

Lessons learned from exploring the overhead introduced by the Greenkeeper dependency bot



Benjamin
Rombaut



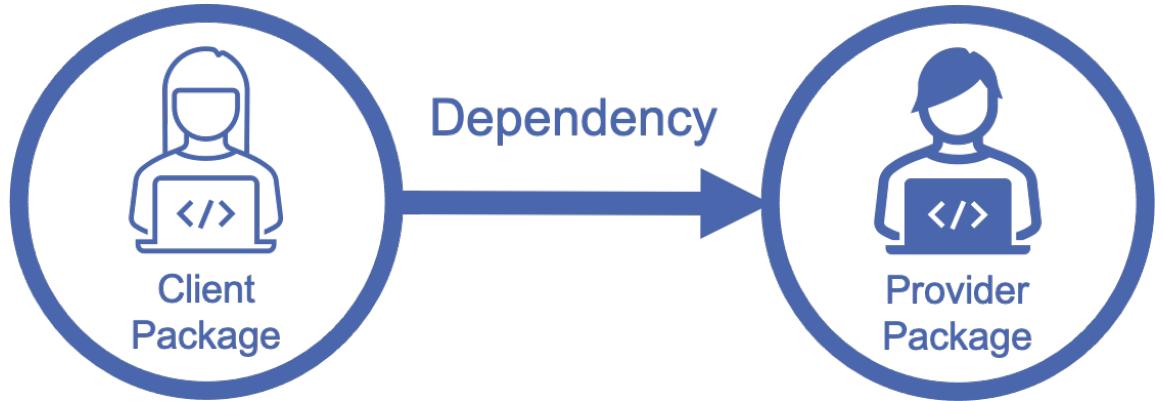
Filipe R.
Cogo

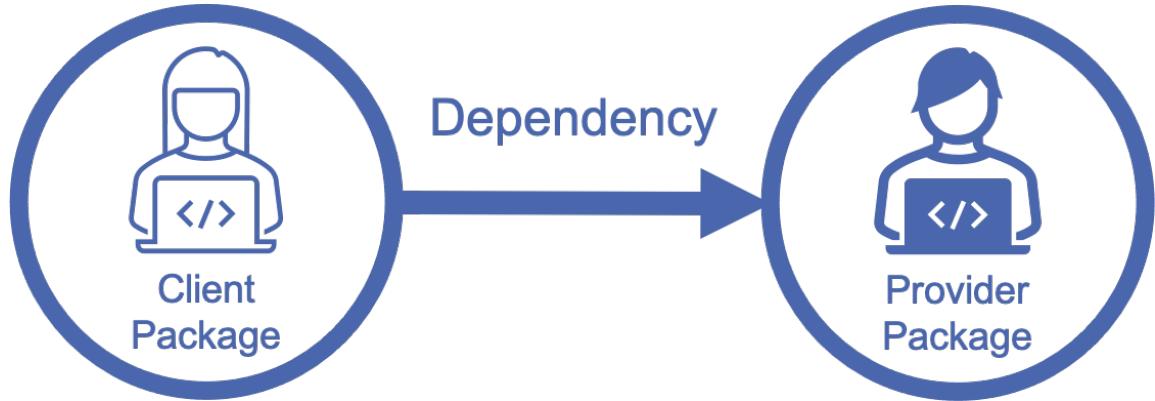


Bram
Adams



Ahmed E.
Hassan

