

DNS Hackathon 2025 Report

Denesh Bhabuta

RIPE 90 :: May 2025 :: Lisbon, PT

Actively seeking opportunities; Available immediately; Ready to contribute :: mail@denesh.uk

gratitude :: hosts



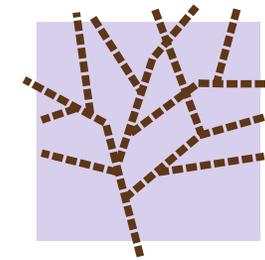
**RIPE
NCC**

RIPE NETWORK
COORDINATION
CENTRE

Vesna
Manojlovic



Johanna
Eriksson



DNS-OARC

Denesh
Bhabuta

gratitude :: host helpers



Jerry
Lundström

Mattias
Ahnberg

gratitude :: programme committee



Arife
Vural-Butcher

Lars-Johan
Liman

Samaneh
Tajalizadehkhoob

gratitude :: collaborative group



ideation



• Anycast Sharing
Cache
(Anycast Resolvers)

• Efficient (Anycast)
Rate Limiting + earlier
Detection (Jamis)

(Pake Alig)

- Get DANE on Ladybird
- libCurl, gimme your certs
 - Parse DANE / TLSA
 - UI shit
 - Curl, have my certs!

DoT or Not Tor-stuff

github.com/arcnbrn/dotdot
Observing DNS 2x
ODoH Client to resolver
odns

client -> resolver
client entry middle exit DoT
client -> proxy -> resolver RP
VPS? circ -> DoT-again Threat model?

get BETTER ^{before}

IDEA!!! DNS

<https://github.com/arcnbrn/getbet>

delay mostly working like forwarding agent

maybe some code

'WRAP VS EXTEND?' is the question

RESOLVER / ?

DATABASE
FOR DNS
2-3 yrs

DNS
CACHES
CHECKS
ANSWERS

Canned DNS

Systematic
broken
responses

NAME
has
the
same
structure

Cache preservation
Keep caches hot

- Resolver A lowers example.com
- Spreads the response to B and C
- Who put it in cache?

PROJECT DELEG

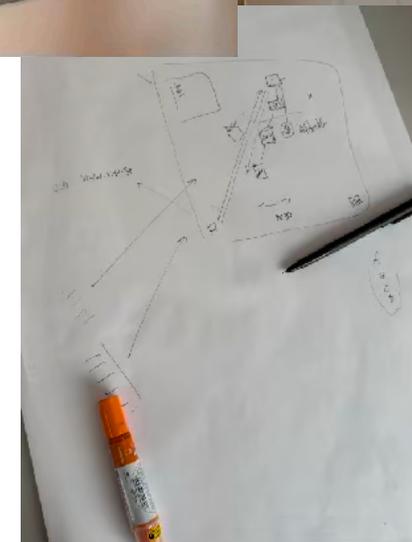
"MAKE THE DNS
BROKEN AGAIN" :-)

CHANGE THE DNS DELEGATION (2 DRAFTS)

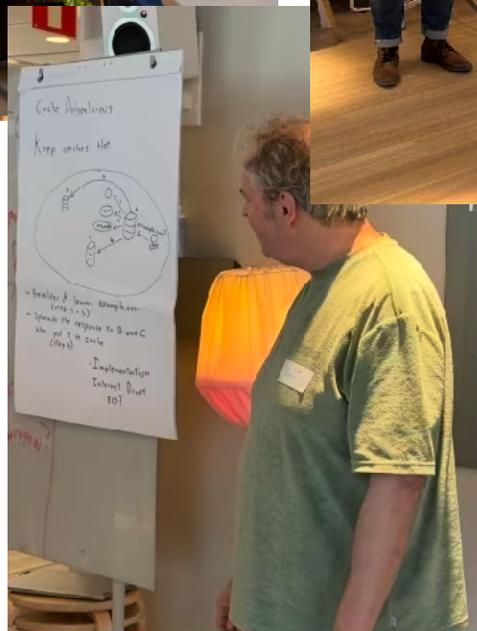
- REPLACE DNS WITH DELEG?

- OR A - DELEG SUBSTITUTION?

