

Debbugs

22 Years of Bugs

Don Armstrong

August 10th, 2017



debian



Code and slides are here:

<https://dla2.us/p/debbugs2017>

Debbugs

└ Introduction to Debbugs

 └ Introduction

Goals of this talk

- ▶ Bug Statistics
- ▶ New features
- ▶ How you can help
- ▶ Answer questions/discussion



Debbugs

└ Introduction to Debbugs

 └ Introduction

Goals of the BTS



- ▶ Reporting of Features
- ▶ Evolution of Features
- ▶ Fixing of Features
- ▶ Reducing impact of Features



debian

Debbugs

└ Introduction to Debbugs

 └ Introduction

Goals of the BTS



- ▶ Reporting of Bugs
- ▶ Evolution of Bugs
- ▶ Fixing of Bugs
- ▶ Reducing impact of Bugs



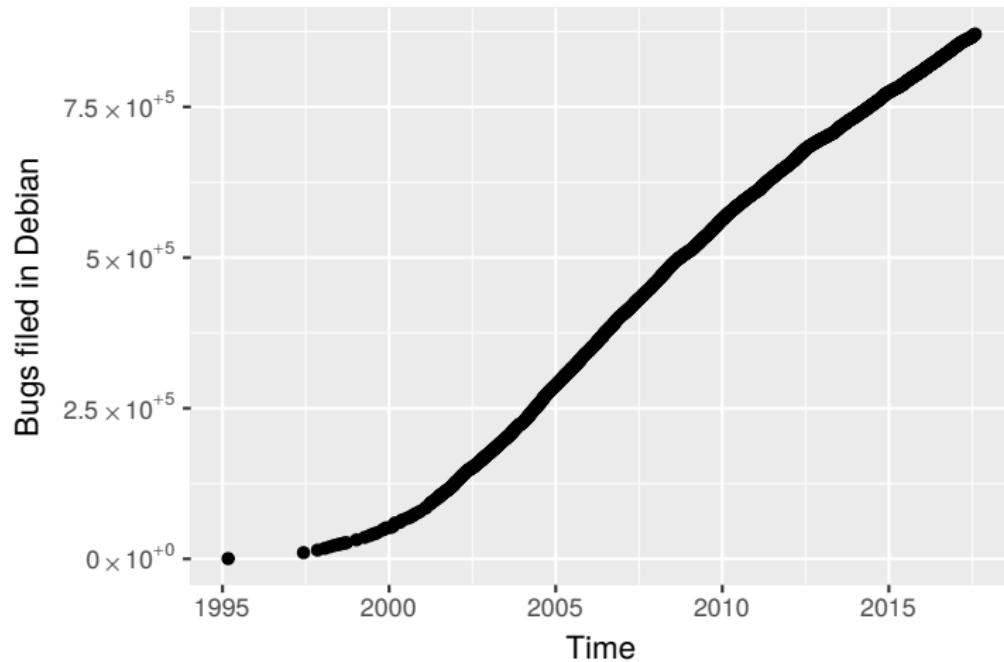
debian

Debbugs

└ Bugs in Debian

└ Bug Reporting Rate

Bugs from the beginning of time

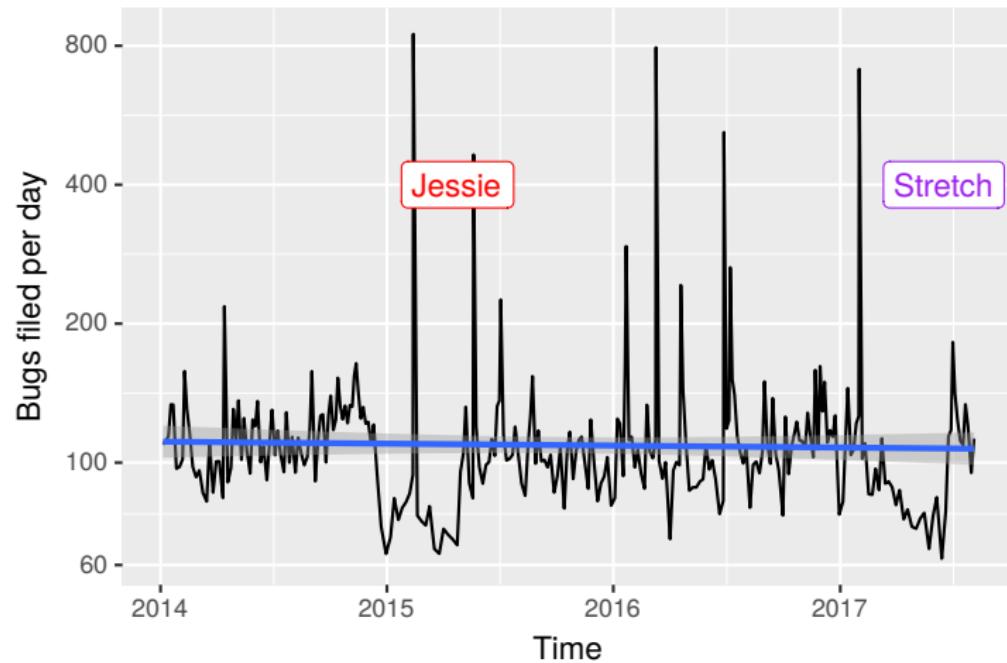


Debbugs

└ Bugs in Debian

 └ Bug Reporting Rate

Bug Growth Rate



debian

Debbugs

└ Bugs in Debian

