



# Secrets Consumption Patterns With Cloud Run And Vault

Robert Barnes  
Senior Developer Advocate



# Agenda

What is Cloud Run, Secret Manager & Vault? 1

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Secret Syncing Pattern 2

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Secret Syncing Pattern Demo 3

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Vault Agent Pattern 4

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Vault Agent Pattern Demo 5

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Q & A 6

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# Rob Barnes

Senior Developer Advocate  
HashiCorp

@devops\_rob



01



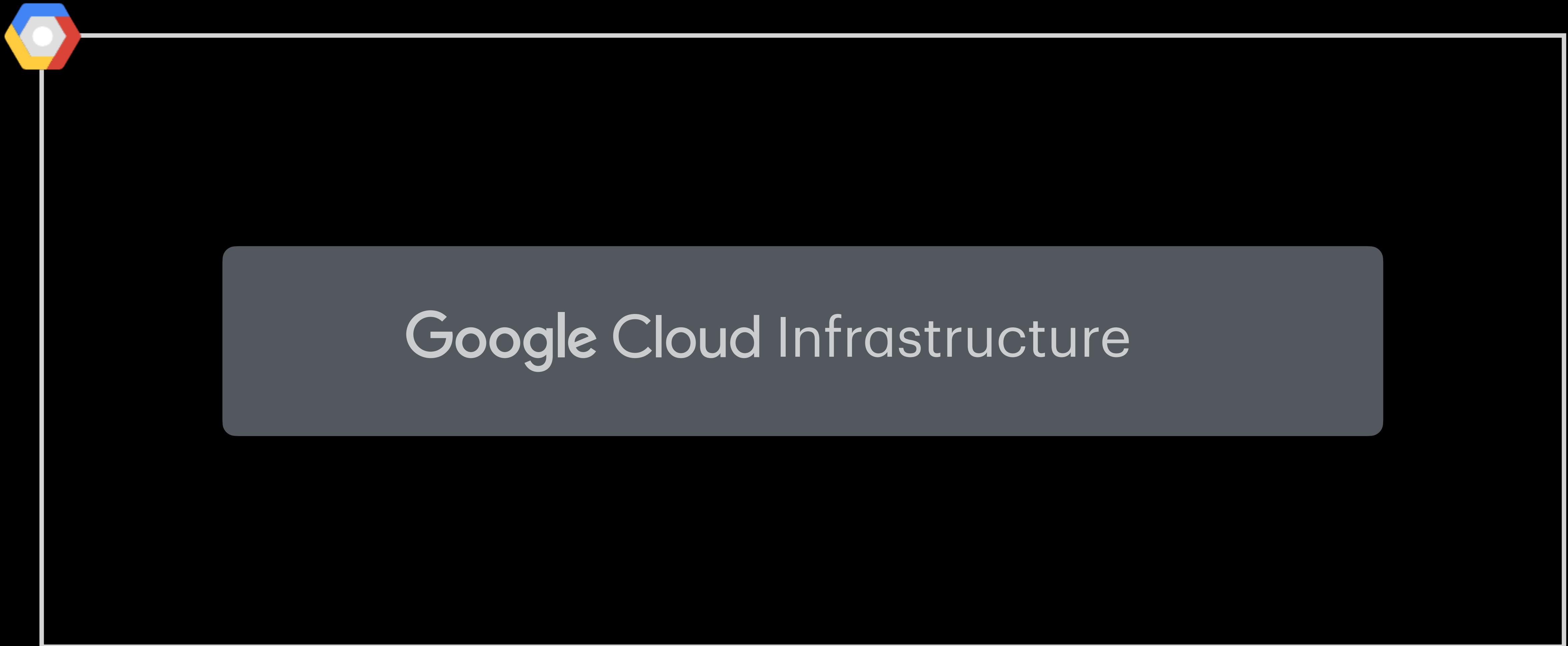
# What is cloud run



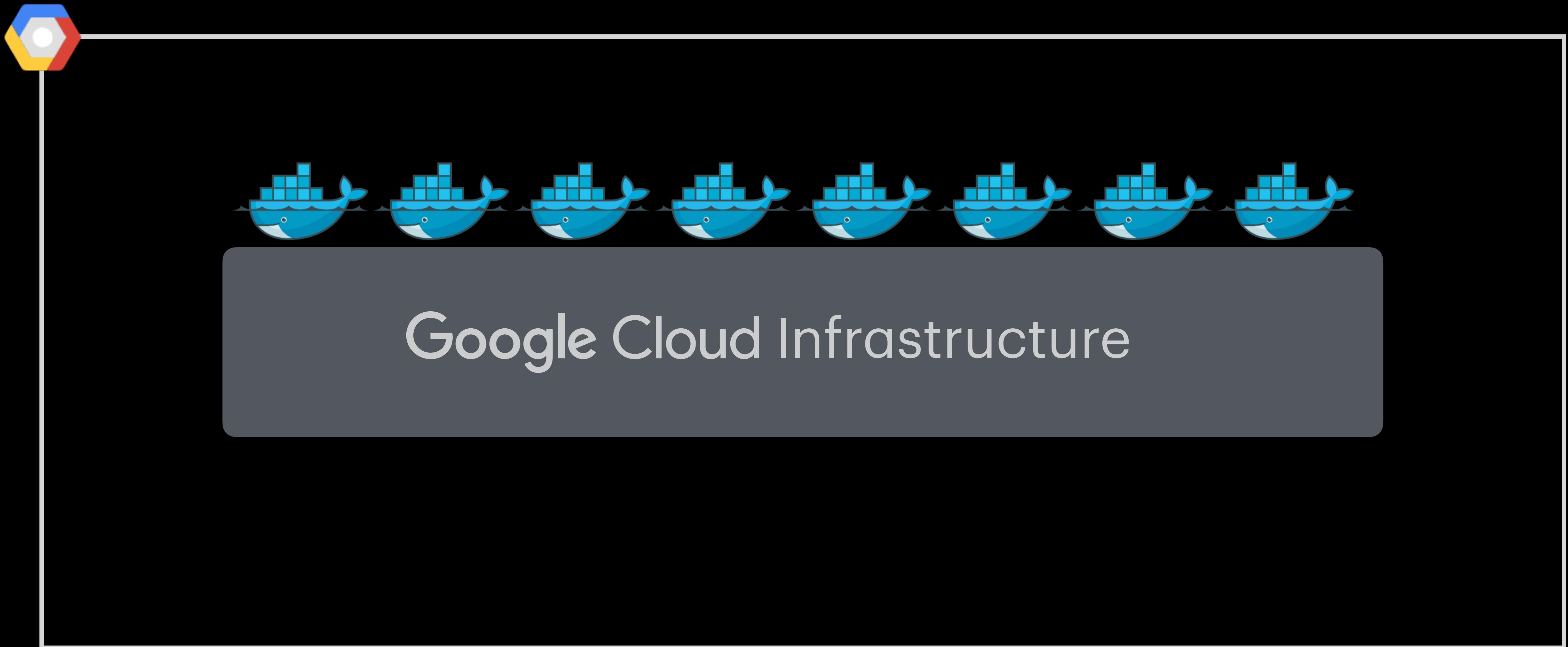
# Cloud Run



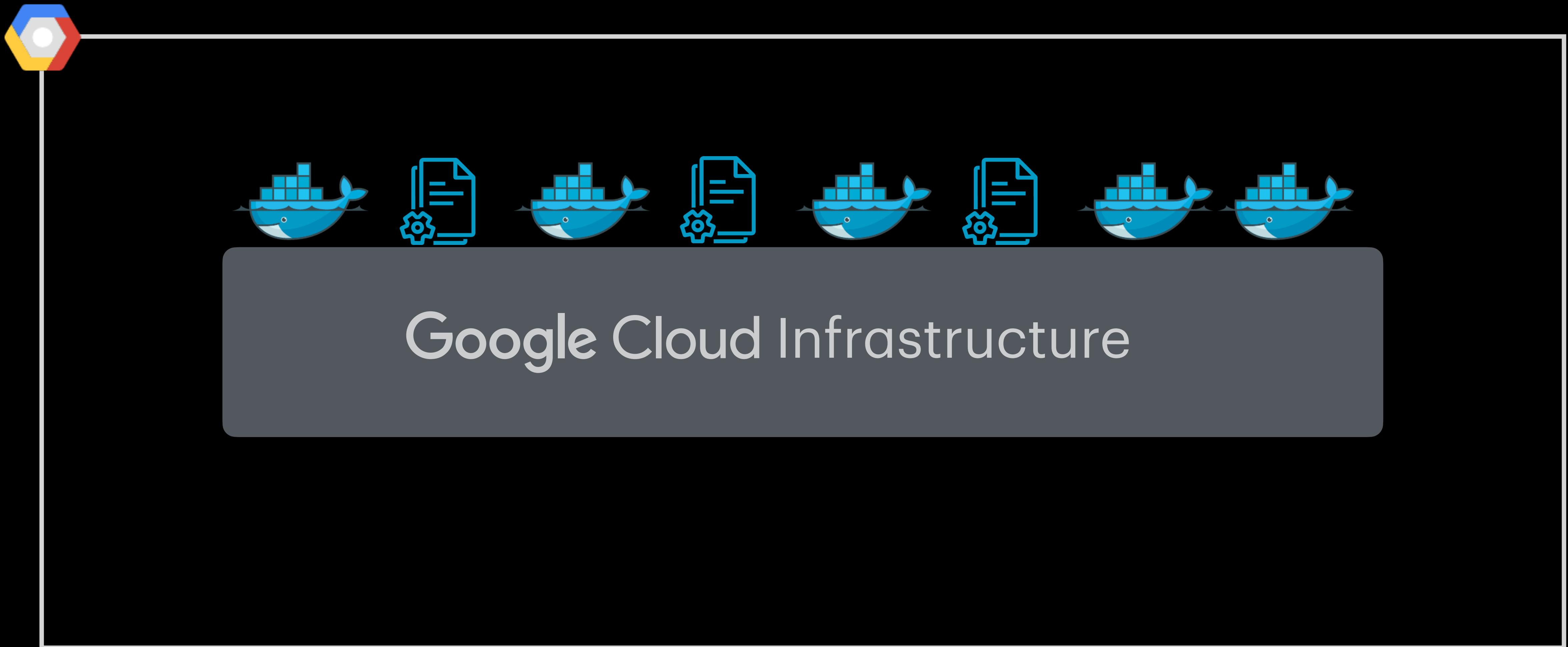
# Cloud Run



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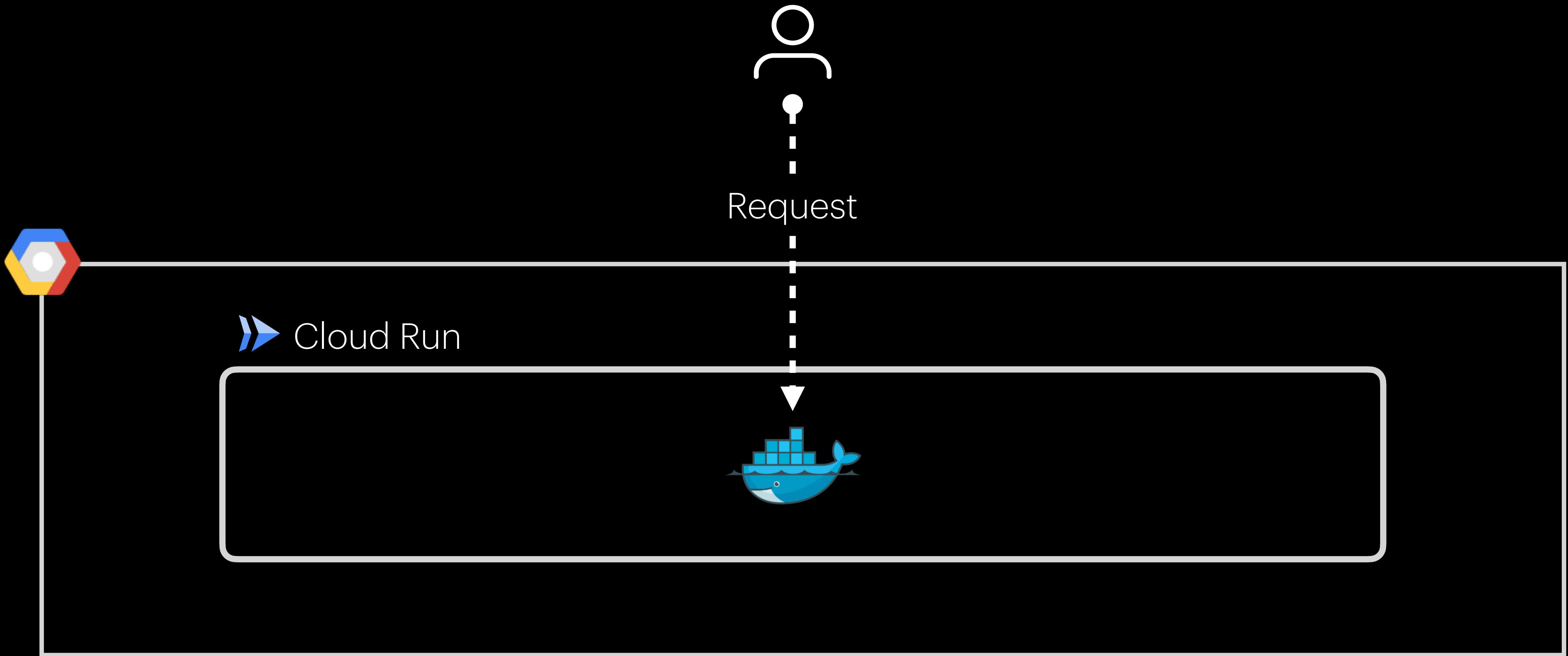
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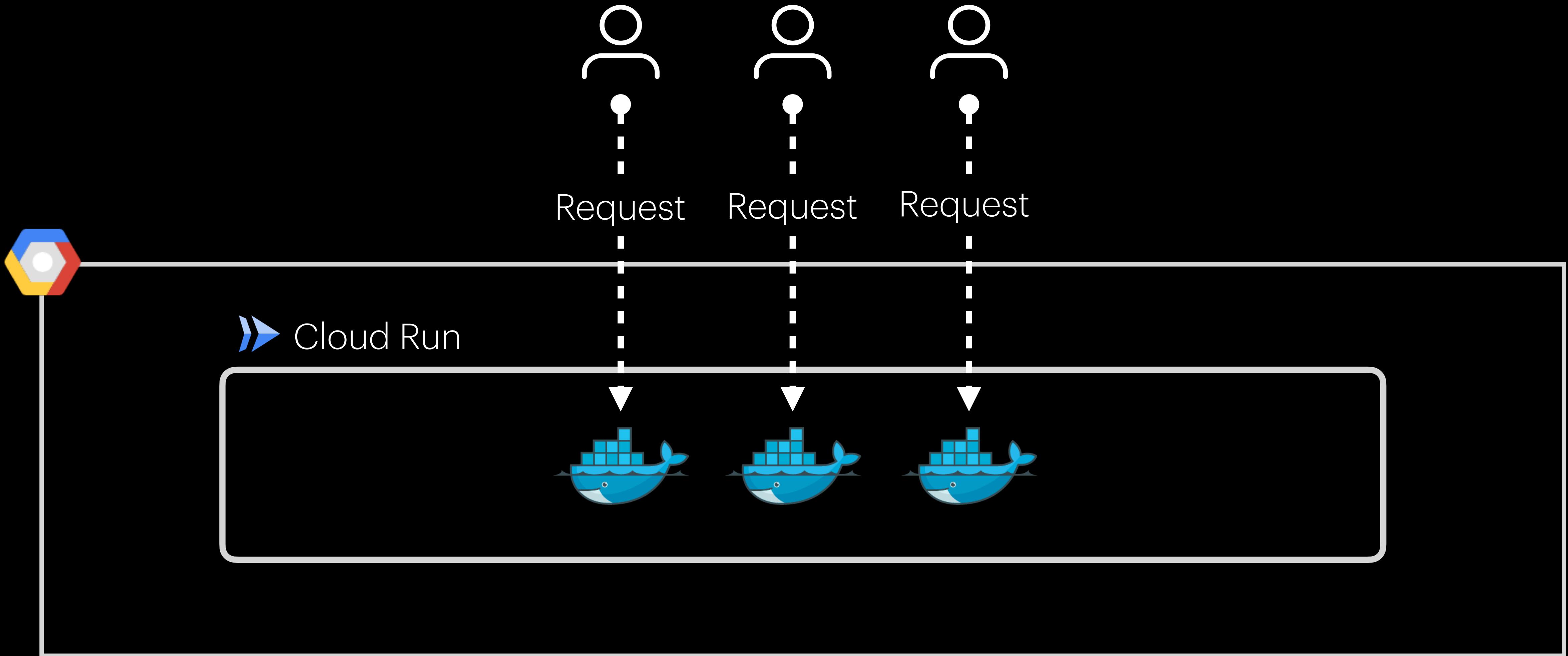
# Cloud Run



