Dedicated to supporting the FreeBSD Project and Community

Upcoming Events

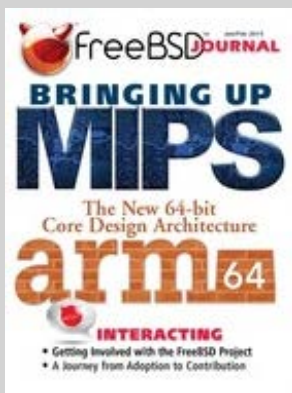**LinuxFest Northwest**
April 25-26
Bellingham, Washington

BSDCan 2015
June 10-13, 2015
Ottawa, Canada

EuroBSDcon
October 1-4, 2015
Stockholm, Sweden

FreeBSD Journal

The Jan./Feb. issue of the *FreeBSD Journa*l is now available! Don't miss articles on Bringing Up MIPS, ARM64, Interacting with the FreeBSD Project, and more. Not a subscriber? Sign up today!

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Message from the Executive Director

March is an exciting time of year. Not only has Spring arrived (sort of) but it also marks the anniversary of the start of the FreeBSD Foundation. This year is particularly special because we are celebrating our 15th year of serving the FreeBSD Project and Community! Check out my fundraising update below for more on our big milestone. Of course, we could never have reached this point without you! Your donations have allowed us to provide support in more areas than we ever anticipated. Thank you again for all you do, and enjoy our latest update!
Deb

Development Projects Update

The Foundation-sponsored port of FreeBSD to 64-bit ARM is progressing well. The new architecture is officially known as ARMv8 or AArch64. It is expected to see growing use in one of FreeBSD's traditional strengths: large scale, high performance servers. The project is a collaboration between the Foundation, ARM, Cavium, Andrew Turner and Semihalf.

At the time of writing we've started delivering the initial changes for the port into FreeBSD HEAD. The kernel toolchain and headers are committed now, and will be followed by the rest of the toolchain components, the userland changes, and finally the kernel support. This work is part of the path to full support for the arm64 architecture in the FreeBSD 11.0 release.

A number of improvements to the build tool chain have been made, both by direct Foundation sponsorship, and within the broader FreeBSD community. Many of these are necessary for the arm64 project, as the in-tree tool chain was becoming increasingly outdated. It lacked support for arm64 altogether, and lacked new features for existing platforms.

Foundation staff member Konstantin Belousov continued effort on

Why Choose FreeBSD?

"[Tarsnap](#) is an online backup service for BSD, Linux, OS X, and other "unix-like" operating systems. I started work on Tarsnap in 2006 when, as FreeBSD Security Officer, I was worried about the security of the information (such as unreleased security advisories) on my laptop; this resulted in a design for a backup system which inspired the tagline "online backups for the truly paranoid".

Tarsnap would never have existed without FreeBSD for another reason: As the name suggests, the Tarsnap software is based on the standard UNIX tar utility, and to that end I started development using the excellent bsdtar utility which was developed within FreeBSD in the preceding years. If I hadn't been able to reuse code from a tar utility, it would have taken me years longer to launch Tarsnap; and both the license (BSD) and code quality (excellent) of

improvements to the Intel VT-d device virtualization support: IR interrupt remapping and DMAR DMA remapping, and related functionality. This provides a number of improvements applicable to large-scale systems, and is a prerequisite to better support for PCI passthrough in the bhyve hypervisor.

Foundation staff member Edward Tomasz Napierała continued working on improvements to the autofs-based automounter. Edward also committed the initial set of changes for Secure Boot support, and is continuing to review the 64-bit Linux emulation patches to help deliver this important improvement into FreeBSD.

-- *contributed by Ed Maste*

FreeBSD at USENIX FAST '15: Event Recap

The FreeBSD Foundation was pleased be an Industry Partner sponsor and first time exhibitor at the 13th USENIX Conference on File and Storage Technologies (FAST '15). The conference was held February 16-19 in Santa Clara, CA . With over 500 attendees, the event was an excellent mix of industry and academic presentations and featured a [keynote](#) by Foundation board member, Dr. Marshall Kirk McKusick. We enjoyed talking with everyone who stopped by the table to find out what's new with the Project and Foundation. Extra special thanks to those who made a donation!
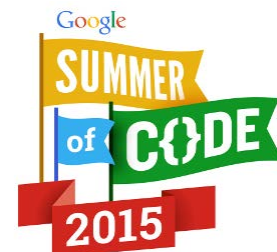
FreeBSD From the Trenches

In case you missed it earlier, this month's story comes from Edward Tomasz Napierała who shares his work on the new FreeBSD automounter. Check out [Using autofs(5) to Mount Removable Media](#) and don't forget, if you have a story you'd like to share, please [email](#) us.

