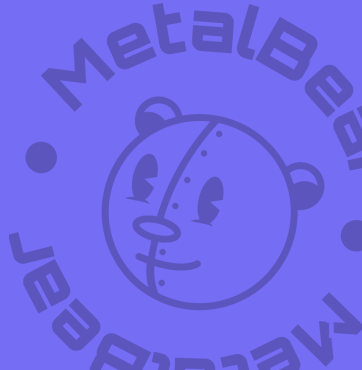
Mirror Mirror on My Local Machine

Say Goodbye to Slow Feedback Loops

Anita Ihuman, MetalBear



I am ...

- Developer Advocate at MetalBear
- Open Source fan girl
- DEI Advocate and a member of the Board at CHAOSS
- Organiser at the KCD Nigeria and CNCF Abuja

Outline

- Conventional Development Environment
- Challenges with the Old Ways
- Remote to Local Development as a Golden Path
- mirrord saves the day!
- Quick Demo

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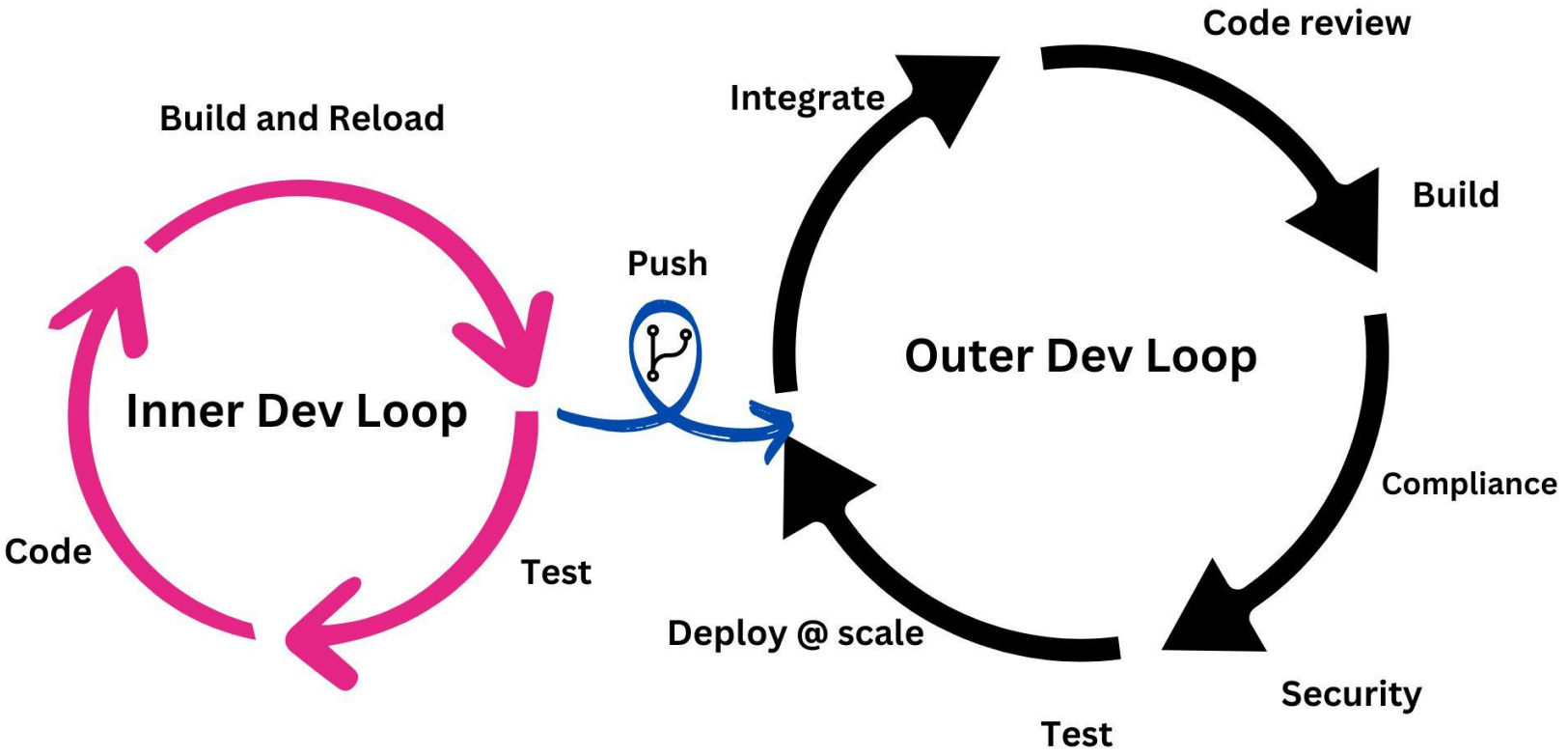
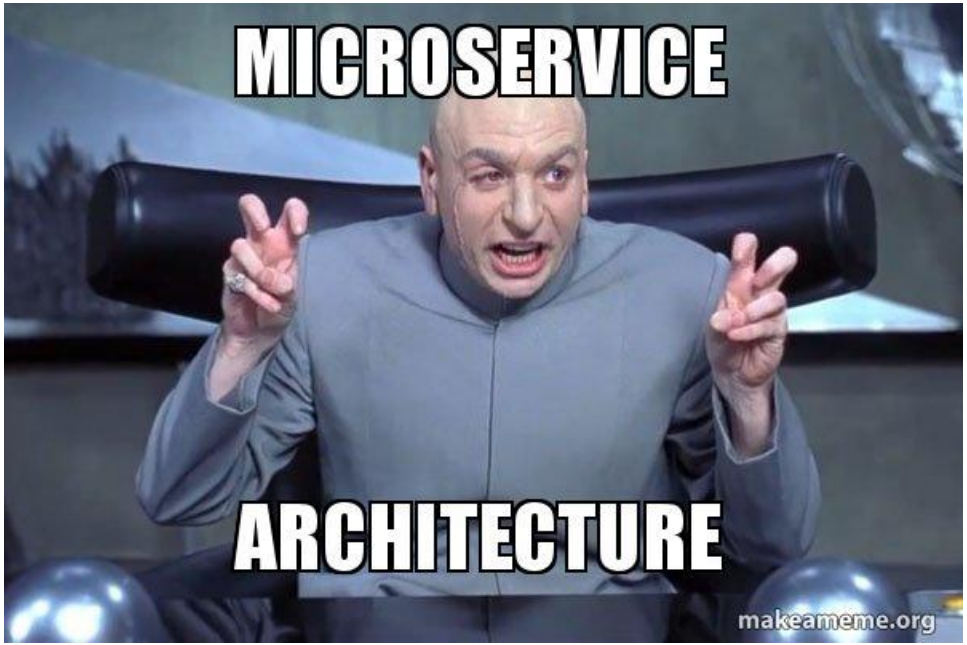
The Inner Loop and Outer Loop



