

# Knot DNS Resolver

A DNSSEC-validating DNS Resolver

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# What is Knot DNS Resolver?

- Open-source DNS Resolver
  - <https://gitlab.labs.nic.cz/knot/resolver>
- Comes with extensive documentation
  - <http://knot-resolver.rtfld.org>
- Platform for building recursive DNS service.
- DNSSEC Validation with Automated Trust Anchor Management (RFC5011) and Negative Trust Anchors (RFC7646)

# What is Knot DNS Resolver?

- Written in C and LuaJIT
- Scriptable daemon with dynamic configuration in Lua
- Simple **core** extensible with modules in C, Lua & Go
- Extra modules included: policies, views, RPZ, and more
- “Happy Eyeballs” IPv6 (20ms headstart)
- No internal threading, scales by self-replication

# Who is it for?

- **Large recursive DNS farms**
  - Scales, the really fast scriptable engine allows you to change resolution
  - Flexible cache backends (lmdb, memcached, redis)
  - Great statistics, metrics, and plotting with Graphite backend
  - RF7646 NTAs
  - Cluster-aware – etcd module for self-configuration
- **Small recursors in private networks**
  - QNAME minimisation for privacy
  - DNSSEC and RFC5011 key management
  - Low memory consumption (cache can be paged out)
- **Personal resolvers**
  - Simple config-less operation (just give it a root.key and you are good to go)
  - Persistent caching (survives reloads/reboots)
  - Future: DNS/HTTP and dealing with “hotel wifis”

# Example: Graphite module



# Current status

- A beta phase of the project
- Give it a try!
  - Sources: <https://gitlab.labs.nic.cz/knot/resolver>
  - Docker # `docker run cznic/knot-resolver`
  - Linux packages
    - `sudo add-apt-repository ppa:cz.nic-labs/knot-dns`
    - `sudo apt-get install knot-resolver`
  - Throw a strange DNS stuff on it
  - Report back any oddities or success stories

# Other projects by CZ.NIC



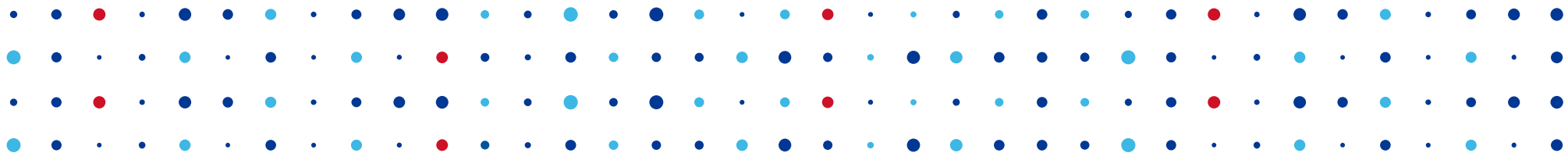
<https://omnia.turris.cz/>



<https://www.knot-dns.cz/>



<http://bird.network.cz/>



# Thank You

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