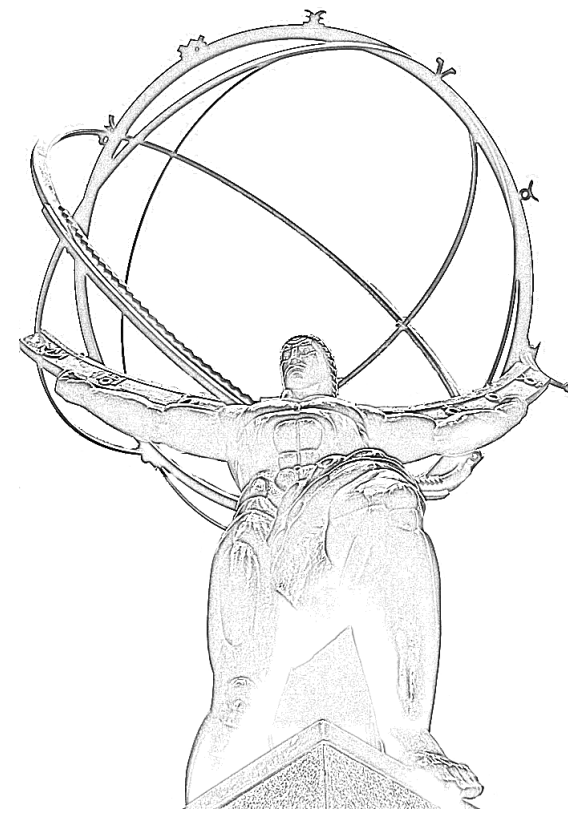
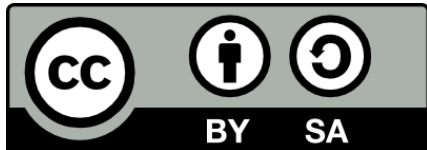


Shrug Daemon



“Doing DNS the Hard Way
Since 2015”



https://en.wikipedia.org/wiki/Ayn_Rand#/media/File:Objectivist1.jpg

Problem Statement

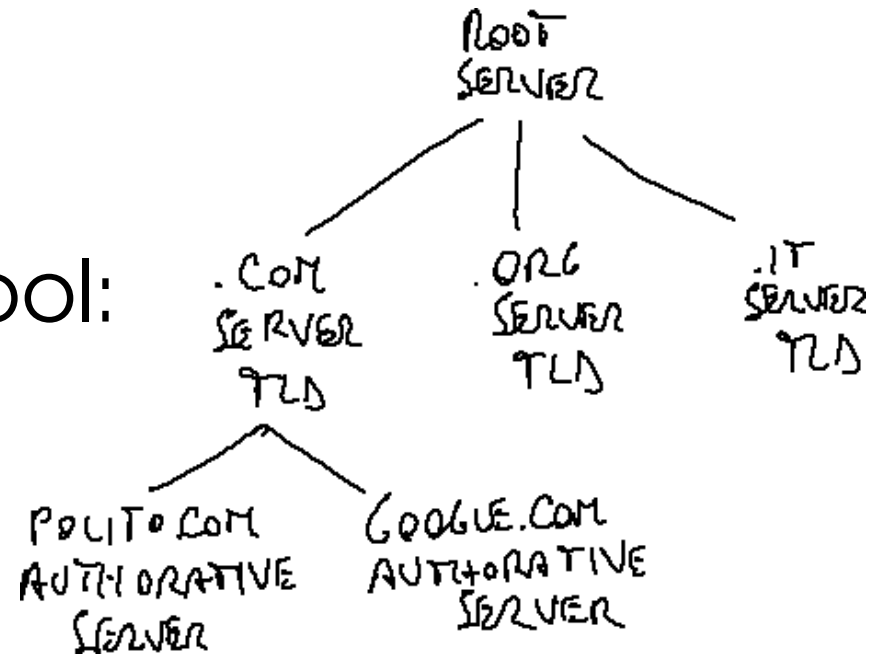
- RIPE Atlas probes have 2 DNS resolvers:
 - Resolver local to probe
 - RIPE Atlas central resolvers
- Does not support alternate root servers
 - The [Yeti project](#), as a fine example
- RIPE Atlas probes *can* send any DNS packet
 - Almost. ;)



Building a Resolver

Just like you learned in school:

1. Start at root
2. Ask for record
3. If you get answer, done!
4. If you get delegation, follow that



Building a Resolver... in RIPE Atlas

- Use Cousteau and Sagan libraries
- Start from roots.txt (IANA or Yeti)
- Make DNS measurements from a probe
- Use the parsed result to follow the delegation chain
- Champagne



Live Demo



Further Ideas

- May be useful in detecting DNS censorship
- Next steps
 - Using the tool and collecting some data!
 - Possible “full” resolution?
- Crazy ideas
 - Use tun/tap interface to forward DNS packets to a RIPE Atlas measurement

<https://github.com/shane-kerr/ripe-atlas-shrugd>

