LibreOffice's automatic updater work
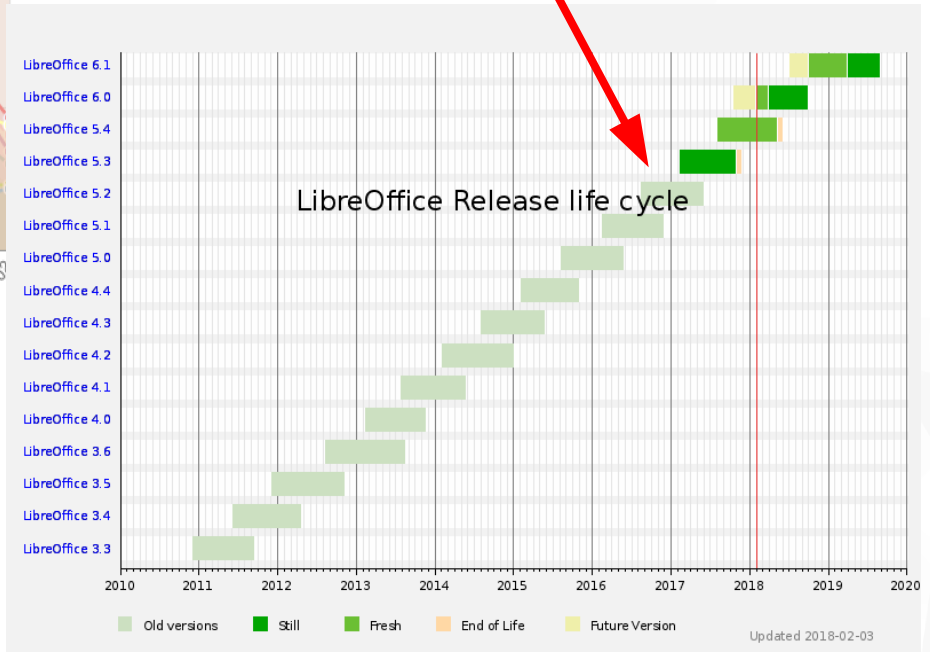
- Markus Mohrhard
- 2018-09-28