In came…


MICROSERVICE
ARCHITECTURE
makeameme.org

MICROSERVICES
MICROSERVICES EVERYWHERE

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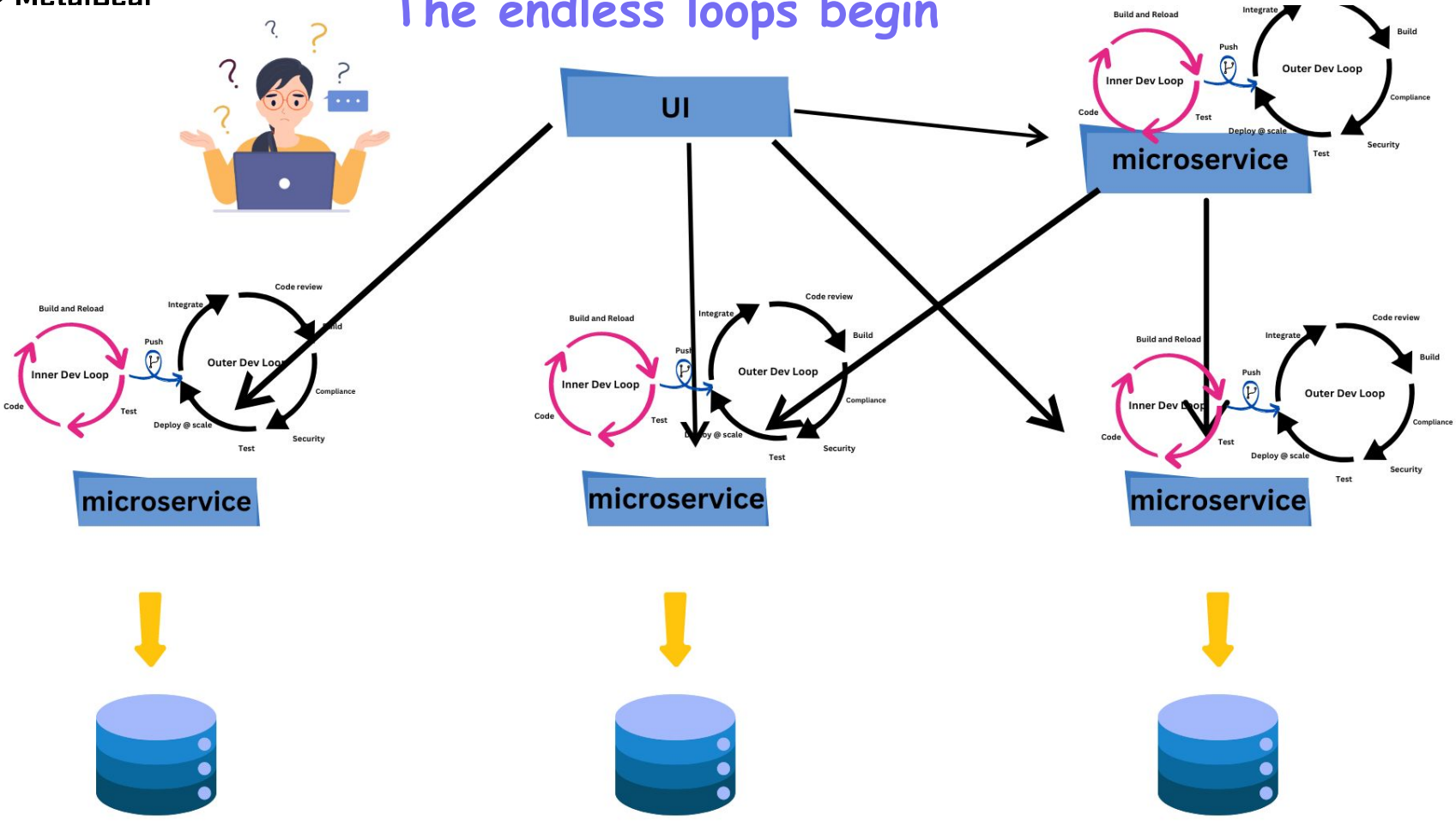
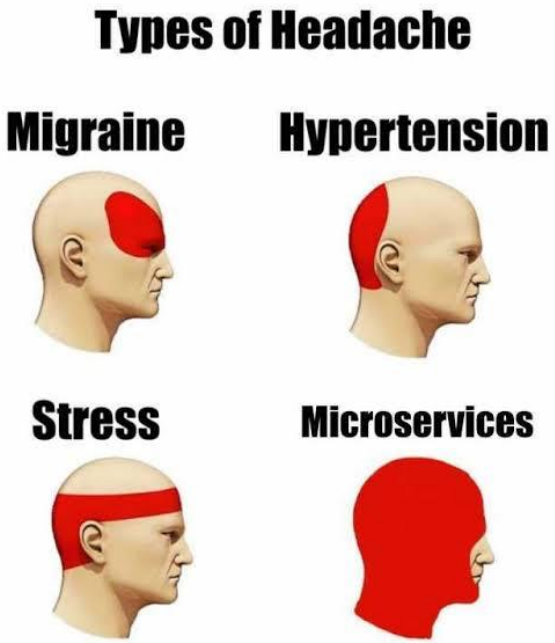
The endless loops begin

