July 17, 2014

This is the 2013 Annual report for the Internet Systems Consortium (ISC), including a set of audited financials for 2013, and updates covering the first six months of 2014. Despite rumor to the contrary, we are neither a fat, rich, organization that doesn’t need your help, nor flat broke and circling the drain.

Our mission was stated simply by the Board of Directors: “ISC is dedicated to developing software and offering services in support of the Internet infrastructure.” We believe that we exist to fill the holes in the Internet that might otherwise be tilted in favor of a specific commercial entity.

Over the past 20 years, we have written and supported BIND, still the most widely used DNS server implementation in the world and ISC DHCP, which is the most widely used implementation of DHCP outside of MS Windows or imbedded in routers. We have also maintained the F-root server. It handles roughly a third of all root queries on the global Internet from 55 locations. Our public benefit Hosted@ service provides free or subsidized hosting for 40 ccTLDs, or roughly 20% of the countries in the UN, as well as open-source projects like FreeBSD. We also help host the Internet Archive, home of the Wayback Machine and the Grateful Dead Archive.

To focus on our core competencies, in the last eighteen months we have completed work, sold or handed off code to Open Source on projects including BIND 10, OSRF, OHGF, registry services and SIE security services. The sale of registry services and SIE provided us with a financial cushion of over three and a half million dollars that has given us a solid financial foundation for the first time.

ISC carries no debt, is approximately break even, and has millions of dollars of cash and equivalents in the bank. We are proud of our past and excited about our future. We are actively in discussions around the globe to research emerging problems we can help solve and playing fields we can help level. We aren’t going anywhere but forward. We hope you will consider supporting our mission financially and furthering our common goals.

Regards,

Jeff Osborn
Where we get our money
ISC receives revenue primarily from support services for our products and services. In addition, in 2013, we received $3.5 million for the sale of our registry and security (SIE) business. The sale of these businesses has provided a cushion for our finances, and leaves us in our strongest financial position in years. In 2013, 74% of total revenue came from the four main products and services: BIND 9 (45%), ISC DHCP (11%), Hosted@ (14%) and F-root (4%). By beefing up our staffing of those functions, and trimming staff from the products we either completed or handed off, we have ended up with a roughly break even organization that is financially sound and ready to continue to serve the Internet community at large.

Where the money goes
The majority of ISC’s costs (and its greatest asset) are its people. Other than personnel costs, there are depreciation charges for our extensive network and hosting gear, bandwidth and facilities and just about nothing else. We run a lean organization, and are proud of the work done and bang for the buck. Technical personnel provide three major functions; Network operations, Software engineering and Technical support. Nearly three quarters of the staff are technical personnel: the remaining quarter are in sales, marketing and G&A.
Changes in 2013

Change in Management
It is always a difficult task to find replacement management when the time comes for a founder to move on, especially a charismatic visionary like Paul Vixie. Paul led ISC for nearly two decades from its inception, and remains a powerful inspiration and example to the team. After couple of years under the control of Barry Greene and then Kannan Ayyar, Jeff Osborn was appointed as President by the Board of Directors in October 2013 and tasked with putting ISC back on track as a contributor to the betterment of the Internet. A course correction and rededication of ISC as a non-profit is underway, although the word has not gotten out to all corners of the Internet community, which were occasionally dismayed at the seeming turn toward commercialism. ISC exists for the betterment of the Internet. There are no shareholders or owners.

Changing from membership to subscriptions
By late 2012, ISC had more projects under way than it could support with its existing revenues and contributions. A new plan to raise revenues with a much more expensive subscription offering, replacing the more collegial membership model, created an angry constituency and is still the source of bad feelings among some of our former partners. In some cases, ISC was attempting to triple or more the rates previously paid for support and services for BIND 9 and ISC DHCP. There were clumsy attempts to force compliance that are an embarrassment to a
great organization like ISC that has actually done so much good. We have since lowered prices for the subscription offerings substantially. In addition, we have introduced a new (basic) service: advance security notification for any vulnerabilities discovered in BIND and ISC DHCP. At $10,000 a year for commercial companies (with substantial discounts for non-profits and schools, and no charge for root server operators) it has been well received by our customers and partners. As the majority of our operating expenses are covered by these subscriptions, we are finally getting comfortable that the current rates are fair to our partners and customers as well as sufficient to support our efforts.

