Hi :-)

- Moritz Warning (mwarning)
- Wrote a tool – want to share

KadNode

- Yet another P2P-DNS like system

- Task

  – Find IP addresses by some identifier

  – … but decentralized

  – Low footprint (Disk, CPU, RAM, Traffic)

- => small task

  – No Domain registry. Not really DNS!

How it works

- DHT (Distrbuted Hash Table)
  - DHT code from Transmission Bittorrent client
  - 20 Bytes => IP addresses
- intercepts .p2p domain on host system
  - /etc/nsswitch.conf ("Name Service Switch")
  - Local DNS server (handles A, AAAA, SRV)

Configuration

/etc/kadnode/kadnode.conf

--value-id myname.p2p
--value-id aa52fb210465bddd679d6853b491ccce.p2p

Bootstrapping from /etc/kadnode/peers.txt

bttracker.debian.org

… or via Local Peer Discovery

Anywhere

On another computer running KadNode:

Typical Issues

- Problems:
  - everybody can announce any identifier
  - Authentication in KadNode?
  - … or end application, e.g. Browser (https)
  - most application do not try multiple IP addresses
  - No back channel ("Hey KadNode – ban that imposter!")

Features

- IPv4/IPv6
- Written in C / Open Source
- Small: 75-120KB
- Local Peer Discovery
- NAT Port mapping (UPnP/NAT-PMP)
- Packages:
    - OpenWrt, Debian, ArchLinux, OSX, Windows, FreeBSD

Thanks

- https://github.com/mwarning/KadNode

- Find me at the "Freifunk" Assembly

- Have fun!