



**OARC 25<sup>th</sup> Workshop**  
**Dallas, Texas**  
**15 October 2016**

# Development @dnsoarc

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# GitHub



<https://dev.dns-oarc.net>

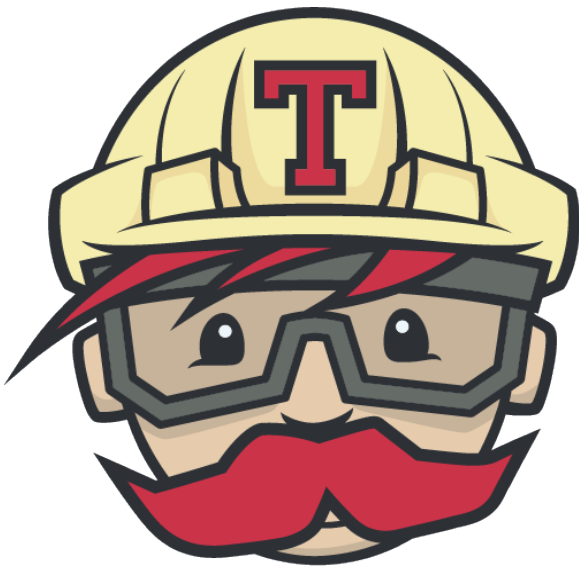
Thanks



**DNS-OARC**

Domain Name System Operations Analysis and Research Center

# Continuous Integration



debian



CentOS



FreeBSD®



ubuntu



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<https://dev.dns-oarc.net/jenkins/>

# Coverity Scan

Project	Lines of code analyzed	Language
<a href="#">DNS-OARC/dnscap</a>	50,617	C/C++
<a href="#">DNS-OARC/dsc</a>	72,379	C/C++
<a href="#">DNS-OARC/pcap-thread</a>	20,586	C/C++

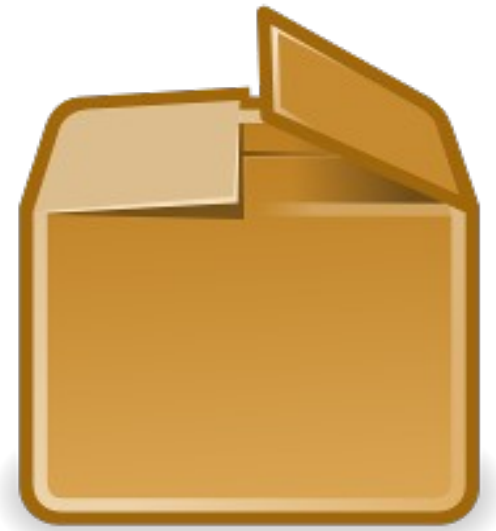
<https://scan.coverity.com/projects?search=DNS-OARC>



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# Packages



pbuilder/cowbuilder



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<https://dev.dns-oarc.net/packages/>

# Development Issues



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15 hrs ago · 4 min read

## Development Issue #1610

Welcome to the first Development Issue!

The idea of this issue is to provide a summary of the current development work being done at DNS-OARC and will be given out on a monthly or bi-monthly basis.

...



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<https://medium.com/@dnsoarc>

# Licenses



AGPLv3+ for public



MPL-2.0 for internal



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# Releases

- DSC 2.0.0-rc.1, 2.0.0, 2.1.0, 2.1.1
- DSP 2.0.0
- p5-DSC 2.00, 2.01, 2.02, 2.03
- p5-Net-GetDNS 0.01, 0.02
- pcap-thread 1.0.0, 1.0.1, 1.1.0, 1.1.1

Semantic Versioning: major.minor.patch

For Perl software: major.(minor+patch)



# DNSSCAP

- License ownership transferred from ISC
- GitHub repository transferred from Verisign

<https://lists.dns-oarc.net/mailman/listinfo/dnscap-users>

- Release 1.1.0
  - Restructure repository and use autotools
  - Compiled and tested on Debian, Ubuntu, CentOS, FreeBSD and OpenBSD using Jenkins and Travis-CI
  - Source code static analysis using Coverity Scan
  - Compatibility fixes for FreeBSD, OpenBSD and OS X
  - New command line options
  - pcap-thread ...