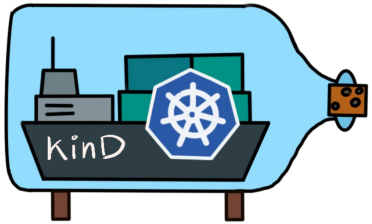


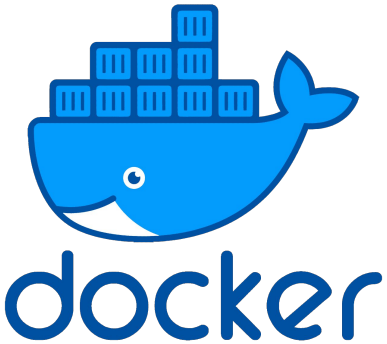
Challenges:

- Lengthy rebuild and redeployment processes
- Suboptimal testing conditions
- Developers become increasingly dependent on DevOps

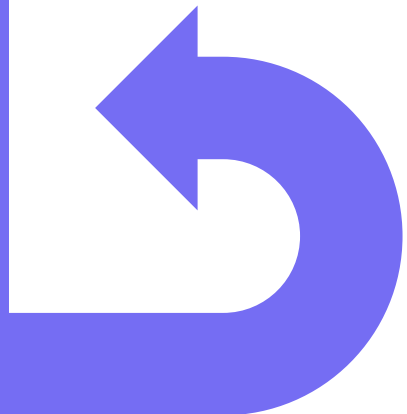


It can't be all that bad right, what about local development tools?





- Limited resources compared to a cloud environment
- Developers have to manage and maintain the environment
- Incompatible with specific processor architectures



"At least remote development still does the job right?"

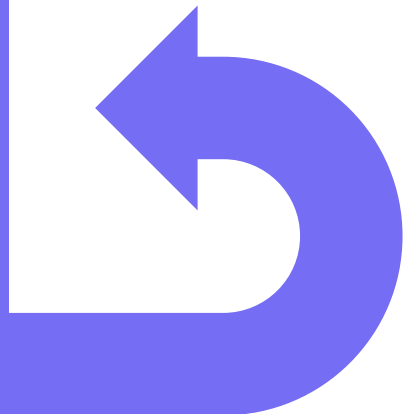
Amazon EKS

Azure Kubernetes Service (AKS)