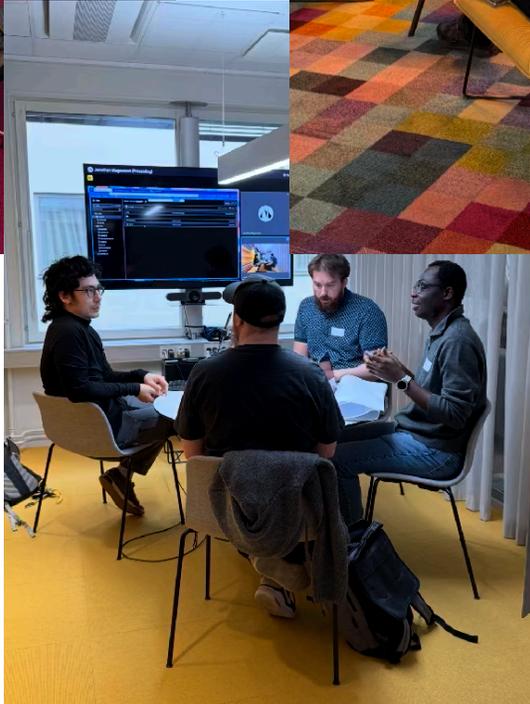
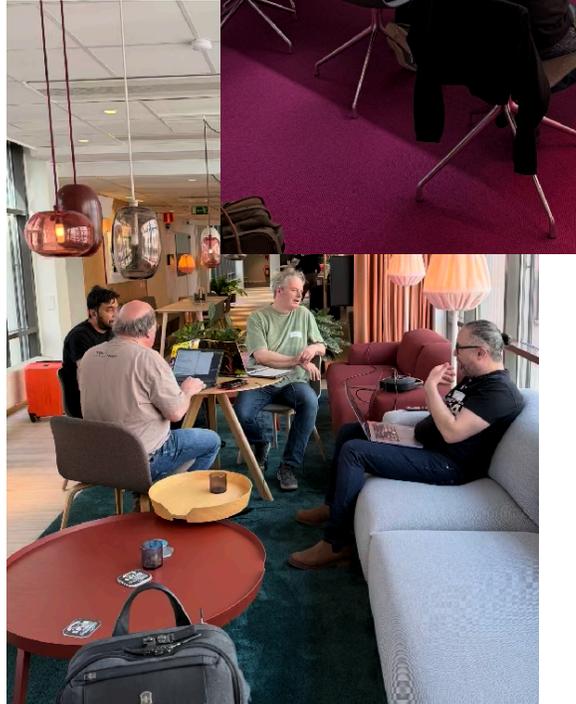
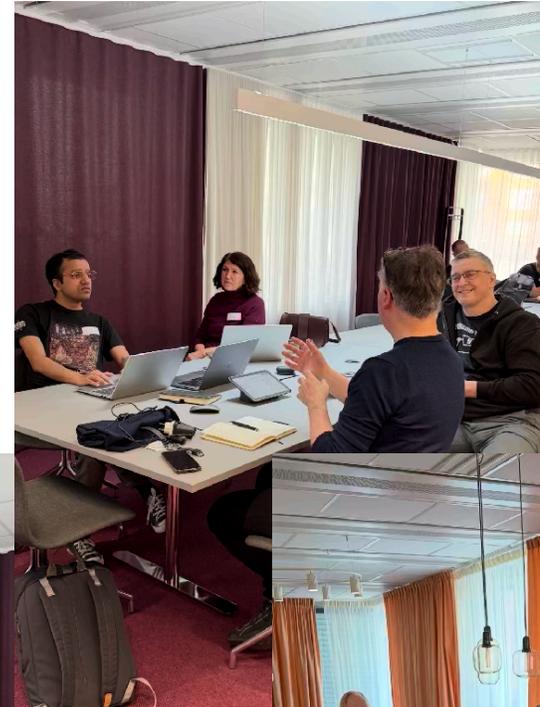
MORE
FEATURES



persuasion



association



Babies



Baby was delivered

- NSD authoritative server integrated with Stork

Future

- Integrate Knot DNS & DSC

Canned DNS



Created a nameserver with Canned DNS responses

Written in Go

Used Miek Gieben's DNS library

Since: used as authoritative server

DoHoT or Donion



DNS-over-HTTPS-over-Tor

Latency problem over Tor

Measured different approaches



IoT devices are idiots

Major issues in DNS for IoT

Insights and DNS recommendations



Lookup Hostname Best-practice

DNS delivers more than just addresses

Make `getaddrinfo()` better or use a
workaround

Poisonlicious



Proof of concept for an efficient DNS resolver in Unbound

- authoritative response sharing between co-operating resolvers

Drafted IETF RFC

[I-D.bortzmeyer-dnsop-poisonlicious](https://datatracker.ietf.org/drafts/current/draft-bortzmeyer-dnsop-poisonlicious/)



Visualising what a resolver is doing
when looking up a domain name

More interactive than a whiteboard,
perhaps more pedagogical

commendation



Most complete project

Canned DNS

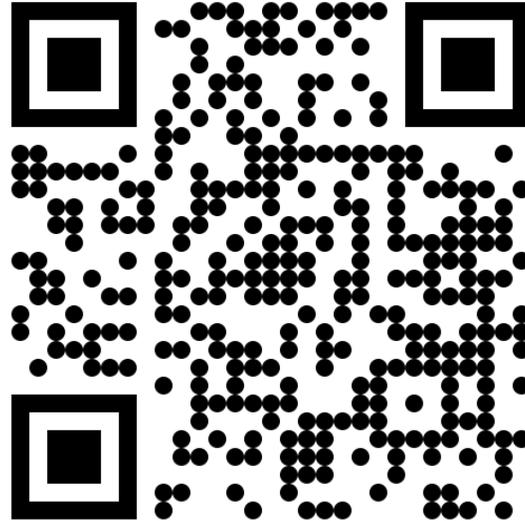
Funniest project name

idIOT

Project with self appointed trouble-maker

Babies

cooperation.. collaboration



<https://github.com/DNS-Hackathon>