# DSC

- Split into; DSC, DSP, p5-DSC

<https://lists.dns-oarc.net/mailman/listinfo/dsc>

- DSC changes up to 2.2.0
  - Conform to FHS 3.0 (or at least try to)
  - Man-pages (man dsc, man dsc.conf)
  - JSON output format
  - Interval of writing statistics now configurable
  - Removed C++ dependency (Hapy)
  - Upload scripts are deprecated
  - pcap-thread ...



# pcap-thread

- PCAP helper library with POSIX threads support
- Version 1.1.1
  - One thread per interface captured
  - Compile detect or runtime configurable fallback to single thread
  - Single thread for processing packets
- Future versions
  - Multi-threaded processing support

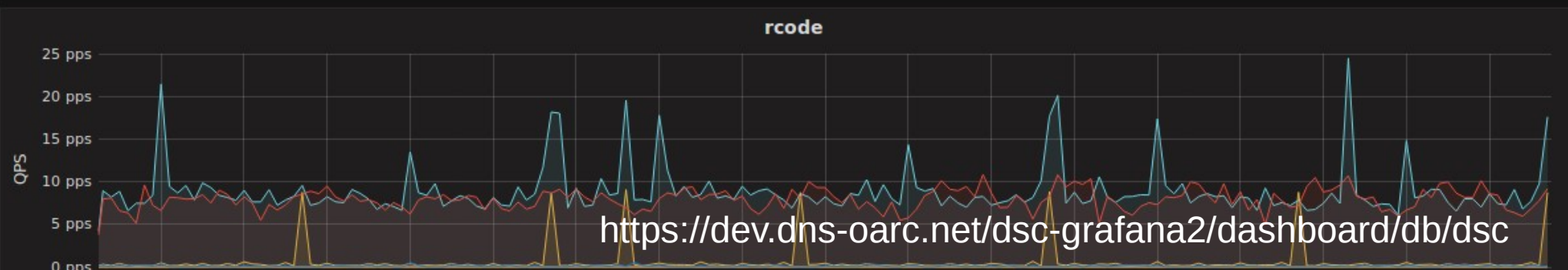
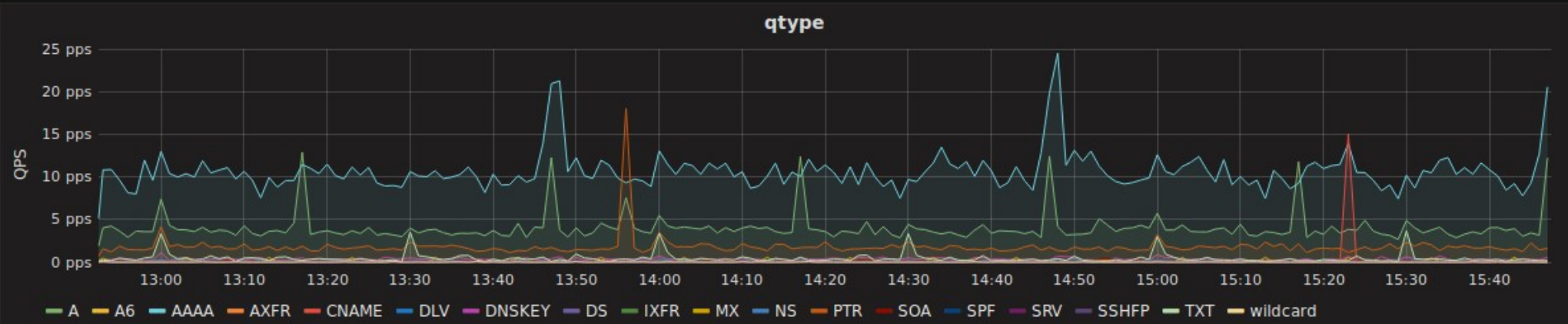
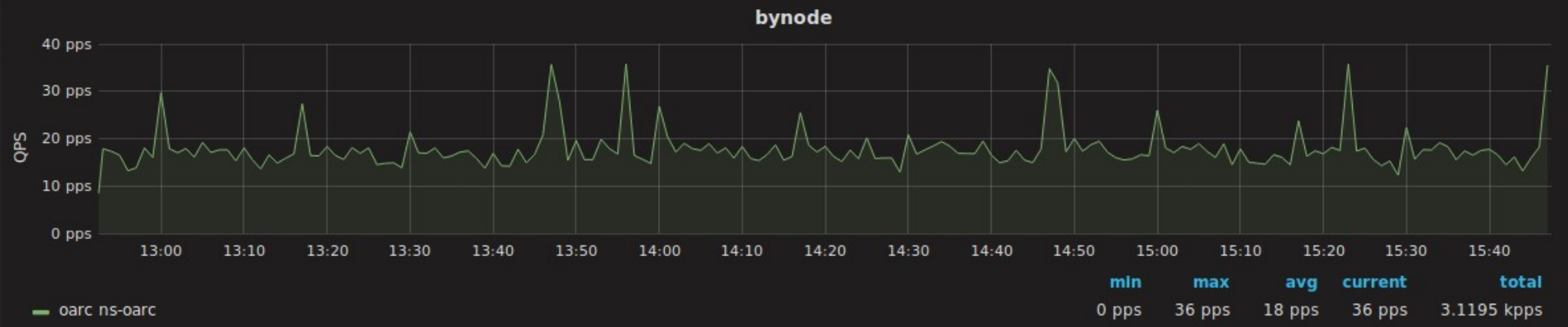




