

FreeBSD Foundation May Update



The
FreeBSD
FOUNDATION

Dedicated to supporting the
FreeBSD Project and Community

Upcoming Events

[BSDCan 2015](#)

June 10-13, 2015
Ottawa, Canada

[Ottawa Developer and Vendor Summit](#)

June 10-11, 2015,
Ottawa, Canada

[vBSDcon](#)

September 11-13, 2015
Reston, Virginia

[womENCourage 2015](#)

September 24-26, 2015
Uppsala, Sweden

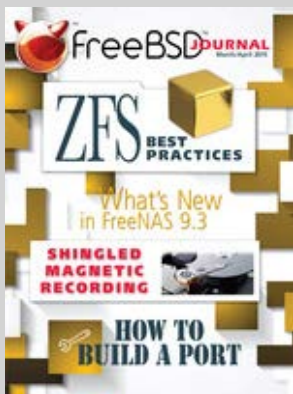
[EuroBSDcon](#)

October 1-4, 2015
Stockholm, Sweden

[Grace Hopper 2015](#)

October 14-16, 2015,
Houston, Texas

FreeBSD Journal



The [March/April](#) issue of the *FreeBSD Journal* is now available! Don't miss

Message from the Executive Director

The start of summer is upon us and that also means the beginning of a particularly fun few months at the Foundation. From meeting FreeBSD developers at BSD events to installing new hardware, we're continuing to come up with new ways to support the Project. As always, we can't do anything without your help so, thank you again for all you do, and enjoy our latest update!

Deb

Development Projects Update

In May we made incremental progress on a number of ongoing projects. The FreeBSD/ARM64 porting effort continues to make progress, and the Cavium



FreeBSD®

ThunderX reference platform has now run with all 48 CPU cores in one package in operation. The remaining issues are rapidly being addressed, and we plan to demonstrate the platform at the BSDCan conference next month.

One way the Foundation helps support FreeBSD project development is by providing testing, review, or other services to augment development happening in the FreeBSD community. Foundation staff member Edward Napierała supported FreeBSD developer Dmitry Chagin's work on 64-bit Linux binary emulation support by reviewing the extensive patch set. Those changes are now committed to FreeBSD's Subversion tree, and will arrive in FreeBSD 11.0.

Edward also merged a large number of improvements to the autofs-based automount daemon and others from FreeBSD's development branch into the stable/10 branch, so that they will be available in the upcoming FreeBSD 10.2 release.

Foundation staff member and FreeBSD release engineer Glen Barber continued improving support for non-x86 architectures in the FreeBSD release process, including 32- and 64-bit ARM. Glen was also on-site at New York Internet (NYI), who donates rack space, power and connectivity to the FreeBSD project. Find out more about Glen's trip below.

articles on ZFS Best Practices, What's New in FreeNAS 9.3, and more. Not a subscriber? [Sign up](#) today!

Open *FreeBSD Journal* Articles

Have you ever wanted to read the *FreeBSD Journal*, but don't have a subscription? Now's your chance! The FreeBSD Foundation is releasing select articles from previous issues. Check out the [first article](#).

See what others are saying about the Journal:

"Awesome! This is the best way to popularize FreeBSD!!" San Jose, California

"I've found it really practical, and great reading...it caters to all levels of users." Brooklyn, NY

Why Choose FreeBSD?



"[NYI](#) is a data center provider that uses FreeBSD for all of its internal and customer-facing solutions for co-location and dedicated servers, cloud computing and managed services. Our initial choice of technology included commercial Unix systems tied to proprietary hardware. However, the cost and portability of FreeBSD were determining factors in our changing platforms early in our company's existence.

Since then, we have enjoyed the functionality and reliability of FreeBSD. We rely on it for

Staff member Konstantin Belousov continued development on the Intel DMA remap (DMAR) and Process Context Identifier (PCID) infrastructure projects. Kostik also contributed an extensive set of changes to multiple aspects of FreeBSD: stability improvements in the virtual memory subsystem, improved compatibility in options handling in the runtime loader, thread library improvements, and GDB debugger enhancements.

