Anti-censorship software

Censorship

- Blacklist vs whitelist

Censorship

- Blacklist vs whitelist
- DPI

Censorship

- Blacklist vs whitelist
- DPI
- Active inspection

Censorship

- Blacklist vs whitelist
- DPI
- Active inspection
- DDoS

Censorship

- Blacklist vs whitelist
- DPI
- Active inspection
- DDoS
- Legal and financial

Centralized, Federated, Distributed

- Centralized $<$ federated $<$ distributed (P2P)

Centralized, Federated, Distributed

- Centralized $<$ federated $<$ distributed (P2P)
- More about this next monday

Torrent

- P2P

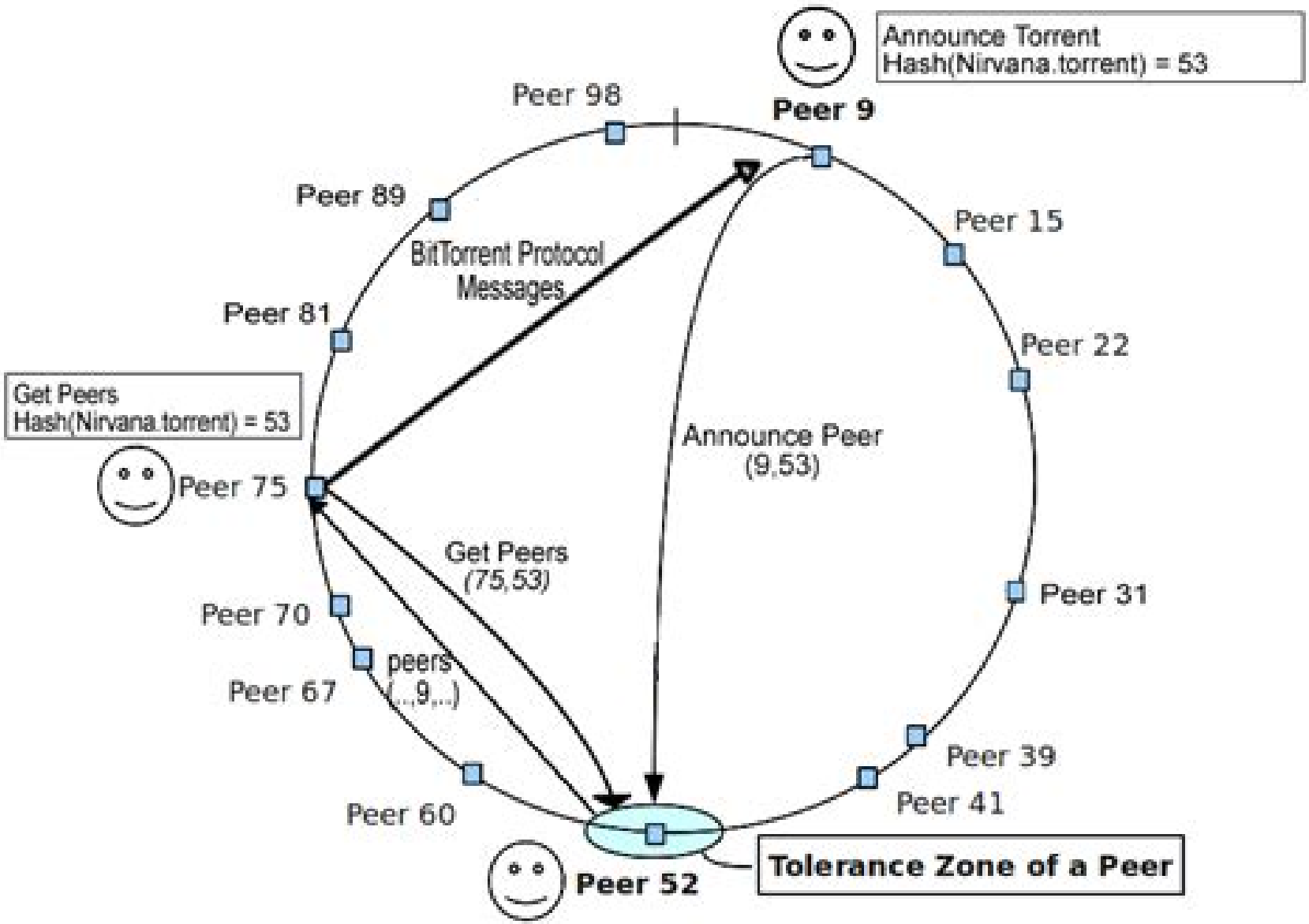
Torrent

- P2P
- Trackers and DHT

Torrent

- P2P
- Trackers and DHT
- Legal issues (Europe): using, sharing, hosting

Torrent


Announce Torrent
Hash(Nirvana.torrent) = 53
Peer 9
Peer 98
Peer 89
Peer 81
BitTorrent Protocol
Messages
Peer 15
Peer 22
Get Peers
Hash(Nirvana.torrent) = 53
Peer 75
Announce Peer
(9,53)
Get Peers
(75,53)
Peer 31
Peer 70
peers
(...,9,...)
Peer 67
Peer 39
Peer 41
Peer 60
Peer 52
Tolerance Zone of a Peer

Blockchain

- Just P2P

Blockchain

- Just P2P
- Decentralized ordering

Blockchain

- Just P2P
- Decentralized ordering
- Financial censorship (Wikileaks, Autistici/Inventati, etc.)