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# Cloud Run



01



# What is secret manager



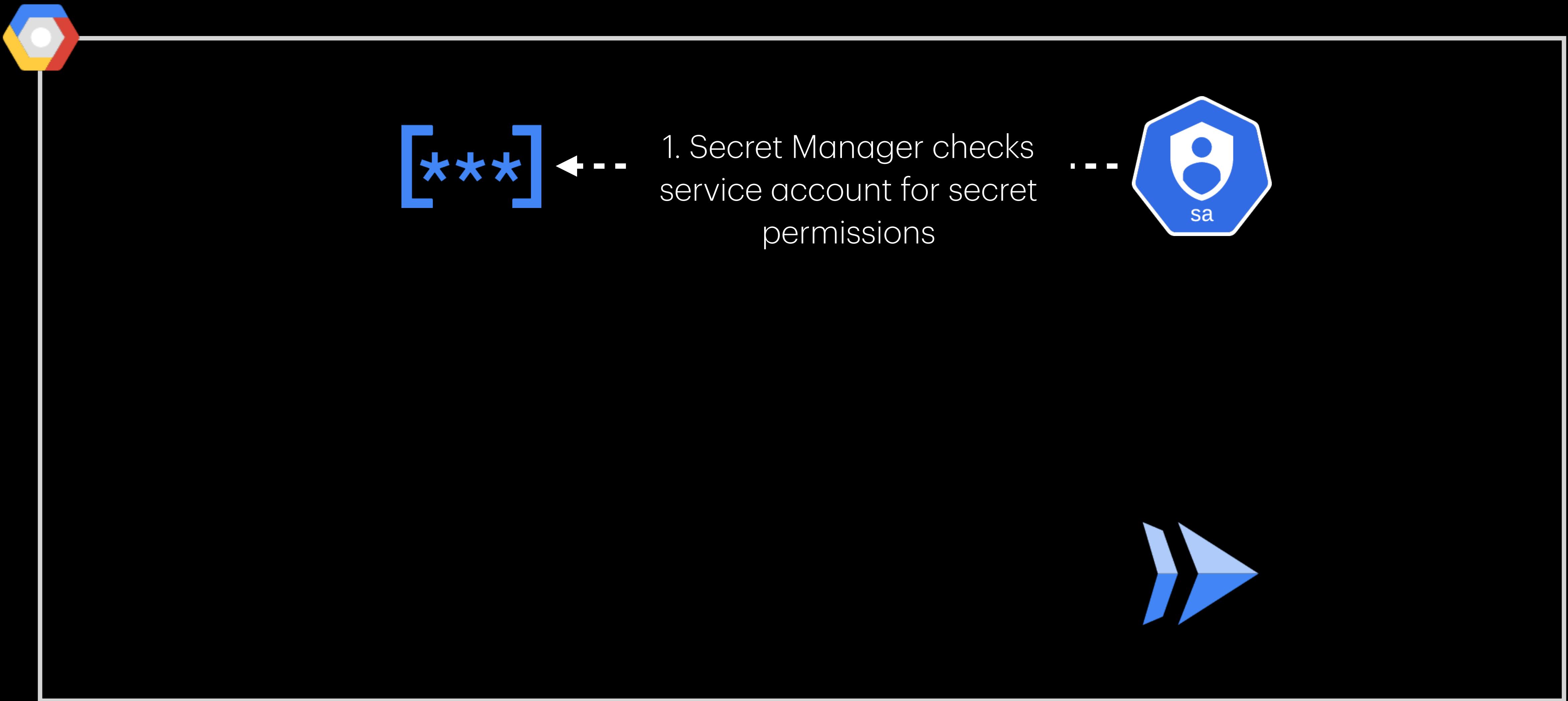
# Secret Manager With Cloud Run



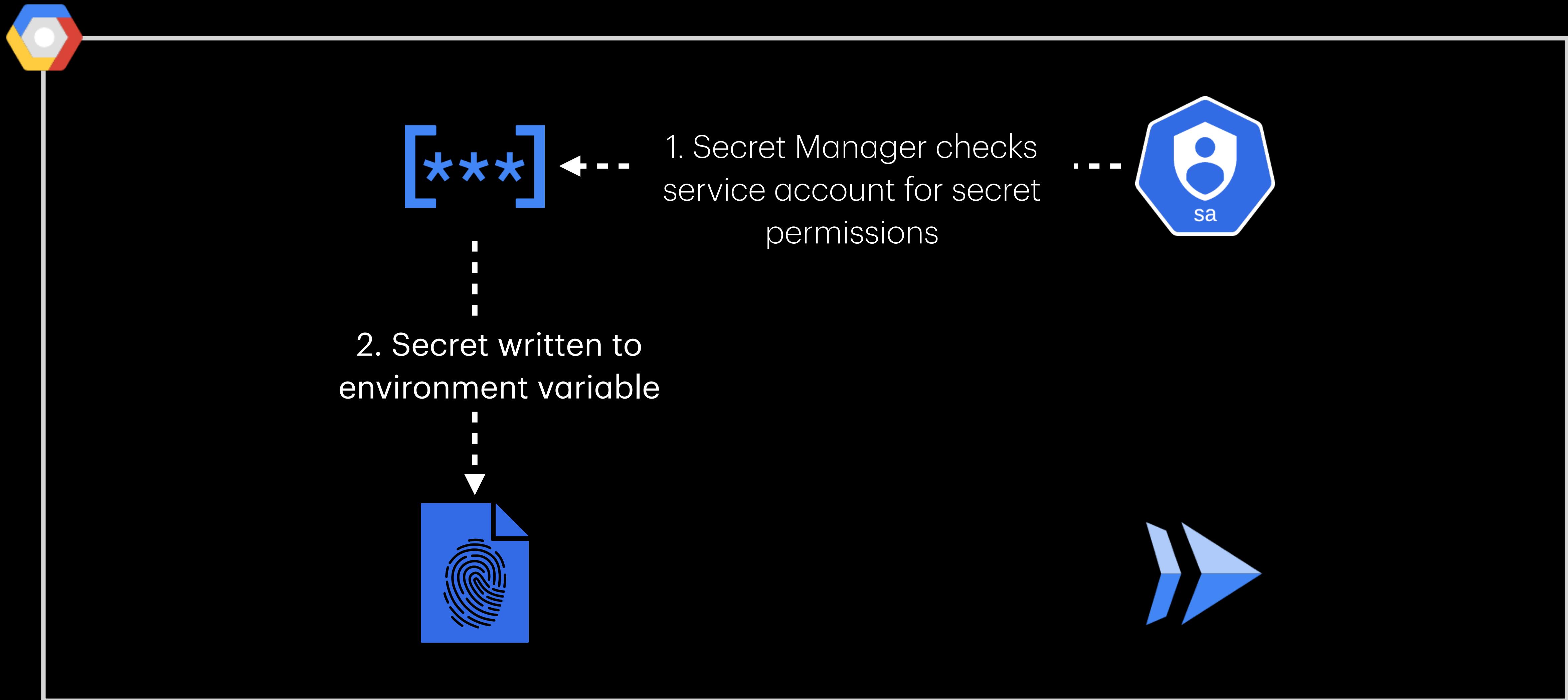
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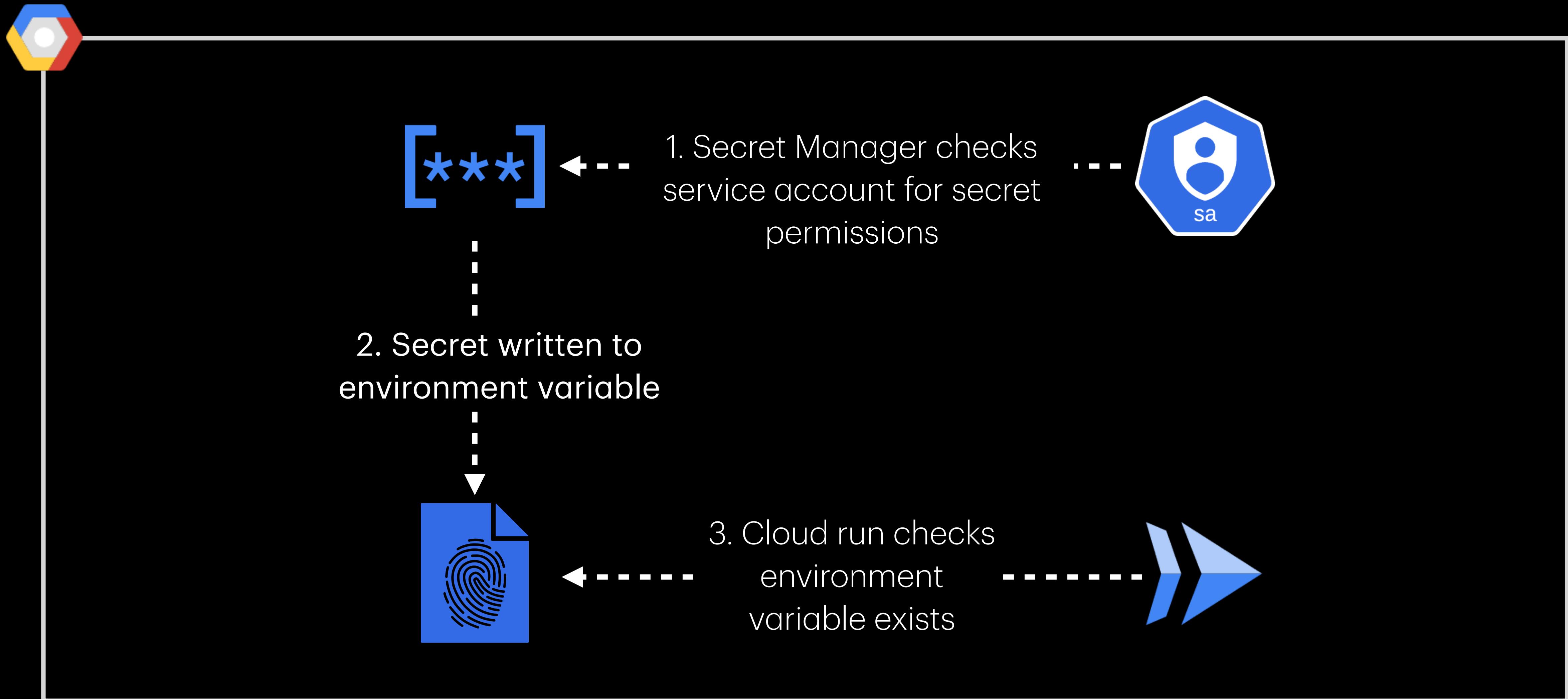
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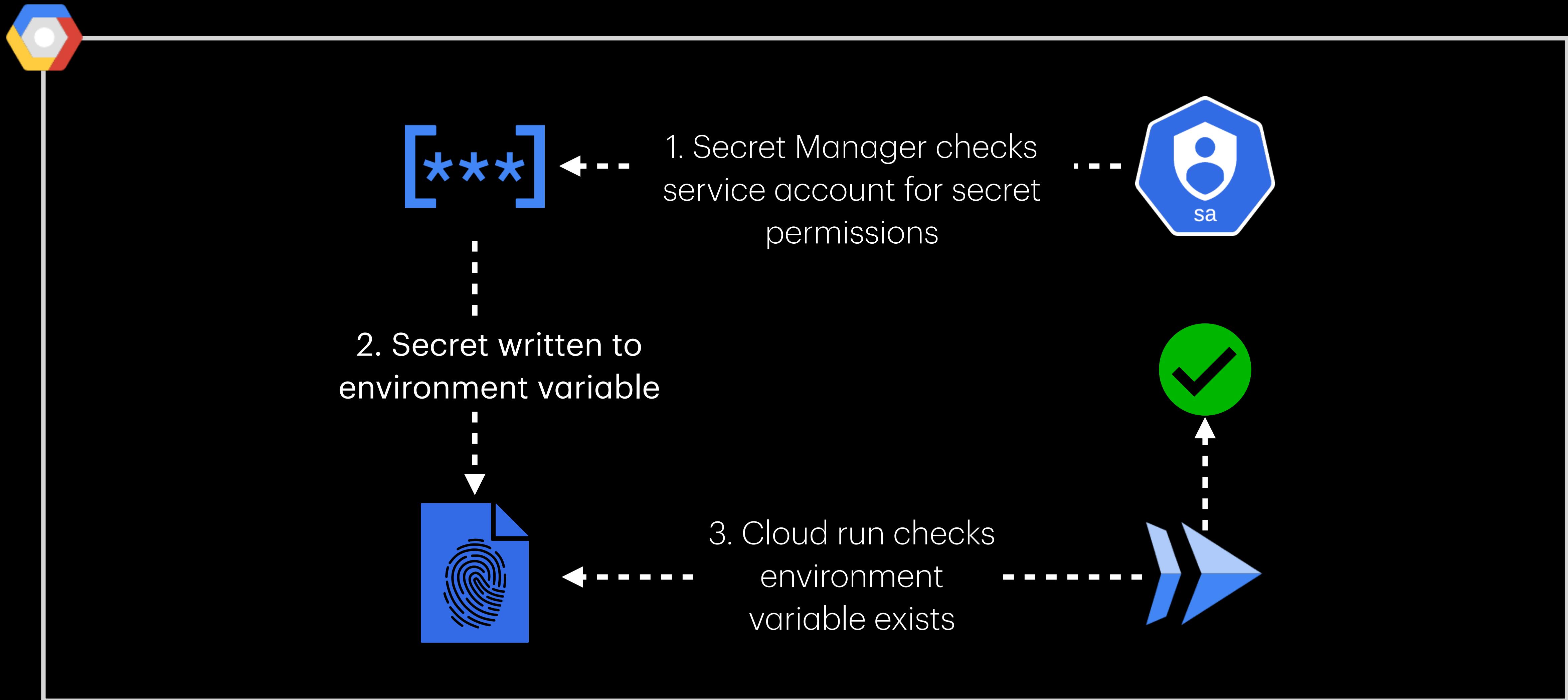