Changes in Focus
During 2013, and continuing into 2014, we concluded a number of programs which were drawing our focus away from our core responsibilities; ISC DHCP, BIND9 and F-root. The largest of these discontinued programs, and the most wrenching decision, concerned the long-running BIND10 development project. In April of 2014, we released version 1.2 of BIND10 and announced that ISC would no longer be updating the source pool. This announcement was a recognition of the fact that BIND10 was not on a path to replace BIND9 anytime soon, and that we could not afford to pursue development of two completely different DNS software systems in parallel. We are grateful for the involvement of the BIND 10 sponsors and support BIND 10’s continued development as Bundy.

Also in 2013 and early 2014 we concluded the Open Home Gateway Forum, transferred the Open Source Routing project to http://netdef.org/, and spun off two services; the SIE project, which became Farsight Security, Inc headed by ISC founder Paul Vixie and our registry business to Uniregistry.

The DNS Company - a Failed Experiment
The focus on a new commercial entity, The DNS Company, to be known as dns-co.com, was ill-conceived and poorly handled. Its launch and a focus on business that looked, acted and smelled commercial led to further uncertainty and mistrust among friends, partners and customers alike. ISC appeared to be transforming into a for-profit organization that sought increased revenues, profits and shareholder value over the values of keeping the Internet safe for the world.

While there actually is a for profit part of ISC, it is entirely a product of US tax law, and a requirement imposed on us in 2005 by the IRS. The IRS requires that services provided that have a value must be treated as a taxable benefit, much like the value of the prizes given away during fund drives by National Public Radio are not allowable as charitable contributions that can be deducted from US taxes. The DNS Company was an attempt to make this separation clear during the period we were looking for extended commercial opportunities.

However, ISC is operated and managed as a non-profit, and has no shareholders (other than the non-profit itself) who could benefit from any activities of the company. There is no profit to
squander and there are no shares to sell. It’s just that simple. By the end of 2013, under new corporate leadership, we had moved away from attempting to become a corporate powerhouse and returned to our roots and best abilities as a non-profit entity focused on doing the right thing by and for the Internet. There are vestiges of The DNS Company and dns-co.com on our web pages and in some legal contracts that are extant, but our clear intent and direction is to move from any semblance of commercial enterprise. Thanks to all of our partners, customers and suppliers for your patience and forbearance as we correct these unfortunate missteps.

55 F-Root Nodes worldwide

Network Operations

F-Root operations
We’ve operated F-Root, one of the world’s thirteen root name servers, since 1994. We have this service deployed around the world in 55 locations to offer fast access even in otherwise underserved parts of the world. We have well over a thousand peers, and F-root handles roughly a third of all internet queries to the DNS root.

F-Root is supported with the help of multi-year donations in kind from many service providers and other Internet organizations. We partner with many Regional Internet Registries, such as LACNIC, APNIC, and AfriNIC, as well as many local sponsors to deploy F-Root all over the globe. We are grateful for hosting services provided by Equinix (in PAIX, San Jose, Chicago and now London), and others. We receive significant donations of transit bandwidth from NTT, Hurricane, Telia, Cogent and AboveNet. Cisco, Juniper and Arbor Networks have donated hardware in prior years.
2013 was a year of updates and moves for F-Root. Our nodes in New York and Kiev underwent major datacenter moves, while we refreshed the node equipment in Auckland, Brisbane, and Seoul. Unfortunately due to sponsorship difficulties, the node in Kuala Lumpur was decommissioned. We entered into agreements for a new node in Trinidad and Tobago which will be deployed in 2014.

**Hosted@**

We offer collocation or hosting for public-benefit organizations whose needs match our ability to deliver. Among the services available include rack space and power, connectivity, remote hands, and web hosting. We request donations from those we host to cover our power and cooling costs, however, the goal of serving the community trumps cost issues.

