FreeBSD Foundation July 2016 Update

Dedicated to supporting the FreeBSD Project and community

Upcoming Events

BSDCam 2016
August 15-17, 2016
Cambridge, UK

WomENcourage 2016
September 12-13, 2016
Linz, Austria

EuroBSDCon 2016
September 22-25, 2016
Belgrade, Serbia

OpenZFS 2016
September 26-27, 2016
San Francisco, CA

FreeBSD Journal

The May/June issue of
the *FreeBSD Journal* is now available!
Don't miss articles on ARMv8
Architecture, Cavium ThunderX Chip,
bhyve ATA Emulation, and more.

New Feature! Browser-Based
subscribers now have the ability to
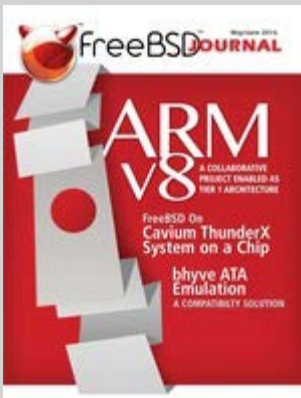download and share PDFs of the
articles!

Message from the Executive Director

Dear FreeBSD Community Member,
It's hard to believe we're halfway through 2016. Along with all of the
summer fun, July is also the perfect opportunity to take a look at what
we've accomplished so far and determine where we need to focus our
efforts for the rest of the year. From increasing our presence at non-
BSD events to funding new development projects, to making it easier to
get started using FreeBSD, we're definitely making progress towards
our goals. However, our progress can only go as far as our funding
allows. This is where you come in. We hope as you finish reading the
latest update, you'll take a minute to donate, and help us grow and
improve the OS you love as much as we do.

Deb

Development Projects Update

There are a wide variety of attack
mitigation security programs
available, for a myriad of platforms.
Most of these programs generically
function by processing log files
from network facing daemons, and based on pattern recognition of
attacks, implement some sort of packet filtering to block the source of
the attacks. Fail2ban and sshguard are examples of these. While these
solutions are functional, they require ongoing maintenance (to adapt to
changing log file formats) and may not integrate well with other
applications.

The blacklistd daemon provides a different solution. Developed by
Christos Zoulas for NetBSD, it is a reasonably lightweight and secure
cross platform, cross packet filter system for realtime injection and
removal of blacklists for different attack sources. The implementation is
based on a daemon that listens for direct notifications of network attacks
from various daemons and stores the attack information in a database.
 The daemon supports a text configuration file that allows for the
specification of different policies for when a blacklist should be installed

for different protocols (based on inbound port number). The daemon uses that information to call out to a helper program that does the actual programming of the packet filter. In this manner, it is relatively easy to extend the system to support a variety of packet filters. Support for additional styles of packet filters only needs to be implemented in one script.

Kurt Lidl has been awarded a Foundation project grant to adapt blacklistd to FreeBSD and propose patches for applications in the base system or ports tree to integrate blacklistd support. Kurt will also work with Christos and the NetBSD development community to integrate portability changes back into the upstream blacklistd source tree.

-- contributed by Ed Maste and Kurt Lidl

Mid-Year Fundraising Campaign!

I'm pleased to announce the kickoff of our mid-year fundraising campaign! We are more than halfway through the year, but we've only raised $265,000 towards our goal of raising $1,250,000. We are reaching out to you, the FreeBSD community, to help us promote our work and to make a donation so we can continue supporting FreeBSD.

Last year, we raised $656,594 and spent $1,093,204. After reviewing where we spent our money to determine our budget for 2016, we decided to continue investing in areas of the Project that are important for continuing its path of growth and innovation.

Our purpose is to help enable the success of FreeBSD as a platform for product development, education, research, and end-users. We're doing this by providing assistance to the Project in critical areas and roles, outreach and advocacy, facilitating community collaboration and engagement, and helping to keep FreeBSD secure, stable, and reliable.

Your donations will directly support FreeBSD by helping us:

- Provide outreach and advocacy for FreeBSD, which includes sponsoring many BSD and non-BSD conferences; sending FreeBSD contributors to these conferences; improving the new user experience; supporting work on creating curriculum to be taught in schools and universities; publishing the high-quality FreeBSD focused magazine, The FreeBSD Journal; and providing more informational and training material.

- Make OS improvements, including employing our technical staff to maintain and improve critical kernel subsystems, add features and functionality, and fix problems. This also includes funding larger projects like the arm64 port and toolchain work, to make sure FreeBSD remains a viable solution for new platforms and technologies.

Why Choose FreeBSD?

NYC★BUG

"Almost 12 years of the New York City *BSD User Group (NYC*BUG) provides a useful perspective on the *BSD ecosystem.

NYC*BUG is a technical user group in New York City. We conduct monthly meetings and held five conferences in various forms, plus maintain various mailing lists.