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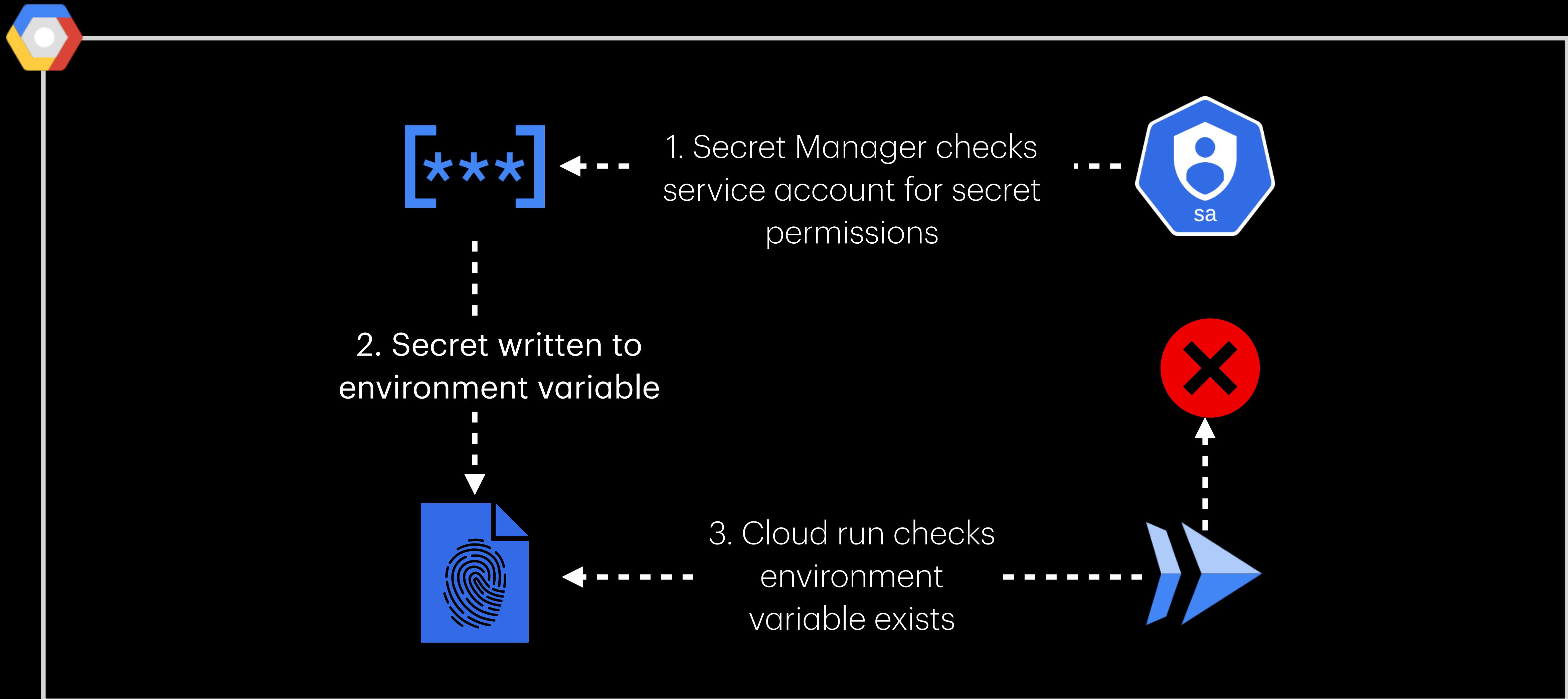
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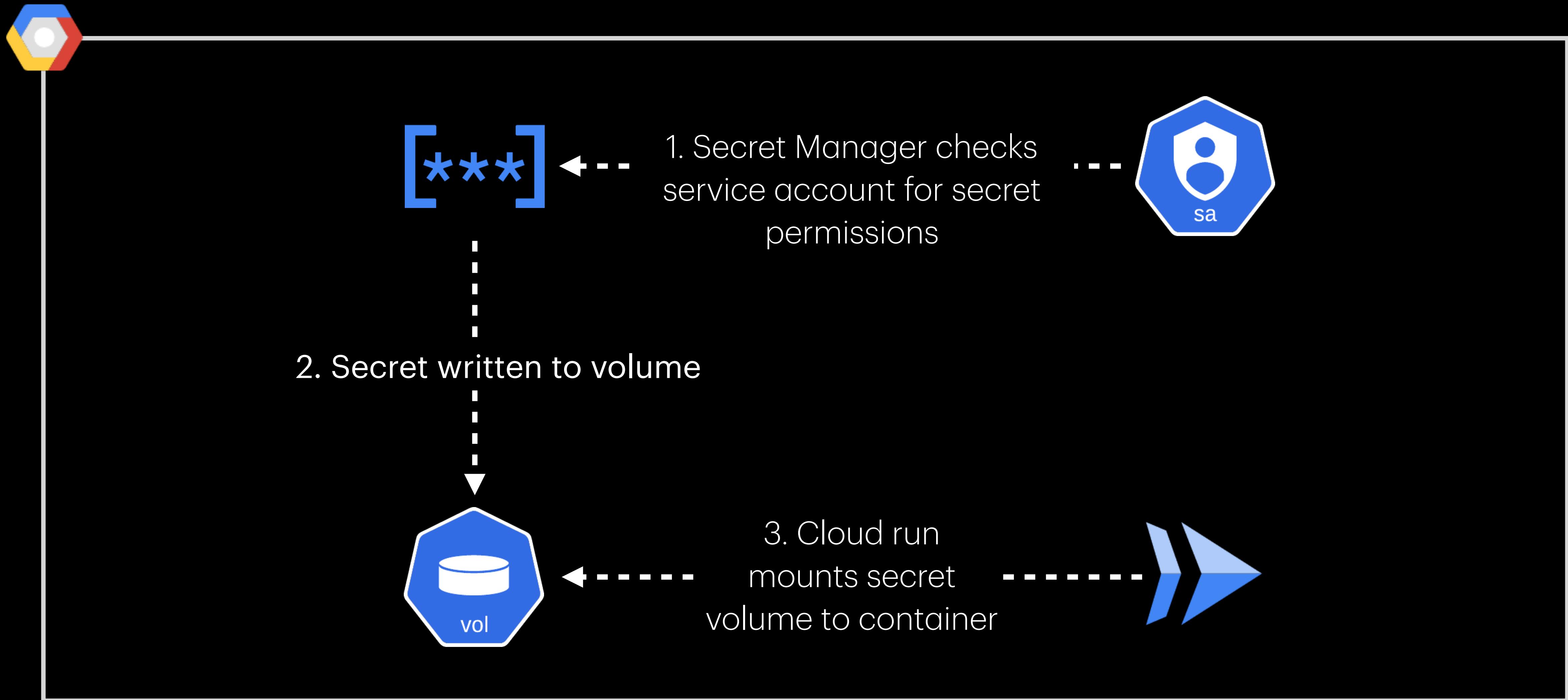
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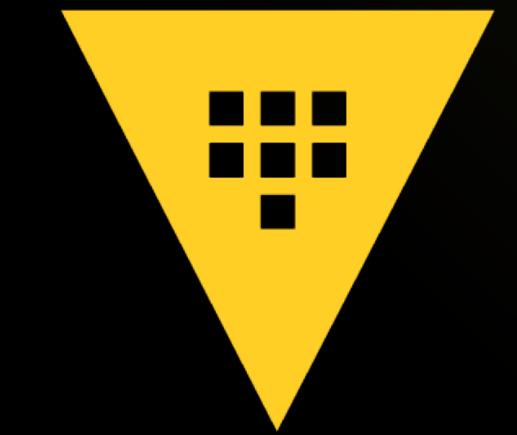
# Secret Manager With Cloud Run