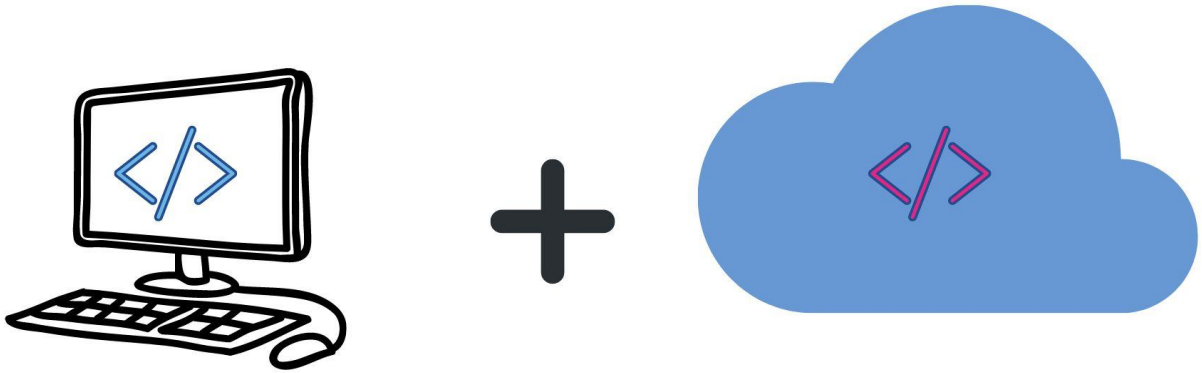
Google Kubernetes Engine

DigitalOcean

- Long feedback loops that slow engineering efforts
- Frustrating debugging experience
- High cloud costs to set up environment
- Complex and overwhelming for developers

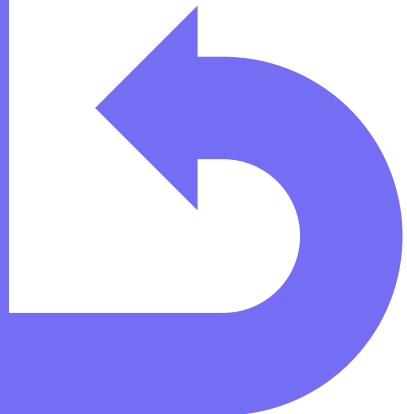


Remote to Local Development as a Golden Path

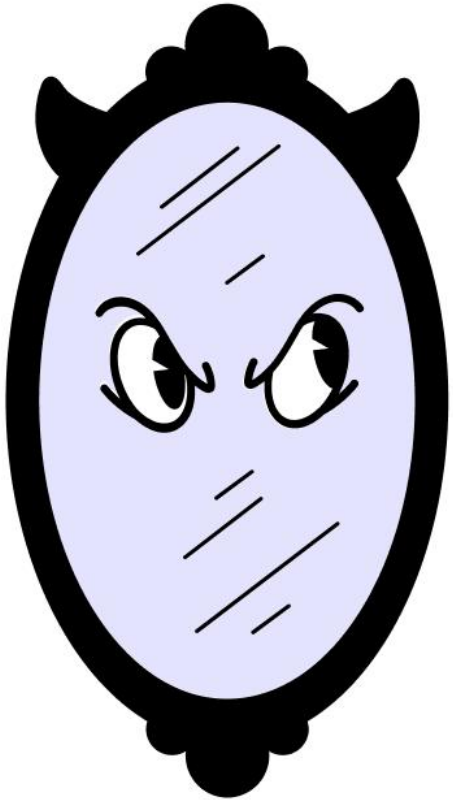


Advantages

- Consistency between the remote and local
- Easy to use
- Fast feedback loops
- Saves cost
- Get the Best of both worlds



mirrord saves the day!