In 2013 we expanded our relationship with our largest Hosted@ partner, [Internet Archive](http://www.internetarchive.org) to include the provision of 3rd party Internet Transit Services. Some of the several dozen non-profit organizations we host at cost-recovery or no-cost rates are:

- FreeBSD.org
- NetBSD.org
- OpenLDAP.org
- Kernel.org
- CAIDA
- RIPE Atlas
- DNS-OARC
- SANOG Public Library of Science

In continuation of our outreach to our local community in the Bay Area, in 2013 ISC entered into a formal agreement to provide Internet access to the City of Palo Alto, and increased our bandwidth to the Palo Alto Unified School District. We also entered into a formal agreement to allow ISC to deliver Internet services to all members of the INET, a fiber optic network in the bay area connecting schools and municipalities. Also in 2013, continuing the relationship that brought forth the F-Root node in Beijing and the .CN node in Palo Alto, ISC worked with CNNIC to deploy a new .CN node in Chicago.

**Secondary Name Service**

ISC’s Secondary Name Service is an infrastructure service for publication of DNS zone data to the global Internet with maximum availability and minimum delay. Customers of SNS operate their own primary name servers where they manage their DNS zone data, and then ISC transfers this zone data to one or more of our globally anycast name server clusters. End users will see extremely high availability and short response times when they look up domain names whose DNS zones are served by ISC’s Secondary Name Service.
In 2013 we had 15 commercial customers and nearly 100 Public Benefit entities using our SNS service. We deployed a new statistics system for the commercial SNS customer base, providing elegant interactive graphs of traffic. We renegotiated our contracts with one of our hosting providers, increasing our bandwidth 10-fold while reducing our ongoing costs with this vendor by over 60%. Finally, we refreshed aging equipment in our Amsterdam based Public Benefit node, dramatically increasing our capacity to serve ccTLDs and other public benefit entities.

Some of the subsidized SNS public benefit users:

- AQ Antartica cc TLD
- ARIN
- Centro Nacional de Innovacion Tecnologica
- Christmas Island Internet Administration Limited, NIC.CX
- Comision Nacional de Telecomunicaciones (CONATEL.VE)
- FreeBSD Foundation
- ICI Bucharest ccTld .ro National Institute for R&D in Informatic
- NIC Chile
- Norfolk Island Data Services NIC.NF
- NYSERNet.Org, Inc.
- Rwanda Info & Comm Tech Assos
- St. Jude Children's Research Hospital
- University of Iowa
- Zimbabwe Internet Service Providers' Assn
- Virgin Island Domain Registry, NIC.VI

DLV.ISC.ORG

DLV.ISC.org is a free service available to anyone. DLV (DNSSEC Look-aside Validation) is an extension to the DNSSEC protocol. It is designed to bridge the gap created when a domain wants to enable DNSSEC, but the parent zone isn't DNSSEC capable. The ISC DLV site is included in the default configurations provided by RedHat, for example. We continue to have a steady stream of new users, and as of the end of 2013 we had over 4 thousand zones registered.

<table>
<thead>
<tr>
<th>Zone Status</th>
<th>Number of Zones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>2882</td>
</tr>
<tr>
<td>Unconfigured</td>
<td>431</td>
</tr>
<tr>
<td>Cookie Missing</td>
<td>7</td>
</tr>
<tr>
<td>Key Missing</td>
<td>213</td>
</tr>
<tr>
<td>Missing NS RRs</td>
<td>233</td>
</tr>
<tr>
<td>Servers unreachable</td>
<td>584</td>
</tr>
<tr>
<td>Signature expired</td>
<td>173</td>
</tr>
<tr>
<td>General Failure</td>
<td>21</td>
</tr>
</tbody>
</table>
We are concerned that this service is quickly becoming a crutch, delaying complete DNSSEC deployment, and providing an excuse for registries not to enable DNSSEC. We're evaluating this risk and are likely to have a change of direction in the upcoming year.

**Domain Survey**

Internet Systems Consortium’s Internet Domain Survey, which was started by Network Wizards, is the longest-running survey of the number of computers connected to the Internet. This data provides an in-depth look at the active domains on the Internet. Despite its name, the ISC Domain Survey is not a survey of domains. It is a survey of IPv4 addresses that have a domain name attached to them. ISC has been sponsoring the Domain Survey since 1987, although the process has evolved since then.