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# What is Vault

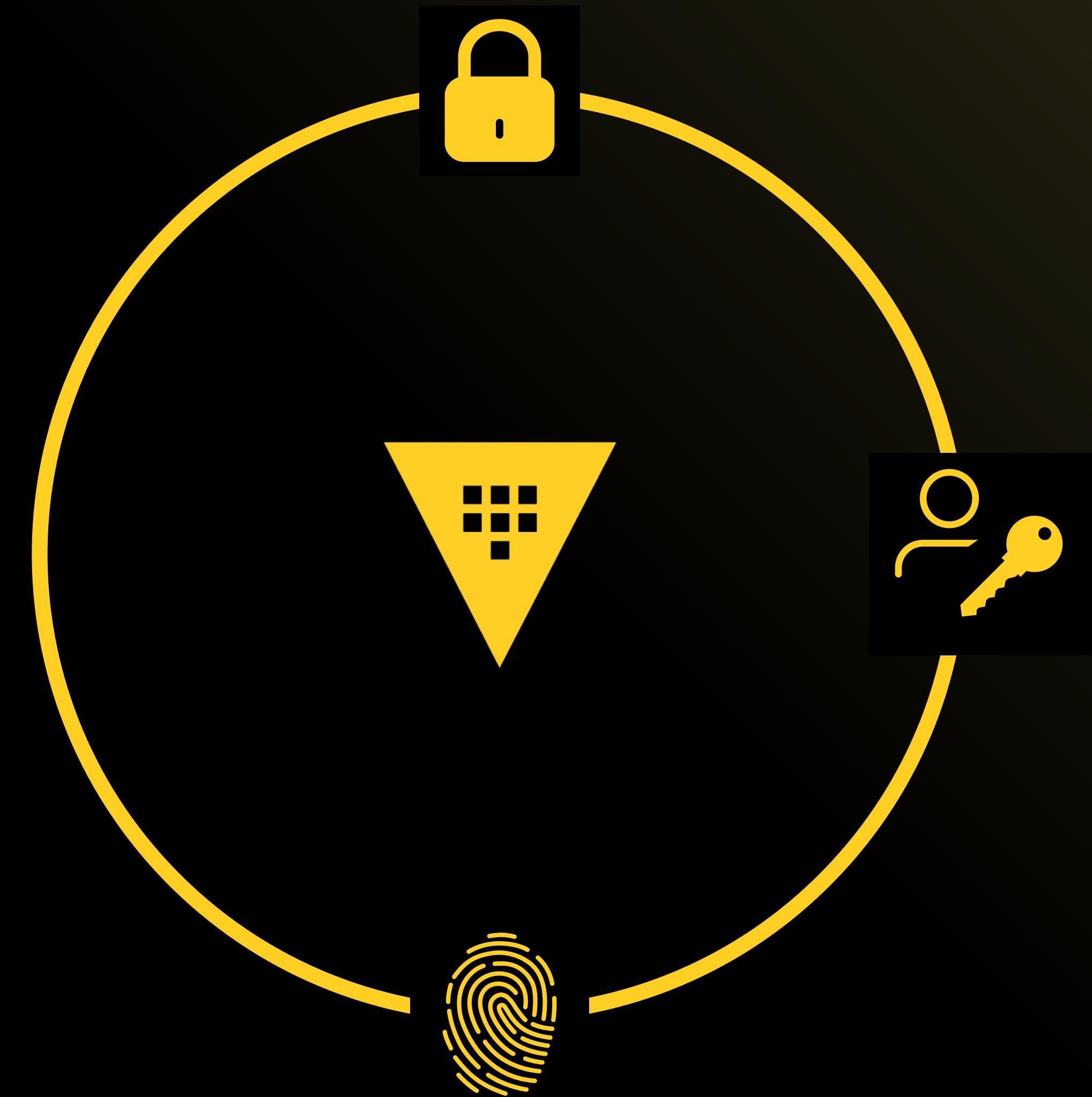


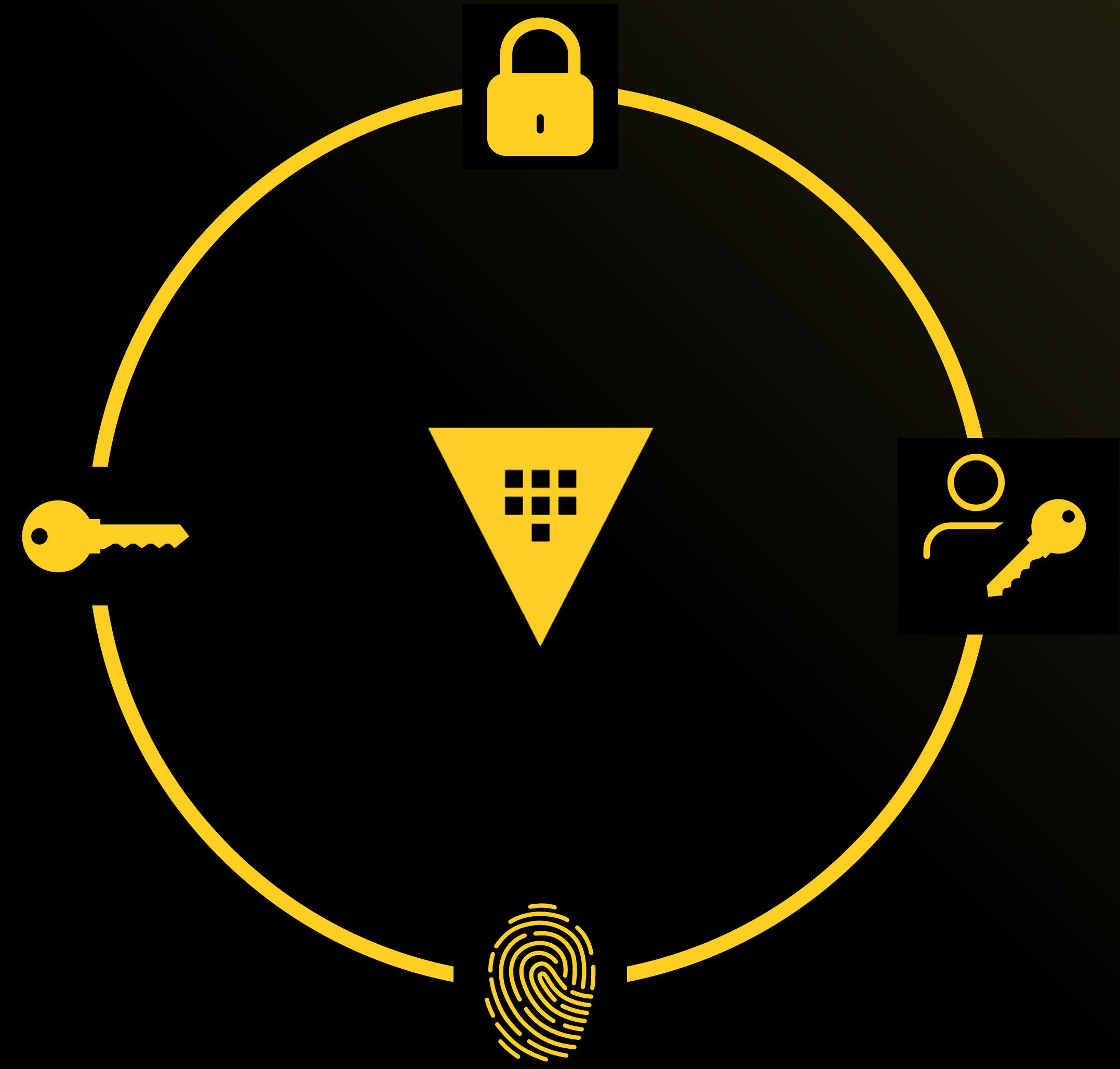












# Vault Plugin Constructs



## Auth Methods

- Responsible for AuthN
- Allows you to BYOIdP
- Enable only the plugins you require



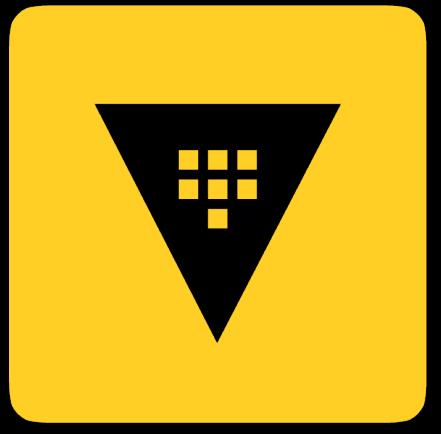
## Secrets Engines

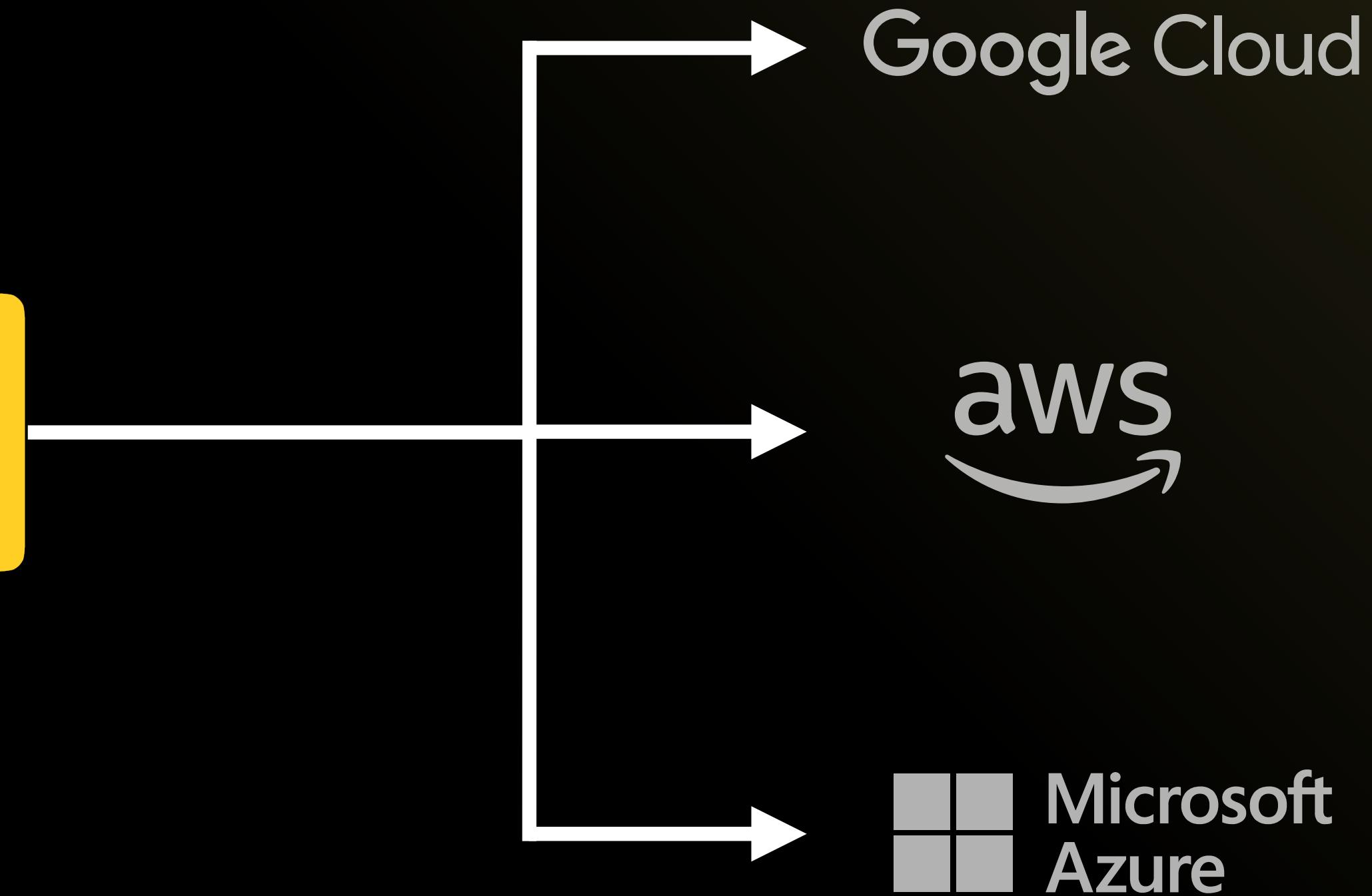
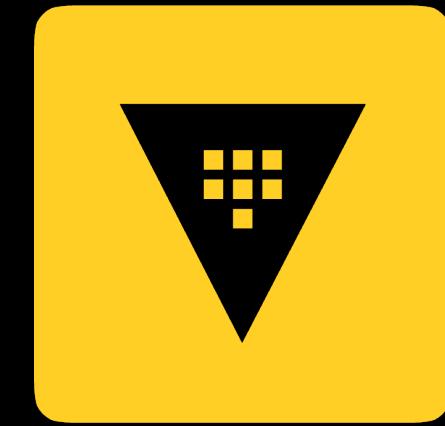
- Responsible for managing secrets
- Supports most major clouds, DBs, and platforms
- KV-V2

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# Secret Sync Pattern







03

# Secret Sync Pattern Demo





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You're working in [My First Project](#)

