



DNS-OARC

Domain Name System Operations Analysis and Research Center

Members report, May 2019 - Oct 2019

Summary:

1. Austin OARC31 Workshop & AGM
2. New Members
3. DNSVIZ
4. Member Portal
5. Software Development
6. DITL and Data Storage
7. Finances, Fee Discounts & Increases
8. Future workshops

Dear OARC Members,

[OARC30](#), held in Bangkok in May in conjunction with ICANN IDS, was one of our most successful workshops ever, with some 174 attendees, and our first time in the Asia Pacific region in a decade brought many first-timers. Slides and Video of OARC30 are available via the [workshop site](#) and the [OARC YouTube Channel](#).

The months since OARC30 have seen some major advances in our open-source DNS tool software offerings, including our becoming the new home for performance testing tools such as [dnsperf](#) and [dnsmeter](#).

It has not however all been smooth running – signing up and retaining Members and Sponsors is increasingly challenging in current industry conditions, and demands on our systems resources have exceeded our capabilities in a number of areas, limiting progress against plan.

Our main services new development has included taking on the hosting of the acclaimed [DNSVIZ](#) tool in partnership with **BYU** and a donation from **VeriSign**. We also rolled out our new [Member portal](#), offering a more modern, friendly and future-proof platform, which we have recently started adding features to.

1. Austin OARC31 Workshop and AGM

Our Fall workshop, [OARC31](#), is imminent, and will take place in Austin, Texas, USA on the 31st October and 1st November, co-located with [NANOG77](#). Please note due to venue issues beyond our control, we are (this time only) running immediately *after* NANOG77 and concurrently with the [ARIN44](#) meetings. We realize there may be some potential overlap between OARC, Halloween festivities and ARIN attendance, and apologize for any inconvenience or *scares* this may cause you.

The 2019 AGM will also take place in Austin, on the afternoon of Friday 1st November. The [AGM agenda](#) is posted on the OARC31 site, and we have received 4 nominations for the 2019 Board Elections:

- **Paul Ebersman** (Neustar)
- **David Lawrence** (Oracle)
- **Benno Overeinder** (NLnet Labs)
- **Ondřej Surý** (ISC)

Full platforms for each of these candidates are available at:

<https://www.dns-oarc.net/index.php/oarc/agm-2019/elections>.

Please submit a proxy form to vote if you are unable to attend in person.

We have a full programme of 21 presentations - registration currently stands at 113 attendees. There will be an opportunity to submit lightning talks for OARC31 immediately before the workshop, and we would very much appreciate additional sponsors - please contact Denesh via [<sponsor@dns-oarc.net>](mailto:sponsor@dns-oarc.net) if you are interested. While boat trips are becoming something of a staple for OARC workshop socials, this time we have something a little different, with a chance to see Austin's famous bat flocks on Halloween !

OARC31 would not be happening without the generous support of our sponsors:

- **VeriSign** (2019 Workshop Promoter Patron)
- **Comcast** (Contributor)

and co-location assistance from **NANOG**.

2. New Members

Please join us in welcoming the following additions and upgrades to OARC Membership in the last 5 months:

- **LACNIC** as a re-joined Bronze Member
- **NetProtect** as a Bronze Member
- **Alibaba** as a Bronze Member
- **Microsoft** as re-joined Bronze Member
- **ISZT-HU** as a Blue Member
- **CAIDA** from Supporter to Blue Member
- **ShreshatIT** as a Supporter

- **Old Dominion University** as a Supporter

We unfortunately had to say farewell to five Members in this period: **A10, Cox, CMU-SEI, Donuts,** and **RESTENA**; also 3 Supporters.

As ever we would appreciate your help in spreading the word about the benefits of OARC Membership - to help you do this, you may find our [Brochure](#) and [Briefing](#) documents useful, see also below about our new referral discounts.

Please contact Sue Graves via [<admin@dns-oarc.net>](mailto:admin@dns-oarc.net) if you have any questions and/or would like to upgrade your membership or donate to support our mission and the DNS community.

3. DNSVIZ

OARC has taken over the role of hosting the highly-regarded *DNSVIZ* DNSSEC debugging tool. This was created by Casey Deccio at Sandia Labs, now of Brigham-Young University (**BYU**), and for the past few years it has been hosted by **VeriSign**. VeriSign has kindly donated the server hardware to OARC, and *DNSVIZ* will from now be operated jointly by OARC and Casey – we will provide the hosting and systems support, and Casey will continue to own and develop the code.