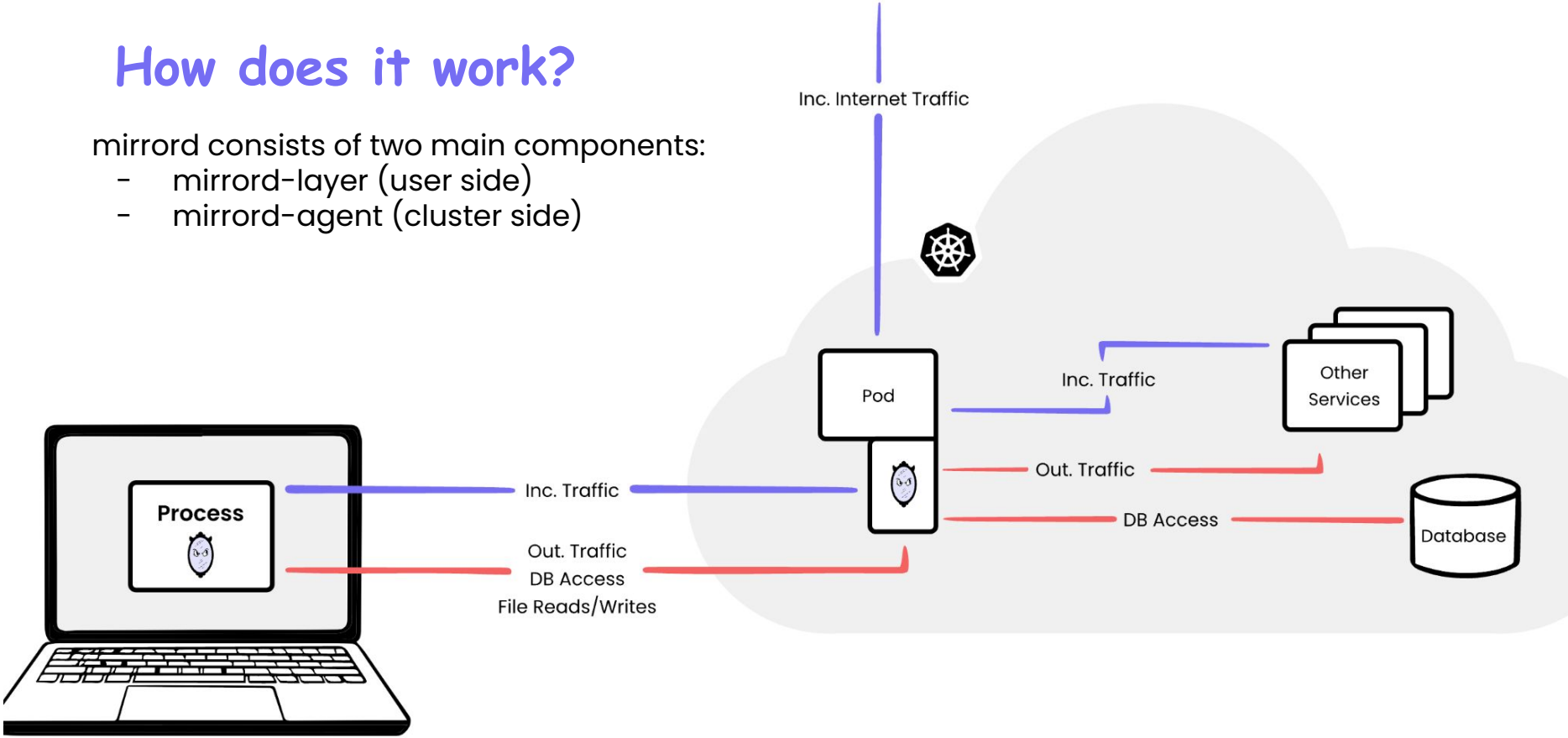
What is mirrord?

- Comes as a CLI Tool or IDE Plugin
- Lets developers run a **local process** in the **context of their cloud environment**.
- Enables developers to work locally, but on a remote **shared** environment
- Keep the convenience of local development
- Resulting in: higher **developer velocity**, faster **time to market**, and lower **cloud costs**

How does it work?

