Working together with Debian

Kunal Mehta / Legoktm
WikiConference North America 2022

Wikipedia and Debian

- Collaborative project to build a free encyclopedia

- Free culture movement

- Est. 2001

- Primarily volunteer contributors

- 6.5m articles

- Collaborative project to build a universal operating system

- Free software movement

- Est. 1993

- Mix of volunteers and paid contributors

- 35,000 packages

What is a Linux distro?

- An operating system built on the Linux kernel

- Has some kind of app store ("packages")

- Different distros target different audiences. Some are for desktops or embedded or servers.

- Hundreds of distros, many are forks or derivatives of another distro

- E.g. Fedora, Ubuntu, Mint, Red Hat, Arch

Do you use Debian?

- Yes! All Wikimedia servers run Debian

- Debian is also a very popular distro for servers, best known for its stable releases

- It's very aligned with the Wikimedia ethos

Openess

- Anyone can contribute to Debian through bug reports and patches

- Only uploading packages requires permissions/vetting

- Everything but security issues handled publicly

- Enshrined in Debian Social Contract

Power structure

- Debian Project Leader elected every year, primarily a coordination and process role

- Project-wide votes ("General Resolutions") to determine controversial issues

- Each package is maintained by a single developer or designated group

Power structure

Officers

- Leader — <leader@debian.org>
  current Jonathan Carter
- Technical Committee — <debian-ctte@lists.debian.org> — appoir
  current Sean Whitton (*chair*)
  current Niko Tyni
  current Gunnar Wolf
  current Simon McVittie
  current Elana Hashman
  current Christoph Berg
  current Helmut Grohne
  current Matthew Vernon
- Secretary — <secretary@debian.org> — appointment mail
  current Kurt Roeckx

Distribution

- Development Projects — <debian-devel@lists.debian.org>
- FTP Archives — <ftpmaster@debian.org> — delegation mail
  - FTP Masters —
    member Thorsten Alteholz (delegate)
    member Ansgar (delegate)
    member Joerg Jaspert (delegate)
    member Luke W. Faraone (delegate; they/them)
    member Mark Hymers (delegate)
  - FTP Assistants —
    member Bastian Blank
    member Luca Falavigna
    member Paul Tagliamonte
    member Scott Kitterman
    member Sean Whitton
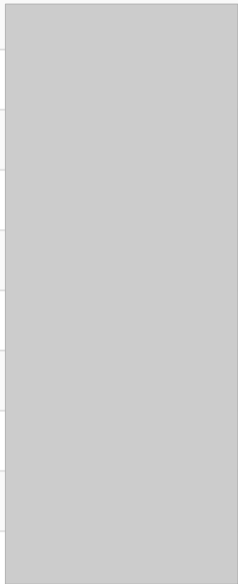 - FTP Wizards —
    member Mike O'Connor

Ownership

- Maintainer has full control over a package

- Can be overruled by Technical Committee or via project-wide GR

- Yes, people do "own" pages on Wikipedia despite it being forbidden by policy

- Do-ocracy!

Ownership

Authorship attribution, measured by character count, excluding spaces

Rank	Username	Links	Characters	Percentage
1		Top Edits · Edit Counter	11,530	40%
2		Top Edits · Edit Counter	7,712	26.8%
3		Top Edits · Edit Counter	3,842	13.3%
4		Top Edits · Edit Counter	1,011	3.5%
5		Top Edits · Edit Counter	793	2.8%
6		Top Edits · Edit Counter	679	2.4%
7		Top Edits · Edit Counter	488	1.7%
8		Top Edits · Edit Counter	342	1.2%
9		Top Edits · Edit Counter	275	1%
10		Top Edits · Edit Counter	273	0.9%
	⬤ 58 others		1,867	6.4%

general

source:	kiwix (main)
version:	2.3.0-1
maintainer:	Kunal Mehta (DMD)
arch:	any
std-ver:	4.6.0.1
VCS:	Git (Browse, QA)

general

source:	mediawiki (main)
version:	1:1.35.8-1.1
maintainer:	MediaWiki packaging team (DMD)
uploaders:	Kunal Mehta [DMD] – Taavi Väänänen [DMD] [DM]
arch:	all
std-ver:	4.5.1
VCS:	Git (Browse, QA)

How does Wikimedia use Debian?

- All servers use Debian

- All containers are based on Debian

- Mostly use packages from Debian, unmodified. For some key packages like PHP or MariaDB, we build our own on apt.wikimedia.org.

Okay, but why?

- Debian releases are supported for 3 years, plus 2 more years of "long-term support"

- Relatively stable, changes don't suddenly happen underneath you, nor do you fall behind quickly

- Debian main is 100% free software

- Openness allows Wikimedians to ensure their input and needs are appropriately considered

Debian has a wide reach

- Lots of derivatives, like Ubuntu, Raspbian

- Packages end up there without any extra work

Repository	Packages	Total	Newest		Outdated	
Debian Unstable	10	10	6	60.0%	3	30.0%
Devuan Unstable	10	10	6	60.0%	3	30.0%
Debian 12	9	9	5	55.6%	3	33.3%
Kali Linux Rolling	9	9	5	55.6%	3	33.3%
Raspbian Testing	9	9	5	55.6%	3	33.3%
Debian Experimental	4	4	3	75.0%		-
Parrot	16	8	3	37.5%	5	62.5%
Debian 11	8	8	3	37.5%	5	62.5%
Pardus 21	8	8	3	37.5%	5	62.5%
Devuan 4.0	8	8	3	37.5%	5	62.5%
PureOS landing	8	8	3	37.5%	5	62.5%
Raspbian Stable	9	9	3	33.3%	5	55.6%
Ubuntu 20.04	4	4	2	50.0%	2	50.0%
Trisquel 10.0	4	4	2	50.0%	2	50.0%
Ubuntu 22.04	4	4	1	25.0%	2	50.0%
Ubuntu 22.10	6	6	1	16.7%	4	66.7%
Debian 9 Backports	3	3		-	3	100.0%
Debian 10 Backports	3	3		-	3	100.0%
Debian 10	5	5		-	5	100.0%
Pardus 19	5	5		-	5	100.0%

How do we contribute back?

