

DNS-OARC Update

Wayne MacLaurin
OARC Executive Director



DNS-OARC

Domain Name System Operations Analysis and Research Center

What is DNS-OARC ?

- The DNS Operational, Analysis and Research Center was conceived as a membership organization where DNS operators, network researchers, software implementors, and others could participate to share data, common problems, and solutions in a secure environment.



DNS-OARC

Domain Name System Operations Analysis and Research Center

DNS-OARC History

- Established in 2004 by Internet Systems Consortium and funded by an NSF grant in collaboration with CAIDA (UCSD)
- Became separate 501(c)3 nonprofit corporation in 2008
- Funded by member subscriptions and grants
- 6 seat member-elected board provides oversight



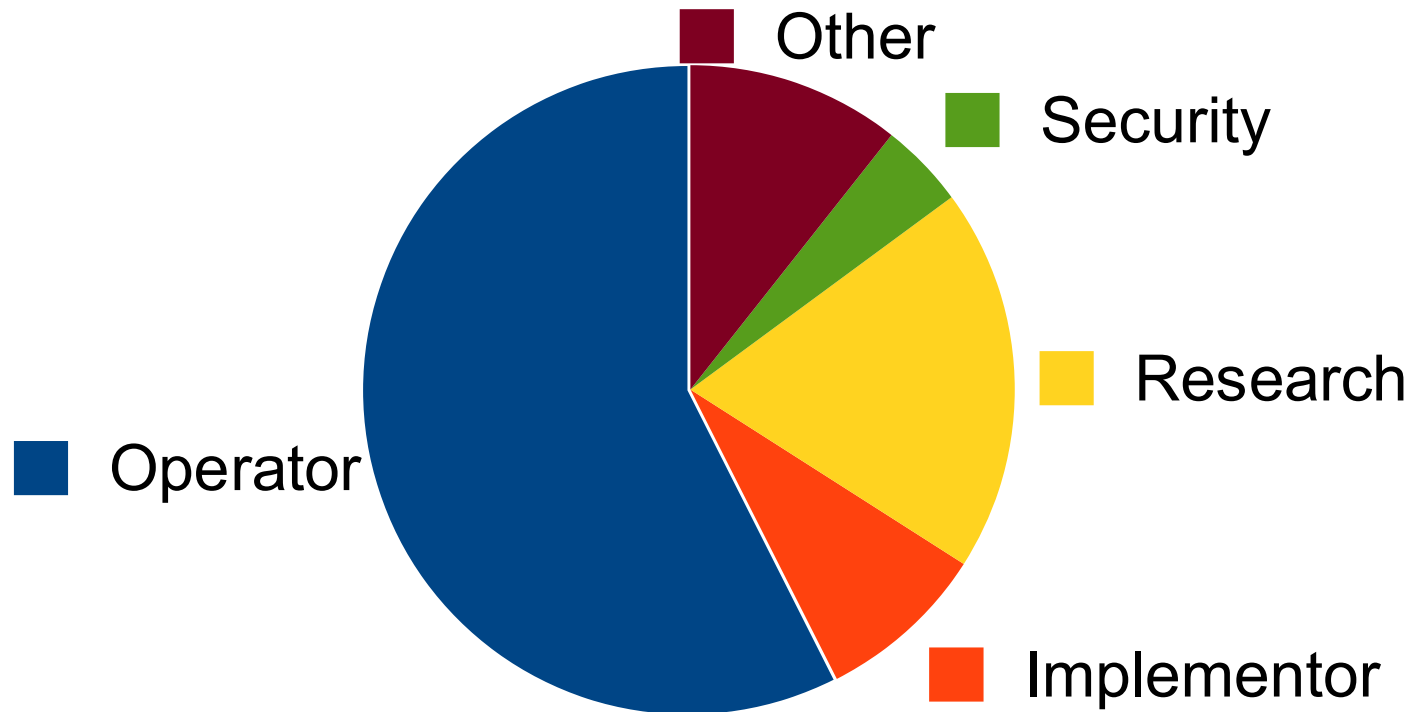
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DNS-OARC Members

over 60 members

Root and Top-Level Domain (TLD) operators, government agencies, registries, registrars, hosting providers, hardware vendors, software vendors, security companies, universities, service providers



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DNS-OARC Members



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DNS-OARC Board

- 4 Member-elected Directors
- 2 Appointed Directors
- Board members:
 - Suzanne Woolf (ISC) – President (Secretariat)
 - Matt Larson (VeriSign) – Chairman (Root Operators)
 - Peter Koch (DENIC)
 - Matt Pounsett (Afilias)
 - Stephane Bortzmeyer (AFNIC)
 - Roy Arends (Nominet)



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DNS-OARC Data Sets

- 6+ years of continuous DSC summary statistics gathering from root and major TLD servers
- 5+ years of annual 48-hour snapshots of all traffic to key servers (DITL)
- Accumulated >40Tb dataset over 6+ years
- > 6Tb data from the most recent DITL



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DNS-OARC Non-Data Resources

- Lists of IP address ranges not to be probed by researchers
- Lists of DNS Open Recursive Resolvers
- TLD zonefile repository
- 10+ years of root zone archive