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Try our most advanced model: Gemini 1.5 Pro

Try Gemini 

## Quick access

[API APIs & Services](#)

[IAM & Admin](#)

## Client count

[Details](#)

### Total

The number of clients in this billing period (May 2024 - May 2024).

0

### New

The number of clients new to Vault in the current month.

-

Updated May 23, 2024 10:00:52

## Replication

### Replication not set up

Data will be listed here. Enable a primary replication cluster to get started.

[Enable replication >](#)





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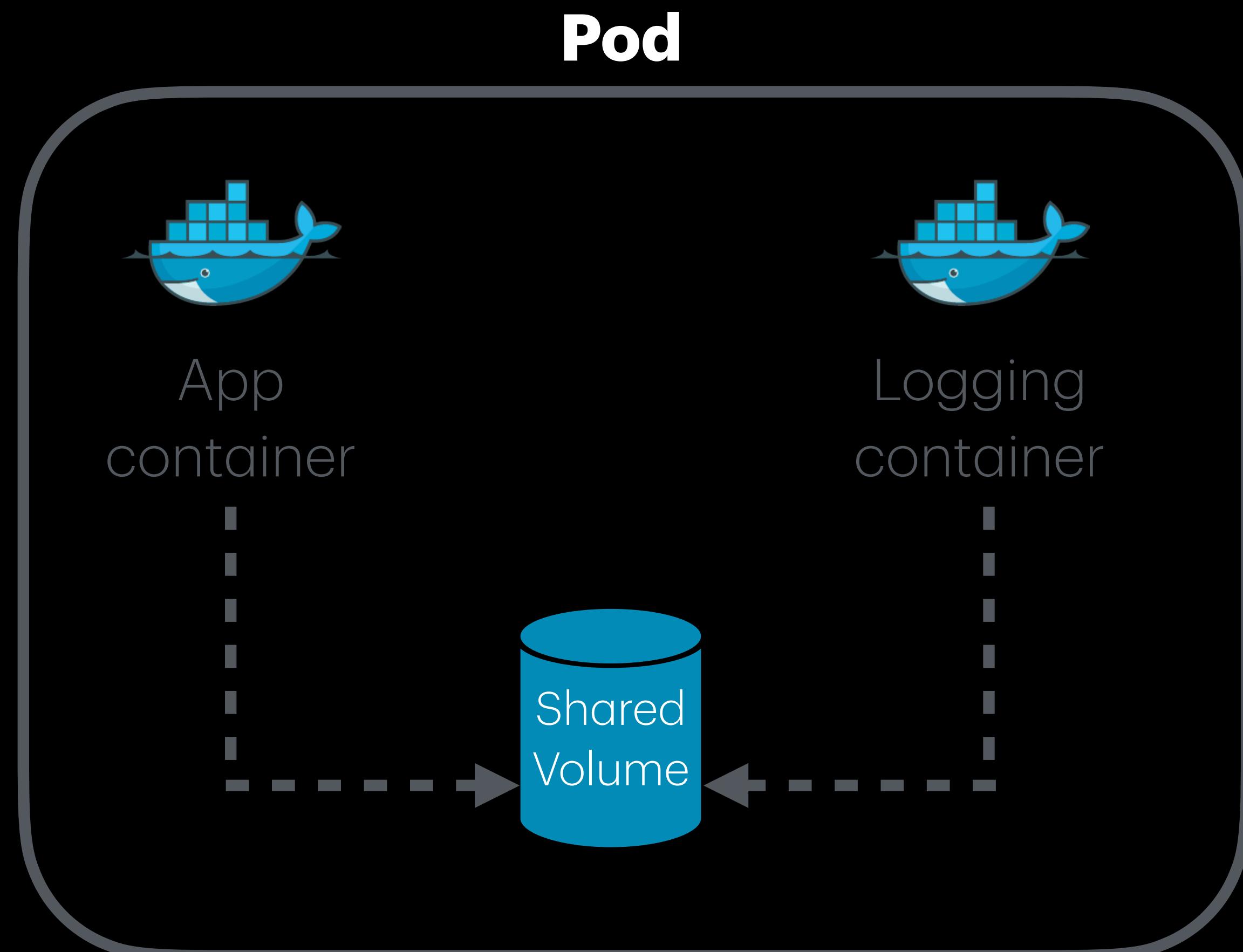


