ISSUES OPENED BY GREENKEEPER BOT
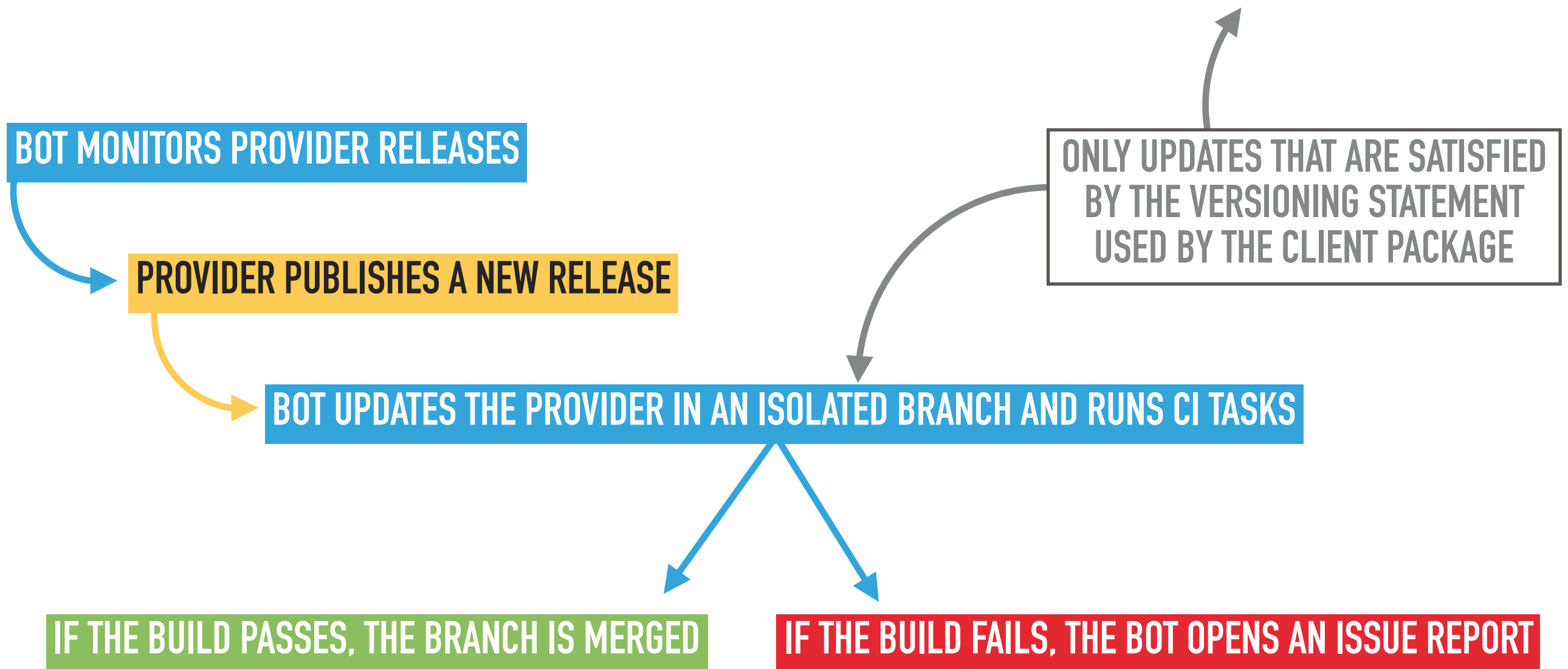
DATA SET PRESENTATION

HOW GREENSKEEPER DETECT BUILD BREAKAGES OF IMPLICIT UPDATES?

BOT MONITORS PROVIDER RELEASES

PROVIDER PUBLISHES A NEW RELEASE

ONLY UPDATES THAT ARE SATISFIED BY THE VERSIONING STATEMENT USED BY THE CLIENT PACKAGE

BOT UPDATES THE PROVIDER IN AN ISOLATED BRANCH AND RUNS CI TASKS

IF THE BUILD PASSES, THE BRANCH IS MERGED

IF THE BUILD FAILS, THE BOT OPENS AN ISSUE REPORT

A TYPICAL ISSUE REPORT OPENED BY GREENKEEPER

PINNING IS RECOMMENDED WHEN IT FIXES THE BROKEN BUILD

▸ Pinning has an impact on the future updatability of the provider

greenkeeper bot commented on Jan 22   Author + ☺ ...

After pinning to **7.0.13** your tests are still failing. The reported issue *might* not affect your project. These imprecisions are caused by inconsistent test results.