Getting *DNSVIZ* settled in its new home has been rather more challenging than we anticipated, and we thank the community for your patience and support while we've gone through this protracted process. We inherited significantly more technical debt in terms of things like OS platform age, hardware remote management and RAID configuration than we were prepared for, and some migration decisions which were good for keeping the live service up while we moved and reconfigured the hardware turned out to be not so good for the availability of the long-term historical database. This has led to a period of extended downtime for the latter while we re-built and re-indexed the database, plus a lot of clean-up, as well as impact on Matt Pounsett's time from other OARC systems activities.

Thanks to Matt's efforts plus a lot of help from Casey, we believe we are close to a much better place for *DNSVIZ*. The historical database is almost fully restored, and while we are now wary of making commitments, there's a very good chance it will be live again before OARC31. It's also clear the existing hardware is not a long-term sustainable platform for *DNSVIZ*, and we have just purchased a modern, high-capacity database server. This will replace the existing DB server, which will become a hot-sync backup. Additionally, the new server creates extra headroom for us to develop new premium capabilities for *DNSVIZ*, in particular better searchable query history, and an active monitoring service, which we plan to offer in 2020.

4. Member Portal

The new portal for accessing your Member services has been live for some months now, and Member feedback and interactions suggest it is working well. Now that the functionality of the old portal has been fully re-implemented, we're starting on a rolling programme of feature enhancements. Here are some of the first set of upcoming changes to our Portal:

- A notice about the use of personal information is now shown at all places where personal information is entered or changed. This was previously only shown to the organization administrators when adding new contacts.
- Contacts can be marked as "Administrative Only" which means they will not count towards the active contacts limit, but they will not have access to any of OARC's services. This can only be set by Portal Administrators, please contact [<admin@dns-oarc.net>](mailto:admin@dns-oarc.net) if you wish to have any of your contacts set as an administrative only contact.
- The version number of our portal is now visible at the bottom of each page, please include this in

any bug report you send us.

- You will now be prompted to confirm your email to ensure we have the correct one. This will be done once after the upgrade and then every time your email is changed or when a new account is created.
- Our news posting now supports Markdown formatting, this will let us add presentation enhancements such as clickable links (no more cut & paste !) etc.
- We have added Programme Committee support to the portal, in the same fashion as the Board private site support, along with a service that all Members can access to view the current PC members and their assignment/title.
- An additional means for external authentication has been added, it can now use ``mod_authnz_fcgi`` which means Apache will communicate over FastCGI to authenticate. This will greatly speed up authentication for services such as Etherpad (mainly used by Staff, Board and PC).
- To clear up a bit of confusion, some overhaul of the organization administrator UI has been done to make it more clear that they are managing contacts, for example we renamed ``View`` to ``Manage`` for ``Manage Contact(s)`` (can only be seen by organization administrators).
- Newly created accounts will get a welcome message sent to them automatically

These changes are being released with portal2 v1.1.1, feedback is welcome.

5. Software Development

OARC maintains a growing set of open source software related to DNS which we make new releases for ever so often. Beside working on issues reported one notable feature was added to *dnperf*, which moved to OARC earlier this year, and that is TCP and TLS support. We also build packages for the major Linux distributions, and significant work has been done to automate the process. The packaging is now triggered directly from our continuous integration platform for both per-releases and releases of our software. You can find more information, instructions and links at: <https://dev.dns-oarc.net/packages>.

We are pleased to report that an application we made to the new **ARIN** Community Grants program was successful, this was for an award of \$7,500 to fund one year of support and maintenance for our open source DNS toolset. The Regional Internet number Registry (RIR) community are strong supporters of OARC's mission, and it is great to once again count both **ARIN** and **LACNIC** among them.

OARC is also providing administrative, media and tool support for [DNS Flag Day 2020](#), an initiative supported by a number of our Members.

See Jerry's Software Engineering report, and come visit him at the OARC31 demo desk, for more detail of all the above and other OARC Software developments. You can also find the latest about our software development activities in Jerry's regular newsletter, the latest edition of which will be available on our [Medium blog](#) as Development Update #1910. A list of all our software is here:

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

Finally, don't forget that OARC can develop new, or enhance features of existing, tools via a custom for-hire development contract. OARC Members will receive priority for such work, and at a discounted rate depending on their membership tier.