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# Vault Agent Pattern

# Sidecar Pattern

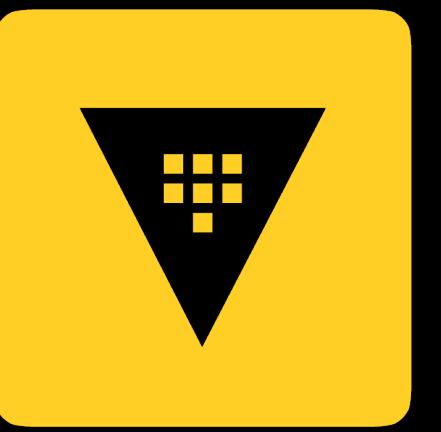
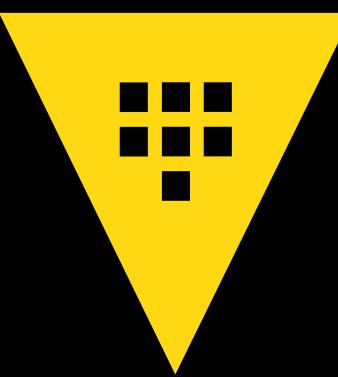


# What is Vault Agent?

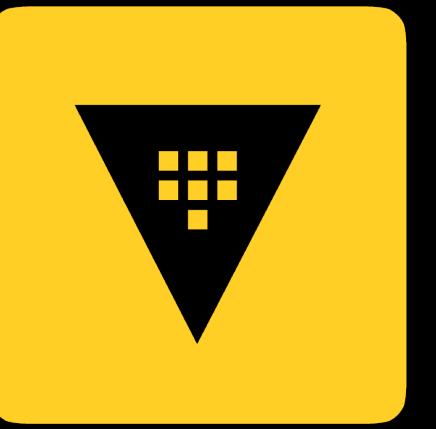
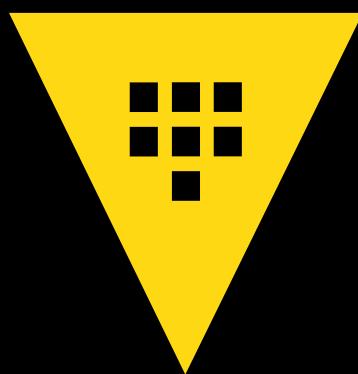
- Daemon process
- Runs alongside your application
- Takes care of authentication
- Fetches secrets from Vault
- Writes secrets to a sink for applications to consume



# Vault Agent Authentication Process

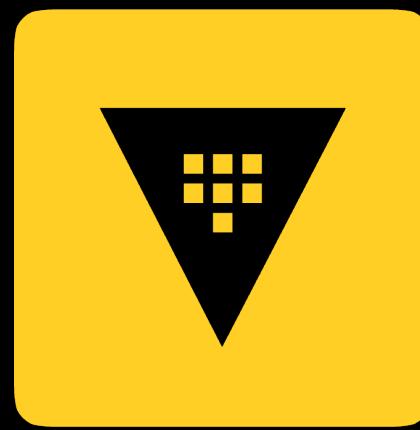
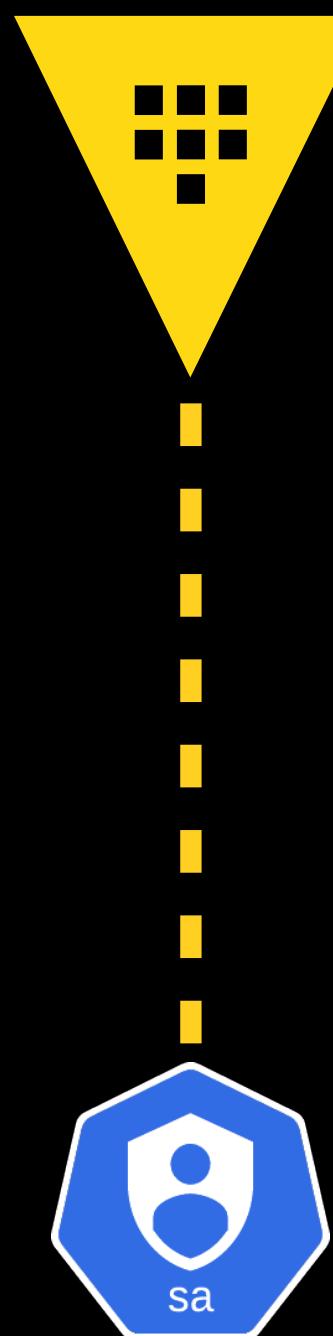


# Vault Agent Authentication Process



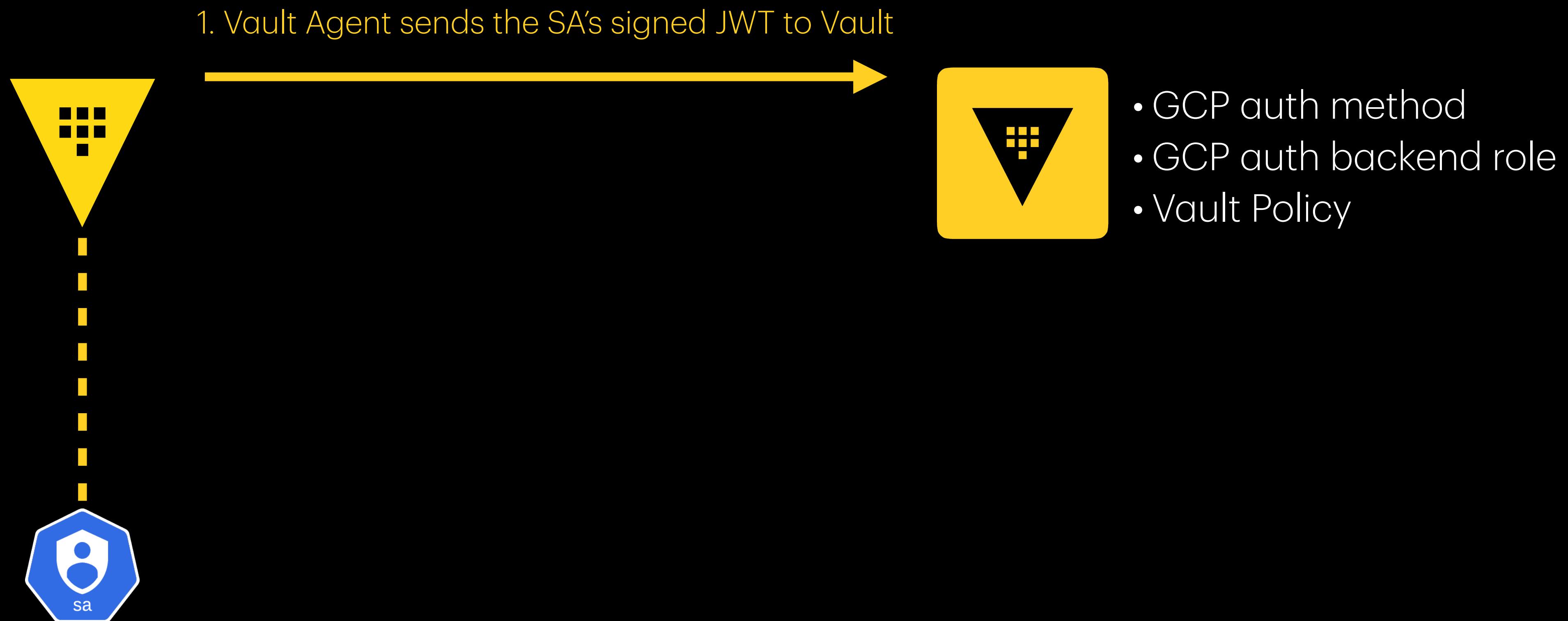
- GCP auth method
- GCP auth backend role
- Vault Policy

# Vault Agent Authentication Process

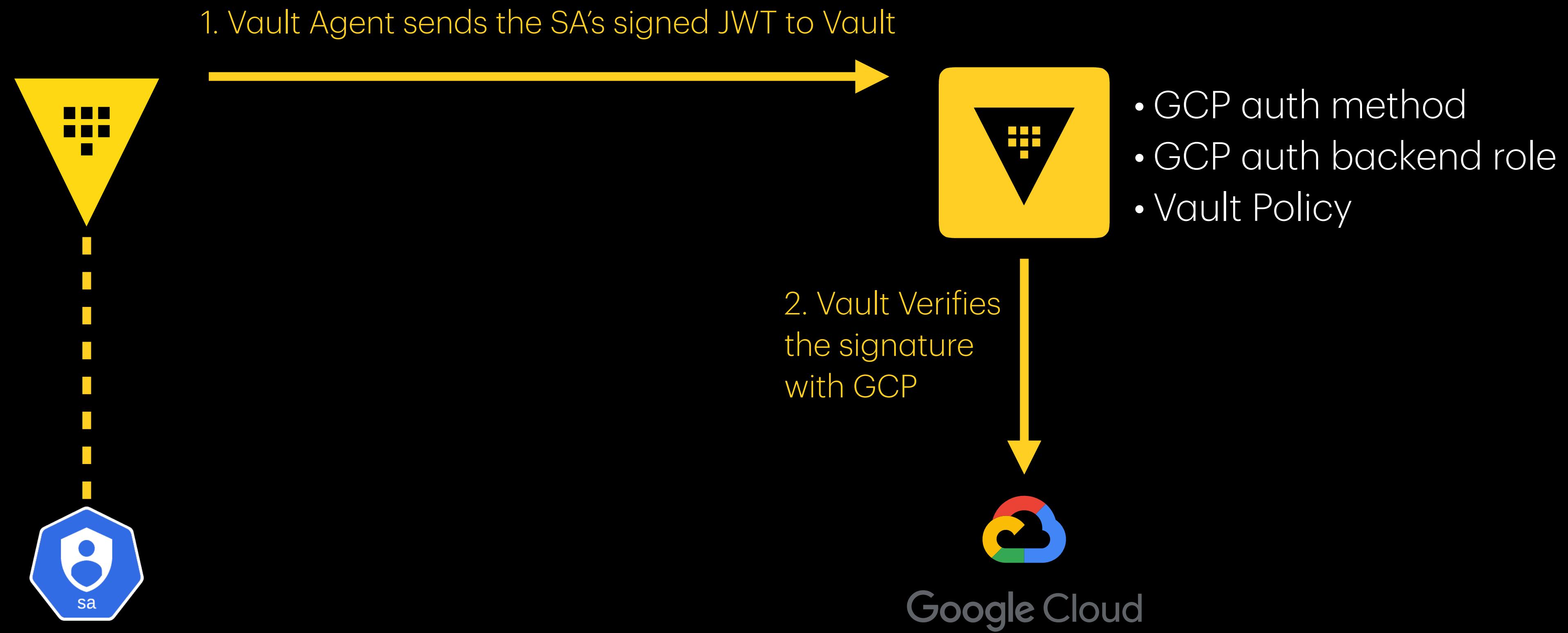


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- GCP auth backend role
- Vault Policy