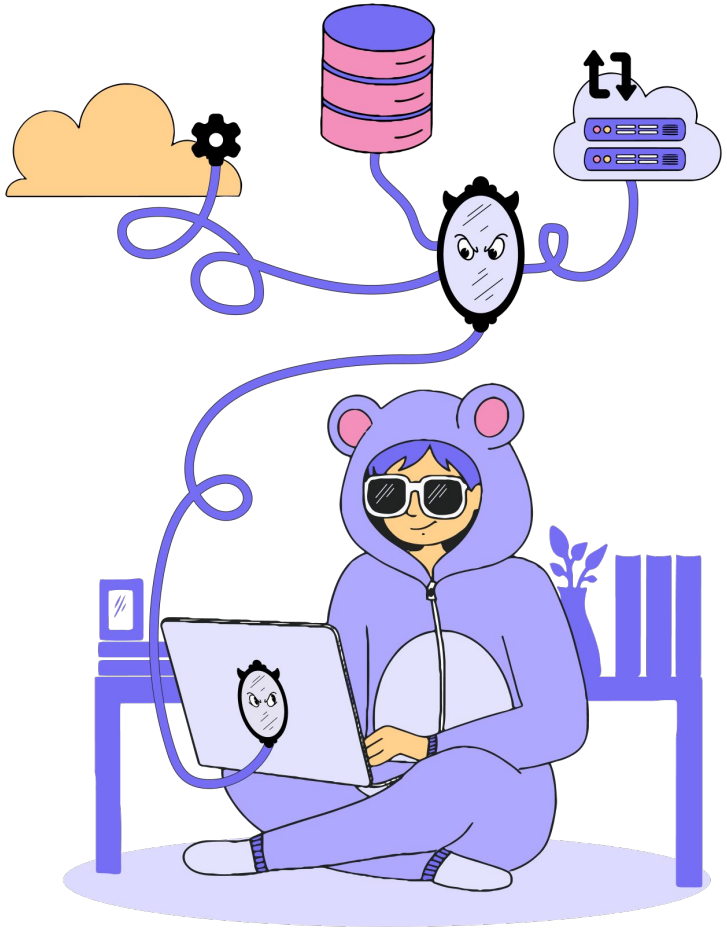
mirrord consists of two main components:

- mirrord-layer (user side)
- mirrord-agent (cluster side)

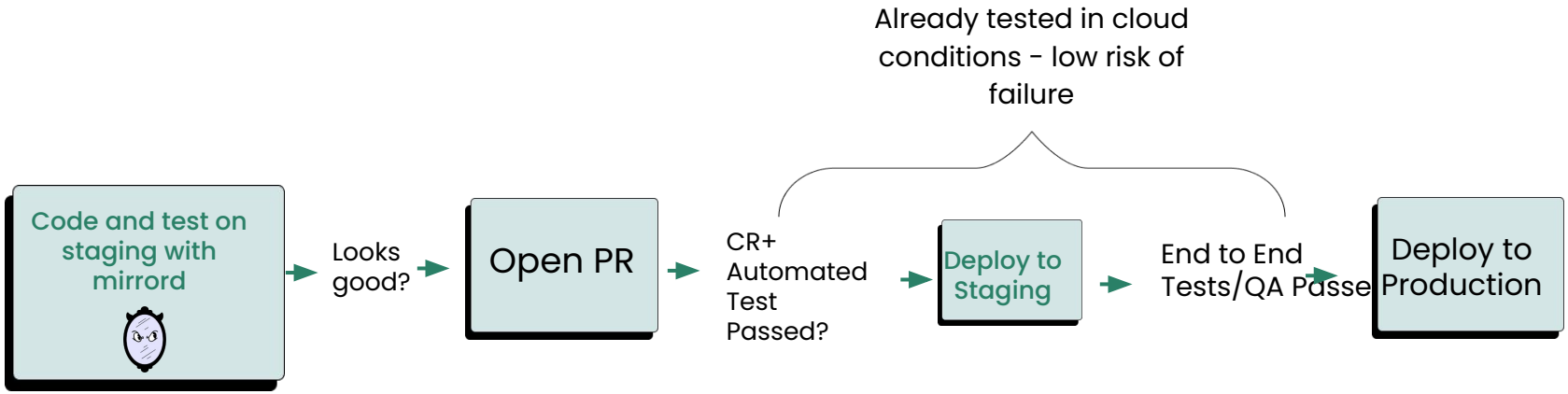


NYPD
CLOUD ENVIRONMENT
LOCAL ENVIRONMENT

mirrord in action



The Dev Feedback Loop with mirrord



- Immediately test in cloud conditions
- Less time spent on mocks and simulations
- Low chance of failure in later stages

Questions?

mirrord

https://mirrord.dev/

https://github.com/metalbear-co/mirrord

https://discord.gg/metalbear

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