OARC 31st Workshop
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OARC Software Report

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Full Software Report

https://indico.dns-oarc.net/event/32/attachments/685/1142/Software-Report-2019_10.pdf

- Development platform updates
- OARC software updates
- ***Member's software updates***
  - Flamethrower, ENTRADA, DNS shotgun

>>> READ IT!

DNS-OARC

Domain Name System Operations Analysis and Research Center

Software Projects & Funding

https://www.dns-oarc.net/oarc/software

- Overview of software developed and maintained by OARC
  - ***dnsmeter***, ***dnsperf***, dnsjit, drool, dsc, dsc-datatool, dnscap, packetq
- Information about funding development, licensing policy, links to GitHub project pages and mailing lists

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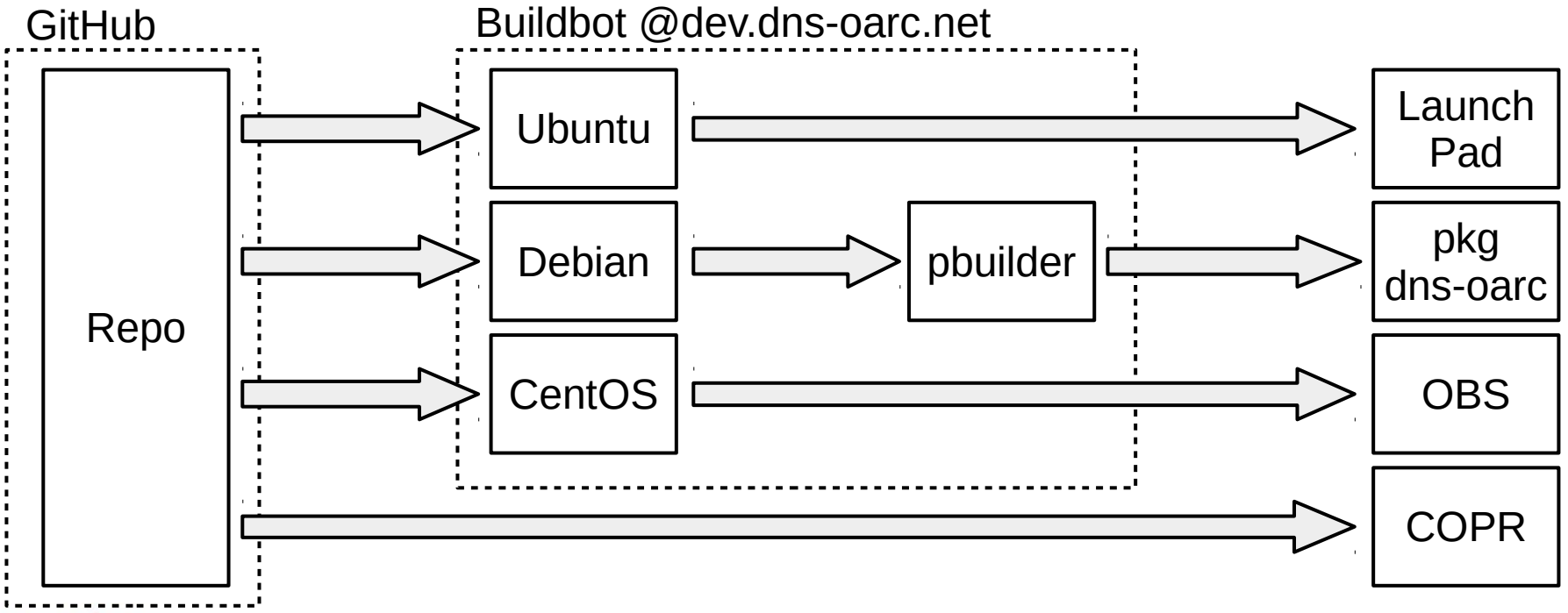
Automatic Package Building

- Time spent on release
  - Before: 4h (best case) to 3+ days
  - After: **~15mins** !!1!oneone
- Develop branch always built as package
  - Published in *pre-release* repositories

Package Building Pipeline



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Development stats May - Oct

- 16 releases
- 233 opened “issues”
  - 206 closed
  - 44 pull requests alive longer then the same day
- 275 commits of which 7 are external contributions
  - All external from CZ.NIC, Petr Špaček & Tomáš Křížek :)

