Debian Java
Insights and challenges

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The importance of Java

- Source / binary packages maintained by the Java team: 1033 / 1644 (+10.84 % since Debian 9)
- Source lines of code (Rank 3): 90,744,884
- Popcon value OpenJDK-8 (installed): 78104 / 199604
- Popular libraries: apache-commons-*, javamail, xerces2, bouncycastle
- Popular applications: libreoffice, netbeans, pdfsam, sweethome3d, freeplane, freecol
- Frequently used for scientific research, medical care and bioinformatics.
What is new in Buster?

- **OpenJDK 11** transition completed. (required more than 400! package updates)
- **Build tools:** Ant and Maven are up-to-date. Gradle is stuck at the last pre-Kotlin version. SBT is still being worked on.
- **JVM languages:** Groovy 2.14, Scala 2.11.12 (2.12 requires SBT), Clojure 1.9, Jython 1.7.1, JRuby 9.1.13 (?), Kotlin is wanted but hard to bootstrap.
- **IDE:** Eclipse is gone (lack of maintainers) but there is Netbeans 10 now.
- **Server:** Jetty 9.4 and Tomcat 9 fully up-to-date with systemd integration.
- **Reproducibility** rate is at 85% (was 75%)  
  https://reproducible-builds.org
Packaging challenges

- “None of the packages in the main archive area require software outside of that area to function”

- Internet downloads at build time are not allowed

- No prebuilt jar or class files!

- Java is version-centric. Every developer has to update every dependency themself in this model. There are no shared security updates. Software is often bundled into uberjars.
Packaging challenges II

• Everything can be built from source, offline, only with packages from Debian main.

• Debian prefers **one package version** and shared dependencies that can be independently updated. This simplifies security support and maintenance and reduces code duplication.

  This use case is poorly supported upstream.
Debian Java bugs fixed

Years

2013 2014 2015 2016 2017 2018

Bugs

0 50 100 150 200 250 300 350 400 450 500

Debian Java bugs fixed

Mean (ebourg)
Linear (ebourg)
others
nomadium
tmancill
apo
ebourg

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Let’s release Debian 10 “Buster”

Thank you all for your attention!