HTTP

- Web proxy

HTTP

- Web proxy
- HTTP proxy

HTTP

- Web proxy
- HTTP proxy
- Signal

SOCKS5 proxy

- Transport layer

SOCKS5 proxy

- Transport layer
- UDP ok

SOCKS5 proxy

- Transport layer
- UDP ok
- SOCKS5h

Hosting censorship

- DNS censorship (TPB,Autistici/Inventati)

Hosting censorship

- DNS censorship (TPB,Autistici/Inventati)
- Hosting provider choice

Hosting censorship

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- Crypto payment for Domain and Hosting

Hosting censorship

- DNS censorship (TPB,Autistici/Inventati)
- Hosting provider choice
- Crypto payment for Domain and Hosting
- Self-hosted

Tor

- Created in 2002 by US Navy

Tor

- Created in 2002 by US Navy
- Low latancy

Tor

- Created in 2002 by US Navy
- Low latancy
- Timing attack

Tor

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- TCP only

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- TCP only
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- Bridges
- Obfsv4

Tor

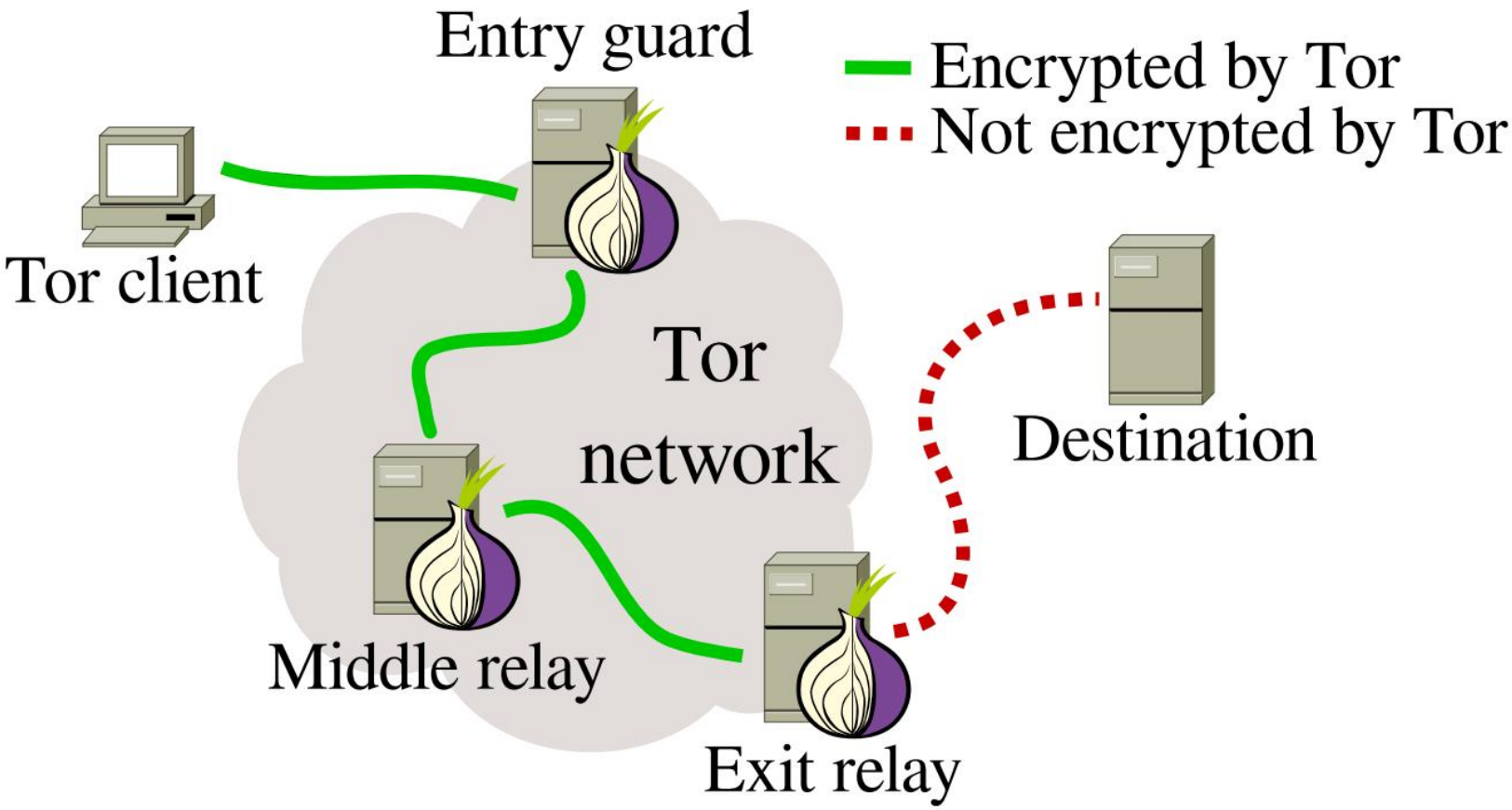


Figure 2: Tor

I2P

- Forked form Hyphanet (Freenet) in 2003

I2P

- Forked form Hyphanet (Freenet) in 2003
- High latency

I2P

- Forked form Hyphanet (Freenet) in 2003
- High latency
- Timing attack resitant

I2P

- Forked form Hyphanet (Freenet) in 2003
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- Cant go outside of I2P network
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- Monero version

