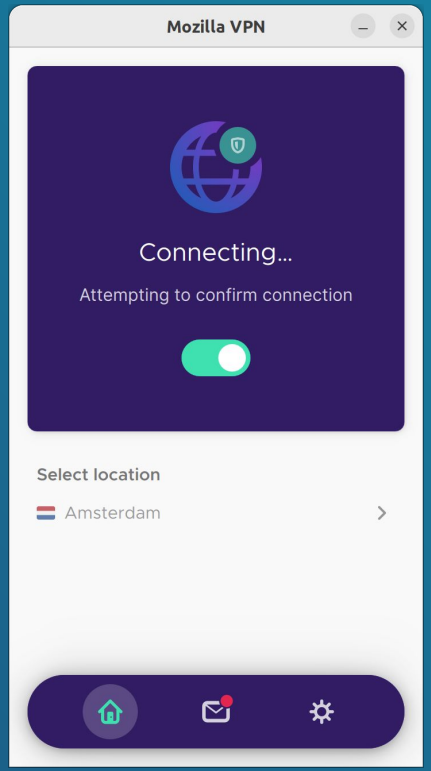
Unbound: fix

```
local-zone: "chat.signal.org." block_a
local-zone: "cdn.signal.org."  block_a
local-zone: "cdn2.signal.org." block_a
local-zone: "cdsi.signal.org." block_a
local-zone: "storage.signal.org." block_a
```

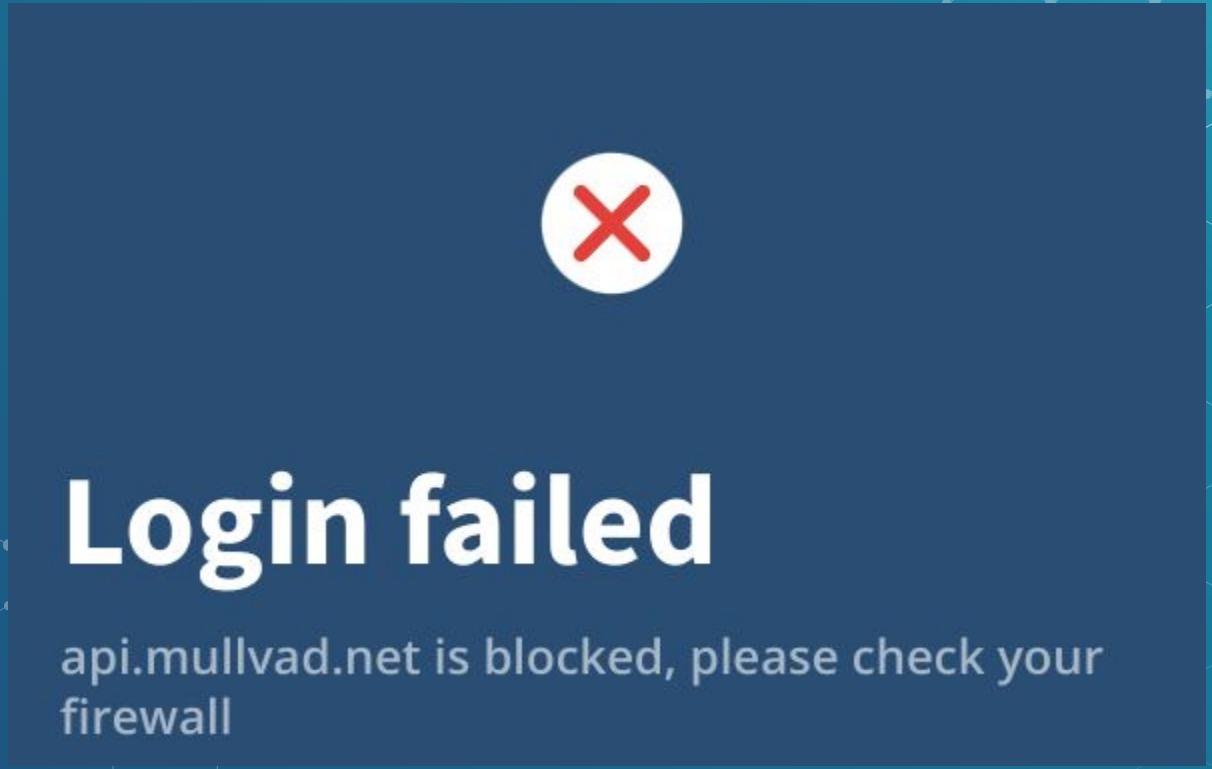
Signal


Signal
File Edit View Window Help
Note to Self
K
TH
Hello IPv6!
lintsov@station1:~$ ifconfig enp37s0f0
enp37s0f0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
inet6 :3a00:1228:ffb6:5b2f:233e prefixlen 64 scopeid 0x0<global>
inet6 :3a00:f5af:61e1:27df:cdf4 prefixlen 64 scopeid 0x0<global>
inet6 fe80::7d01:cd3a:98a8:7dc8 prefixlen 64 scopeid 0x20<link>
ether a0 :57:5c txqueuelen 1000 (Ethernet)
RX packets 655145 bytes 441378030 (441.3 MB)
RX errors 0 dropped 45583 overruns 0 frame 0
TX packets 452977 bytes 188140654 (188.1 MB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
device memory 0xc0100000-c01fffff
Welcome to modern Internet. Now
Message

Mozilla VPN


Mozilla VPN
Connecting...
Attempting to confirm connection
Select location
Amsterdam

Mullvad


Login failed
api.mullvad.net is blocked, please check your firewall

Links

- https://pavel.network/building-gateway-to-access-legacy-ipv4-internet-from-ipv6-only-work-laptop/
- https://github.com/signalapp/Signal-Desktop/issues/4121
- https://github.com/NLnetLabs/unbound/pull/819
- https://nlnetlabs.nl/news/2023/Aug/30/unbound-1.18.0-released/
- https://github.com/mozilla-mobile/mozilla-vpn-client/issues/5393
- https://github.com/mullvad/mullvadvpn-app/issues/2391
- https://www.stableit.blog/2023/01/using-radvd-to-advertise-ipv6-prefix.html

THANKS!

ANY QUESTIONS?

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