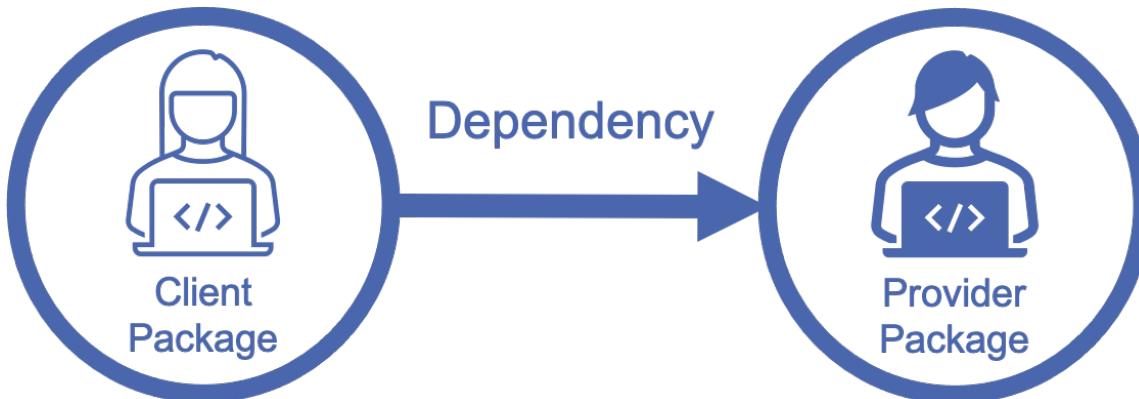




“

Vulnerabilities are found at an increasing pace, nearly doubling in the last 2 years





Dependabot



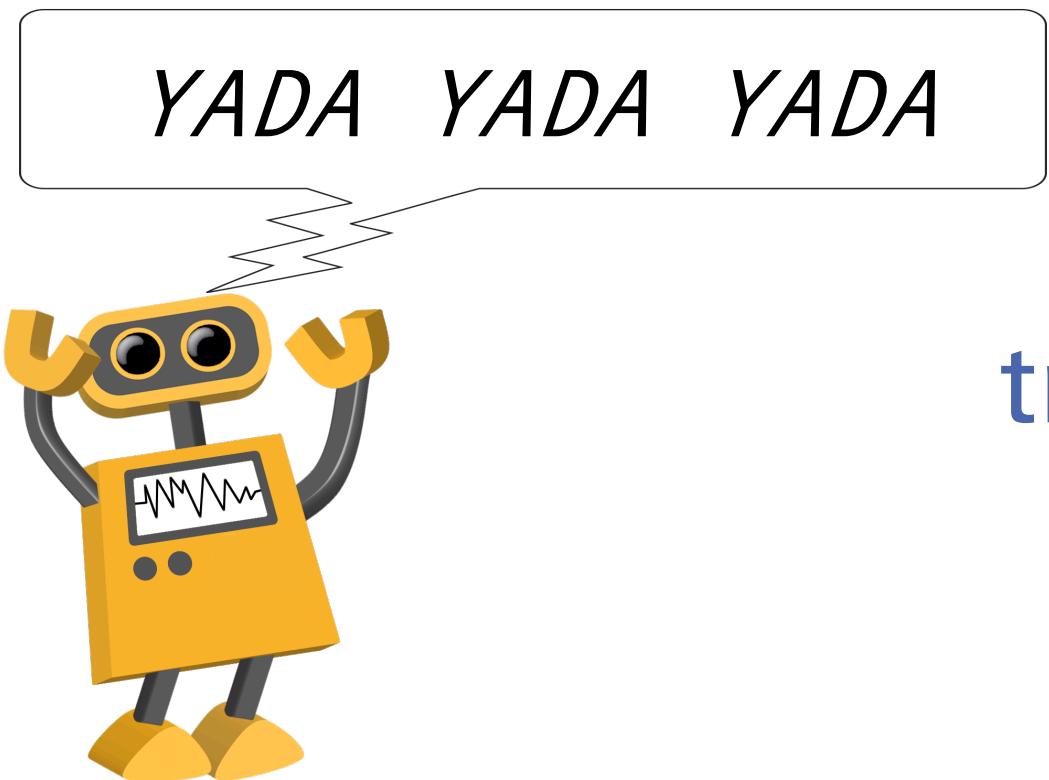
“

Vulnerabilities are found at an increasing pace, nearly doubling in the last 2 years