Motivation
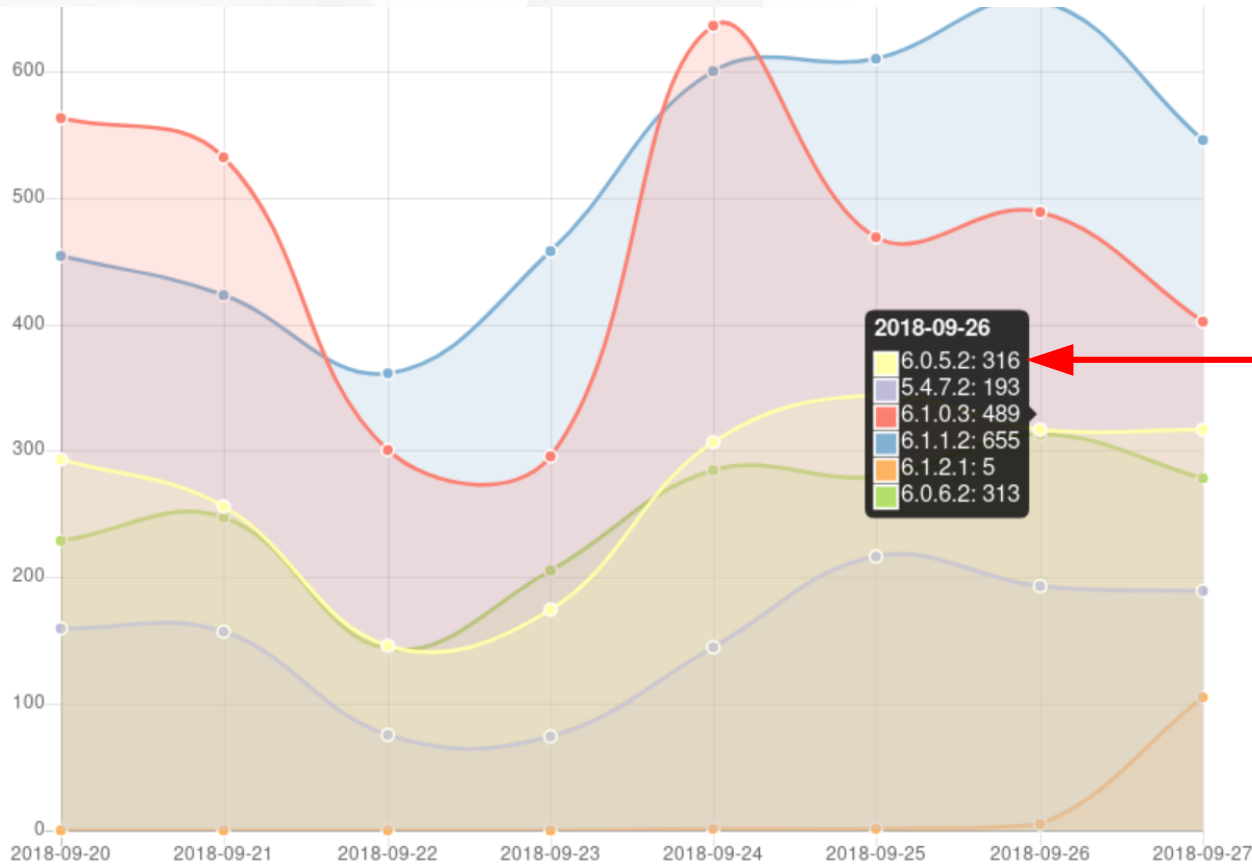

5.2.4.2 still on the top

LibreOffice Release life cycle
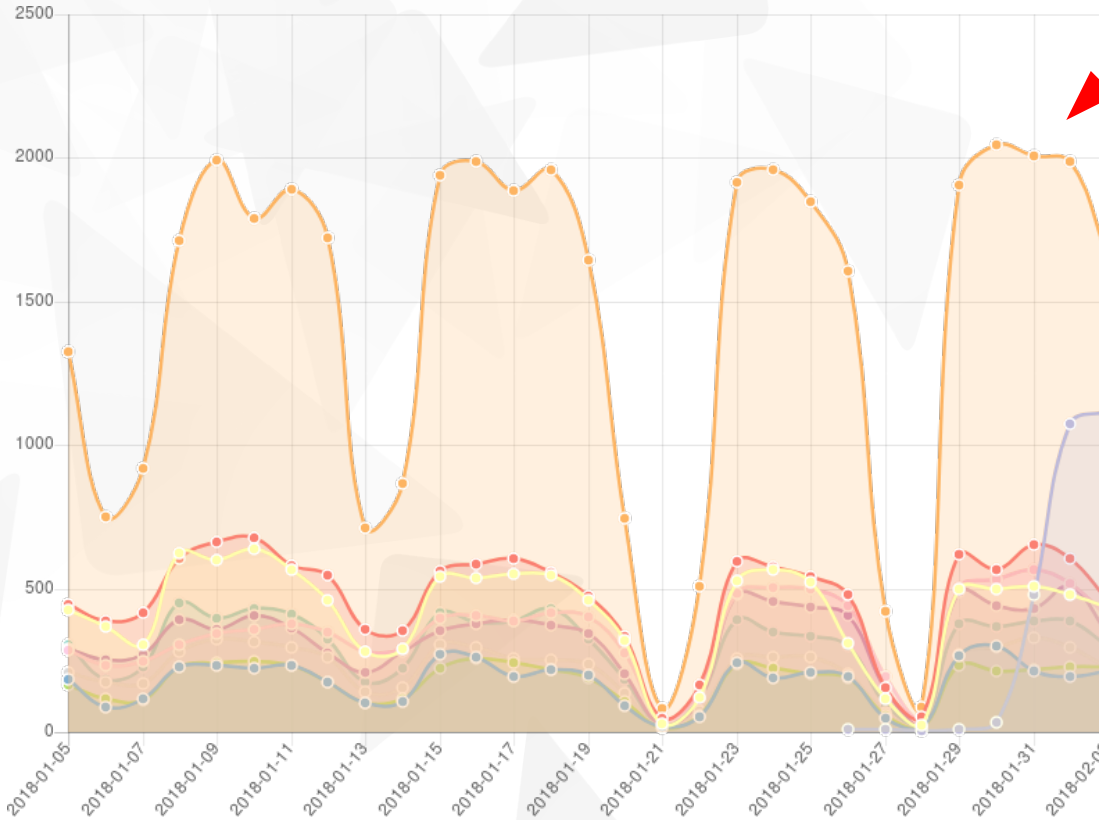
About 1000 crashes for 5.2.4.2 each day

1.12 million crash reports for 5.2.4.2 in total

Motivation

Can we make sense of these numbers?

Which version is better?