VS.

greenkeeper bot commented 7 days ago   Author Contributor + ☺ ...

After pinning to **0.13.2** your tests are passing again. Downgrade this dependency 📌.

THE BOT ALSO RECOMMENDS TO EXPLICIT UPDATE A PINNED DEPENDENCY

WHEN A PINNED DEPENDENCY PUBLISHES A RELEASE THE CLIENT PACKAGE IS NOTIFIED

greenkeeper `bot` commented on May 4   Author +☺ ...

- The `devDependency` postcss was updated from `7.0.14` to `7.0.15` .

Your tests are passing again with this update. Explicitly upgrade to this version 🚀

▶ Release Notes for 7.0.15

greenkeeper `bot` commented on May 4   Author +☺ ...

- The `devDependency` postcss was updated from `7.0.15` to `7.0.16` .

Your tests are passing again with this update. Explicitly upgrade to this version 🚀

greenkeeper `bot` commented on Jun 5   Author +☺ ...

- The `devDependency` postcss was updated from `7.0.16` to `7.0.17` .

Your tests are passing again with this update. Explicitly upgrade to this version 🚀

▶ Release Notes for 7.0.17

WHICH DATA DO WE HAVE?

WE OBTAINED ALL ISSUE REPORTS THAT HAVE THE STANDARD TITLE

▸ 82,399 issue reports

an in-range update is breaking build in:title

▸ 152,257 events associated with the issue reports

  ▸ Closed/Reopened (62,154/144)

  ▸ Commits with reference to the issue report (1,388)

  ▸ Assignments to a contributor (1,172)

  ▸ Mention of a GH user (389)

  ▸ Subscriptions for notification (321)

  ▸ Milestoned/Demilestoned (314/51)

  ▸ Among others …

WE EXTRACTED THE NAME AND VERSION OF THE PROVIDER THAT BROKE THE BUILD

THERE ARE SEVEN VARIATIONS OF ISSUE REPORT BODY. WE USE A DIFFERENT REGULAR EXPRESSION OVER EACH VARIATION

WE EXTRACTED THE NAME AND VERSION OF THE PROVIDER THAT BROKE THE BUILD

An in-range update of enzyme is breaking the build 🚨

Open · greenkeeper `bot` opened this issue on Jan 23 · 0 comments

greenkeeper `bot` commented on Jan 23 · Contributor

There have been updates to the *enzyme* monorepo:

- ○ The `devDependency` enzyme was updated from `3.7.0` to `3.8.0`.
- The `devDependency` enzyme-adapter-react-16 was updated from `1.7.0` to `1.7.1`.

🚨 View failing branch.

This version is **covered** by your **current version range** and after updating it in your project **the**

INFORMATION ABOUT THE PROVIDER THAT BROKE THE BUILD IS DIFFERENT AMONG THE VARIATIONS OF ISSUE REPORT

An in-range update of postcss is breaking the build 🚨

Open · greenkeeper `bot` opened this issue on Jan 22 · 4 comments

...ases of one or more dependencies which all belong to the

...project. It **might not break your production code or affect** ...breaks your build or test tools, which may **prevent deploying**

greenkeeper `bot` commented on Jan 22

The devDependency **postcss** was updated from `7.0.13` to `7.0.14`.

🚨 View failing branch.

This version is **covered** by your **current version range** and after updating it in your project **the build failed.**

postcss is a devDependency of this project. It **might not break your production code or affect downstream projects**, but probably breaks your build or test tools, which may **prevent deploying or publishing.**

An in-range update of grunt is breakir...

Open · greenkeeper `bot` opened this issue on Feb 7, 2018 · 2 comments

greenkeeper `bot` commented on Feb 7, 2018

Version 1.0.2 of **grunt** was just published.

Branch	Build failing 🚨
Dependency	grunt
Current Version	1.0.1
Type	devDependency

This version is **covered** by your **current version range** and after updating it in your project **the build failed.**

grunt is a devDependency of this project. It **might not break your production code or affect downstream projects**, but probably breaks your build or test tools, which may **prevent deploying or publishing.**

IN 41% OF THE ISSUE REPORTS THERE IS NO INFORMATION OF WHICH IS THE PRIOR VERSION

WE OBTAINED ALL SUCH COMMITS

▸ Commit message

  ▸ Clear vs. Tangled changes

    ▸ *"Update dependencies make greenkeeper happy, closes #17, closes #18"*

    ▸ *"feat(base): Add `function-paren-newline` rule\n\nFix #25"*

▸ Modified files

▸ Author and committer

▸ Commit size

  ▸ Large vs. Regular commits

    ▸ Number of added and deleted lines of code

    ▸ Number of files

CHALLENGES

# WE DON'T KNOW IF THE PACKAGE THAT USES THE BOT ON GH IS IN NPM

▸ There are 10,496 projects using Greenkeeper in our dataset

▸ If we want to study how the projects (bot users) deploy versions in npm as client packages …

   ▸ … then we need to find the correspondent package in npm

▸ We just have the repository of the project, not it's name in npm

▸ The package.json file hosted on GH has the name of the package

   ▸ However, life is harder than this!