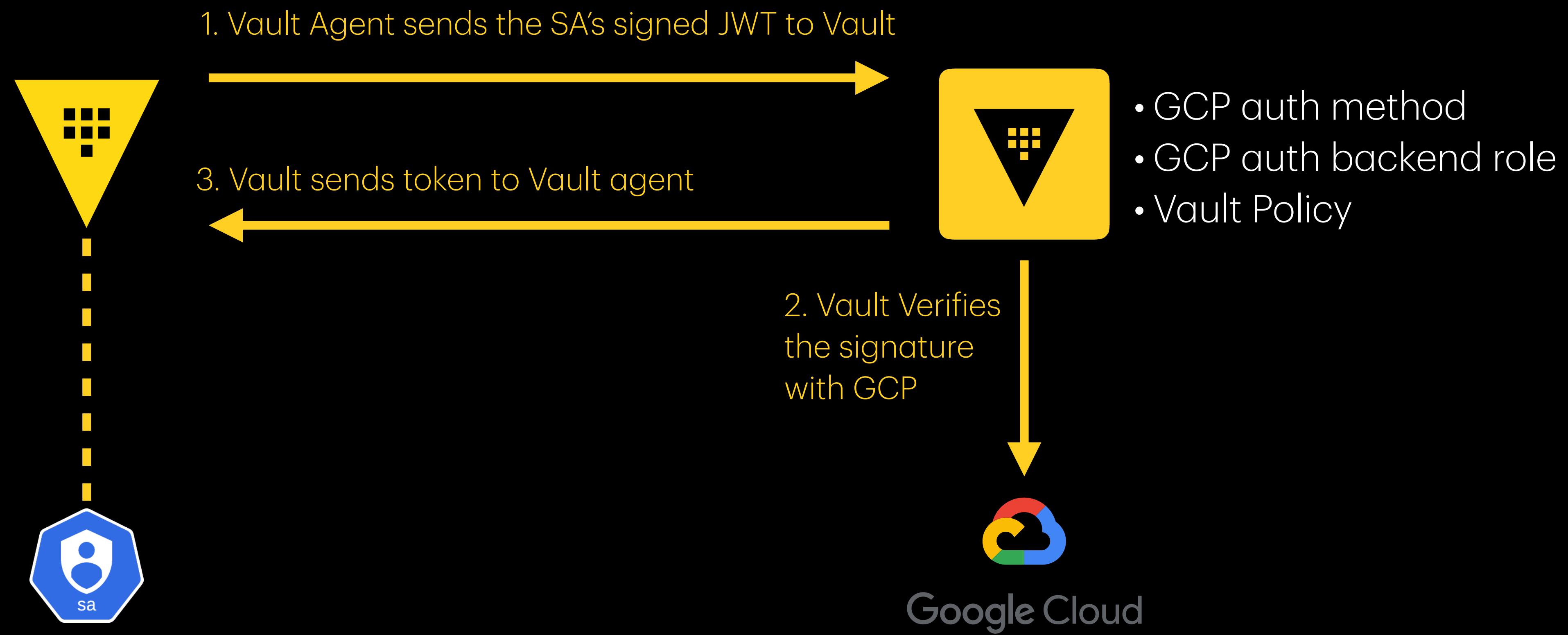
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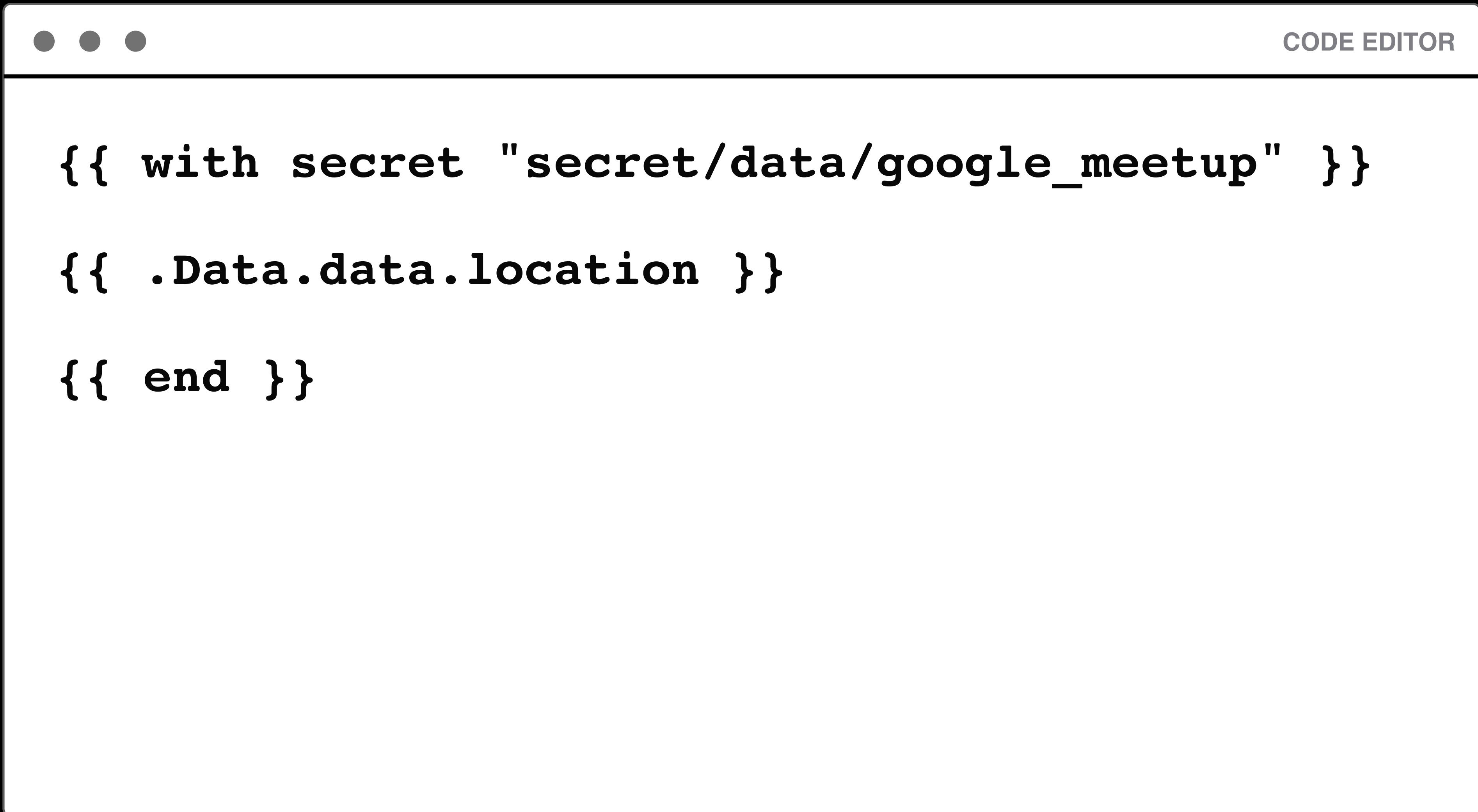
# Vault Agent Authentication Process



# Vault Agent Authentication Process



# Vault Agent Template



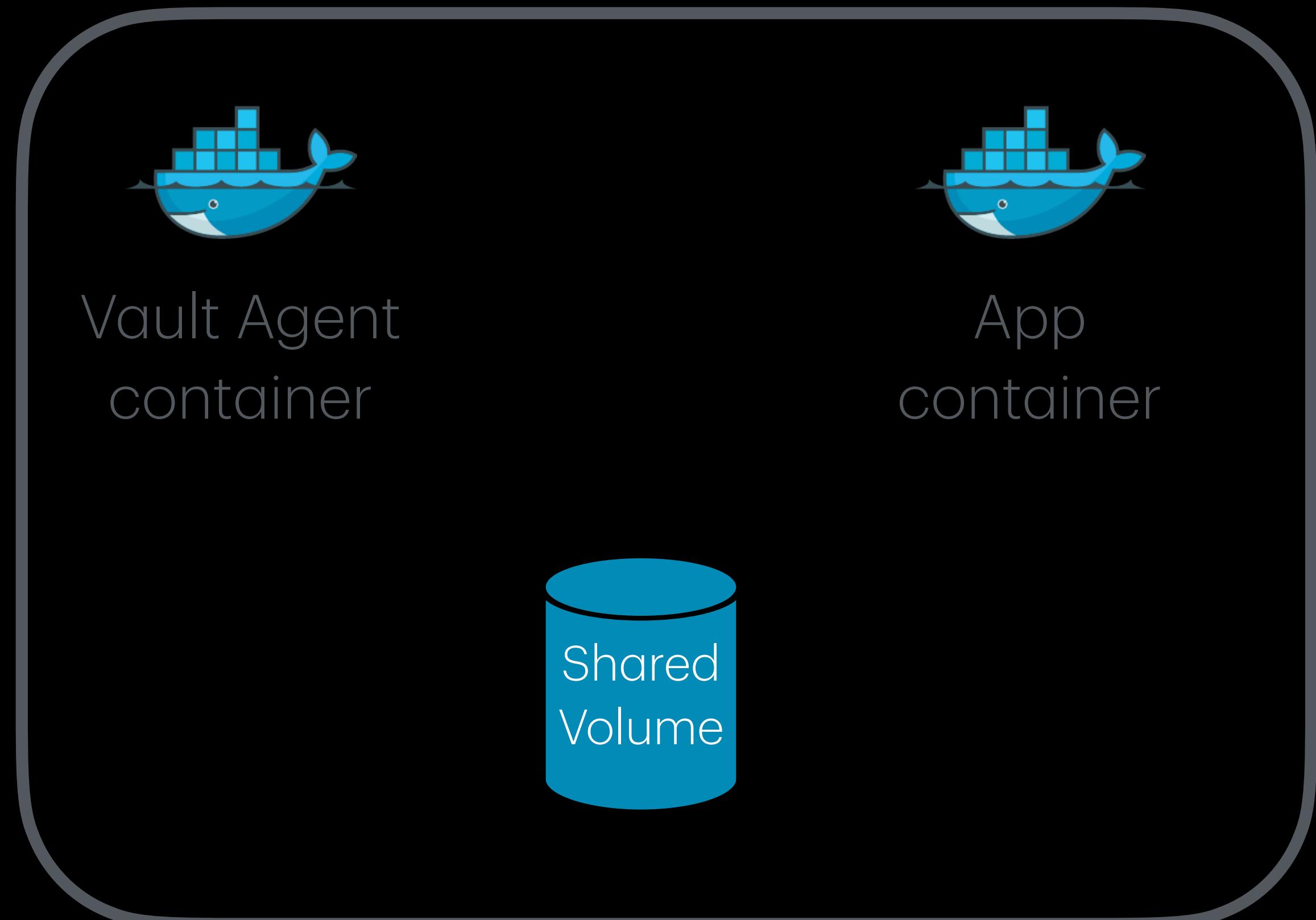
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{ { with secret "secret/data/google_meetup" } }