Ed Maste committed a number of improvements to the tool chain, including an update to the ELF Tool Chain set of binary utilities to fix a number of outstanding bugs. Ed also investigated and fixed a set of outstanding issues with the new vt(4) console in the FreeBSD installer.

-- contributed by Ed Maste

Conference Recap: AsiaBSDCon 2015

AsiaBSDCon 2015 was held in Tokyo, Japan, March 12-15, 2015. The FreeBSD Foundation was one of the Platinum sponsors and has supported this conference from the beginning. It is the 10th conference in Asia which focuses on BSD-derived operating systems and related technologies. The number of the attendees was 151 including 41 speakers.

Over 20 FreeBSD papers were presented and included the following:

- * Michael Dexter, Block Storage Device Life Cycles
- * Boris Astardzhiev, Smartcom's control plane software, a customized version of FreeBSD
- * Kris Moore, Unifying jail and package management for PC-BSD, FreeNAS and FreeBSD
- * Daniel Lovasko, Pretty-printing of kernel data structures
- * Kamil Czekirda, FreeBSD pressed installation (PXE)
- * Ken Moore, Lumina-DE: Redefining the Desktop Environment for Modern Hardware
- * Ganbold Tsagaankhuu, Esbold Unurkhaan, and Erdenebat Gantumur, Go based content filtering software on FreeBSD
- * Dru Lavigne, Advanced Open Source Storage with FreeNAS 9.3
- * Ed Maste, The LLDB Debugger in FreeBSD
- * Rui Paulo, Programmable Realtime Units in FreeBSD
- * Allan Jude, A Universal Configuration File Format for FreeBSD
- * Randall R. Stewart, John-Mark Gurney, and Scott Long, Optimizing TLS for High-Bandwidth Applications in FreeBSD
- * M. Warner Losh, A CAM Level I/O Scheduler
- * Stefano Garzarella, Giuseppe Lettieri, and Luigi Rizzo, A netmap passthrough for virtual machines
- * Dr. Marshall Kirk McKusick, Journalized Soft-Updates
- * Mihai Carabas, Instruction caching for bhyve
- * Pedro Arthur, Lua as the FreeBSD loader scripting language
- * George V. Neville-Neil and James W. Thompson, Measure Twice, Code Once: Network Performance Analysis for FreeBSD

FreeBSD developers at iXsystems gave talks about their efforts in PC-BSD and FreeNAS, which are based on FreeBSD and whose improvements have been contributed back regularly to FreeBSD

networking duties like routers, VPNs, firewalls and traffic shapers, as well as web applications like shared hosting, backend interfaces, load balancers and proxies. We particularly appreciate the community support and centralized documentation, which means that we do not have to hunt down bits and pieces of information, like we would with other projects.

– Phillip Koblence, VP Operations, [NYI](#)

project. Developers at Netflix gave interesting talks about TLS optimization and I/O scheduler. In addition to the regular talks, four Google Summer of Code students reported their results in the short talk session. All of the paper sessions were streamed via video and recorded. Details about the papers can be found at the [official website](#). PDFs of the proceedings are also available. Videos of the talks are not yet ready, but will be posted to the [bsdconferences](#) YouTube channel in June.

Also during the conference, a FreeBSD Developer Summit, Vendor Summit, and bhyvecon were held. The Developer Summit provided a venue for face-to-face communication among FreeBSD developers. Developer Summits are also regularly held at various places such as BSDCan, EuroBSDCon, and University of Cambridge. The Vendor Summit provided the opportunity for people who are using BSD-derived operating systems for their services and/or products to talk with each other. bhyvecon was a small conference dedicated to BHyVe hypervisor, which is implemented into FreeBSD. Over 30 FreeBSD developers and users attended these meetings and discussed various topics.

In 2015, AsiaBSDCon had the largest number of talks, while the number of paper submissions and attendees continues to increase. Attendees included many FreeBSD Developers in Asian countries such as Japan, China, Taiwan, Korea, and Mongolia, in addition to developers from the US and Europe.