The current Domain Survey attempts to discover every host on the Internet by doing a complete search of the allocated address space and following links to domain names. Survey data is collected and published quarterly and is available for purchase from ISC. In a recent survey, we found more than 1 billion hosts. Therefore, the corresponding datasets, especially for the .com, .net, .edu, and .org TLDs, are quite large. For example, the .com file is more than 170MB zipped. The Domain Survey is approximately revenue-neutral. This is a program we run for the benefit of those doing research on the growth of the Internet.

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**BIND Roadmap**

![BIND Roadmap Diagram]

3 Simultaneous Trains
Open Source Software We Continue to Develop

BIND 9
As our flagship product, BIND 9 is once again receiving the attention it deserves. While it is mature and perhaps a bit bulky, it continues to perform well for many thousands of users who appreciate its stability and comprehensive feature set.

All of us at ISC are well aware of the importance of BIND9 to the overall health and efficient functioning of the Internet and we take this responsibility very seriously. The BIND9 team is small, but also experienced, dedicated and effective. Their expertise in maintaining this very large code base is apparent. The development engineers answer queries on the public mailing lists, participate in IETF, DNS-OARC and other industry groups and open source efforts, while supporting our paying support customers and maintaining the open source at a level that supports its use in everything from high-availability, high-volume Telco operations to hobbyist usage.

The most significant changes to BIND during 2013 were the introduction of the RRL (Response Rate Limiter) feature, and the inauguration of the subscriber-only software branch. RRL has made a huge global contribution towards reducing the number and impact of malicious DNS-based amplification attacks.

In 2013 we created a subscriber-only private branch of BIND to create a compelling reason for organizations using our software to help support us. This branch offers subscribers access to new features not available to the general public, for a premium. We did this out of necessity: we remain committed to completely open source.

Researching and responding to reports of possible security vulnerabilities in BIND9 is a major activity for ISC. We maintain a rotating on-call schedule of security officers so we have 7x24 coverage in case of a report, and we actively monitor DNS mailing lists for questions or complaints that could turn into a security issue. When we get a report of a possible security problem, we work around the clock to verify it (of course not all reports turn out to be valid), determine what versions of BIND are affected, develop a patch or identify a work around, and start our phased notification process. We issued four CVE (Common Vulnerability and Exposure) notices for BIND in 2013. We were able to manage all of these without any of them being exploited in the wild (to our knowledge).
We issued 4 CVEs against BIND 9 in 2013

During 2013 we maintained three main branches of BIND for our users; the 9.6 Extended Support Version branch, 9.8 and 9.9, and introduced one new branch, the 9.9-based private subscriber branch. We issued 3 patches plus 2 maintenance releases for each branch, a total of 15 open source releases. In December, we started our beta for a new branch of BIND, the 9.10 branch.

**ISC DHCP**
ISC’s DHCP remains the only comprehensive non-Microsoft tool for assigning IP addresses to computers on both public and service provider networks. The closest competitor is DNS MASQ, optimized for embedded environments by our friend Simon Kelley. There are fewer alternatives to ISC DHCP than there are in the DNS software arena, which is why we plan to add another developer on this team, while we continue our efforts to replace it with the new Kea DHCP server.

Despite ISC DHCP’s maturity, we get a significant number of requests to make minor adjustments in ISC DHCP. These are difficult to make, both because the software is difficult to update, and because any change we make threatens some legacy application or device that relies on the old behavior. One decision we will have to face in 2014 is whether to retain the older 4.1 over the newer 4.2 train, because the 4.2 and later releases have a larger footprint, potentially putting them beyond the reach of embedded systems applications.

During 2013 we brought out maintenance releases for our existing 4.1 Extended support version and our 4.2 train, while we were developing the new 4.3 train we started beta testing in December. The 4.3 train is updating our IPv6 feature support to approximate parity with our IPv4 feature support. We issued one CVE (Common Vulnerability and Exposure) notice for ISC DHCP in 2013.
Kea

Our new from scratch DHCP implementation, code named Kea, had 4 full time developers at the end of 2013. Kea is not yet generating any revenue, and we are very hopeful that it represents a valuable area for development and growth.