└ Bug Reporting Rate

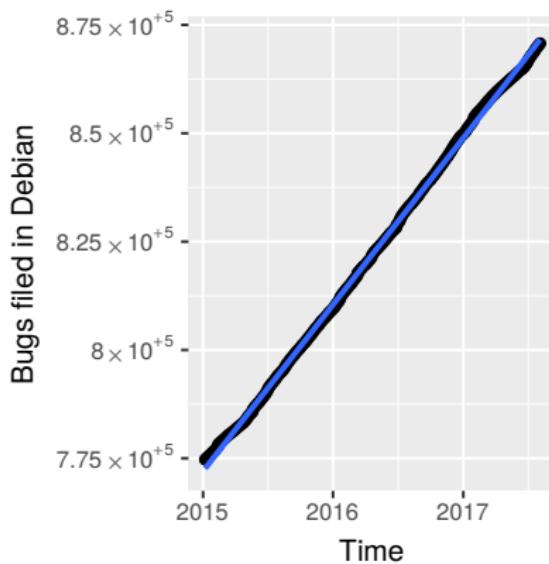
Is the bug filing rate decreasing?

```
summary(lm(log(`bugs per day`)~date,
            bug.growth[date > "2014-01-01 PST",]))  
  
##  
## Call:  
## lm(formula = log(`bugs per day`) ~ date, data = bug.growth[date >  
##     "2014-01-01 PST", ])  
##  
## Residuals:  
##      Min       1Q   Median       3Q      Max  
## -0.55003 -0.16770 -0.04112  0.11157  2.04406  
##  
## Coefficients:  
##              Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 5.139e+00 9.041e-01  5.684 3.38e-08 ***  
## date        -3.091e-10 6.256e-10 -0.494    0.622  
## ---  
## Signif. codes:  0 '****' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1  
##  
## Residual standard error: 0.3388 on 272 degrees of freedom  
## Multiple R-squared:  0.0008968, Adjusted R-squared:  -0.002776  
## F-statistic: 0.2442 on 1 and 272 DF,  p-value: 0.6216
```

Not significantly decreasing.

