

tailscale

WireGuard-based Software-Defined Mesh Network for Remote Access

- Alternative to traditional VPNs
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Installation + Config

Installing Tailscale is made simple with OPNsense, and only 2 items are required to successfully install the service:

1. Console Access to router (SSH)
2. Internet Connection

SSH into your OPNsense router console, enter "8" to select the shell option. Then run the command to download or update the ports tree:

```
-----  
| Hello, this is OPNsense 24.1 | | |  
| Website: https://opnsense.org/ | | |  
| Handbook: https://docs.opnsense.org/ | | |  
| Forums: https://forum.opnsense.org/ | | |  
| Code: https://github.com/opnsense | | |  
| Twitter: https://twitter.com/opnsense | | |  
-----  
*** router.austinhomelabs.com: OPNsense 24.1.5_3 ***  
  
HomeWGVPN (wg0) -> v4: 10.10.10.1/24  
LAN (igb0) -> v4: 192.168.1.1/24  
TAILSCALE (tailscale0) -> v4: 100.127.254.66/32  
v6: fd7a:115c:a1e0::5b01:fe42/48  
WAN (igb1) -> v4/DHCP4: [REDACTED]  
homeLAB1 (igb3) -> v4: 192.168.2.1/24  
  
HTTPS: SHA256 [REDACTED]  
SSH: SHA256 [REDACTED] (ECDSA)  
SSH: SHA256 [REDACTED] (ED25519)  
SSH: SHA256 [REDACTED] (RSA)  
  
0) Logout  
1) Assign interfaces  
2) Set interface IP address  
3) Reset the root password  
4) Reset to factory defaults  
5) Power off system  
6) Reboot system  
7) Ping host  
8) Shell  
9) pfTop  
10) Firewall log  
11) Reload all services  
12) Update from console  
13) Restore a backup  
  
Enter an option: 8  
root@router:~ #
```

```
opnsense-code ports
```

Run it twice to make sure the most current and up-to-date version is downloaded. Then change directories and run the command to install Tailscale:

```
root@router:~ # opnsense-code ports  
Already up to date.  
Already up to date.  
root@router:~ #
```

```
cd /usr/ports/security/tailscale
make install
```

Run the following commands to enable the tailscaled service and check for the version to ensure its installed:

```
service tailscaled enable
service tailscaled start
```

Check version with:

```
tailscale version
```

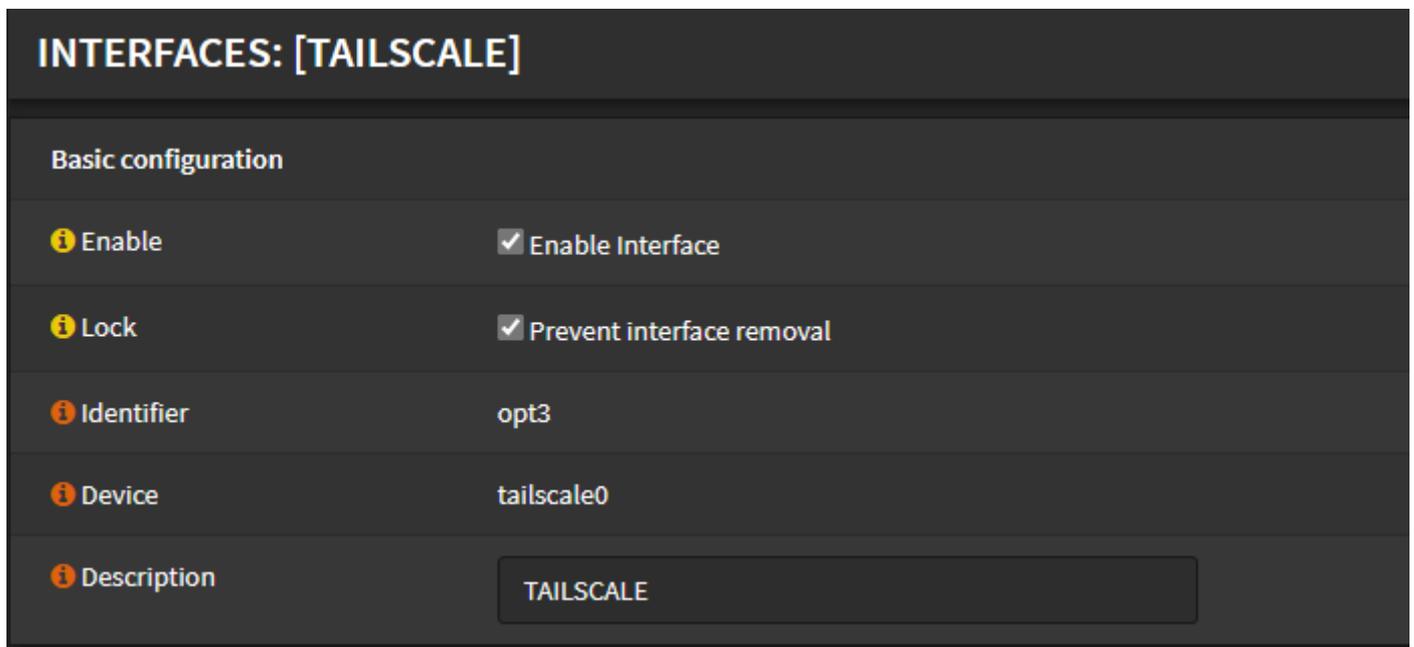
```
root@router:~ # tailscale version
1.62.1
  go version: go1.22.1
root@router:~ #
```