We also manage a full cabinet at New York Internet hosting a number of projects, such as the BSD Certification Group and array of mirrors.

Our position provides a multitude of angles on FreeBSD usage in the New York metropolitan area, from endusers exploring FreeBSD for the first time to enterprise infrastructures relying on FreeBSD. We manage to attract both the experienced and those dipping their toes into the *BSD water for the first time. While NYC*BUG plants a flag and maintains a steady *BSD presence, we benefit from the increased interest and reliance on FreeBSD as a stable, sane

operating system. This is particularly true over the past few years, with the role of FreeBSD at Netflix and support for FreeBSD at the cloud service provider Digital Ocean, not to mention firms like Xinuos and New York Internet which rely heavily on the project.

FreeBSD's reputation plays a critical role in our long-term sustainability. We know our organizational abilities and own particular technical duties only goes so far. Continuing development from 64-bit ARM to the new pkg system means providing us the fuel to continue our prominent role in New York's technical community.

More generally, we point to the FreeBSD project and Foundation as solid models for scaling open source projects, unlike so many flash-in-the-pan projects that get cold as quickly as they got hot.

The FreeBSD Foundation provides regular support for our larger events. We are excited to continue working hand-in-hand with the broader FreeBSD technical community and the Foundation."

– NYC*BUG's Admin@ Group, NYC*BUG

Support the security team by improving processes and policies, and by bolstering the operational capacity of the team.

- Organize and run vendor summits and visit companies, to help facilitate collaboration between commercial users and the Project, to help get changes pushed into the FreeBSD source tree, and to create a bigger and healthier ecosystem.

- Improve developer infrastructure to help modernize the tools and make contributions more efficient.

- Provide full-time release engineering support, resulting in on-time and reliable releases.

This community is amazing and I want to thank you for your commitment to FreeBSD. I see the work many of you do first hand, not only from talking to you at conferences around the world, but by engaging with you over email and working with our FreeBSD community here in Boulder, CO. I've seen community members help others out in time of crises, and form lasting friendships. You provide your knowledge and experience to review code, mentor and help new contributors get involved, implement better solutions for current processes, debate on best practices and solutions, teach others, and keep the standards high on the work we do.

Your passion is what helps drive us to do the work that we do.

Please consider making a donation today, talking to your company about making a donation, and spreading the word about our fundraising campaign.

Thank you for your support – we can't do this without you!

-- *contributed by Deb Goodkin*

Conference Report: HOPE XI

The FreeBSD Project and Foundation made a first-time appearance at the HOPE XI Conference (Hackers On Planet Earth), which took place July 22-24, 2016 in New York, NY. Thank you to Foundation Board Member, George Neville-Neil and NYC*BUG volunteers: George Rosamond, Ike Levy, Bruno Scap, Raul Cuza, Adam Martin, and Cody Hess for working at the table over the 3-day event. We attended this conference as part of the initiative to expand our presence at non-BSD events. While seeing the Project at a hackers conference was surprising for some, overall, we were very well received. During the conference, we had the opportunity to both answer highly technical questions related to using FreeBSD, as well as to introduce FreeBSD to those new to open source. Overall, it was a very successful event for the Foundation and Project, and we look forward to next year!

-- *contributed by George Neville-Neil and Anne Dickison*

Send Us Your Testimonials!

Help us spread the word about The FreeBSD Project by submitting a company testimonial. Not only will you be helping further awareness of FreeBSD, but your testimonial will include links back to your company and will be showcased on the new FreeBSD Foundation website homepage, testimonials page, and at least once in our monthly newsletter. Testimonials are typically written by a Director or VP and include why you use FreeBSD, how you have benefited, and, why the reader should donate money to the Foundation or contribute to the Project. Interested? Contact us!

-- contributed by Anne Dickison

Conference Report: Texas LinuxFest

Dru Lavigne and Kris Moore of iXsystems staffed the FreeBSD booth at the annual Texas LinuxFest. The event was held at the Austin Convention Center on July 8-9, and brought together over 450 attendees to view 4 tracks of presentations. Dru also gave a presentation on using Sphinx in a documentation toolchain. The slides are available here. In addition to promoting FreeBSD and FreeNAS, the event raised $145 for the Foundation.

(photo courtesy of iXsystems)
-- contributed by Dru Lavigne

Update from Release Engineering

The FreeBSD Release Engineering Team continued the FreeBSD 11.0 release cycle, such as investigation into several problem reports, some of which have been resolved, others still in progress.

11.0-STABLE was branched on July 7 and CURRENT switched to 12.0. The remainder of the release cycle will continue in the stable/11 branch.

At present, 11.0-BETA1 and 11.0-BETA2 have been released, with 11.0-BETA3 scheduled before the end of the month. For more information on the remaining milestones of the 11.0-RELEASE cycle, please visit https://www.freebsd.org/releases/11.0R/schedule.html.

-- contributed by Glen Barber