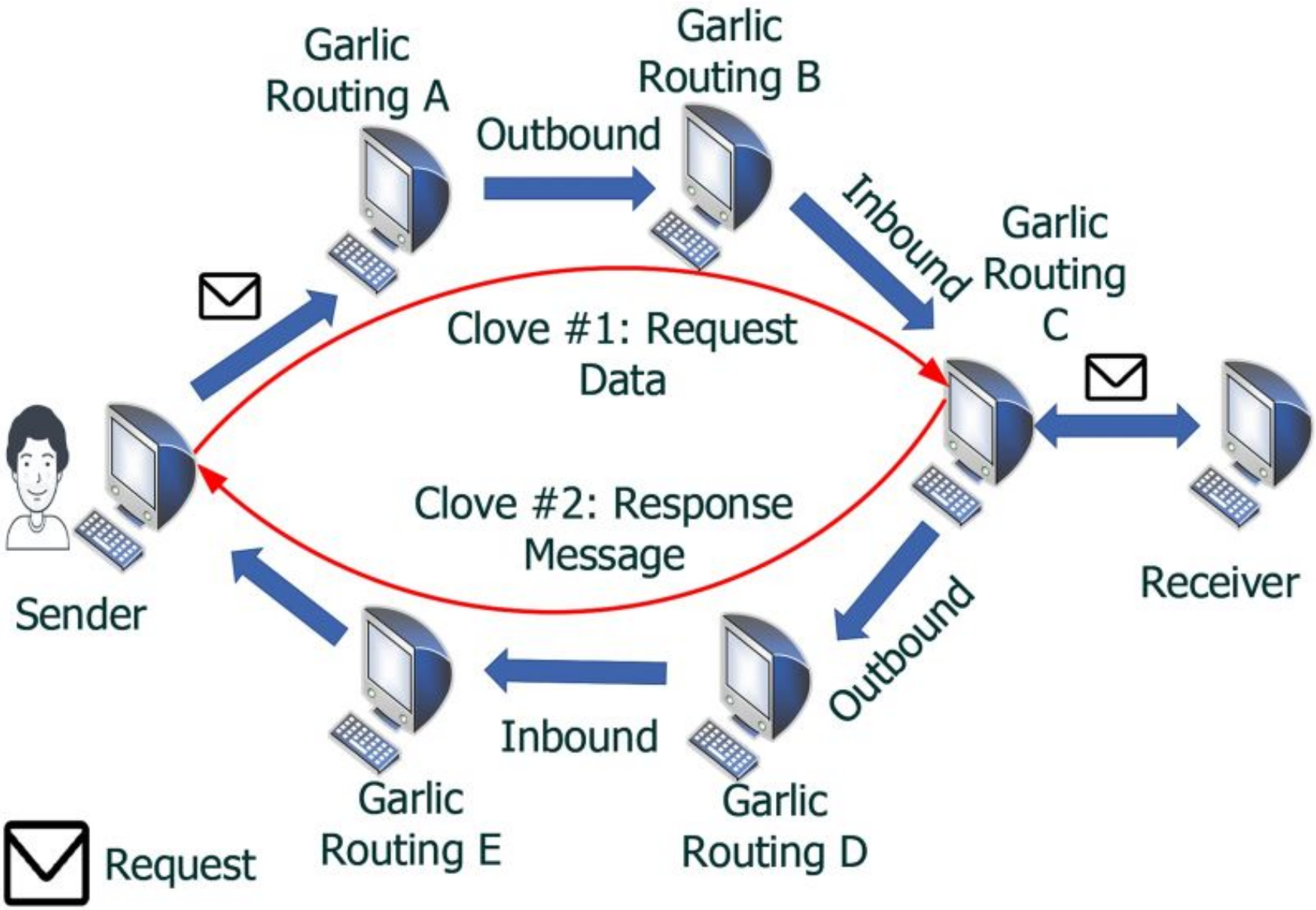

Garlic
Routing A
Garlic
Routing B
Outbound
Inbound
Garlic
Routing
C
Clove #1: Request
Data
Clove #2: Response
Message
Sender
Receiver
Outbound
Inbound
Garlic
Routing E
Garlic
Routing D
Request

Figure 3: I2P

VPNs

- Not as good as previous (longevity and privacy)

VPNs

- Not as good as previous (longevity and privacy)
- DIY

Proxychains

- Tor->I2P not allowed since July 2024

Proxychains

- Tor->I2P not allowed since July 2024
- Tor->SOCKS easy way to fix tor exit node issues