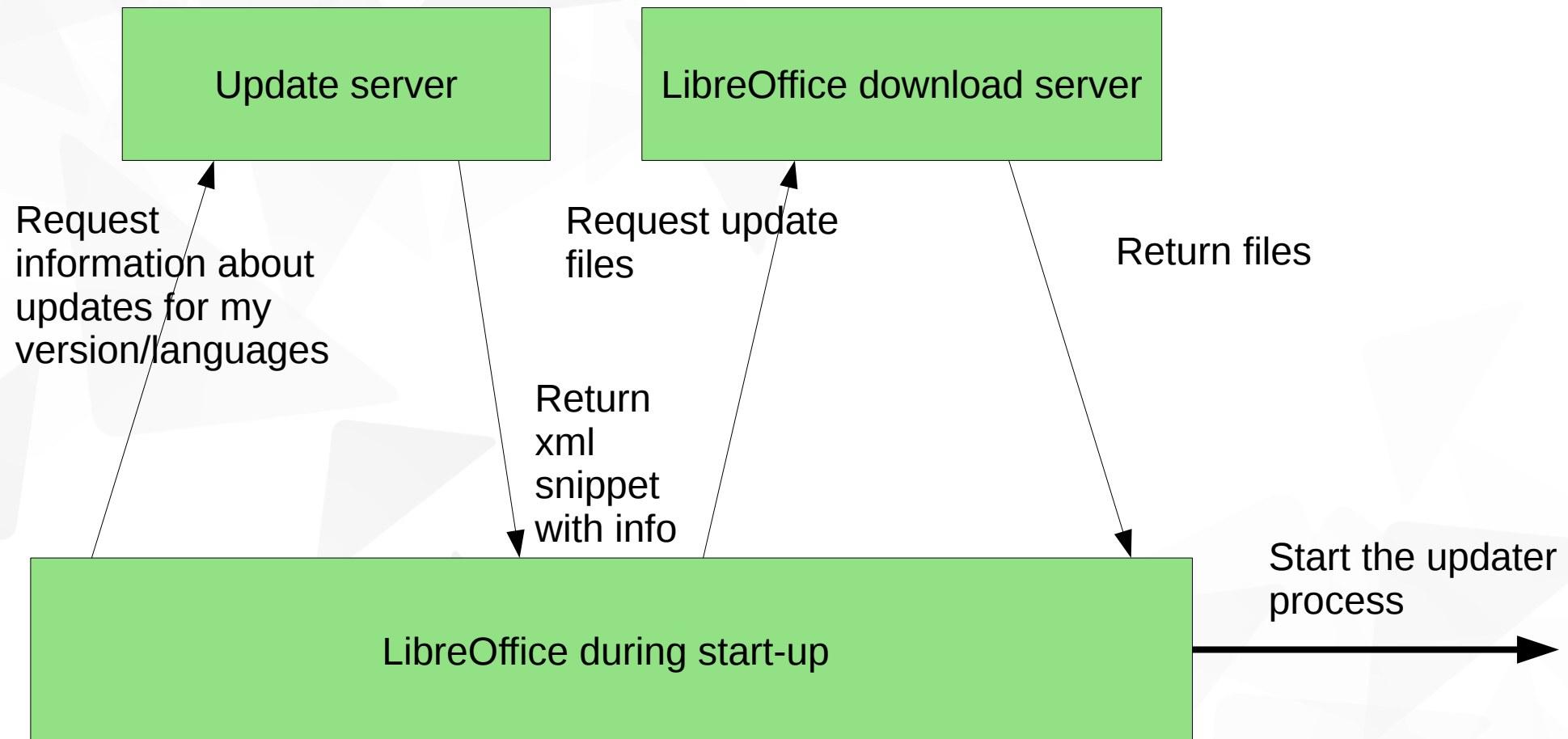Did we manage to improve quality with each release?

