

Simplifying Development Infrastructure with **mirrord**

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We want developers to run
and test their code.

But how do you run and debug cloud-native applications?

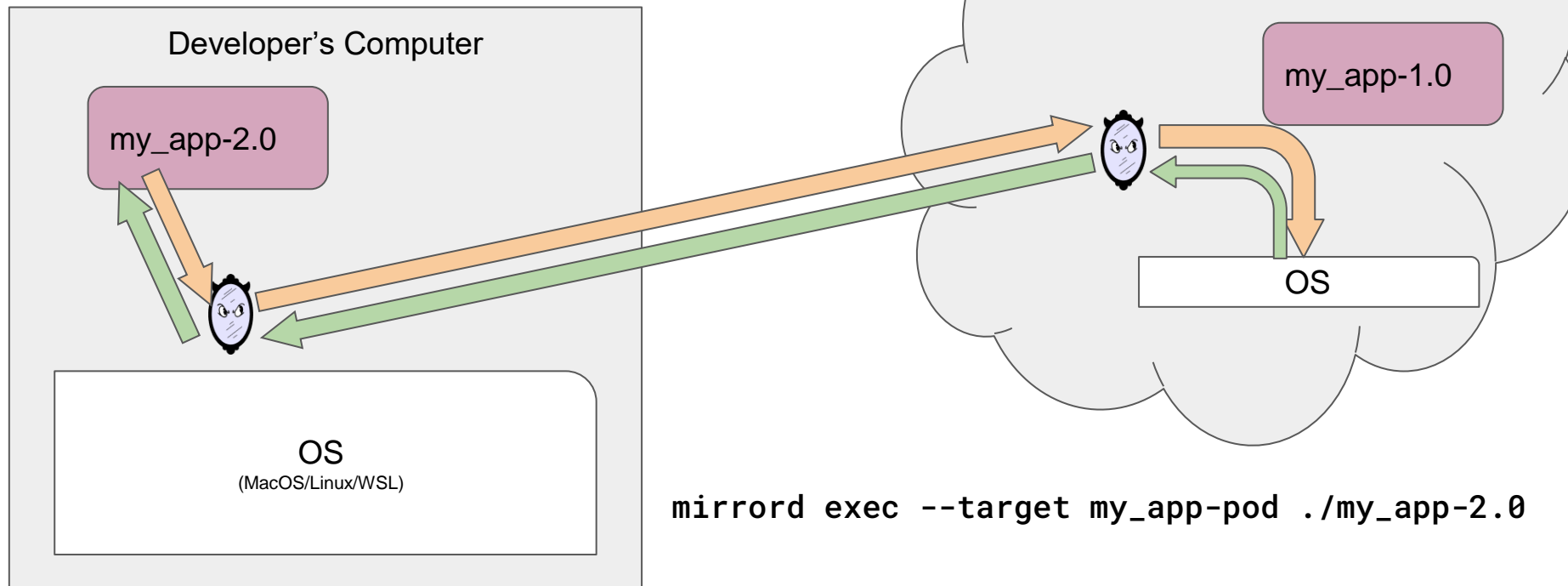
Running and debugging “cloud-native” applications

- Run everything locally?
- Replicate the whole cluster for each developer?

A completely different approach with mirrored

- Single environment for all developers.
- No-deployment, cloud-connected testing.
- But how?

What is mirrord?