6. DITL and Data Storage

Maintaining the storage infrastructure and our dataset that lives on it has unfortunately been a challenge over the past few months, compounded by the exceptional resource demands of taking on DNSVIZ. Although we've had a regular annual refresh cycle for raw storage capacity, as previously mentioned the underlying servers have had a number of recent hardware issues and file-system corruption incidents. This led to a situation where we did not have redundant copies of some of our dataset, and significant efforts were made in early summer to rationalize datasets across multiple servers to rectify this, while dealing with some underlying server hardware issues.

We are now back in the situation where all of our datasets have at least one verified copy on each of two different servers, though at present we do not have a 3rd off-site (Ottawa) mirror of the most recent (unprocessed) DITL collections. However, two of our servers (*fs1* and *fs2*) have residual intermittent hardware issues which are sometimes triggered by processing activity. We have thus put on-hold the post-processing of the 2018 final KSK rollover and 2019 annual DITL collections. We regret the delay in making these available to the community, but feel we really have no choice until we can tackle the underlying server hardware instabilities. A final additional (2019) KSK Rollover dataset has additionally been collected by the Root Operators, and is pending upload until this is addressed.

It has been clear some for time now that these challenges in growing and maintaining our data-set suggest a more radical re-architecting is required. Please see Matt Pounsett's separate Systems proposal which he will be presenting at OARC31. While we can start building some of this using our existing 2019 capital budget, we're hopeful that some Members will be able to step up with donations of funds and/or new hardware that will allow us to build this faster and/or bigger without dipping into our reserves.

7. Finances, Fee Discounts & Increases

Once again OARC's finances, for FY2018, were successfully externally audited, and passed with flying colors in addition to our making a small surplus. The audited [Financial Statements](#) are available for review and Member approval at the AGM.

Our target for 2019 was 5% revenue growth, but so far this is looking like a stretch – we have unexpectedly lost a number of Silver and Gold members through the year, and are finding that even very large corporations are only signing up at Bronze level. Currently our revenue is tracking ~90% YTD of budget, with expenses mostly tracking on-budget, though some major items remain unspent. Depending on whether we make these expenditures, and any possible donations for infrastructure development (see above), it's possible we may make up to a \$50k deficit for 2019. This is less than ideal, but is still well within our ~\$300k reserves if unavoidable.

It has been 5 years since the last substantive increase in most OARC Membership subscriptions, and we will be increasing these, in line with inflation indices, effective 1st January 2020. The planned changes are:

Membership Category	Current Annual Fee	New Annual Fee
Blue	\$1,000	\$1,100
Bronze	\$6,000	\$6,500
Silver	\$9,500	\$10,000
Gold	\$14,000	\$15,000
Platinum	\$25,000	\$25,000
Diamond	\$50,000	\$50,000

Note that the Platinum and Diamond membership levels were introduced more recently than the increases to the other Membership categories, so are not being increased in this round. Any Member who wishes to renew their 2019/20 Membership before end 2019 will be able to do so at this year's prices.

We are also introducing three new discount options:

- **Upgrade:** between now and 1st Jan 2021, and receive a 10% discount for the first year at the upgraded level.
- **Multi-year:** for Members who wish to save by committing to 2- or 3-year terms. This is based on an escalating scale of 5% discount for year 2, and 10% for year 3.
- **Referral:** existing Members who refer a new party to OARC who becomes a paying Member can receive a 10% discount.
Supporters who refer a new paying Member can receive an upgrade to Blue Membership.

8. Future workshops

For 2020 and beyond, we will be switching from two 2-day workshops per year to two 2-day plus one additional 1-day workshop. From 2021 we would then always co-locate with a specific event at the same time of year, e.g. NANOG in Q1, ICANN IDS in Q2, and RIPE in Q3. To transition to this model, we will during 2020 have the following meeting schedule:

- **OARC32** will be co-located with NANOG78 in **San Francisco**. This will be a one-day workshop on the Saturday (February 8th) before NANOG, with some additional activities (tutorials, Member round-table, etc) on Sunday 9th.
- **OARC33** will be co-located with ICANN's IDS, GDD and RoW events in **Paris** on May 9th and 10th. While this is immediately before RIPE80 in Berlin, we are hopeful attending both OARC33 and RIPE80 consecutively should be feasible for attendees.
- For **OARC34**, we are planning to co-locate with RIPE81 and CENTR Tech, subject to venue confirmation.

We will once again be seeking volunteers for the OARC Programme Committee for 2020 immediately after OARC31, please consider if you or a colleague would be willing to step up.

Keith Mitchell
OARC President

October 2019