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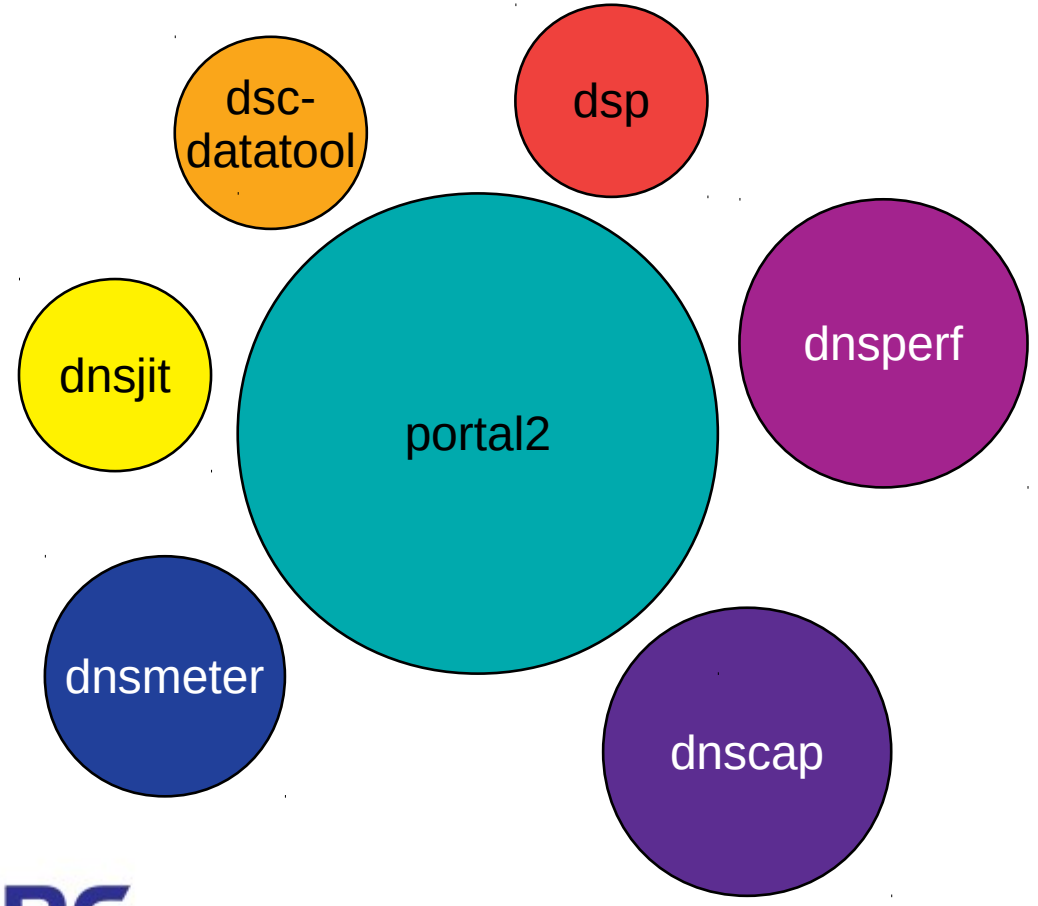
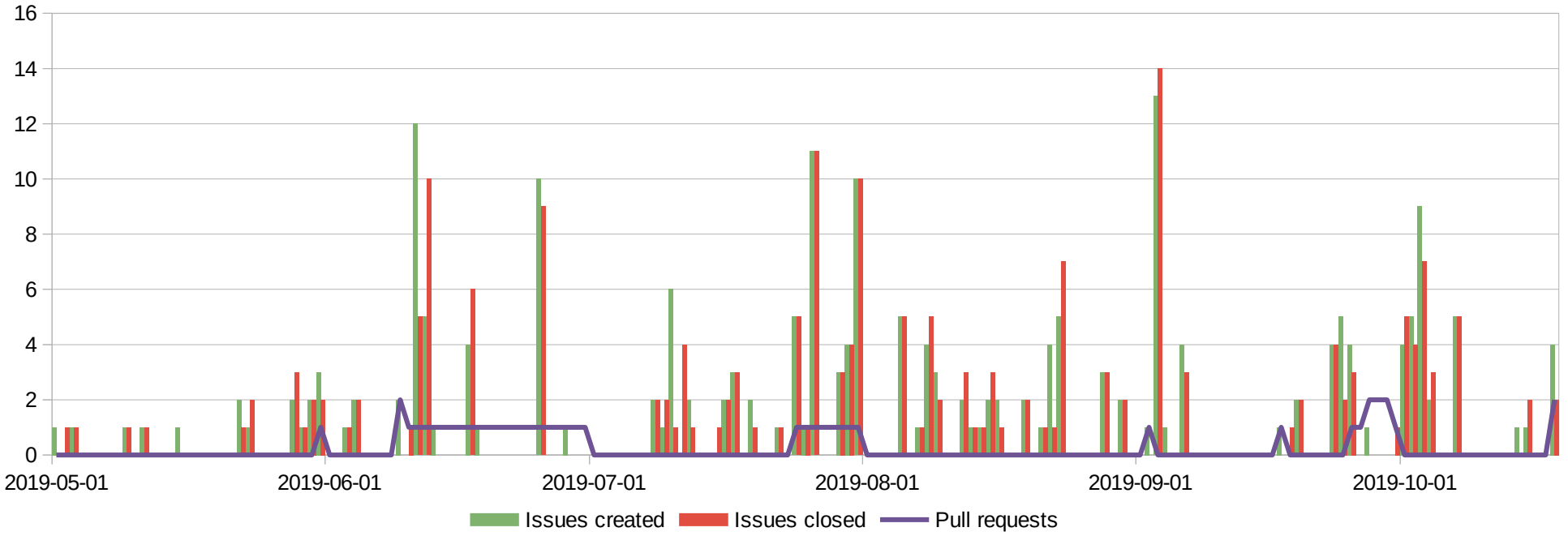
Releases