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DNS-OARC Tools

- UDP source port randomization test (Kaminsky)
- DNS reply size tester (DNSSEC)
- DNSSEC Lookaside-Validation (DLV) test zones
- DNS data traffic capturing and decoding tools
- Quality and conformance testing tools
- DNS server fingerprinting tool



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Communication Resources

- dns-operations list server (open)
- dns-operations jabber room (open to members)
- secure-ops list server and jabber room (trusted, vetted) – realtime, operational matters

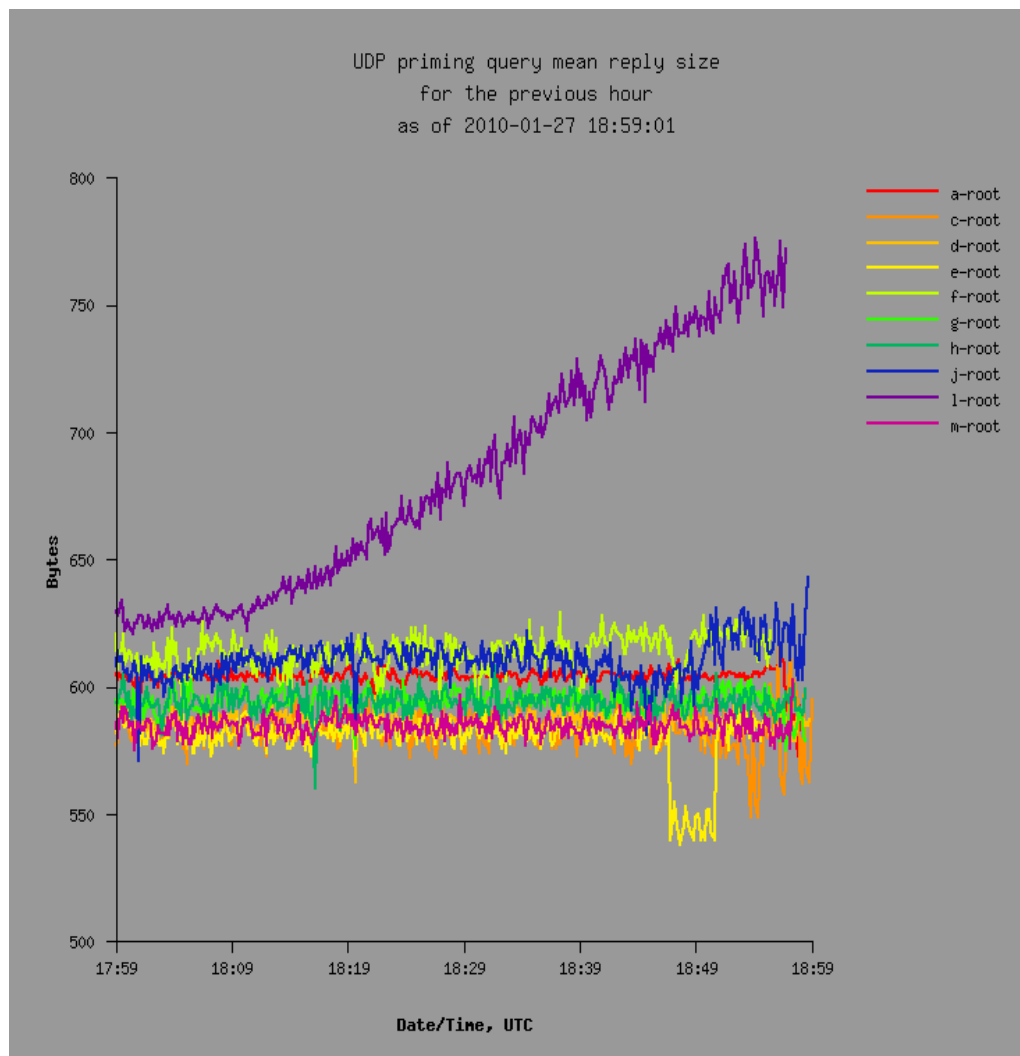


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OARC and DNSSEC

- Ongoing funding by ICANN to model and measure impact of DNSSEC signing of root zone
- <https://www.dns-oarc.net/node/240>



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DNS-CERT

- Position paper submitted to ICANN and available at
<https://www.dns-oarc.net/oarc/dns-cert>



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DNS-OARC Resourcing

- Executive Director:
 - Wayne MacLaurin
- Secretariat functions outsourced to ISC:
 - Director: President/Secretary/Treasurer
 - Administration and Finance
 - Infrastructure hosting
- Contract Engineer
- Annual revenue ~\$250k



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DNS-OARC's Future

- Publish analysis of the root zone signing study
- Enhance data storage and archiving infrastructure
- Expand the membership to support additional staffing
 - System's support
 - Analytics and research
 - Member outreach
- Outreach to registrars, new gTLD operators, developing ccTLDs and large resolver operators



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DNS-OARC thanks

- Keith Mitchell – outgoing President
- Duane Wessels – outgoing director



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Contact Us

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