LINKING THE CLIENT PACKAGE IN GITHUB WITH THE PACKAGE IN NPM IS CHALLENGING

▸ Revision control on Git and deployment on npm is out-of-sync

  ▸ Package.json file have different states in npm and Git
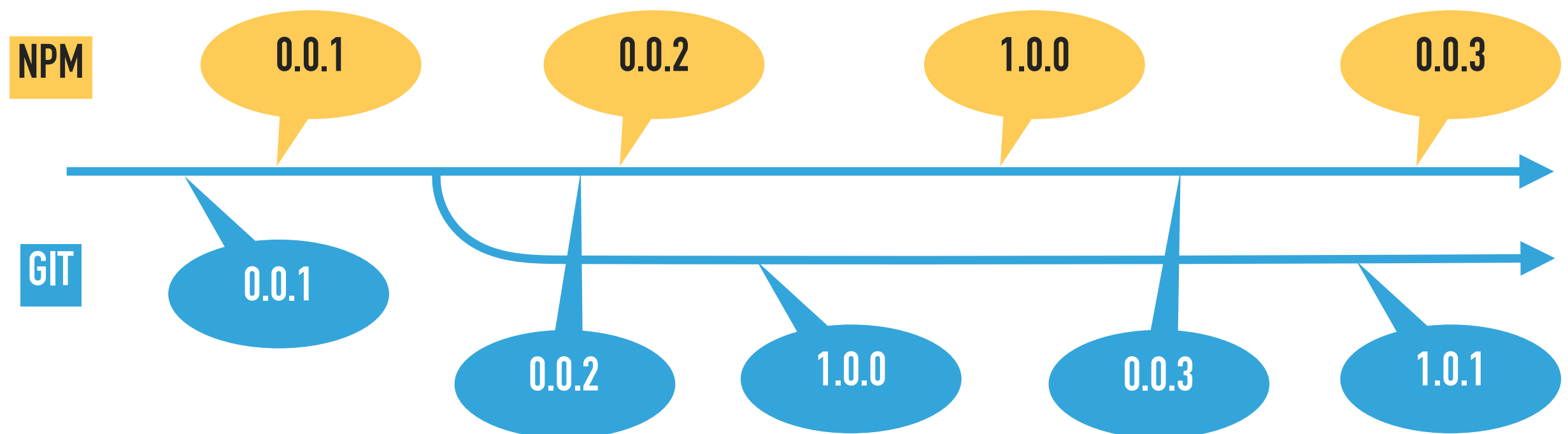
BEST EFFORT TO FIND WHICH IS THE NPM CLIENT PACKAGE HOSTED ON GITHUB

▸ Find the latest revision of the package.json file hosted on GH

▸ Find the package.json file hosted on npm for same package name

▸ Check the following matches:

  ▸ Repository (44% matches)

  ▸ Author (33% matches)

  ▸ Latest version of client package on GH exists on npm (51.7% match)

  ▸ Name of dependencies (61% matches)

OPPORTUNITIES

HOW CAN I MAKE MY BOT BETTER?

▸ How much attention is being given to issues opened by the bots?

▸ How often developers of client packages close the issue without any event (discussion, commit, etc.)?

▸ How often the bot send false alarms?

▸ Do developers accept the bot recommendations of pinning/implicit updates?

HOW SHOULD I FIX A BUILD BREAKAGE?

▸ Do client packages need large changes to cope with the issue opened by the bot?

▸ How long does a client package takes to react to the issue?

▸ How long a pinned provider remains without being updated?

▸ How much people is generally allocated to solve the issues?

▸ What is going on closed/opened issues with large discussions?

AM I BREAKING MY CLIENTS CODE?

▸ How often do provider updates break a client package build?

▸ What types of updates (patch, minor, major) most often break the clients build?

▸ What types of change do client packages need to perform to recover from a build breakage?