Run the command to add the OPNsense router as a node on your tailnet:

```
tailscale up
```

The output will provide you an authentication link to enter in your browser

Open your OPNsense router Web GUI to assign the interface and lock it to prevent removal:



The screenshot shows the OPNsense Web GUI configuration page for the TAILSCALE interface. The page title is "INTERFACES: [TAILSCALE]". Under the "Basic configuration" section, the following settings are visible:

Setting	Value
Enable	<input checked="" type="checkbox"/> Enable Interface
Lock	<input checked="" type="checkbox"/> Prevent interface removal
Identifier	opt3
Device	tailscale0
Description	TAILSCALE

Your installation of tailscale is complete! Your next step should be to set up port mapping. See next page

Port Mapping

With your tailscale installation complete, set up port mapping to allow access to certain devices. If you want to allow access to an entire subnet, you can do this through the admin console for tailscale in the "Edit route settings" section:

MACHINE	ADDRESSES ⓘ	VERSION	LAST SEEN	
router austin.logan.john@gmail.com Subnets Exit Node	100.127.254.66 ▾	1.62.1 FreeBSD 13.2-RELEASE-p11	● Connected	Share... ⋮
austin-ll5p austin.logan.john@gmail.com	100.98.190.112 ▾	1.62.1 Windows 10.0.22631.3374	● 11:52 AM CDT	Edit machine name... Edit machine IPv4... Share... Disable key expiry View recent activity
iphone-15-pro austin.logan.john@gmail.com	100.108.243.27 ▾	1.62.0 iOS 17.4.1	● Apr 2, 12:26 AM	Edit route settings... Edit ACL tags... Remove...

Need inspiration for how to use Tailscale? [Learn more ↗](#)

I've enabled access to both my LAN and homeLAB subnet:

Edit route settings of router



Key expiry is enabled

If this machine's [key expires](#), your relayed traffic may be interrupted until you reauthenticate.

Subnet routes

Connect to devices you can't install Tailscale on by advertising ip ranges as subnet routes. [Learn more](#) ↗

192.168.1.0/24

192.168.2.0/24

Unapprove all

Approve all

Exit node

Allow your network to route internet traffic through this machine. [Learn more](#) ↗

