svn UPDATE

by Glen Barber

It's that time of the year again—the FreeBSD Release Engineering Team has started the RELEASE CYCLE cycle for 9.3 RELEASE. This edition of svn update covers what can be expected in 9.3-RELEASE as well as highlights for other active branches in the FreeBSD source tree.

ZFS Boot Support for Bhyve: head@r262331
(http://svnweb.freebsd.org/base?view=revision&revision=r262331)

The bhyve(8) hypervisor now has support for booting the virtual machine from a ZFS dataset allowing pure "root on ZFS" virtual machines. Prior to this change, it would have only been possible to boot from a UFS file system.

urndis(4) Support: stable/9@r262362
(http://svnweb.freebsd.org/base?view=revision&revision=r262362)

The urndis(4) driver has been added to stable/9. This driver was originally available in head/ with revisions r261541, r261543, and r261544, and provides Ethernet access over Remote NDIS, allowing mobile devices such as phones and tablets to provide network access via USB tethering.

The urndis(4) driver is also available in stable/10 as of revision r262363. The urndis(4) driver should support any USB RNDIS provider, such as those found on Android devices. The urndis(4) driver was ported from OpenBSD.

ext4 File System Support: stable/9@r262564
(http://svnweb.freebsd.org/base?view=revision&revision=r262564)

The ext2fs(5) code has been updated to enable ext4 file system support in read-only mode. Support for mounting read-only ext4 file systems was added in revision r262346 in head/.

Support for read-only ext4 file system is also available in stable/10 as of revision r262563.

BIND Release Update: stable/9@r262706
(http://svnweb.freebsd.org/base?view=revision&revision=r262706)

The BIND DNS server in the stable/9 base system has been updated to version 9.9.5. The release notes for this software update can be found here: https://lists.isc.org/pipermail/bind-announce/2014-January/000896.html.

pkg(8)Boostrap Signature Verification: stable/9@r263038
(http://svnweb.freebsd.org/base?view=revision&revision=r263038)

Signature verification code for pkg(8) bootstrapping originally available in 10.0-RELEASE has been merged to stable/9. With this change, when the administrator issues the 'pkg bootstrap' command, the downloaded pkg(8) binary distribution will be verified against available keys directly included in the base system, providing a massive security benefit for administrators that do not wish to build the 'ports-mgmt/pkg' port to install the pkg(8) package management utility.

Radeon KMS Driver Support: stable/9@r263170
(http://svnweb.freebsd.org/base?view=revision&revision=r263170)

The Radeon KMS driver has been merged from head/. This supports Kernel Mode Setting (KMS) similar to the Intel KMS driver found on newer motherboards. This driver takes advantage of features available in newer Xorg drivers, such as xf86-video-ati.

VT Driver Merged: stable/9@r263817
(http://svnweb.freebsd.org/base?view=revision&revision=r263817)

The new system console driver, VT (also known as "NewCons"), has been merged from head/ to stable/9. The VT driver serves as a replacement for the sc(4) console driver, providing a number of enhancements ranging from UTF-8 font support, to enabling users running X11 with Kernel Mode

Setting ("KMS" for short) to switch back to console from X11.

The VT driver is also available in stable/10 as of revision r262861.

The VT driver was developed by Aleksandr Rybalko under sponsorship of The FreeBSD Foundation.

Support for FreeBSD/arm Releases: stable/10@r264106

(http://svnweb.freebsd.org/base?view= revision&revision=r264106)

Initial support for building FreeBSD/arm images as part of the release process has been merged to stable/10. This change will allow the FreeBSD Release Engineering Team to publish ARM images that may be written to an SD card with the dd(1) utility. At this time, support is added for BeagleBone Black, Raspberry Pi, PandaBoard, WandBoard Quad, and ZedBoard.

Support for FreeBSD/arm image builds was added to head/ in revision r262810, and uses Crochet, written by Tim Kientzle, as the backend build system.

Weekly images are published for the head/ and stable/10 branches and are available on the FreeBSD FTP mirror at:

ftp://ftp.FreeBSD.org/pub/FreeBSD/snapshots/ ISO-IMAGES/arm/armv6/

This work was done by Glen Barber under sponsorship of The FreeBSD Foundation.

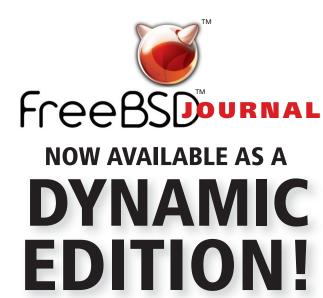## Compressed Release ISO Distribution: stable/9@r264246

(http://svnweb.freebsd.org/base?view= revision&revision=r264246)

As part of the release build process, installation images compressed with

xz(1) will now be available, reducing overall ISO download time for those with access to an xz(1) decompression utility. For the immediate timeframe, uncompressed images will remain available, so those that do not have access to an xz(1) decompression utility will not need to worry.

Compressed image support was initially added to head/ as of revision r264027, and merged to stable/10 as of revision r264245.

As a hobbyist, Glen Barber became heavily involved with the FreeBSD project around 2007. Since then, he has been involved with various functions, and his latest roles have allowed him to focus on systems administration and release engineering in the Project. Glen lives in Pennsylvania, USA.