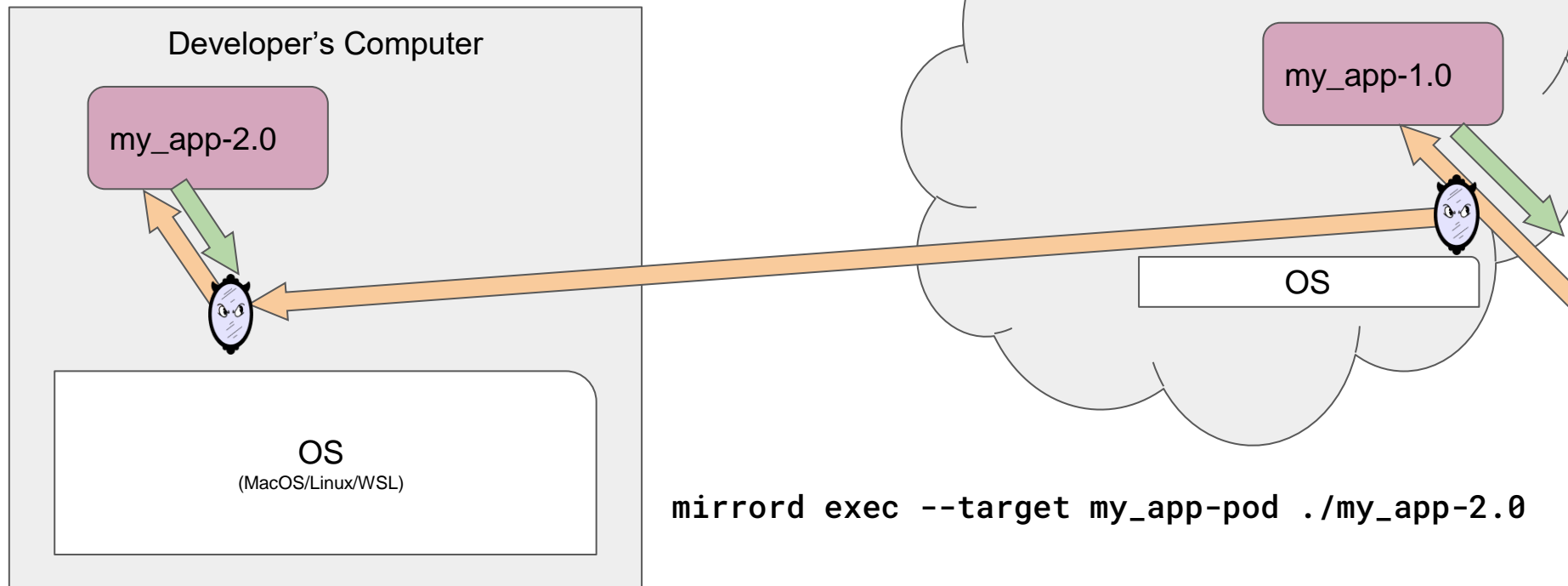


```
mirrord exec --target my_app-pod ./my_app-2.0
```

Some mirrord facts

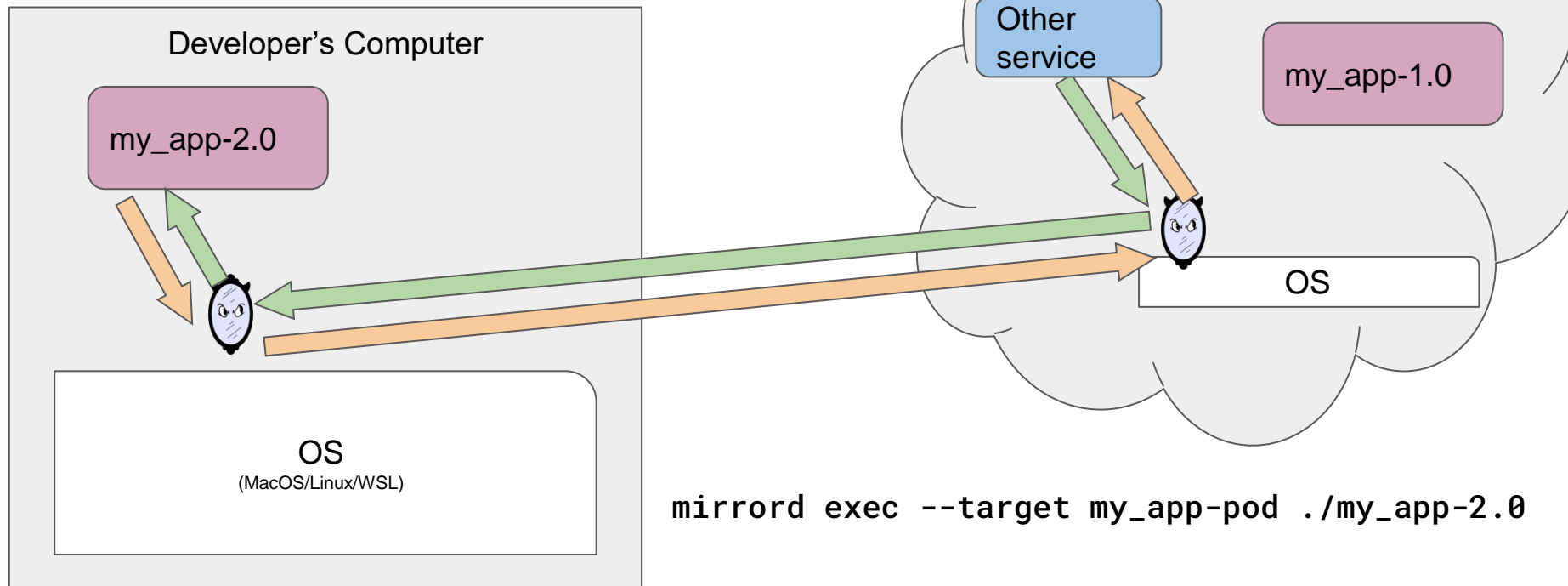
- The agent pod starts on the same node as the target pod.
- Nothing is permanently installed on the cluster.
- (Unless disabled) DNS is resolved in the cluster.
- mirrord can (according to the configuration) supply the local process with the file system, network and environment variables of the target pod.
- There are also more advanced features like pausing the target pod, or splitting stolen traffic by http header regex.
- mirrord is written in Rust and is open source.