Kea is designed to be dynamically re-configurable, solving one of the main limitations of ISC DHCP, and easily customizable, using an applications API. Kea is being developed with a high standard of test coverage and documentation for maintainability. The bug tracker and code repository are both publicly accessible atkea.isc.org.

In 2013 we continued to evolve Kea with the partial support of Comcast, adding support for IPv6 Prefix delegation and DDNS. In 2014, we are removing Kea from the BIND10 umbrella and turning it into a standalone DHCP server to eventually replace the ISC DHCP server.

Open Home Gateway Forum was a program begun and concluded in 2013.
Concluded Programs

BIND 10
After five years of development, on April 17th of 2014, we put BIND 10 into Open Source with the help of Shane Kerr, now with Dyn. It is available at http://bundy-dns.de. BIND 10 was a challenging project for ISC and many hard lessons were learned. We spun off the DHCP part of BIND 10 into Kea (see above) and are continuing to develop it. BIND 10 could serve as a lesson for many things, including the difficulty of attempting to collaborate with nearly a dozen shareholders in a complex software project. We are thankful to the generous contributors to BIND 10 over the years.

BIND 10 Sponsors
- Afilias
- AFNIC
- Association DNS.PT
- Brazilian Network Information Center (NIC.BR)
- Canadian Internet Registry Authority (CIRA)
- China Internet Network Information Center (CNNIC)
- Comcast
- CZ.NIC, z. s. p. o.
- DENIC eG
- Google Inc.
- IIS
- Japan Registry Services Co, Ltd. (JPRS)
- Nominet UK
- New Zealand Registry Services (NZRS)
- Réseaux IP Européens Network Coordination Centre (RIPE NCC)
- Stichting Internet Domainregistratie Nederland (SIDN)
- Technical Center of Internet
- Uniforum SA

SIE
In 2013, our security offering, SIE, was spun off to ISC founder and former Chairman Paul Vixie, and is getting an excellent response as part of his new venture, Farsight Security, Inc. We wish Paul and his team great success. Paul went to the new venture along with 2 ISC Staffers, Eric Ziegast and Robert Edmunds.

Registry
In 2013 we worked aggressively on the Registry project in preparation for the deployment of the first round of gTLDs. A test node was deployed in our headquarters in Redwood City, and then the first production node was installed in San Jose.
Since then, we sold our registry business to Uniregistry. Three of our coworkers went along with the service, Francisco Obispo, Ernesto Hernández-Novich and Luiz Munoz.

Open Home Gateway
One of the unaddressed problems in deploying and managing large numbers of CPE, particularly home routers, is how to update the configuration and download new software securely and with minimal user or administrator attention required. These gateways are having a wide impact on the Internet as misconfigured or out of date home gateways are compromised and used by attackers to launch DDOS attacks.

The Open Home Gateway project at ISC was created to address this problem. This project extended OpenWrt (a popular open source embedded software base) to add a more secure and robust remote configuration and upgrade capability. After a successful demonstration of our work at the IETF meeting in Vancouver BC in November, we posted our code for download on isc.org, and submitted our work for incorporation into the larger OpenWRT project. This work was underwritten by Comcast.

Open Source Routing
The Open Source Routing project was created to provide central coordination for open-source development and testing on various branches of the larger Quagga project. Flexible software-based routing has long been used in high-volume datacenters and Internet traffic exchange points. ISC and the OSRF sponsors together concluded that ISC could not contribute strategically to this project, and it was distracting us from our core programs. In March of 2014, we handed the project and staff off to our friends at netdef.org, who are continuing to support Quagga maintenance.

