



KCDC – SEPT 17, 2021

BUILT-IN TESTING IN GO IS MORE THAN JUST PASSABLE



Scott McAllister

PagerDuty

@stmcallister

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Scott McAllister

Speaker, Writer, Coder

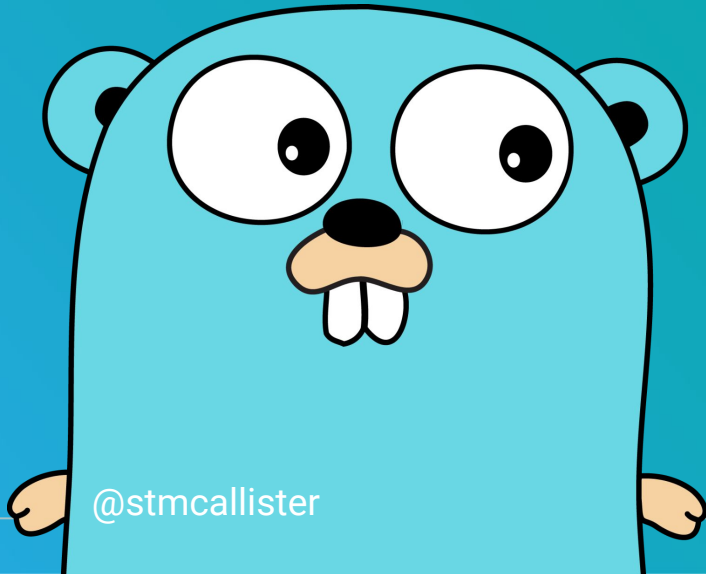
PagerDuty

 stmcallister.github.io

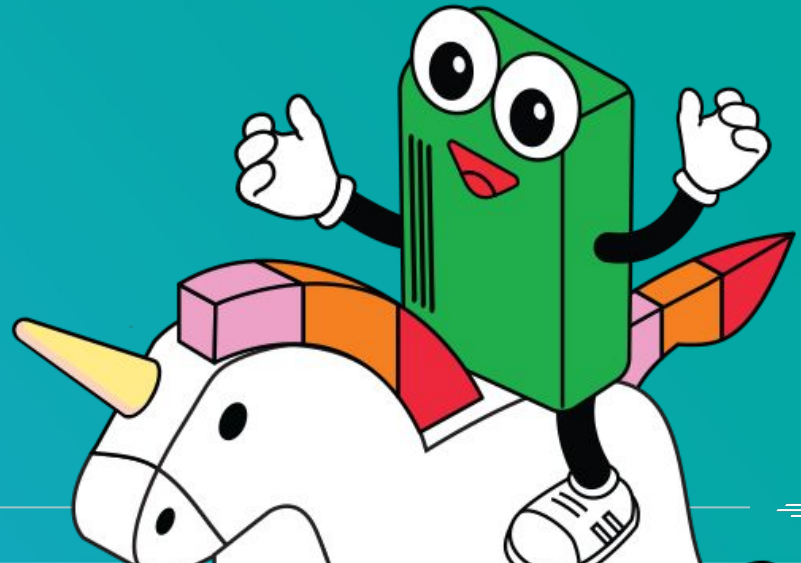
 [@stmcallister](https://twitter.com/stmcallister)



go-pagerduty library



@stmcallister





theckman commented on Jan 9, 2020 · edited ▾

Collaborator



Can you please break this in to smaller PRs so reviewing it is feasible?



theckman reviewed on Jan 9, 2020

[View changes](#)

theckman left a comment

Collaborator



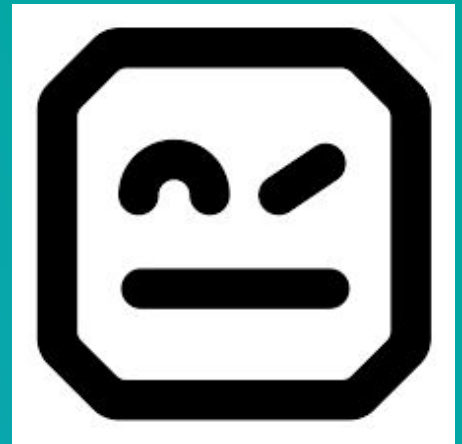
I'd like to review this and at such a large size that is hard to do. I would also like to avoid the additional dependency.



theckman on Jan 9, 2020

Collaborator

I would like to see us stick to the standard library as much as possible.



“

The Go programming language is an open source project to make programmers more productive.

”



- Released by Google in 2009
- Designed to help solve Google's problems
- Main Characteristics
 - Open-Source
 - Statically Typed
 - Concurrency Support
 - Powerful Standard Library
 - Built-in Testing
 - Garbage Collection

Testing

A woman with dark hair, wearing a red jacket, is looking through a magnifying glass. The image is dimly lit and serves as a background for the text.

Evaluate and **verify** that the code does what is expected

Unit Testing



Testing the **smallest piece** of code that can be logically **isolated**

Integration Testing

A woman with dark hair, wearing a red jacket, is looking through a magnifying glass. Her right hand is holding the handle of the magnifying glass, and her left hand is resting against her face. The background is a plain, light-colored wall. The overall image has a slightly desaturated, muted color palette.

Testing **combined** modules as a group



Testing in Go



TESTING IN GO

Test code typically lives
in the same package as
the code it tests

@stmcallister

GO-PAGERDUTY

- ability_test.go
- ability.go
- addon_test.go
- addon.go
- analytics_test.go
- analytics.go
- business_service_test.go
- business_service.go
- change_events_test.go
- change_events.go
- CHANGELOG.md

TESTING IN GO

Test code typically lives in the same package as the code it tests

Name of test files end in
`*_test.go`

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GO-PAGERDUTY



- ability_test.go
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TEST FUNCTIONS



You can define methods on any type:

```
func TestHelloEmpty(t *testing.T) {  
    msg, err := Hello("")  
    if msg != "" || err == nil {  
        t.Fatalf(`Hello("") = %q,  
                %v, want "",  
                error`, msg, err)  
    }  
}
```

Function names begin
with 'Test'

Functions receive
pointer to `testing.T`


```
go test
```



Subtests

Additional Resources



go-test-demos

<https://github.com/stmcallister/go-test-demos>

go-pagerduty

<https://github.com/PagerDuty/go-pagerduty>

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