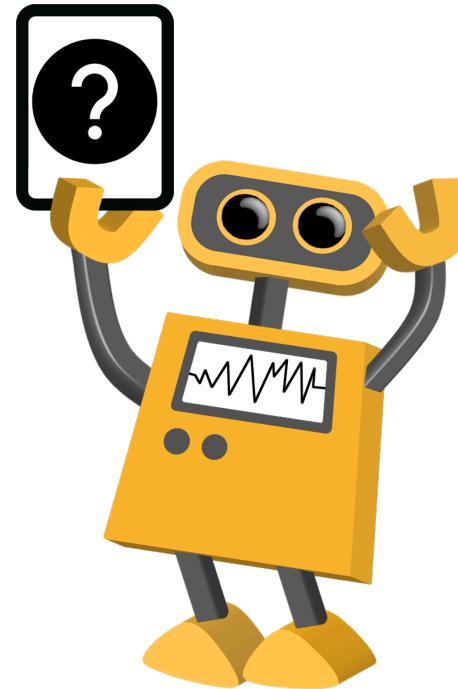


RENOVATE

Bots can help, but
developers say they
can be annoying...

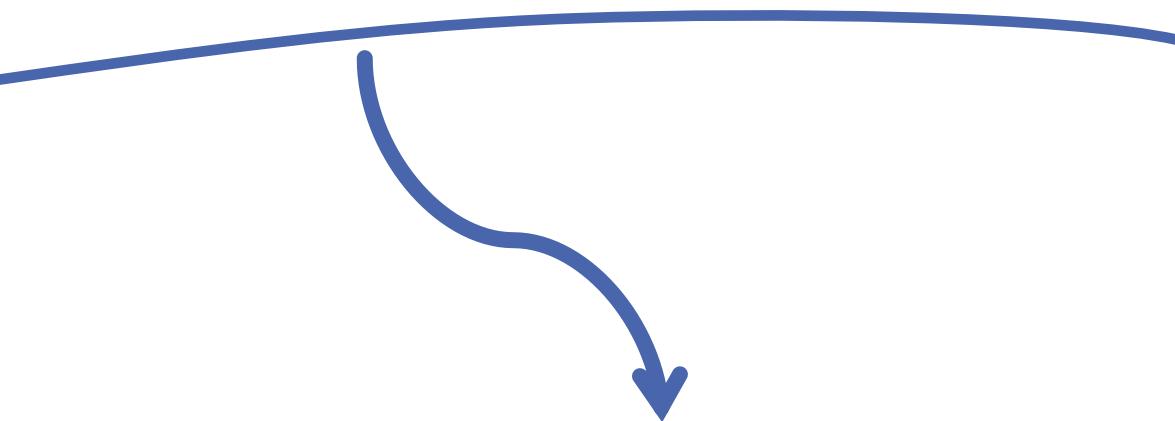


+ .
°

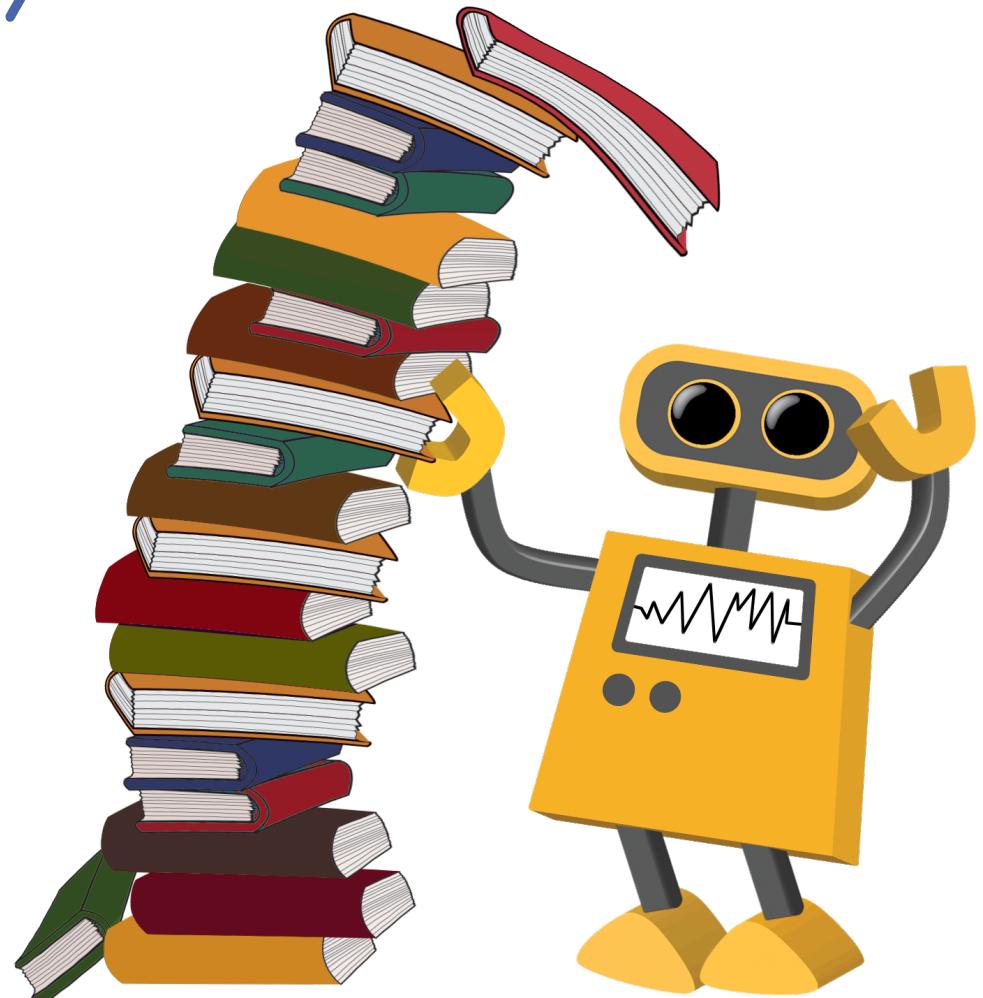