- Bug reports!

How do we contribute back?

From: Moritz Muehlenhoff <mmuhlenhoff@wikimedia.org>
To: Debian Bug Tracking System <submit@bugs.debian.org>
Subject: intel-microcode: Missing MDS mitigations for some Intel CPUs
Date: Thu, 16 May 2019 14:47:24 +0200

Package: intel-microcode
Severity: important

I noticed that on some of our servers (using a E5-2470 Sandy Bridge
CPU), the MDS mitigations were not picked up and after some digging
I found
https://www.intel.com/content/dam/www/public/us/en/documents/corporate-information/SA00233-microcode-update-guidance_05132019.pdf
which lists all the CPU revisions for which updated microcode is not
yet available, but "Planned". It's obviously not actionable on the
Debian side, but I thought it's worth tracking nonetheless in the BTS
for the benefit of others wondering about missing microcode updates.

Cheers,
        Moritz

How do we contribute back?

Message #5 received at submit@bugs.debian.org (full text, mbox, reply):

From: Giuseppe Lavagetto <glavagetto@wikimedia.org>
To: Debian Bug Tracking System <submit@bugs.debian.org>
Subject: apache2: mod_proxy_fcgi erroneously sends response body when issuing a 304
Date: Thu, 16 Jun 2016 17:03:25 +0200

```
Package: apache2
Version: 2.4.10-10+deb8u4
Severity: normal
Tags: upstream

Dear Maintainer,

When apache communicates with a FastCGI server (like php-fpm) via
mod_proxy_fastcgi and the response contains a Last-Modified header with no
Status header and this results in a 304 Not Modified response (based on the
If-Modified-Since header of the HTTP request), apache sends to the client not
only the headers, but the body of the response too. This violates rfc2616
section 10.3.5: "The 304 response MUST NOT contain a message-body, and thus is
always terminated by the first empty line after the header fields."

Apart from causing issues with some reverse proxies, this also causes apache to
 log a bogus error:

"AH01070: Error parsing script headers, referer:..."

for every request that results in a 304 response.

This bug was reported upstream in

https://bz.apache.org/bugzilla/show_bug.cgi?id=57198

and is fixed in 2.4.11, see

https://svn.apache.org/viewvc/httpd/httpd/branches/2.4.x/modules/proxy/mod_proxy_fcgi.c?r1=1650677&r2=1650676&pathrev=1650677&view=patch

It would be useful to have this backported to the current apache2
package in jessie.

Thanks,

Giuseppe
```

How do we contribute back?

- Bug reports!

- Pre-release testing

How do we contribute back?

☑ **Prepare our base system layer for Debian 11/bullseye**

☑ Closed, Resolved   🌐 Public

Description

This task tracks the preparation of our base system services for Debian 11/bullseye. Nothing is released yet, schedule is here:

https://lists.debian.org/debian-devel-announce/2020/03/msg00002.html

Further base packages to build/import:

- ☑ debmonitor-client
- ☑ debdeploy-client
- ☑ ferm (patched compared to Debian)
- ☑ python-wmflib
- ☑ prometheus-rsyslog-exporter

How do we contribute back?

- Bug reports!
- Pre-release testing
- mirrors.wikimedia.org

How do we contribute back?

- Bug reports!
- Pre-release testing
- mirrors.wikimedia.org
- Package maintainership

How do we contribute back?

Kartik Mistry <kartik@debian.org> — Bugs: open - RC - all - submitted - WNPP - 📉 — Reports: [

main (112)

Source Package	Bugs		Version		
	All	RC	stable	testing	unstable
apertium[U]	1 📉	-	3.7.1-1		3.8.3-1
apertium-afr-nld[U]	- 📉	-	0.3.0-2		0.3.0-3
apertium-all-dev[U]	- 📉	-	-		3.8.1-2
apertium-anaphora[U]	- 📉	-	1.0.2-1		1.1.1-1
apertium-apy[U]	- 📉	-	0.11.7-2		0.11.7-2.1
apertium-arg-cat[U]	- 📉	-	0.2.0-2		0.2.0-3
apertium-bel-rus[U]	- 📉	-	0.2.1-1		0.2.1-2
apertium-br-fr[U]	- 📉	-	0.5.1-1		
apertium-cat-ita[U]	- 📉	-	0.2.1-3		0.2.2-1

How to contribute to Debian?

- Run Debian! Especially w/ MediaWiki, you can find bugs before it hits production

- Lurk in IRC channels, provide user support

- Report bugs, write documentation, translate software, and more!

- https://www.debian.org/intro/help

Thanks!

- Email: legoktm@debian.org
- IRC: legoktm on irc.{libera.chat,oftc.net}
- Matrix: @legoktm:matrix.org
- Fediverse: @legoktm@wikis.world