

# UEFI and Debian Next Steps



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# Agenda



- Background
- New upstream features
- Planned developments



# Why UEFI?

- Support for larger disks
- Flexible, featureful environment
  - Network booting
- Properly **specified** firmware interfaces
  - At boot, and later
- Test suite \o/
- Secure Boot



# UEFI downsides?

- Complexity
- Buggy implementations
- Odd missing features
- Secure Boot worries





# Debian (U)EFI History

- July 2001 – first elilo package
- May 2007 – first grub-efi package
- May 2013 – first release with d-i support for amd64 UEFI (Wheezy)
- April 2015 – Jessie added d-i support for UEFI on i386 and arm64 too



# UEFI

- Evolving specification
  - Regular new releases
  - New features
  - New architecture support
  - [uefi.org](http://uefi.org) for full details!
- UEFI 2.5, April 2015
- Controlled by members



# Firmware updates

- Capsule update method (UEFI 2.4)
- Standardised way to ship firmware updates
- Secure
- No need to boot DOS/Windows
- ESRT (UEFI 2.5)

# Secure Boot (in Debian)



- In discussion since ~2011
- Planned since 2012
- Adds some complexity
- Extra signed shim package
- Also sign: kernel, grub
- Changes to dak, d-i, debian-cd, ...
- Ongoing (*slowly*)





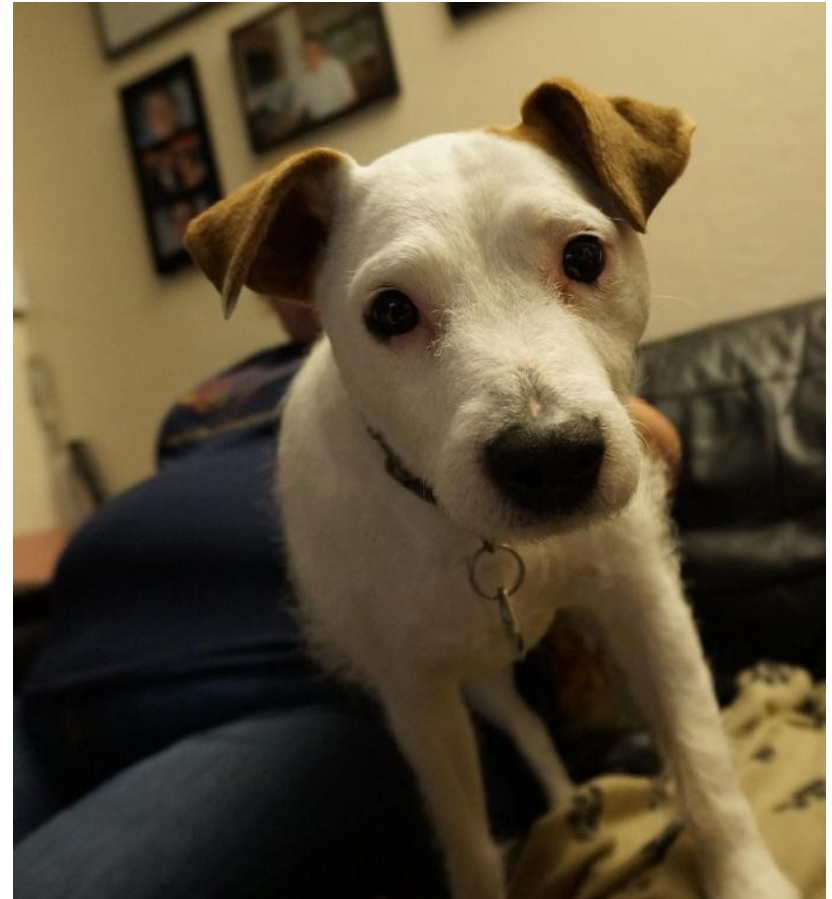
# Software RAID

- No Software RAID support in UEFI
  - Single point of failure for ESP
- Expected to use hardware RAID
- *Could* be supported
- Workarounds?



# UEFI for live images

- Coming soon
- vmdebootstrap + live-build(-ng)
- arm64 live



# Workarounds for brokenness

- Lots of weird and wonderful issues
  - Machines don't respect boot order
  - Will only boot Windows / Red Hat / ??
  - Ignore updates
  - Crash / lockup at boot
  - Removable media path
- Cross-distro work
  - [http://wiki.osdev.org/Broken\\_UEFI\\_implementations](http://wiki.osdev.org/Broken_UEFI_implementations)



# More information

- <https://wiki.debian.org/UEFI>
- Debian EFI team formed:
  - [debian-efi@lists.debian.org](mailto:debian-efi@lists.debian.org)
  - #debian-efi on [irc.debian.org](https://irc.debian.org)
- Ask!



# Questions?



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Thanks to Soile Mottisenkangas for this photo!

Released under GPL v2 at <http://u.einval.com/2015-uefi>