Time Resolution: auto Server: All Node: All QTYPE: All RCODE: All

Local demo: http://demo.dev.dns-oarc.net

These graphs presents some of the data gathered by DSC. Read this wiki article how to set up this yourself.



# dsc-datatool

- Tool for converting, exporting, merging and transforming DSC data
- Modules
  - Input
  - Output
  - Transformers
  - Generators





## Overview



IPv4 **16** IPv6 **53** TCP **2** UDP **67** TLS **0**

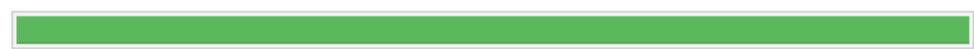
Problems? Please see [known issues](#) and [how to report](#).

Queries	From	Whois
4	2a00:1450:4010:c01::104	IE-GOOGLE-2a00-1450-4000-1
3	2a00:1450:4010:c01::103	IE-GOOGLE-2a00-1450-4000-1
3	2a00:1450:4010:c0e::101	IE-GOOGLE-2a00-1450-4000-1
3	2a00:1450:4010:c02::103	IE-GOOGLE-2a00-1450-4000-1
3	2a00:1450:4010:c0e::106	IE-GOOGLE-2a00-1450-4000-1
2	2a00:1450:4010:c01::10a	IE-GOOGLE-2a00-1450-4000-1
2	2a00:1450:4010:c0e::10a	IE-GOOGLE-2a00-1450-4000-1
2	2a00:1450:4010:c01::10b	IE-GOOGLE-2a00-1450-4000-1
2	74.125.74.15	GOOGLE
2	2a00:1450:4010:c01::105	IE-GOOGLE-2a00-1450-4000-1
2	74.125.74.11	GOOGLE
2	2a00:1450:4010:c0e::10e	IE-GOOGLE-2a00-1450-4000-1
2	2a00:1450:4010:c02::107	IE-GOOGLE-2a00-1450-4000-1
2	2a00:1450:4010:c01::106	IE-GOOGLE-2a00-1450-4000-1

## DNSSEC



## IPv6 Connectivity



## QNAME Minimisation



## TCP Connectivity



**i** Click on the titles above to show details about the tests then you can click on the view button to get a list of DNS queries and click on each query row to get full details. Refresh in order to re-test.



## Overview

IPv4 **10**IPv6 **0**TCP **2**UDP **8**TLS **0**

Problems? Please see [known issues](#) and [how to report](#).

Queries	From	Whois
10	199.227.111.28	unknown

## DNSSEC

## IPv6 Connectivity

## QNAME Minimisation

## TCP Connectivity

**i** Click on the titles above to show details about the tests then you can click on the view button to get a list of DNS queries and click on each query row to get full details. Refresh in order to re-test.





# 2017+

- Check My DNS tests
  - Reply Size, Port Test and DNS Entropy
- DSC/DNSCAP
  - Merger of similar code base, possibly as an external library
  - More formats for everyone
- Packages
  - CentOS (RPM)
  - Ports (\*BSD)
- *<insert feature requests here>*