FreeBSD and Google Summer of Code

The FreeBSD Project is pleased to be one of 137 mentoring organizations in this year's Google Summer of Code. This program funds students $5,500 USD to contribute to an open source project over the summer break. Time is short as the Student Application Deadline is this Friday, March 27. However, if you know of, or are, a student interested in participating, please take a look at the ideas page and submit your application! More information about the Project's participation in Google Summer of Code including, past projects, proposal guidelines, and FAQs can be found [here](#).

bsdtar were crucial to my ability to reuse it.

As well as reusing code from FreeBSD in the client software, Tarsnap relies entirely on FreeBSD for its server infrastructure. In addition to being easy to maintain and administer, FreeBSD's separation between the minimalist and internally-maintained "base" system and third-party "ports" code has proven to be extremely useful when responding to security issues: For the recent "shellshock" vulnerabilities, for example, I merely had to confirm that I had never installed bash from the ports tree. If bash had been installed on any of Tarsnap's servers, it would have required a much more time-consuming process to audit all of the ways that it might have been used -- and that process would have been required even if the eventual conclusion was that bash had never been used.

Tarsnap Backup Inc. is proud to support FreeBSD, both through my personal work (most recently, maintaining the FreeBSD/EC2 platform) and through its place as a Silver sponsor of the FreeBSD Foundation; and Tarsnap has directly benefited from projects and events which the FreeBSD Foundation has supported. Giving back is not merely an act of charity; it is truly an investment which yields an excellent return.

-- *Colin Percival, President,*
[Tarsnap Backup Inc.](#)

Fundraising Update: Spring Fundraising Campaign Kickoff

As I'm sitting in my office, writing this monthly update, I occasionally gaze out the window to watch the snow falling. Yes, it's snowing here. Which isn't unusual this time of year, but when I wrote my last article, just a week or so ago, it was sunny and warm out and it was still winter! It serves a reminder that we can't just sit back and bask in the glow of the sun, and let things happen around us. We need to throw on those winter coats, brave the cold and actively shovel that snow to help create clear paths to allow people to get to the resources they need. That's what we are doing here at the Foundation. Helping create unobstructed paths to FreeBSD educational materials, FreeBSD releases, conferences that bring FreeBSD enthusiasts together, and offer newbies a way to easily navigate how to get involved in FreeBSD.

As I mentioned above, it really has been an exciting month. First, in honor of our 15th Anniversary on March 15th, BSDNow interviewed our founder and president Justin Gibbs. Watch the [interview](#) to learn more about our history and why Justin started the Foundation.

Second, we had five team members attend and give talks at [AsiaBSDCon](#). You can always count on our board members to be hands on in the FreeBSD Project and community. They are FreeBSD developers, writers, teachers, and advocates. They attend conferences like AsiaBSDCon as FreeBSD volunteers to share their knowledge, teach, and continue to learn, to help contribute to the amazing growth and popularity of FreeBSD.

Finally, we kicked off our spring fundraising campaign in celebration of our anniversary. We're in our second week of the campaign and have welcomed 74 new community investors! Thank you to everyone who has made a donation this year, and specifically during this campaign. Our goal is to add 500 new community investors during this campaign. We know this is an ambitious goal, but it also seems realistic when you think about the fact that we have over 8000 FreeBSD Journal subscribers. Now, imagine having each subscriber make a $10 donation. We would have over 8000 individuals and organizations listed on our donor page! How would that make you feel as a FreeBSD contributor?

I know what you are thinking - "But, I already donated to the Foundation by subscribing to the Journal!" We truly appreciate you subscribing to the Journal. The reality is that while subscriptions help with the expenses of providing a professional publication like this, they are not yet covering the costs, which is our goal. We are fortunate that the authors and editorial board are all volunteering their time on the Journal.

Our spring fundraising campaign will continue over the next two and a half weeks. We need your help to spread the word to your friends, family, and companies. You can help by making a donation, sharing on social media, and spreading the word.

Ten reasons you should donate to the Foundation:
10. Help us facilitate collaboration between commercial users and the Project.
9. Help provide release engineering support for consistent and timely releases.
8. Help buy more equipment to support testing, builds, and FreeBSD infrastructure.
7. Support BSD-related conferences around the world.
6. Provide legal support for the Project and to protect FreeBSD IP.
5. Help recruit new people to the Project.
4. Help market and promote FreeBSD.
3. Help get more FreeBSD contributors to conferences to share their passion for FreeBSD.
2. Fund development projects to fix and improve FreeBSD.
1. Help make FreeBSD the number one open source operating system in the world.

To find out more about our spring fundraising campaign, read our blog.

This week we also unveiled our new Proud Donor button. By adding the button to your site once you've donated, you are not only letting people know that you support FreeBSD, but you are also making it easier for them donate as well.

Your donations are essential for us to continue and increase our support to FreeBSD. Please consider making a donation today and let's get to 500 new community investors!

-- contributed by Deb Goodkin