LWDS-Lite
DS-Lite, or Dual-Stack Lite (RFC6333), is a solution to deal with the IPv4 exhaustion problem once an IPv6 access network is deployed. It enables an unmodified IPv4 application to access the IPv4 Internet over the IPv6 access network. In the DS-Lite architecture, global IPv4 addresses are shared among subscribers in the AFTR, acting as a Carrier-Grade NAT (CGN). Lightweight DS-Lite (LWDS-Lite) is a faster, and lighter, implementation of DS-Lite that supports Stateless Deterministic NAT (SD-NAT). In 2013 we released LWDS-Lite 1.0, based on ISC DHCP 4.2.0 and ISC AFTR 1.1.
Both BIND-users and DHCP-users continue to host a lot of activity

Support and Training

Software Support
We have a team of dedicated technical support engineers, located in the US and Europe, who provide support for our core products, BIND and ISC DHCP. This team (4 senior engineers plus a manager at the end of 2013) also runs our Advance Security Notification service. The revenues generated from this service make up over half of ISC’s funding, and support all our software maintenance and development operations. Effectively, our support subscribers are funding the on-going maintenance of our core open source products.

We offer five levels of support contracts; Basic, which includes only Advance Security Notifications, and Bronze, Silver, Gold and Platinum. The ‘Basic’ subscription offers a simple but valuable benefit at our lowest contribution level. The ‘metals’ offer increasingly fast response from our support team, plus increasing amounts of bundled training and consulting. Our customers include OEMs, Telcos, Service Providers and Internet Enterprises that measure their service outages in minutes and millions of dollars. To support them we have rotating on-call coverage and support and engineering employees in different time zones to provide 7x24 hour support to our best customers.
<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support customers</td>
<td>88</td>
<td>105</td>
</tr>
<tr>
<td>Support tickets</td>
<td>858</td>
<td>750</td>
</tr>
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</table>

The primary trend we see among our support customers is a trend towards running multiple open-source DNS systems, either for heterogeneity or because they need specific features that BIND lacks. We also see organizations running BIND alongside commercial DNS products, generally because they need better management interfaces or improved ease of use.

We accept bug reports via email to bind9-bugs@isc.org and dhcp-bugs@isc.org. We received 701 bug reports from the user community (non-customers) in 2013. We spend considerable time in reviewing and replying to these reports. Many were duplicates of known issues or user error.

In addition to our paid support, we also provided free community support via various email distributions. We monitor relevant Internet mailing lists closely for any hint of security vulnerabilities in our software, and often respond to questions asked on those lists rather than trying to sell a support contract before answering. That effort takes a big chunk of our support staff’s time.

Consulting and Training
We offer hands-on classroom training in configuring and troubleshooting BIND and ISC DHCP. We offered 14 training sessions in 2013. We have seen an increased interest in private, customized training on customers’ premises when an organization has several engineers desiring training. We continue to get very positive feedback on all of our training sessions (ratings 4 or 5 out of 5). We had several consulting engagements in 2013, primarily assisting with DNSSEC implementation or re-implementations of DNS. Neither Training nor Consulting is a significant revenue generator for ISC; we offer these services because there is a need for expert help with the DNS and we have the expertise.

Technical Documentation
We started the Knowledge Base (KB) in 2011. We began requiring registration and login for KB access in 2012. In 2013 we added access levels, making some content restricted to paid support customers. Although the restricted content is almost exclusively related to support procedures, and not useful to the general public, we feel that the new mode has caused some people to have more trouble accessing the information they need.

In 2014 we will work to roll back our access restrictions. We added 68 new articles and 57 updates and new release notes to our KB in 2013. We have gradually been removing technical information from our website, moving the content to the KB. This has increased the importance of the KB to ISC and its stakeholders. There were 438 new KB user registrations in 2013, bringing the total number of registered users to 803.
We conducted 4 public webinars in 2013, a significant decrease from 2011 and 2012. Our technical documentation is in need of a refresh. We have been operating without any dedicated writer, and both the BIND Administrator's Reference Manual and the ISC DHCP Manual pages need updating. Our software engineers update command references, but we are missing coherent how-to instructions in some areas. This is something we plan to improve on in 2014.