The organizing committee would like to thank the FreeBSD Foundation for their continued support of AsiaBSDCon. We now have three BSD conferences in North America, Europe, and Asia and it would have been impossible to realize AsiaBSDCon without the FreeBSD Foundation's support.

The next AsiaBSDCon is planned for March 10-13, 2016. The venue will be the same buildings in Tokyo, Japan.

Visit the [official website](#).
Questions? [Contact](#) us.

-- contributed by Hiroki Sato

FreeBSD From the Trenches: Another Data Center Site Visit - NYI

Earlier this month, Glen Barber headed to [NYI](#) to install new hardware purchased by the FreeBSD Foundation to support the Project. As Glen writes, "No blog post about new hardware would be complete without pictures, right?" You can check out the post and the photos [here](#). Don't forget, if you have a story or tip you'd like to share, please [email](#) us.



In Memoriam: Paul Schenkeveld



In March 2015, the BSD community lost one of its biggest advocates, Paul Schenkeveld. Paul was passionate about BSD in everything he did from his own consulting company he ran for almost 25 years to the many organizations he was involved in. One of Paul's greatest accomplishments was bringing EuroBSDCon to his home country of the Netherlands in 2011, after which he co-founded the EuroBSDCon Foundation to ensure the future of the biggest BSD event in Europe. Paul's enthusiasm was irresistible to anyone he spoke to and he inspired many people to learn more about

BSD and used his tireless energy and conviction to pull together people from all the BSDs, and many different countries, languages, and cultures towards one goal: BSD. He will be greatly missed. Our sincerest condolences go out to his family.

-- contributed by Erwin Lansing -- photo courtesy of Ollivier Robert

Fundraising Update: Summer Excitement

I'm a little excited right now, because I just finished booking my flight to Sweden for [EuroBSDCon](#) and [womENCourage 2015](#).

These are two of the many conferences we are sponsoring this year to promote and support FreeBSD efforts. WomENCourage is in its second year focusing on networking and exploring career opportunities for women in computer science and related disciplines. I am participating on a panel called Open Source as a Career Path with three other FreeBSD representatives, moderated by Foundation Board Member, Dru Lavigne. This is one way we're expanding our reach into Europe and promoting FreeBSD to women in computer science. It's coincidental and convenient that the conference will be held close to EuroBSDCon.



Right now we are preparing for [BSDCan](#). It's one of the largest BSD-related conferences in the world, and growing. In fact, I just saw the number of FreeBSD developers registered for the developer summit, and it's my understanding that this is the largest registration number in the history of developer and vendor summits! We are the primary sponsor for these summits. We view this as an important investment, giving FreeBSD contributors an opportunity for collaboration and information sharing. From hackathons and documentation sprints, to focused discussions on innovative features in FreeBSD, an incredible amount of work gets done during these events. It's also a time for new ideas, strategic planning, and face-to-face interaction. We want to encourage and support these efforts, because we've seen the benefits

to FreeBSD.

We are also proud to be a platinum sponsor of BSDCan. In addition, we are providing travel grants to 13 FreeBSD contributors to attend the conference. Many of these grant recipients are students, traveling from Taiwan, Amsterdam, Poland, England, and the US. They are interested in showing their works in progress, presenting new ideas, meeting and working with their mentors, and getting input from other developers on the work they are doing in FreeBSD. Most of our team will be at BSDCan. Please be sure to stop by and say hi!

On the fundraising front, we've raised \$324k from 381 community investors at the time of this writing. We received a generous donation from Cavium moving them up to the Gold level. Plus, we have pledges for a total of \$60,000. Even though we fundraise all year round we will be launching the spring fundraising campaign at BSDCan to generate excitement and encourage people to spread the word. We are reaching out to more commercial users asking for donations. If you work at a company that uses FreeBSD, please ask them to make a contribution to the Foundation. If you don't feel comfortable doing this, please send us a contact, so we can reach out to them.

These are just a few of the highlights of what we've been doing to support FreeBSD. Please consider making a [donation](#) to enable us to continue and increase our support of the FreeBSD Project and Community. It's easy – just click [here](#) to make your donation today.

Thank you for your continued support!

-- contributed by Deb Goodkin

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