Use as exit node

Cancel

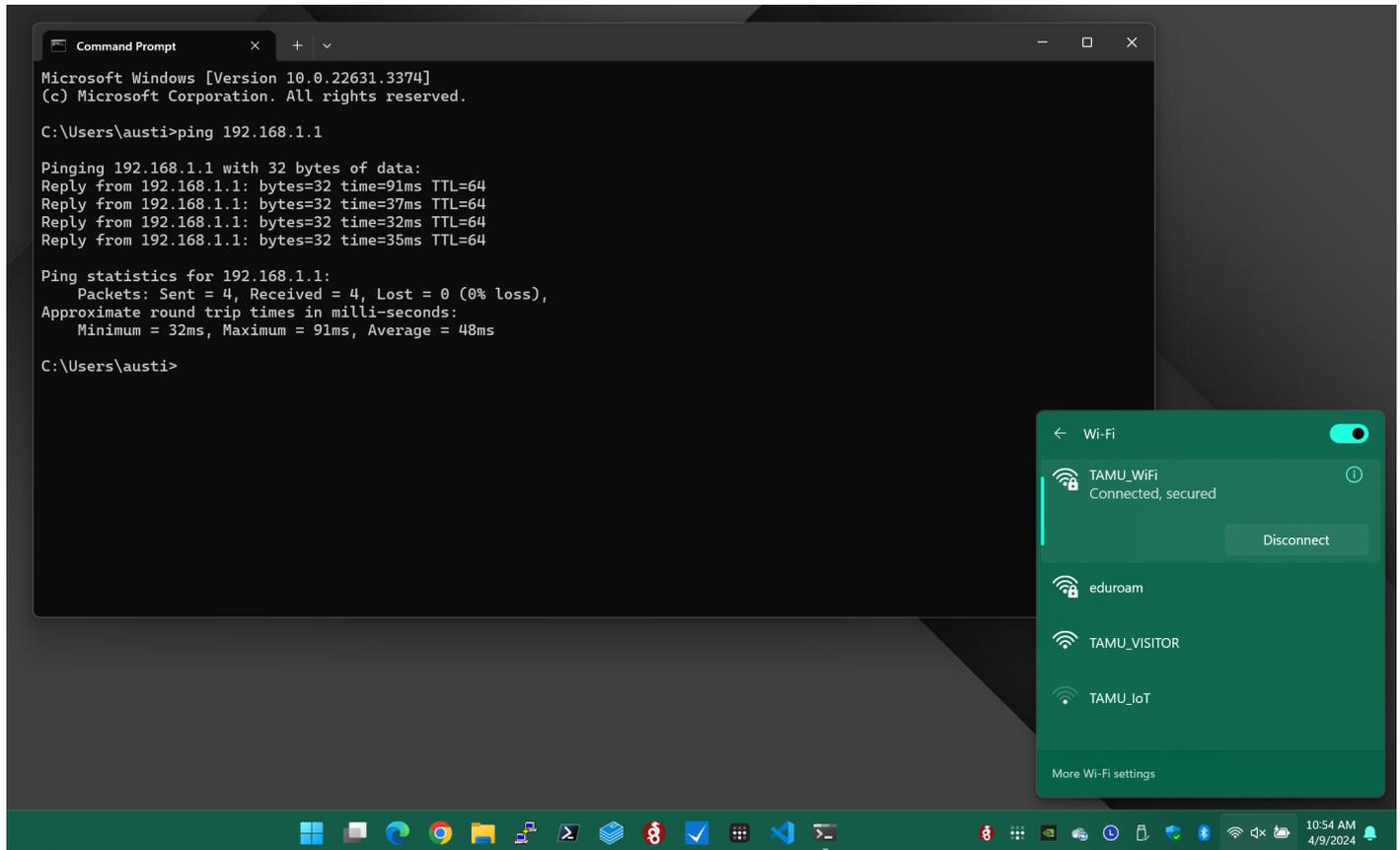
Save

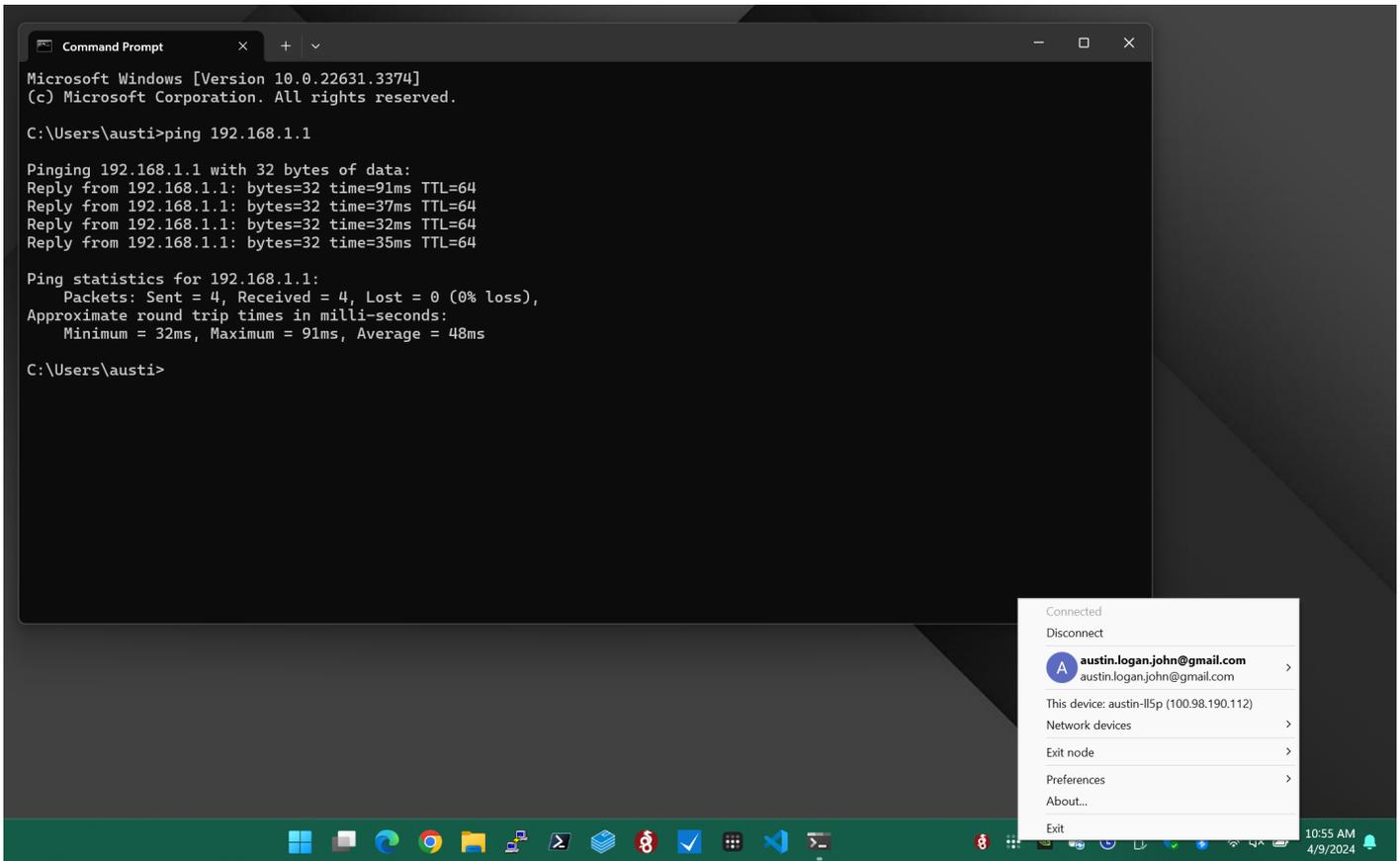
Additionally, an alternative to static port mapping would be to enable Universal Plug and Play. To do this, download the Universal Plug and Play plug in via OPNsense --->Firmware ---> Plug-Ins and enable the settings.

All set! See next page to view my connection results!

Successful Connection

To test my connection, I went to my University library and tried to connect to my tailnet. As you can see below, I was able to ping my router gateway while connected to my University WiFi:





To update Tailscale, run the following commands:

```
cd /usr/ports/security/tailscale  
make deinstall
```

```
root@router:/usr/ports/security/tailscale # make deinstall  
==> Deinstalling for tailscale  
==> Deinstalling tailscale-1.62.1  
Checking integrity... done (0 conflicting)  
Deinstallation has been requested for the following 1 packages (of 0 packages in the universe):  
  
Installed packages to be REMOVED:  
  tailscale: 1.62.1  
  
Number of packages to be removed: 1  
  
The operation will free 29 MiB.  
[1/1] Deinstalling tailscale-1.62.1...  
[1/1] Deleting files for tailscale-1.62.1: 100%  
root@router:/usr/ports/security/tailscale # █
```

```
make clean
```

```
root@router:/usr/ports/security/tailscale # make clean  
==> Cleaning for tailscale-1.62.1  
root@router:/usr/ports/security/tailscale # █
```

```
make install
```

Installation may take some time. After clean installation, restart the service:

```
service tailscaled restart
```

Check the version to confirm update:

```
tailscale version
```

```
root@router:/usr/ports/security/tailscale # service tailscaled restart
Stopping tailscaled.
Waiting for PIDS: 26136, 26136.
root@router:/usr/ports/security/tailscale # tailscale version
1.62.1
  go version: go1.22.1
root@router:/usr/ports/security/tailscale # █
```