



A Recipe for Migrating to Go Modules

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Modules are the Default

...and migrating is easier than
you think!





Mender.io

- ▶ Used for large-scale IoT deployments
- ▶ Build as a collection of microservices
- ▶ Varying version tags between services





Get a go.mod file

```
`go mod init`
```

v2+

- ◀ Glide
 - ◀ Godeps
 - ◀ Govendor
 - ◀ Dep
 - ◀ ... and more!
- ◀ Slightly more complex
 - ◀ Increment major version
 - ◀ Add to module path
 - ◀ Causes some other issues to address

```
`go mod init github.com/mendersoftware/deviceauth/v3`
```



Update imports

- ▶ Build and test
- ▶ Both will likely fail
- ▶ Update import statements for new path
- ▶ May want to use a script for this in large projects

```
- "github.com/mendersoftware/deviceauth/utils"  
+ "github.com/mendersoftware/deviceauth/v3/utils"
```



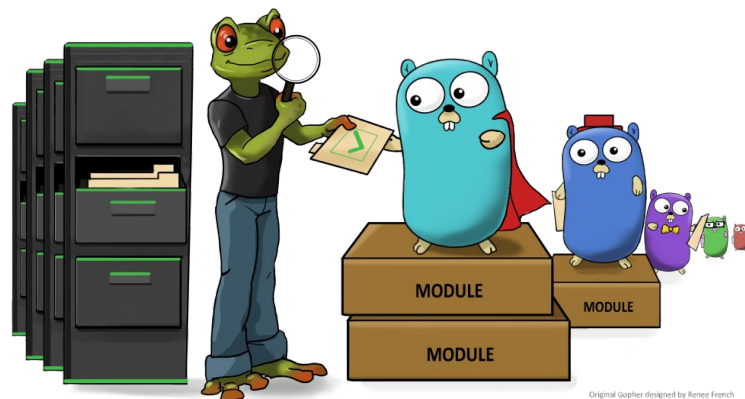
Module Versioning

- ▶ After ``go mod init`` or ``go mod tidy``, check version numbers
- ▶ Some dependencies may cause problems here
- ▶ Untagged changes in `satori/go.uuid` broke Mender
- ▶ At this point, you should be able to build and run tests

Module Proxy

- ▶ JFrog GoCenter
- ▶ Immutable and persistent modules
- ▶ Much faster than cloning
- ▶ Consistent, secure, reproducible builds
- ▶ Vulnerability scanning built in

```
` export GOPROXY=https://gocenter.io `
```



Original Gopher designed by Renee French



Static Analysis and Code Generators

- ◀ Some projects may need to handle additional issues with paths here
- ◀ Remember to look at your .proto and Dockerfiles

Testing Changes

- ◀ Go v1.13 made changes to testing
- ◀ Specifically, when flags are parsed
- ◀ Move `flag.Parse()` to main test function

```
39      -      flag.Parse()
40      39      }
41      40
42      41      func TestRunMain(t *testing.T) {
43      42          if !runAcceptanceTests {
44      43              t.Skip()
45      44          }
46      45
46      46      +      flag.Parse()
```

Thanks!

Any questions?

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