...so is it worth the
trouble of using a bot to
help with dependency
management?

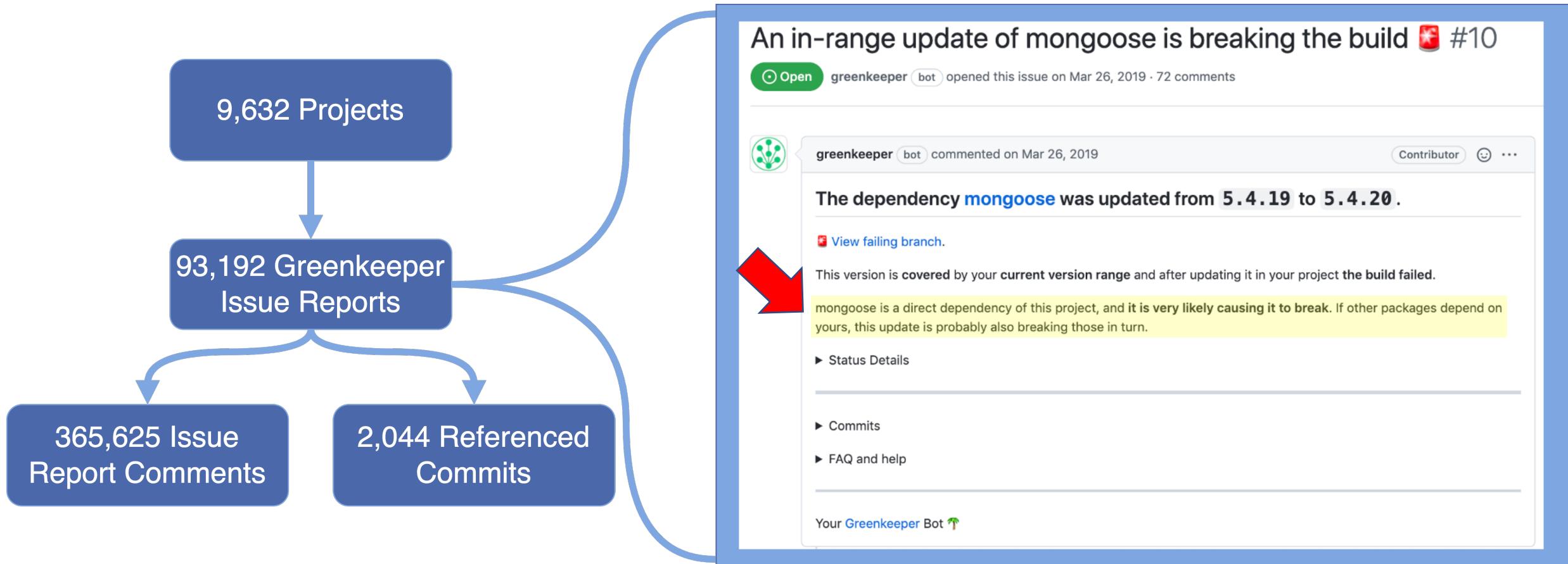
“Overhead” from Dependency Management Bots



