# Benchmark Testing





**Michael Van Sickle** 

@vansimke



#### Introduction



What are benchmarking tests?

Creating and executing benchmark tests

Benchmarking memory allocations

Parallel benchmarks

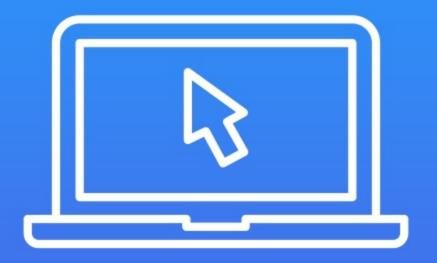
Configuring benchmarking runs

## What are Benchmarking Tests?

Tests are used to confirm the correctness of the application

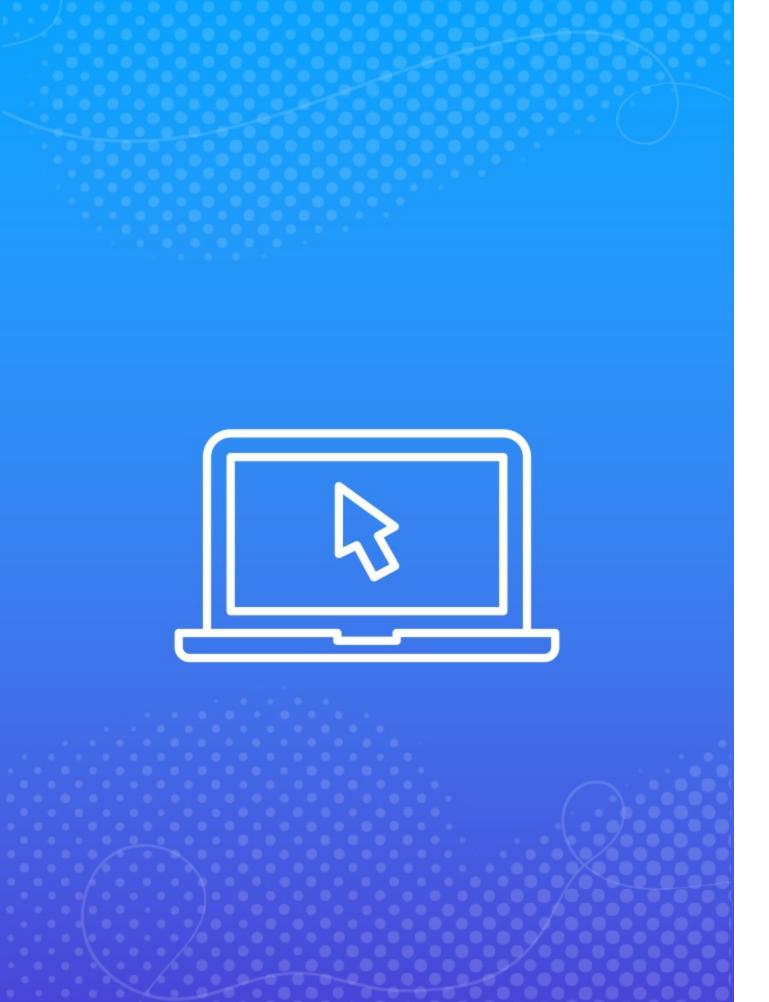
Benchmarks are used to determine how performant the application is



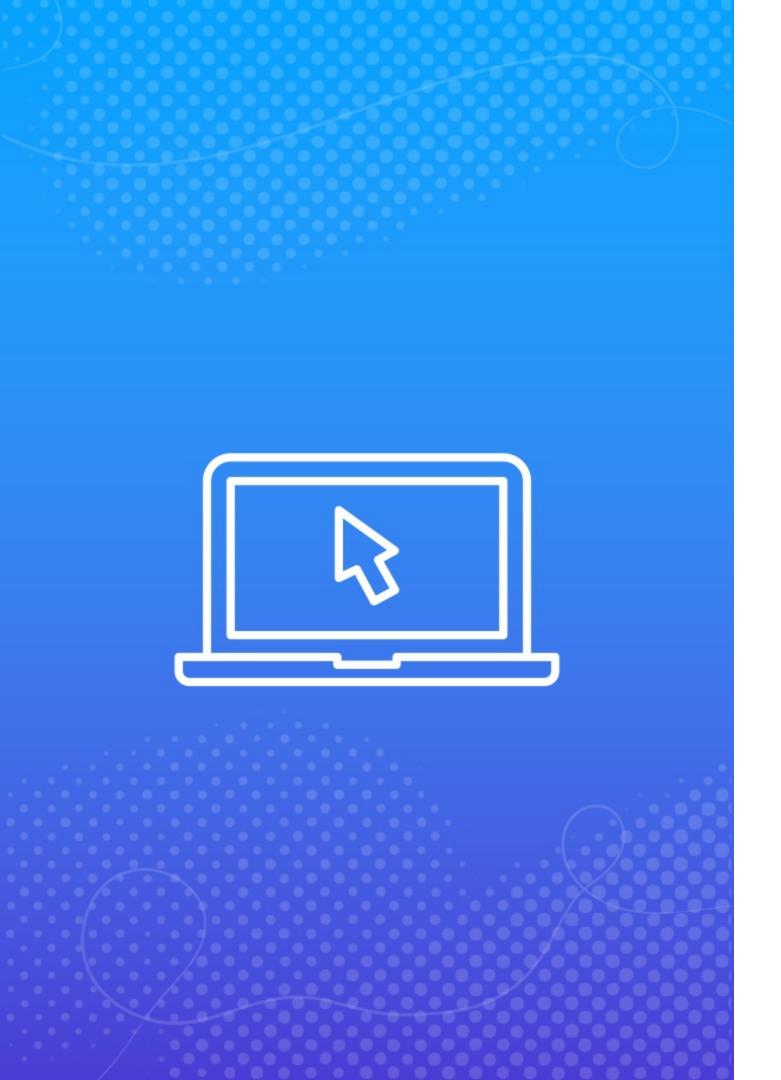


#### Creating and executing benchmark tests

- naming
- setup and teardown
- use of b.N
- b.Log to show how b.N is derived



Benchmarking memory allocations



Parallel benchmarks



### Configuring benchmarking runs

- benchtime

```
func BenchmarkFoo(b *testing.B) {
    // setup code
    b.ResetTimer()
    for i := 0; i < b.N; i++ {
    b.StopTimer()
    // tear down code
go test -bench .
go test -bench . -benchmem
go test -bench . -benchtime 1m
```

- **◄** Benchmark test signature
- **◄** Reset benchmark timer
- **◄** Run benchmarked iterations

**◄** Stop benchmark timer

- Include benchmark tests in test run
- **◄ Include memory allocations in results**
- Tune b.N to run tests for approx. 1 minute