ISC is grateful for the support of:

F-root Partners

Hosting Providers (providing Rack and Power)

- Equinix
- NIKHEF/SARA
- Prolexic/Akamai
- Telehouse
- Telx
- United Layer

Internet Transit

- AboveNet
- Cogent
- Hurricane Electric
- NTT
- Telia

**Peering**
Globally we have well over a thousand peers, but here are some of our larger ones.
- Apple
- CenturyLink
- China Telecom
- CNNIC
- Comcast
- DTAG
- France Telecom
- Level 3
- NASA
- Tata Communications
- Time Warner

**Deployment Partners**
We partner with many Regional Internet Registries, as well as many local sponsors to deploy F-Root all over the globe. Our top deployment partners are:
- AfriNIC
- LACNIC
- APNIC

**Equipment donations**
- Arbor Networks
- Cisco
- Juniper

**Services**
We would also like to thank the following vendors for their continued support:
- [Afilias](#) - Secondary name services support for isc.org and dlv.isc.org
- Coverity – Provides free software static analysis through their [Coverity Scan program](#) for open source projects. We use this scanning service regularly on BIND9, ISC DHCP and Kea.

**Sponsored Development**
The following organizations sponsored open source development through ISC in 2013.
- AT&T - sponsored development of the BIND9 RRL feature, and RRL classifiers
- Comcast - contributed substantially to the Open Home Gateway and sponsored development of the Kea DHCP server.
- Cumulus Networks - contributed to the Open Source Routing Forum
- Google - contributed substantially to the Open Source Routing Forum
- ICANN - Open Source Routing Forum
- Juniper - sponsored development of LWDS-Lite
- JPRS - BIND Forum member
- Oracle – sponsored development of ISC DHCP support for InfiniBand
- University of Iowa - BIND and DHCP Fora member
- Wind River - contributed to the Open Source Routing Forum

We discontinued the BIND and DHCP Forum Membership programs in 2013. Some of our software subscription customers have subscribed not because they need support, but because they want to continue to contribute to ISC. We sincerely appreciate that. We don't list our current subscribers here or on our website at this time because we don't know which of them would want to be publicly identified.

Technical Contributors
ISC welcomes technical contributions to our open source. We try to acknowledge these in our release notes, but undoubtedly we have failed to acknowledge everyone who has contributed. In addition, there are some very dedicated individuals who help answer technical questions from the community on our busy mailing lists (bind-users@lists.isc.org and dhcp-users@lists.isc.org), and who field test our alpha and beta software releases. We are grateful for their help. The list below is a partial list of 2013 contributors.

Contributors to 9.10 new features
- Pierre Beyssac
- Ken Brownfield
- John Eaglesham
- Tony Finch
- Wilmer van der Gaast
- Vadim Goncharov
- Timothe Litt
- Peter Palfrader
- Kevin Sheehan
- Tim Tessier
- Vernon Schryver

Operating System distributors of our software
ISC software is distributed, and our packages maintained, by a group of mostly volunteers at the various UNIX and LINUX operating system teams. We would like to recognize these individuals who constantly monitor BIND and ISC DHCP, report bugs to us, send us patches, and help keep our users updated.
<table>
<thead>
<tr>
<th>Operating System</th>
<th>Maintainers</th>
</tr>
</thead>
<tbody>
<tr>
<td>CentOS (uses RedHat packages)</td>
<td>Carl Byington</td>
</tr>
<tr>
<td>Debian and Ubuntu</td>
<td>Lamont Jones, Andrew Pollock, Michael Gilbert</td>
</tr>
<tr>
<td>Free BSD</td>
<td>Erwin Lansing, Mathieu Arnold&lt;</td>
</tr>
<tr>
<td>Fedora and RedHat</td>
<td>Thomas Hozza, Jiri Popelka</td>
</tr>
<tr>
<td>OpenBSD</td>
<td>Jakob Schlyter and Theo deRaadt</td>
</tr>
<tr>
<td>Solaris</td>
<td>Stacey Marshall, Peter Sear</td>
</tr>
</tbody>
</table>

**Monetary Donations**

ISC is grateful to the following people and organizations for their donations in 2013. Names listed in boldface made large donations.