Issues and Pull Requests



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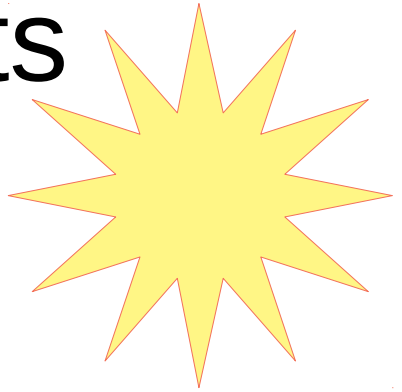
Development Highlights



- Automated package building
- TCP and TLS support in dnsperf
- dnsmeter
- New OARC portal
- DNS shotgun(!) by CZ.NIC
  - dnsjit based shot-your-own-dns-server-in-the-foot software

drool vs perf vs meter vs shotgun

- drool (Lua): dnsjit, PCAP payload, low # clients, userland sockets, UDP, TCP, TLS
- dnsperf: text payload, moderated # clients, userland sockets, UDP, TCP, TLS
- dnsmeter: text/PCAP payload, spoofing clients, raw sockets, **v4 UDP ONLY**
- DNS shotgun: dnsjit, PCAP “pellets”, high # clients, userland sockets, **v6 ONLY**

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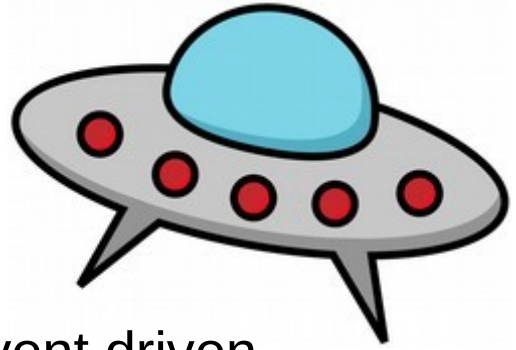
Future Work



- libdnstap
  - DNSTAP library for threaded, non-threaded and event driven applications
  - First to be added to dsc and dnscap
- Two funded development in consideration
  - Stay tuned, announcement @OARC32 (hopefully, fingers cross, ta!)
  - … or?

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Announcing Project Soteria

- Greatly improve the quality and testing of DNS-OARC's software and tools for the community, by using **code coverage** and **code analysis**
- Name comes from Greek mythology, *Soteria* was the goddess (or spirit) of safety and salvation, deliverance, and preservation from harm
- Funded by The Swedish Internet Foundation

INTERNET STIFTELSEN

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