

Code Climate and Drupal

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What is static analysis?

What is static analysis?

Do you even
continuous delivery!?

Inspecting code without execution.



GH**STBUSTERS**™

Great for bug detection!

- Unused variables or methods
- Access to globals (security risk!)
- Static calls (bad for testability!)
- “Dead” code

WHAT ARE THOSE!



Great for understanding quality!

- Testability
 - Static calls
 - Complexity
- Adaptability
 - Coupling
 - Number of public methods
- Maintainability
 - Code style violations
 - Missing documentation
 - Complexity
 - Length of file, method, class
 - Copy and pasted code
- Compliance
 - Accessibility
- Performance
 - <https://www.sitespeed.io/>

What are Code Climate?

Code Climate is...

- Static analysis tool built on static analysis tools
 - <https://docs.codeclimate.com/docs/list-of-engines>
- Open source
- Free for open source projects
- A GPA that represents quality



Worker

Feed

Classes

Smells

Trends

Security

3196e168



Summary of February 11th - 17th

42 files changed, 1,054 insertions, 316 deletions

Quality::CanonicalLocator has **improved**. about a month agoQuality::Worker::Jobs::ScanVulnerabilities has gotten **worse**. about a month agoOne class/module was **added**. about a month ago

Quality::Worker::Jobs::CompareVulnerabilities

Quality::Worker::Jobs::SnapshotTree has gotten **worse**. about a month ago

Summary of February 4th - 10th

38 files changed, 799 insertions, 527 deletions

Quality::ConstantDefinition has gotten **worse**. about a month agoQuality::MethodDefinition has gotten **worse**. about a month ago

Classes by Rating



Hotspots



Quality::Worker::Jobs::CompareSnapshots



Quality::Worker::Jobs::ScanVulnerabilities



Quality::Worker::Jobs::FinalizeSnapshot



Quality::ConstantDefinition



Quality::MethodDefinition

What does this mean?

Code Climate can be used to...

- Audit tool for project quality
- Bug prevention tool
- Quality assurance tool

Predicting reactions to Code Climate...



WARNING!

SYSTEM MAY HAVE DETECTED VIRUSES ON YOUR COMPUTER

System May Have Found (2) Malicious Viruses: ***Rootkit.Sirefef.Spy*** and ***Trojan.FakeAV-Download***. Your Personal & Financial Information **MAY NOT BE SAFE.**

For Help Removing Viruses, Call Tech Support Online Right Away:

1(855) 970-1892

(TOLL-FREE, High Priority Call Line)

Your IP Address: | Generated on 02-18-2014 | Priority: Urgent



WELL THERE'S YOUR
PROBLEM

Who's doing it?

- Microsoft and Linux have found static analysis to have a 58% correlation with user bug reports.

https://www.usenix.org/legacy/event/usenix09/tech/full_papers/guo/guo_html/index.html

- Golang's compiler does some static analysis out of the box (also go-fmt).
- Users of Code Climate:
 - JavaScript: Angular, Bootstrap, jQuery, d3, Node
 - PHP: ownCloud, ReactPHP
 - 50k+ other projects <https://codeclimate.com/oss>

Why Drupal?

How many are frustrated by?

- Number of bug reports in core and modules... (~15k issues?)
- Lack of objective comparison of modules...
- Unstable and slow release cycles...
- Difficult to test code...
- Inability to unit test code...

Code Climate can help make Drupal better.

What are your thoughts?