**Individuals**

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greg Albrecht</td>
<td>Alex Apke</td>
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<tr>
<td>Ronaldo Henn</td>
<td>Liao Chin-Hung</td>
<td>Thomas Leuxner</td>
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<td>Carl Longmire</td>
<td>Michel Machado</td>
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<td>Subhashis Mohanty</td>
<td>Jonas Nielsen</td>
<td>Jacson Querubin</td>
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<td>Jeffrey Spain</td>
<td>Wolfgang Schroeder</td>
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<td><strong>Dave Taht</strong></td>
<td>Nguyen Thuy</td>
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<td>Alice Vixie</td>
<td>Zygmun Wasylkiewicz</td>
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<td>Swen Wojciechowski</td>
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**Organizations**

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Partnerships
ISC Staff contribute in a number of technical fora. The list below describes some of our most substantial commitments.

- **DNS-OARC**—ISC staff attend the DNS-OARC meetings and participate on their mailing list discussions. In addition we contribute annually in the Day In the Life data project, providing the raw data for continuing research into the growth and changes of the global DNS.
• **ICANN** - As part of our ongoing participation in root server policy, we participated in the re-launch of the ICANN Root Server System Advisory Committee with the appointment of Suzanne Woolf as both the representative for F-Root and liaison to the ICANN board.

• **IETF** – ISC sends 4 or 5 developers to every IETF meeting and our engineers participate vigorously in the development of new standards. ISC’s association with the DNSOP working group continued: Stephen Morris, our Senior Director of Software Engineering stepped down as the one of the co-chairs at the IETF-86 meeting in March, and Suzanne Woolf started as a co-chair at IETF-88 in November. Tomek Mrugalski, the lead developer on our new Kea DHCP server is co-chair of the IETF DHC working group. Our Director of Operations, Jim Martin has led the team that builds the IETF network for well over a decade and for each of its 2013 meetings (IETF 86 in Orlando, IETF 87 in Berlin and IETF 88 in Vancouver).

• **ISOC** – David Farber, one of ISC’s Directors, is a current Trustee of the Internet Society. Leah Symekher is San Francisco Bay Area ISOC Chapter President.

• **NANOG** – ISC technical staff participate regularly in meetings of the North American Network Operators Group

• **PLNOG** - Members of ISC technical staff participate regularly in meetings of the Polish Network Operators Group. In 2013 Tomek Mrugalski gave a presentation on the Kea DHCP server.

• **RIPE** – ISC technical staff participate in the RIPE community. During 2013, Shane Kerr was co-chair of the IPv6 working group and Joao Damas was co-chair of the Routing working group. At the Spring 2013 meeting Joao Damas participated in a panel discussion on Open Source.

• **UKNOF** – Stephen Morris of ISC sits on the Advisory Committee and Cathy Almond, our Lead Technical Support Engineer is a member of the Program Committee for the UK Network Operators Forum.

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**IETF RFCs Published**

The following recent IETF RFCs were published while their authors were employed by ISC. ISC employees have worked on or contributed to other drafts that didn't reach publication during their tenure at ISC.
Organization Structure and Management

Management and Staff
Internet Systems Consortium, Inc. is a US nonprofit 501(c)(3) corporation. ISC Inc. has Public Charity status 509(a)(1) and 170(b)(1) (A)(vi), which means that contributions to ISC can be deducted from US income taxes. Our US Federal EIN is 20-0141248.

Board of Directors
ISC’s Board of Directors is currently made up of four members, each with a long and important history of involvement with the internet. Rick Adams (Chairman of the Board), Fred Baker (Director), David J. Farber (Director), Stephen Wolff (Director).

Management
ISC is managed by Jeff Osborn (President), Stephen Morris (Senior Director of Software Engineering), Jim Martin (Director of Operations), Brian Reid (Senior Member of Technical Staff), Vicky Risk (Director of Marketing and Product Marketing) and T. Marc Jones (Director of Sales).
Staff
At the close of 2013, ISC had 44.5 Full-time equivalent staff. We had 33 engineering and technical support staff, 11 people in sales and marketing and 3 in financial, legal and executive functions. In February of 2014 we reduced headcount significantly, to reflect the new smaller requirements of the more focused product line. This was a very difficult decision, as some talented and dedicated ISC staff had to find other employment. ISC Headquarters is in Redwood City, CA, but many staff work remotely and are located in various countries, including Poland, India, Australia, the UK and France, as well as the US.