

# 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**

