

## Reproducible buster?

Holger Levsen Jonathan Bustillos Osornio Chris Lamb Steven <u>Chamberlain</u> Introduction

Status update

Issues in detail



### Introduction

Reproducible Builds have the purpose to enable anyone to reproduce identical binary packages from a given source.



## **Project goals**

Ensure builds have identical results.

We want to change the meaning of "Free Software": It's only Free Software if it's reproducible!



### Other talks

Bornhack, All Systems Go, All ThingsOpen, OSSE, Hackmit, FreeNode Live, CubaConf, Open Compliance Summit, Linux.conf.au, FOSDEM, Scale, NYLUG, LibrePlanet, Easterhegg, MiniDebConf Curitiba, Foss-North, FLOSSUK; and mentioned by several talks at 34C3.



## New since DebConf17 Montreal



#### Migration to salsa.d.o

### 3rd Reproducible Builds Summit in Berlin

Logo discussion & voting



(This is the final logo, but not the final typeface/colour...)



### GCC - fmacro-prefix-map

```
#include <stdio.h>
int main() {
   fprintf(stderr, "error at %s line %l", __FILE__, __LINE__); return 1;
}
```

```
$ /usr/lib/gcc-snapshot/bin/gcc -o main /home/user/main.c
$ strings main | grep ^/
/lib64/ld-linux-x86-64.so.2
/home/user/main.c
```

# New since DebConf17 Montreal

### GCC -fmacro-prefix-map

```
#include <stdio.h>
int main() {
   fprintf(stderr, "error at %s line %l", __FILE__, __LINE__); return 1;
}

$ /usr/lib/gcc-snapshot/bin/gcc -o main -fmacro-prefix-map=/home/user=/build

$ strings main | grep ^//lib64/ld-linux-x86-64.so.2
/build/main.c
```



### New since DebConf17 Montreal

#890195: Testing for unnecessary Build-Depends



## Other projects

Arch Linux reached ~80% reproducible packages openSUSE reached 93%

NetBSD and FreeBSD base systems reached 100%

Tails 3.3, 3.6.1 → 100% reproducible ISO images

OpenWrt images (for at least some targets)

Yocto, AngularJS, Please.build, ...



### Debian buster

"Packages should build reproducibly" added in Debian Policy 4.1.0.0



## What's missing?



### Debian installer images

Comparing against packages from the archive



## **Funding**

New progress is slowing down...

Some things go backwards...

Impact on collaboration / community...

We kept up the weekly blog, which could be misleading...



### Lack of funding

New progress is slowing down...

Some things go backwards...

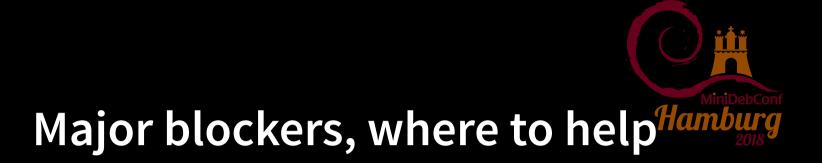
Impact on collaboration / community...

We kept up the weekly blog, which could be misleading...

## Debian is wrong

93% is a lie. We need infrastructure, processes and policies. (And testing. Currently we only have testing and a vague goal.)

With the upcoming list of bugs we don't want to fingerpoint at individual teams, instead I think we can only solve this if we as Debian decide we want to solve it for *buster*. I think this is not happening because people believe things have been sorted out and we take care of them. But we are not, we can't do this alone.



#869184

sbuild, dput, dpkg: source uploads including \_amd64.buildinfo causes problems

#894441

binNMUs, mtimes and rsync(1) causes problems and binNMUs should be replaced by easy "no-change-except-debian/changelog-uploads"



### .buildinfo files

#862073

ftp.debian.org: Please POST .buildinfo files to buildinfo.debian.net

#763822

ftp.debian.org: please include .buildinfo file in the archive

#862538

security.debian.org: Please POST .buildinfo files to buildinfo.debian.net



### Debian stretch

the 'reproducibly in theory but not in practice' release

### Debian buster

the 'we should be reproducible but we are not' release?

## Debian bullseye

the 'we are almost there but still haven't sorted out...' release???



### Debian buster

the release is still far away and we haven't frozen yet! :-)



## Thanks!

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