debian

My entries into Christian's game



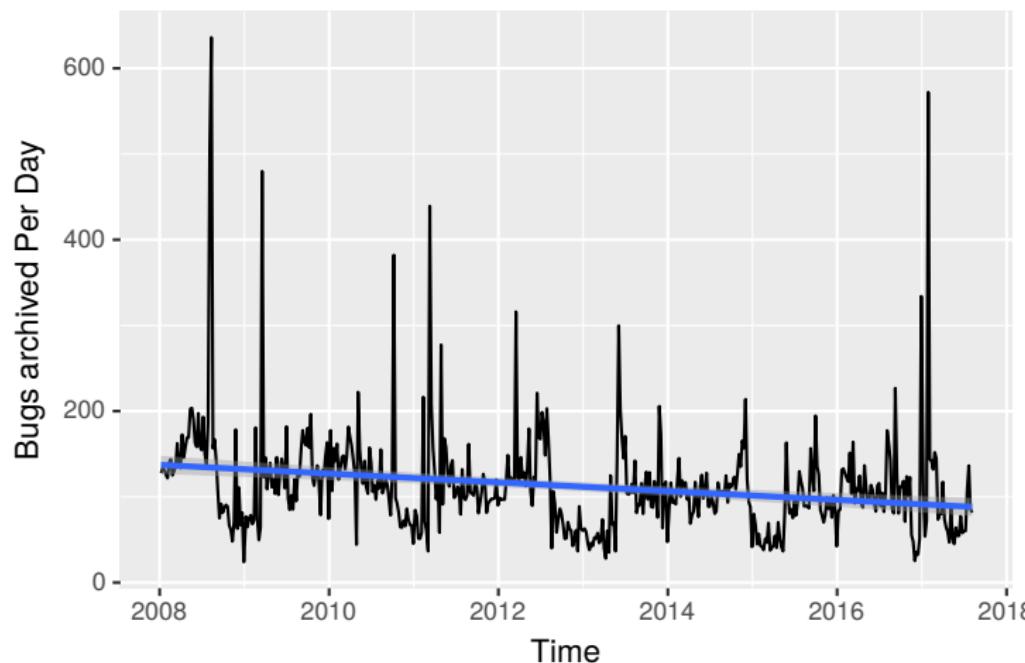
Roughly 134 bugs are filed per day. The 880000th bug will be filed at 2017-10-23 12:44:13, the 900000th bug will be filed at 2018-05-01 14:47:03, and bug one million will be filed 2020-12-07 00:01:12.



Debbugs

└ Bugs in Debian

└ Bug Fixing Rate



Roughly 96 bugs are closed per day.