the need for developers to address issues or recommendations created by the bot in their projects







Greenkeeper generates a lot of activity in client projects...

HALF of a projects issue
reports are from Greenkeeper!

NEARLY ALL comments on
these issue reports are from
Greenkeeper!



Greenkeeper generates a lot of activity in client projects...



+
•
○



...so dependency bots should provide features that allow clients to reduce the amount of activity generated by the bots.

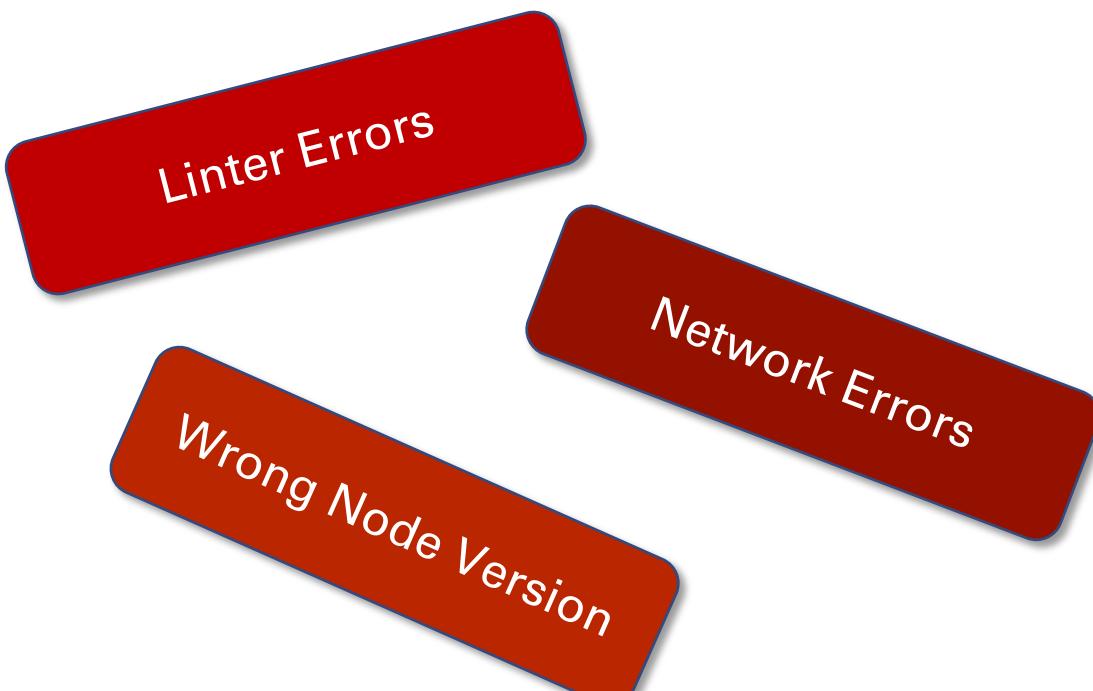
Client developers must
deal with a lot of **false**
alarm dependency
issue reports...

