

The tinc VPN

Geestmerambacht, August 1, 2013



The tinc VPN

Gus Sliepen

Yet another VPN?

Runs on...

How does it work?

Now in pictures:

Tinc 1.1 will be better

Invite your friends

The end

Gus Sliepen

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Development start September 1997. Version 1.0 in August 2003.

- Connect multiple nodes together in one VPN
- Peer-to-peer, decentralized
- Automatic full mesh
- Full support for IPv4 and IPv6
- Router or switch mode
- Adding a new node is $\mathcal{O}(1)$

[Yet another VPN?](#)

[Runs on...](#)

[How does it work?](#)

[Now in pictures:](#)

[Tinc 1.1 will be better](#)

[Invite your friends](#)

[The end](#)

Tinc has been known to run on:

- Linux
- OpenBSD, FreeBSD, NetBSD, Dragonfly
- MacOS/X
- Windows
- Android*
- iOS*

*) *rooted device required*

- Configure endpoints, not tunnels
- Exchange public keys with at least one other node
- Tinc learns about all other nodes
- Autodetects TCP or UDP, PMTU, NAT
- Routes around damage

[Yet another VPN?](#)

[Runs on...](#)

[How does it work?](#)

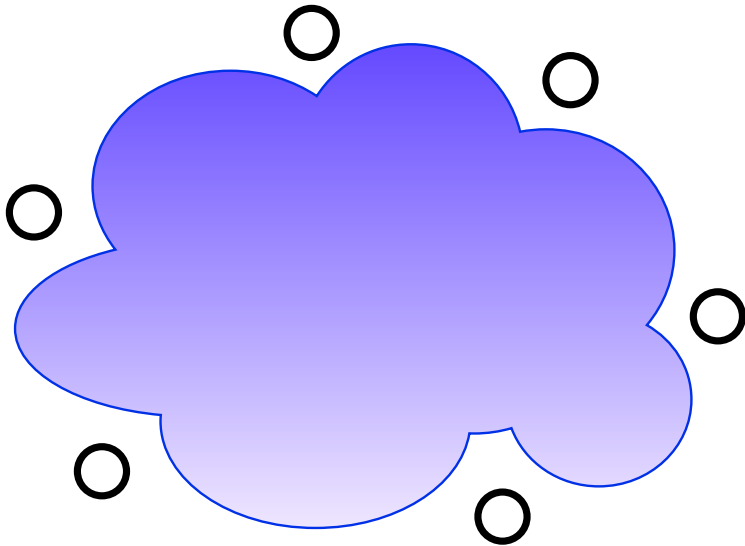
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[Tinc 1.1 will be better](#)

[Invite your friends](#)

[The end](#)

Network before VPN is configured:



Blue cloud: the Internet
Black circles: VPN nodes

[Yet another VPN?](#)

[Runs on...](#)

[How does it work?](#)

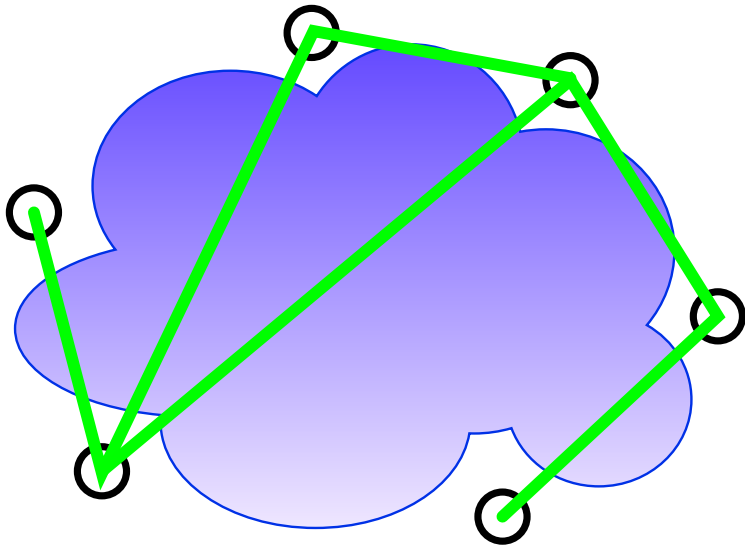
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[Tinc 1.1 will be better](#)

[Invite your friends](#)

[The end](#)

Initial connections configured by user:



Green lines: initial connections

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[Yet another VPN?](#)

[Runs on...](#)

[How does it work?](#)

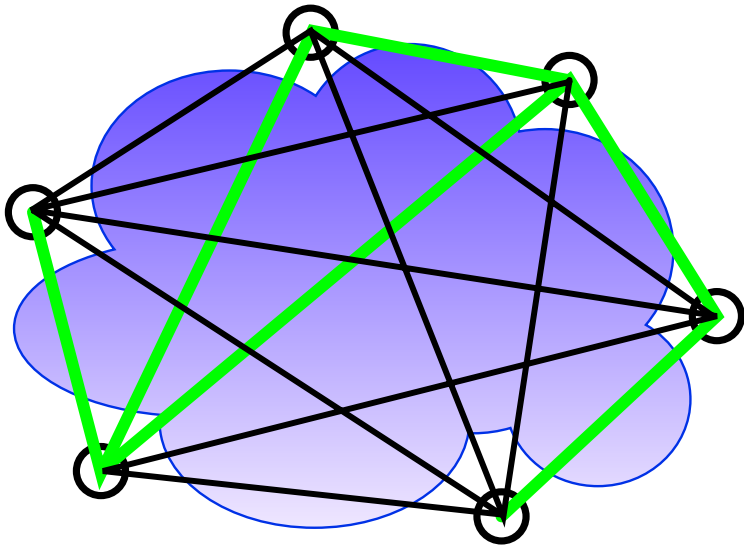
[Now in pictures:](#)

[Tinc 1.1 will be better](#)

[Invite your friends](#)

[The end](#)

Full mesh created by tinc:



Black lines: UDP tunnels

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Tinc 1.1 will be better than 1.0.x.

Stronger cryptography:

- 521 bits ECDSA keys
- AES-256-CTR + HMAC-SHA256
- Perfect Forward Secrecy
- Always end-to-end encryption

PRISM proof?

Easy setup:

```
myself:~# tinc -n myVPN init
myself:~# tinc -n myVPN add Subnet 93.184.216.0/24
```

Easy exchange of config files:

```
myself:~# tinc -n myVPN export \
| ssh remotehost tinc -n myVPN import
```

Get information from running VPN:

```
myself:~# tinc -n myVPN info <node|address>
myself:~# tinc -n myVPN top
```

[Yet another VPN?](#)[Runs on...](#)[How does it work?](#)[Now in pictures:](#)[Tinc 1.1 will be better](#)[Invite your friends](#)[The end](#)

Generate an invitation*:

```
myself:~# tinc -n myVPN invite myFriend  
example.org/vhdIF...m7rXK
```

Short enough to send it to a friend via email, IRC, SMS, ...

```
afriend:~# tinc join example.org/vhdIF...m7rXK
```

*) *Use git or wait for version 1.1pre8.*

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Thank you for listening!

Visit the website:

<http://tinc-vpn.org/>



Workshop today @ Milliways, 17:00 - 18:00.

You are welcome!

[Yet another VPN?](#)

[Runs on...](#)

[How does it work?](#)

[Now in pictures:](#)

[Tinc 1.1 will be better](#)

[Invite your friends](#)

[The end](#)