mirrord - mirroring network traffic

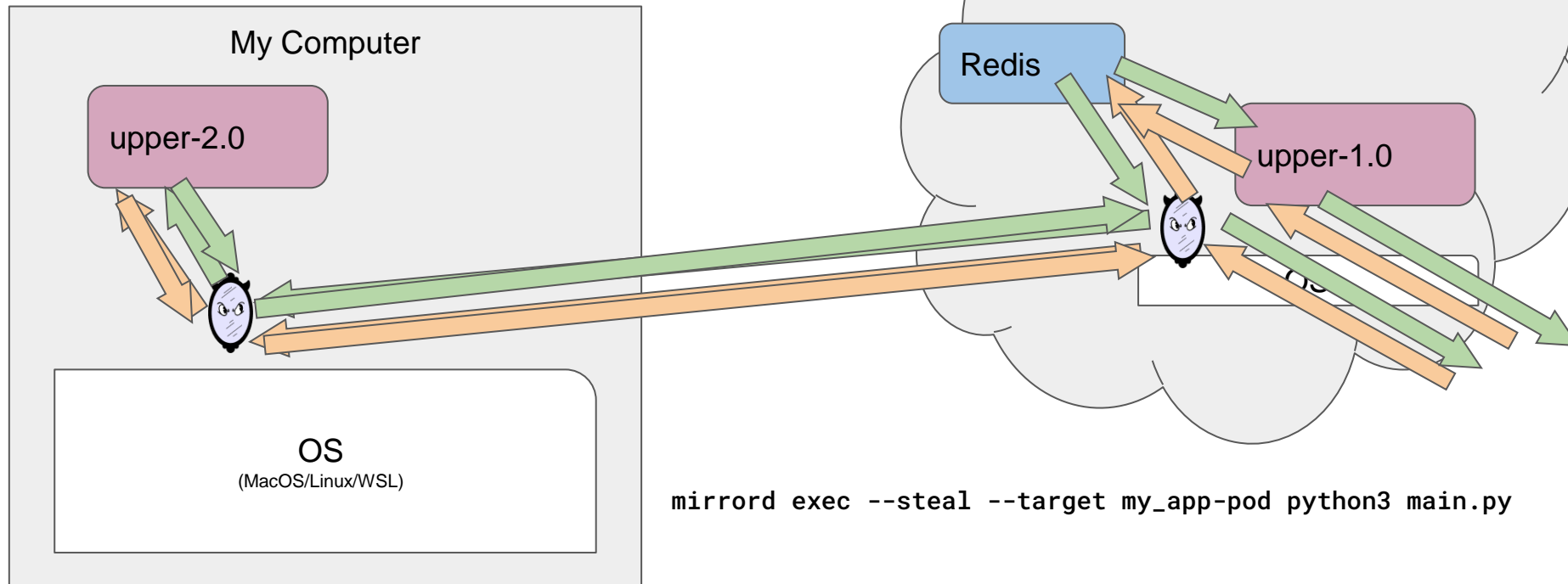


```
mirrord exec --target my_app-pod ./my_app-2.0
```

mirrord - outgoing network traffic

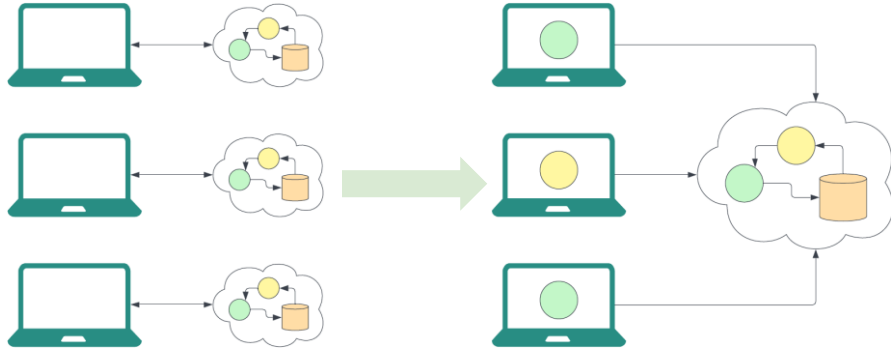


Toy Example



Live Demonstration

Switching to a single environment with mirrord



- Realistic conditions.
- Low cloud costs.
- Easy to run.

Where to find us

mirrord.dev

discord.com/invite/pSKEdmNZcK

github.com/metalbear-co/mirrord

Thank you.

mirrord internals

- Rust
- `LD_PRELOAD` / `DYLD_INSERT_LIBRARIES`
- Frida
- Hooking libc
- Hooking syscalls for Go
- Linux Namespaces