Linter Errors

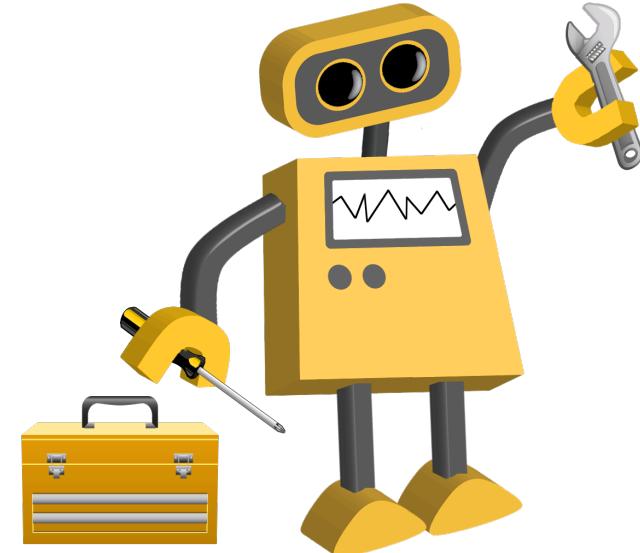
Network Errors

Wrong Node Version

Client developers must deal with a lot of **false alarm** dependency issue reports...



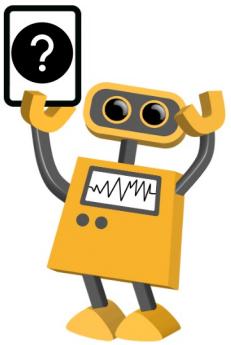
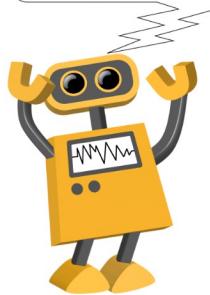
+ .
◦



...so dependency bots should consider **more** than just the **PASS/FAIL** status of a CI pipeline.

Bots can help, but
developers say they
can be annoying...

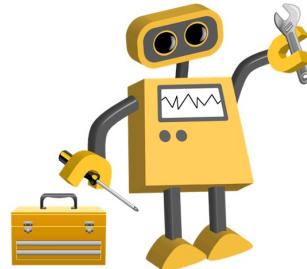
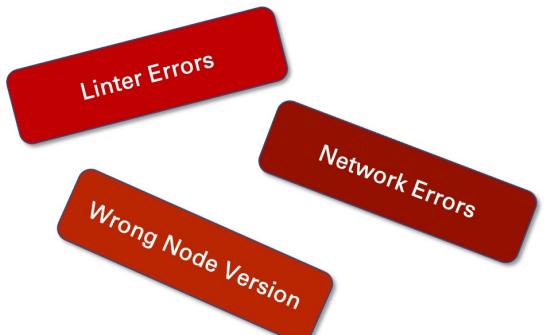
YADA YADA YADA



...so is it worth the trouble of using a bot to help with dependency management?

5

Client developers must deal with a lot of **false alarm** dependency issue reports...



...so dependency bots should consider **more** than just the **PASS/FAIL** status of a CI pipeline.

12

Greenkeeper generates a lot of activity in client projects...

HALF of a project's issue reports are from Greenkeeper!

NEARLY ALL comments on these issue reports are from Greenkeeper!



...so dependency bots should provide features that allow clients to reduce the amount of activity generated by the bots.

10

RESEARCH-ARTICLE

Lessons learned from exploring the overhead introduced by the Greenkeeper dependency bot in npm

Just Accepted

Authors: [Benjamin Rombaut](#), [Filipe R. Cogo](#), [Bram Adams](#), [Ahmed E. Hassan](#) [Authors Info & Claims](#)

ACM Transactions on Software Engineering and Methodology • Accepted on February 2022 • <https://doi-org.proxy.queensu.ca/10.1145/3522587>

Online: 30 April 2022 [Publication History](#)

12