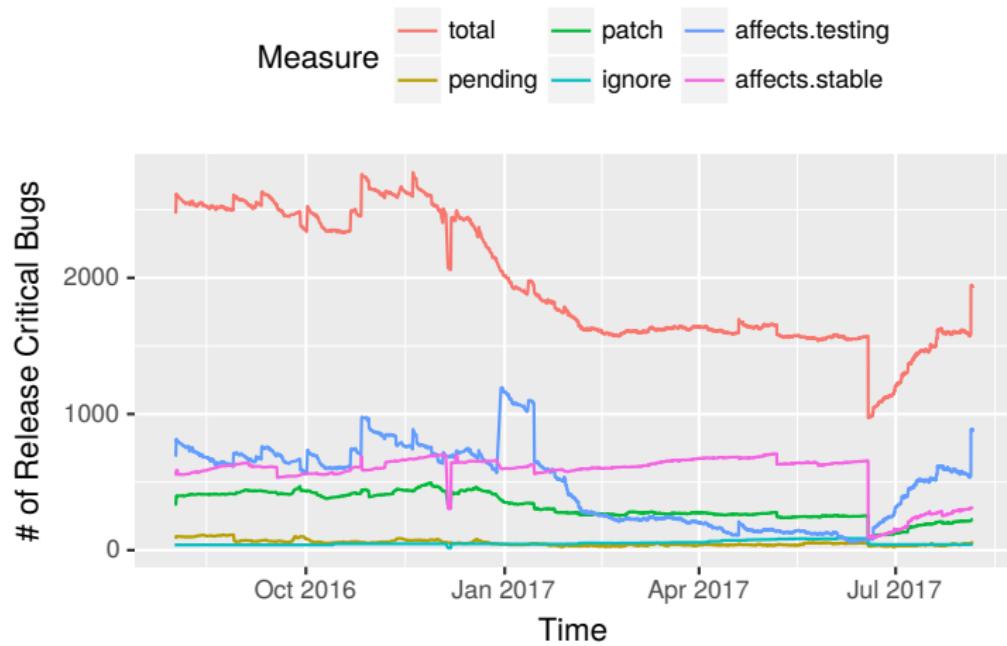
debian

Debbugs

└ Bugs in Debian

 └ RC Bugs

RC Bugs in the Past Year

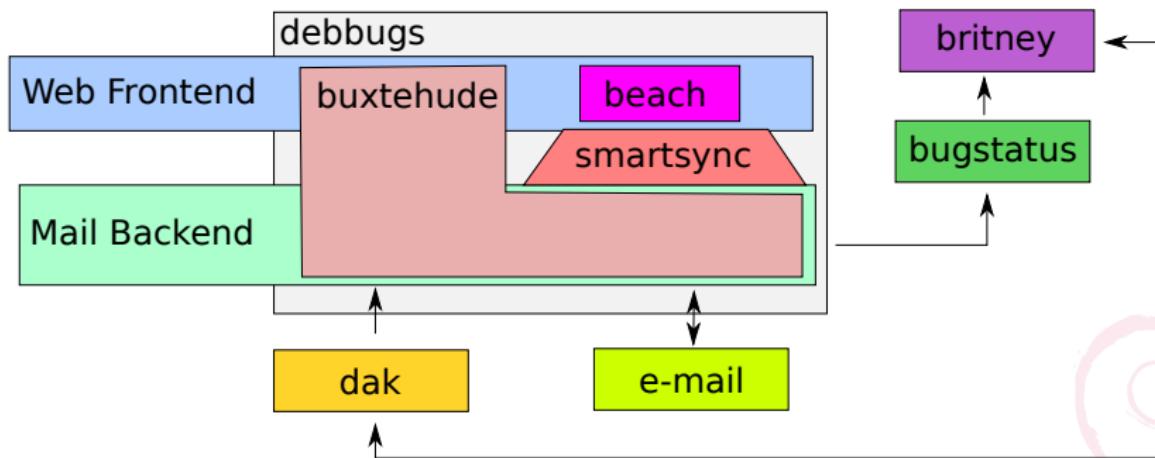


Debbugs

└ Debbugs Structure and Infrastructure

 └ BTS System Diagram

BTS system Diagram



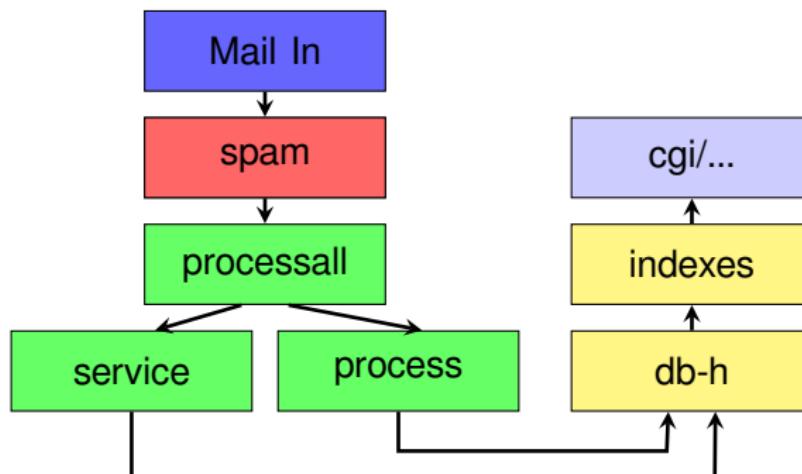
debian

Debbugs

└ Debbugs Structure and Infrastructure

 └ Debbugs Box Diagram

Debbugs Box Diagram



debian

Debbugs

└ New Features

 └ Database

Perl Database Infrastructure

- ▶ DBIx::Class
- ▶ DBIx::Class::Schema::Loader – SQL schema to DBIx::Class
- ▶ DBIx::Class::DeploymentHandler – Upgrades of Schema
- ▶ Debbugs::DB – Debbugs SQL Module



debian

Debbugs

└ New Features

 └ Database

SQL Loading

- ▶ Load bugs

```
debbugs-loadsq1 bugs;
debbugs-loadsq1 bugs archive;
```

- ▶ Load Versioning information

```
debbugs-loadsq1 versions;
debbugs-loadsq1 debinfo;
```

Debbugs

└ New Features

└ Database

Messages to bugs

```
SELECT count(*), c.addr FROM
message_correspondent mc
JOIN correspondent c ON mc.correspondent=c.id
WHERE correspondent_type='from'
GROUP BY mc.correspondent, c.addr
ORDER BY count DESC LIMIT 5;
```

count	addr
5123	bubulle@debian.org
4346	joeyh@debian.org
4214	biebl@debian.org
3875	tbm@cyrius.com
3632	ftpmaster@ftp-master.debian.org



