Orchestrion: lightning demo

Automatic compile-time instrumentation of Go code

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Orchestrion

github.com/DataDog/orchestrion

datadoghq.dev/orchestrion

How it works (internals)

- The process starts from CLI `orchestrion go build` or `go build -toolexec orchestrion` .

- In both cases, `toolexec` is our entrypoint into the compilation process.

- Orchestrion is invoked:

  - It gets the compiler/linker arguments.

  - Parses any `*.go` file, matching patterns defined in YAML descriptors.

  - Applies the transformations associated to each match.

  - Overrides the file paths with new ones for files transformed, stored in temporary location.

- Returns control to compiler.

YAML descriptor example

chi example

Demo time!

The code

The result

- Tracing

- Profiling

- Logging (with the Agent properly configured)

TL;DR

Do you want to know more?

Julio Guerra – GopherCon Europe 2021: youtu.be/Uk1hscXhIY0

Jon Bodner – GopherCon 2023: youtu.be/5I-W7vPSbuc

Dario Castañé (this same talk with more bloopers) – GoLab 2024:
youtu.be/nltWDQnYQCQ

Me (again): bsky: dario.cat, fediverse&email: d@rio.hn

Orchestrion docs: datadoghq.dev/orchestrion

These slides: github.com/darccio/talks/tree/main/go/orchestrion