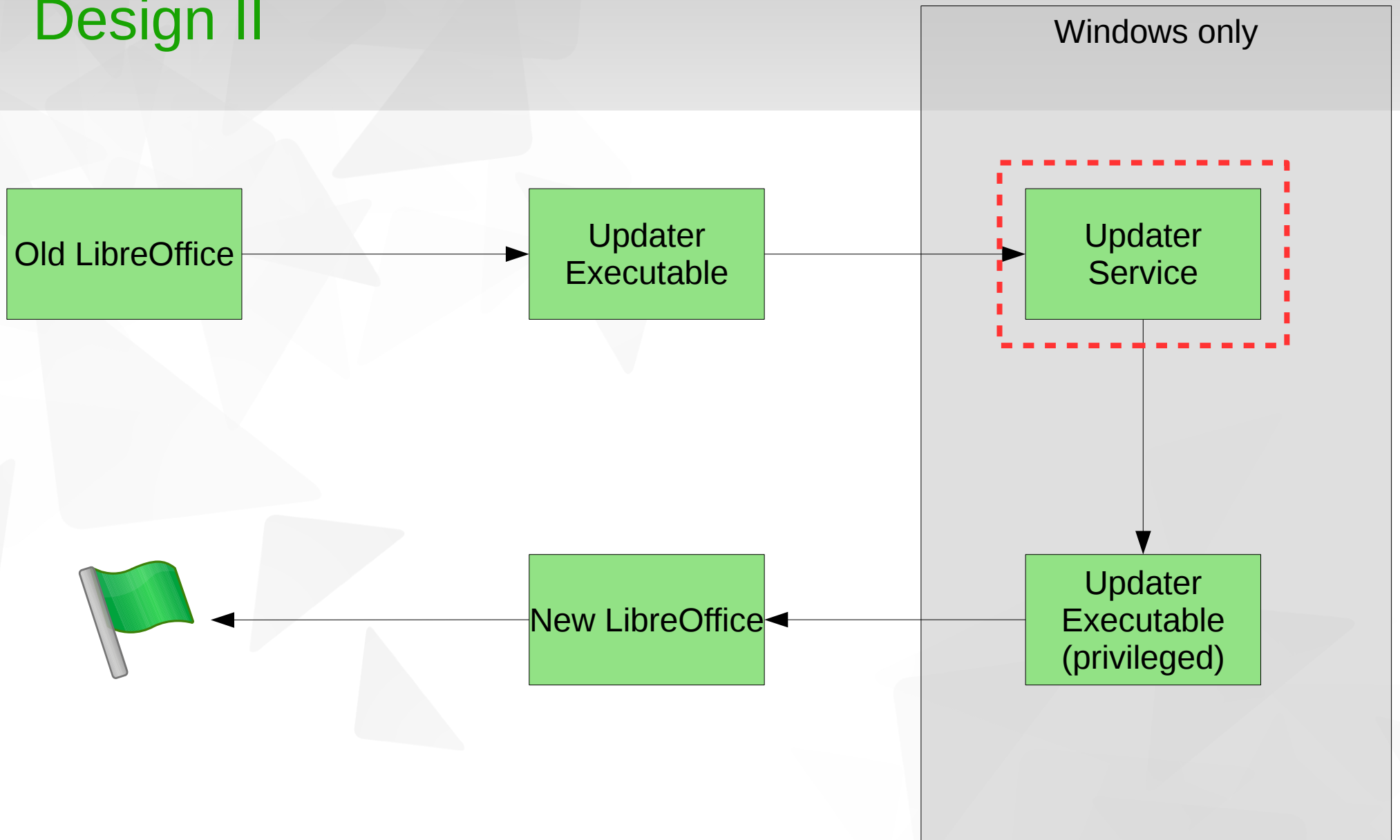Can we detect a huge spike?

Component overview

Overview

- mar based updater service

- Merged to master from a feature branch

- Updater is actually an own process

- Works with daily builds already
  - Linux done as a jenkins job
  - Windows done manually on my machine

- Incremental updates
  - Currently for daily builds between 1 and 10 MB

Design I – Checking for available updates

Update server

LibreOffice download server

Request information about updates for my version/languages

Request update files

Return files

Return xml snippet with info

LibreOffice during start-up

Start the updater process

Design II

Old LibreOffice → Updater Executable → Updater Service

Updater Service → Updater Executable (privileged) → New LibreOffice → 🏳️

Updater Service

- System service for automatic updating on Windows

- Builds and works but not integrated into our installer yet
  - Missing integration into MSI
  - Quite a bit of low level Windows work necessary

- Huge missing piece
  - High priority

Server

- Small django app that serves small update snippets

- Stores hash, size and location of the update files

- Collects some statistics about versions

- More work on statistics and stability are necessary

- https://github.com/mmohrhard/updater

- Running test instance: http://vm195.documentfoundation.org

Server response

http://vm195.documentfoundation.org/update/check/1/LibreOfficeDev/d6c4c576ef71f2294ec

8eefc6576a797220e6809/Linux_X86_64/daily-master-gandalf

LibreOffice's automatic updater work

Windows MSI

- MSI has an own incremental update format – MSP

- No MSI/MSP support in Mozilla code

- MSP generation in LibreOffice is a horrible mess
  - Different way to run the packaging
  - Configuration for MSP generation really complicated
  - Part of the LibreOffice build – Why?

libreoffice-msp-generator

- https://github.com/mmohrhard/libreoffice-msp-generator

- Uses already build MSI files

- Same config variables as LibreOffice msp build

- Packaged pcp files

- MSP files are not perfect yet
    - More work needed

Automated testing

- How to make sure that incremental updates produce correct builds?

- Testing surface explodes

- Interacts with the system a lot

- UI testing to the rescue?

Thank you …

❮ … listening!

❮ … for supporting LibreOffice!