To develop Open Source Software and Open Standards for the benefit of the Internet.

Paraphrased Article 1 of the Foundations Charter
**NSD Goals**

Improving Internet Security

DNSSEC

Biodiversity

Non-avail of alternative should not lead to blocking of DNSSEC

High Performance: Software not the bottleneck

Do what’s needed and not more

Typically a Secondary Authoritative server

Simple thus Secure

Tool designed for the job
Authoritative only
Reference Implementation
Secure
Independent
High Performance
As announced previously k.root-servers.net will start running nsd 1.0.2-rel. The changeover will start at 0900UTC on Wednesday 19.2.2003. Between 0900 and 0930 all instances of K will be sequentially cut over. This way there will be no service interruption. During the cut-over period K will answer either using bind8 or nsd. After 0930 K will only answer using nsd. K will support identification of software and instance via id.server and version.server in class CHAOS as per draft-ietf-dnsop-serverid.

This is designed to increase the diversity of software in the root name server system, the lack of which is widely considered to be a potential vulnerability. The nsd software has been designed from scratch specifically as an authoritative name server. It has no design commonalities with bind, the currently prevalent DNS implementation. In addition to that nsd provides a significant increase in the performance reserve of k.root-servers.net.

Please report any anomalies with k.root-servers.net service to <ops at ripe.net> as usual.

nsd can be found at http://www.nlnetlabs.nl/nsd/index.html.
Typical Use Cases

As one or more of the secondaries

Provisioning system

Hidden Master

Behind load balancer

Balancer
Vaporware, under active development

Production release: end 2012? - 2013

Goal: make NSD more suitable for hosting environments

- $10^5$ zones
- Zone config templates
- Dynamic behavior
- Reconfiguration
- Reload
- At least same performance as NSD3

http://www.nlnetlabs.nl/svn/nsd/tags/NSD_4_0_0_IMP_5/

Monday, June 25, 12
μDB is the NSD memory database, unmapped to disk

- No changes in query logic
- edit of domain nodes in μDB and nsec3 pre-compile
- $ nsd-control repattern
  $ nsd-control addzone 
  bla.example mypattern
- Performance radix tree and improved compilation
- μDB on disk, removal of zonec, editable NMAP database
- ‘Patterns’, new config file structures
- edit of domain nodes in μDB and nsec3 pre-compile for NXDOMAIN
- XFRD scalability to cope with growing memory
- Control SSL remote control
- Outgoing Incremental
- Full production grade tests release
- Munin, logging, other usability
- edit of domain nodes in μDB
- μDB on disk, removal of zonec, editable NMAP database
- Control SSL remote control
- ‘Patterns’, new config file structures
- edit of domain nodes in μDB and nsec3 pre-compile
- XFRD scalability to cope with growing memory
- Outgoing Incremental
- Munin, logging, other usability
- Full production grade tests release
- edit of domain nodes in μDB and nsec3 pre-compile for NXDOMAIN
- μDB on disk, removal of zonec, editable NMAP database
- ‘Patterns’, new config file structures
- edit of domain nodes in μDB and nsec3 pre-compile
- XFRD scalability to cope with growing memory
- Control SSL remote control
- μDB is the NSD memory database, unmapped to disk
- edit of domain nodes in μDB and nsec3 pre-compile
- $ nsd-control repattern
  $ nsd-control addzone 
  bla.example mypattern
- μDB on disk, removal of zonec, editable NMAP database
- ‘Patterns’, new config file structures
- edit of domain nodes in μDB and nsec3 pre-compile
- XFRD scalability to cope with growing memory
- Control SSL remote control
- Outgoing Incremental
- Full production grade tests release
- Munin, logging, other usability
- edit of domain nodes in μDB and nsec3 pre-compile for NXDOMAIN
- μDB on disk, removal of zonec, editable NMAP database
- ‘Patterns’, new config file structures
- edit of domain nodes in μDB and nsec3 pre-compile
- XFRD scalability to cope with growing memory
- Control SSL remote control
- Outgoing Incremental
- Full production grade tests release
- Munin, logging, other usability
- edit of domain nodes in μDB and nsec3 pre-compile for NXDOMAIN
- μDB on disk, removal of zonec, editable NMAP database
- ‘Patterns’, new config file structures
- edit of domain nodes in μDB and nsec3 pre-compile
- XFRD scalability to cope with growing memory
- Control SSL remote control
- Outgoing Incremental
- Full production grade tests release
- Munin, logging, other usability
- edit of domain nodes in μDB and nsec3 pre-compile for NXDOMAIN
- μDB on disk, removal of zonec, editable NMAP database
- ‘Patterns’, new config file structures
- edit of domain nodes in μDB and nsec3 pre-compile
- XFRD scalability to cope with growing memory
- Control SSL remote control
- Outgoing Incremental
- Full production grade tests release
- Munin, logging, other usability
- edit of domain nodes in μDB and nsec3 pre-compile for NXDOMAIN
- μDB on disk, removal of zonec, editable NMAP database
- ‘Patterns’, new config file structures
- edit of domain nodes in μDB and nsec3 pre-compile
- XFRD scalability to cope with growing memory
- Control SSL remote control
- Outgoing Incremental
- Full production grade tests release
- Munin, logging, other usability
Use one core of 4x3.2Gz, 12Gb, 1Gbit intel Debian
1M queries, randomized.
100,000 qps is 64 mbit query stream

Assumptions
Domains called example123.tld
No nxdomain
No dnssec

Legacy hardware.
For comparison with NSD3 only

Root:
1 zone, 500 delegations

TLD:
1 zone, 1M delegations

SLD:
100k zones, 10 records/zone

Monday, June 25, 12
Support to Community

BSD License
allows for proprietary extensions

Paid Support
Support levels and Prices available on request

Free

Committed to announce 2 years in advance

nsd-users@nlnetlabs.nl

http://www.nlnetlabs.nl/
©2011 Stichting NLnet Labs