Debbugs

└ New Features

└ Database

Single-message correspondents

```
SELECT count (*) FROM
(SELECT count (*), c.addr
FROM message_correspondent mc
JOIN correspondent c ON
mc.correspondent=c.id
WHERE correspondent_type='from'
GROUP BY mc.correspondent,
c.addr
HAVING count (*) = 1) AS foo;
```

count

30215



debian

Debbugs

└ New Features

└ Database

More fun queries

```
SELECT count(*) , t.tag
FROM bug b
JOIN bug_tag bt ON b.id=bt.bug
JOIN tag t on bt.tag=t.id
GROUP by bt.tag,t.tag
ORDER by count DESC LIMIT 5;
```

count	tag
141184	patch
42288	upstream
39466	sid
33640	110n
25566	fixed-upstream



debian

Debbugs

└ New Features

 └ Database status caching

Status caching “working”

```
SELECT count(*) ,status  
FROM bug_status_cache bsc  
JOIN suite s ON bsc.suite=s.id  
WHERE s.suite_name='unstable'  
GROUP by status;
```

count	status
514488	fixed
234155	absent
3923	found



debian

Debbugs

└ New Features

 └ Work still needed for SQL

Work Still needed for SQL

- ▶ Integration into CGI (`bugreport.cgi` and `pkgreport.cgi`)
- ▶ Database loading/update is slow in some cases
- ▶ Some corrupted bugs have been exposed by the loading (167851 and 280931); likely others
- ▶ Testing (Mainly of queries)
- ▶ Deployment



debian

Debbugs

└ New(ish) Features

 └ New Changes

New Changes

- ▶ Format-flowed messages are wrapped
- ▶ https links everywhere
- ▶ etag caching support everywhere
- ▶ a11y (accessibility, &) tag
- ▶ newcomer (*) tag
- ▶ Usercategories now selectable (Categorize/order using)



debian

7 tasks seeking contributors

- ▶ Documentation of Usercategories
- ▶ Implementation of rss feeds for packages and bugs
- ▶ CGI options on pkgreport.cgi for usertags et al. #536378)
- ▶ Documentation of multiple-package reassign and when it or affects should be used
- ▶ Documentation for local-debbugs configuration file (behaves like bts select)



Getting started on these tasks

- ▶ Upstream branches:

<http://bugs.debian.org/debbugs-source/>

- ▶ master (upstream debbugs): `git clone http://bugs.debian.org/debbugs-source/debbugs.git`
- ▶ debian (debian branch): `git clone -b debian http://bugs.debian.org/debbugs-source/debbugs.git`
- ▶ Checked out branches are also available at `http://bugs.debian.org/debbugs-source/master` and
`http://bugs.debian.org/debbugs-source/debian`

- ▶ My branches:

<http://git.donarmstrong.com/debbugs.git>

- ▶ Mailing list debian-debbugs@lists.debian.org

- ▶ IRC #debbugs or #debian-bugs on [irc.debian.org](irc://irc.debian.org); I'm [dondelelcaro](#)



Debbugs

└ Contributing to Debbugs

Using local-debbugs to run these tasks

```
git clone \
  https://bugs.debian.org/debbugs-source/debbugs.git
cd debbugs
# get some bugs
perl -I. ./bin/local-debbugs --mirror
# start a web daemon
perl -I. ./bin/local-debbugs --daemon
# show some of my bugs (use your own search here)
perl -I. ./bin/local-debbugs --search bugs.debian.org
# stop the daemon
perl -I. ./bin/local-debbugs --stop
# hack and repeat
perl -I. ./bin/local-debbugs --daemon
perl -I. ./bin/local-debbugs --show 614351
```

debian

The Debbugs Team

- ▶ Current team
 - ▶ Don Armstrong
 - ▶ Blars Blarson
 - ▶ Colin Watson
- ▶ Emeritus Developers
 - ▶ Steiner Gunderson
 - ▶ Adam Heath
 - ▶ Josip Rodin
 - ▶ Anthony Towns
- ▶ You!



debian

Questions?