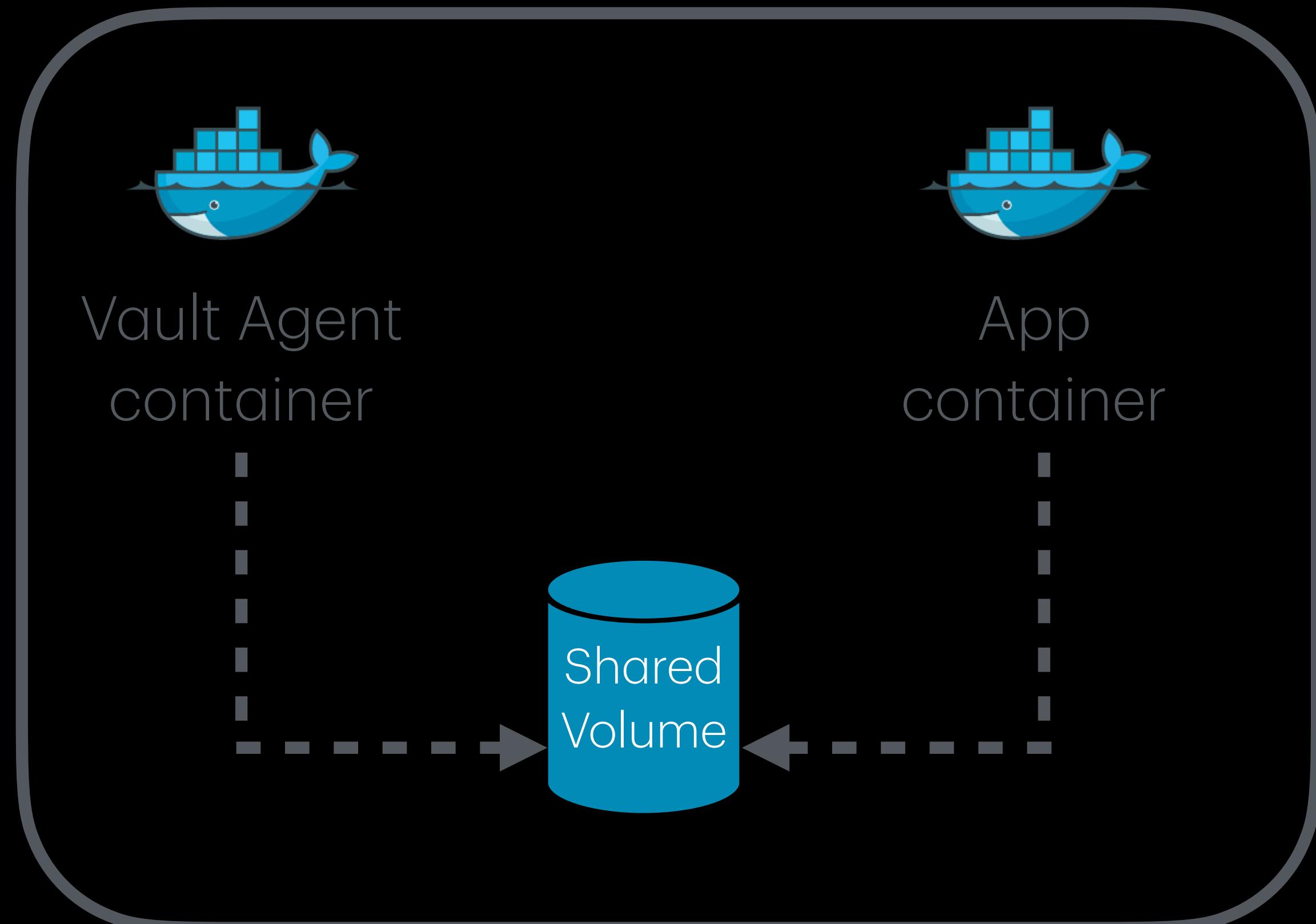
{ { .Data.data.location } }

{ { end } }
```

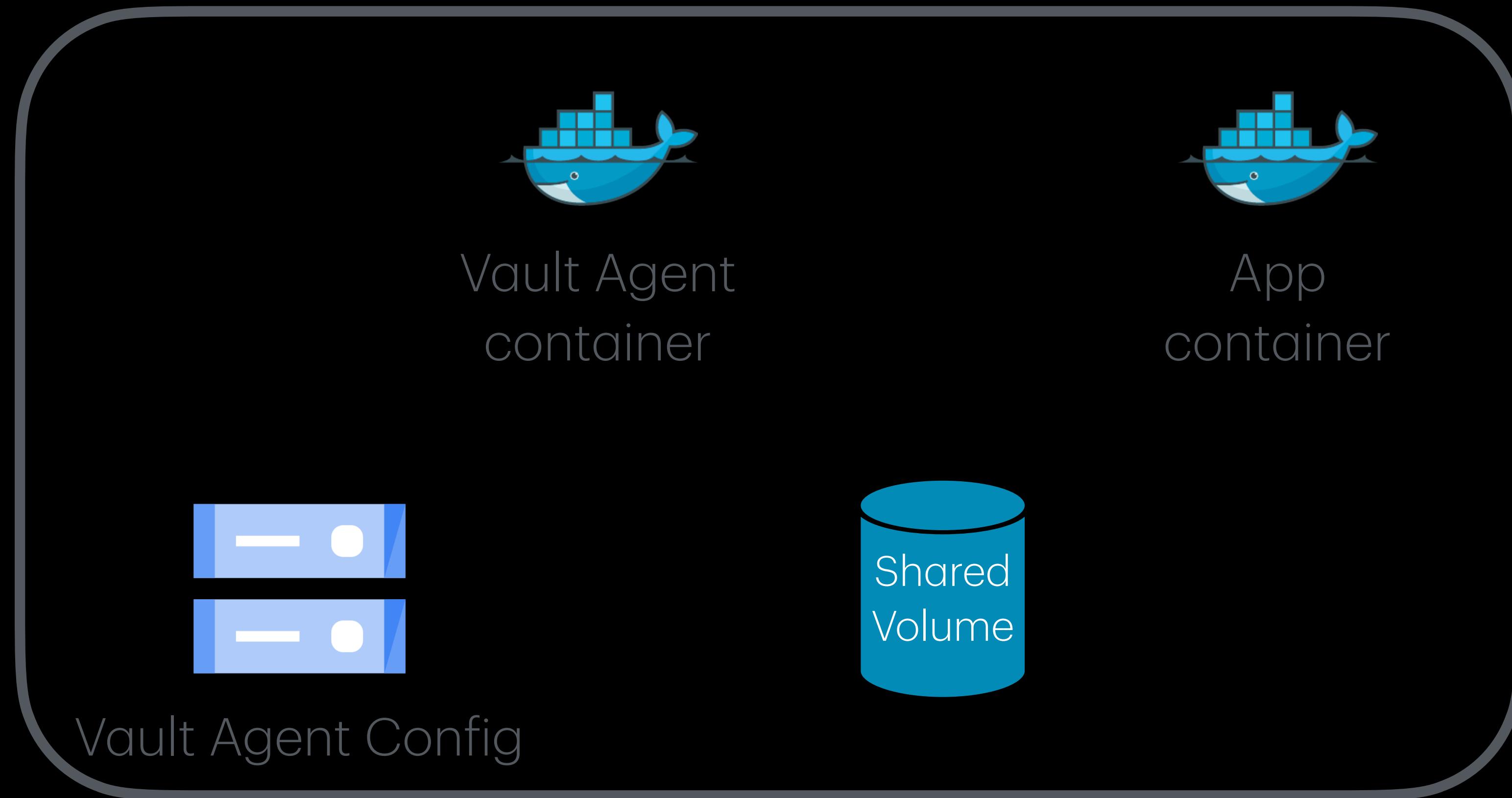
# Vault Agent Pattern



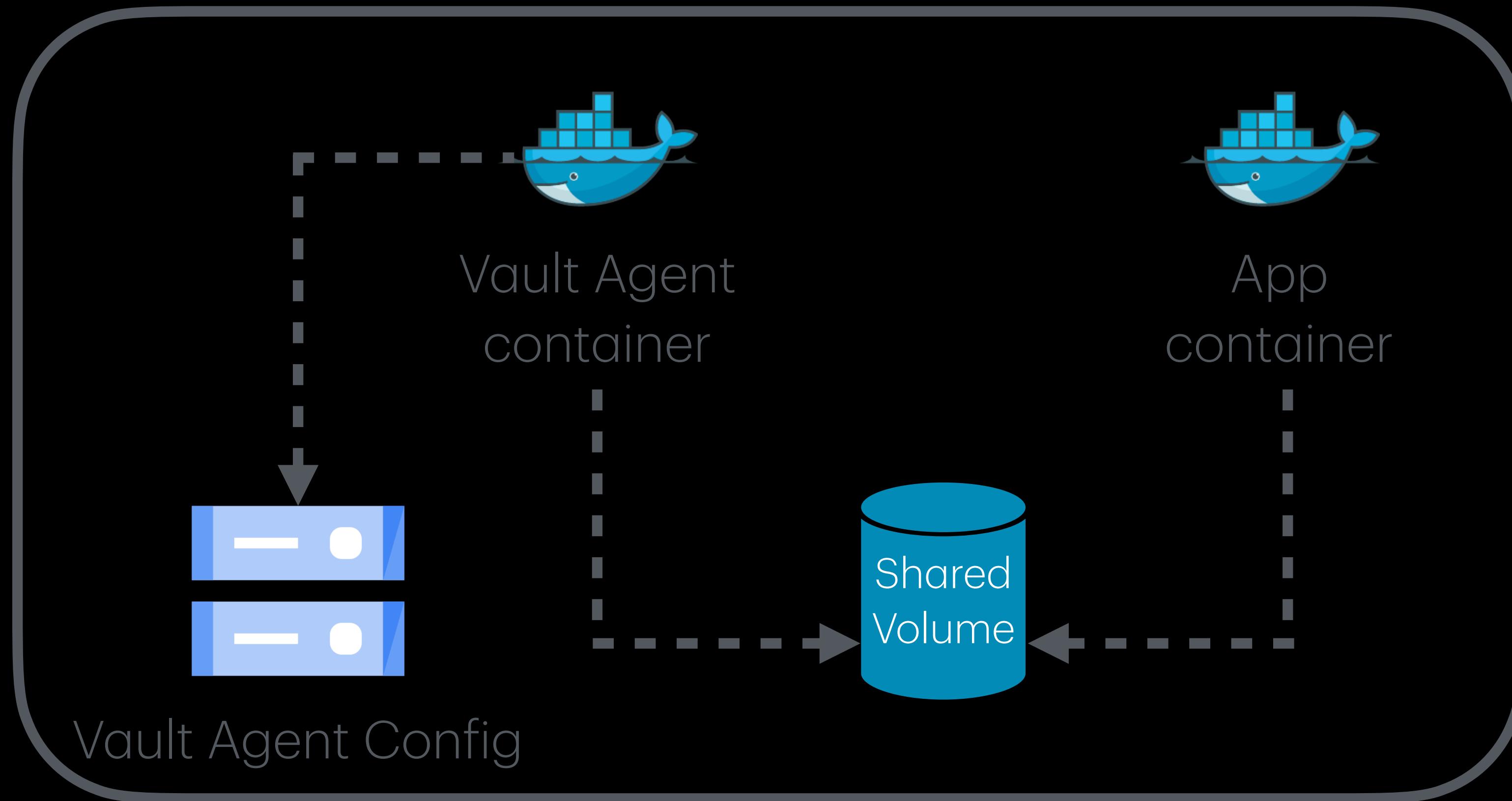
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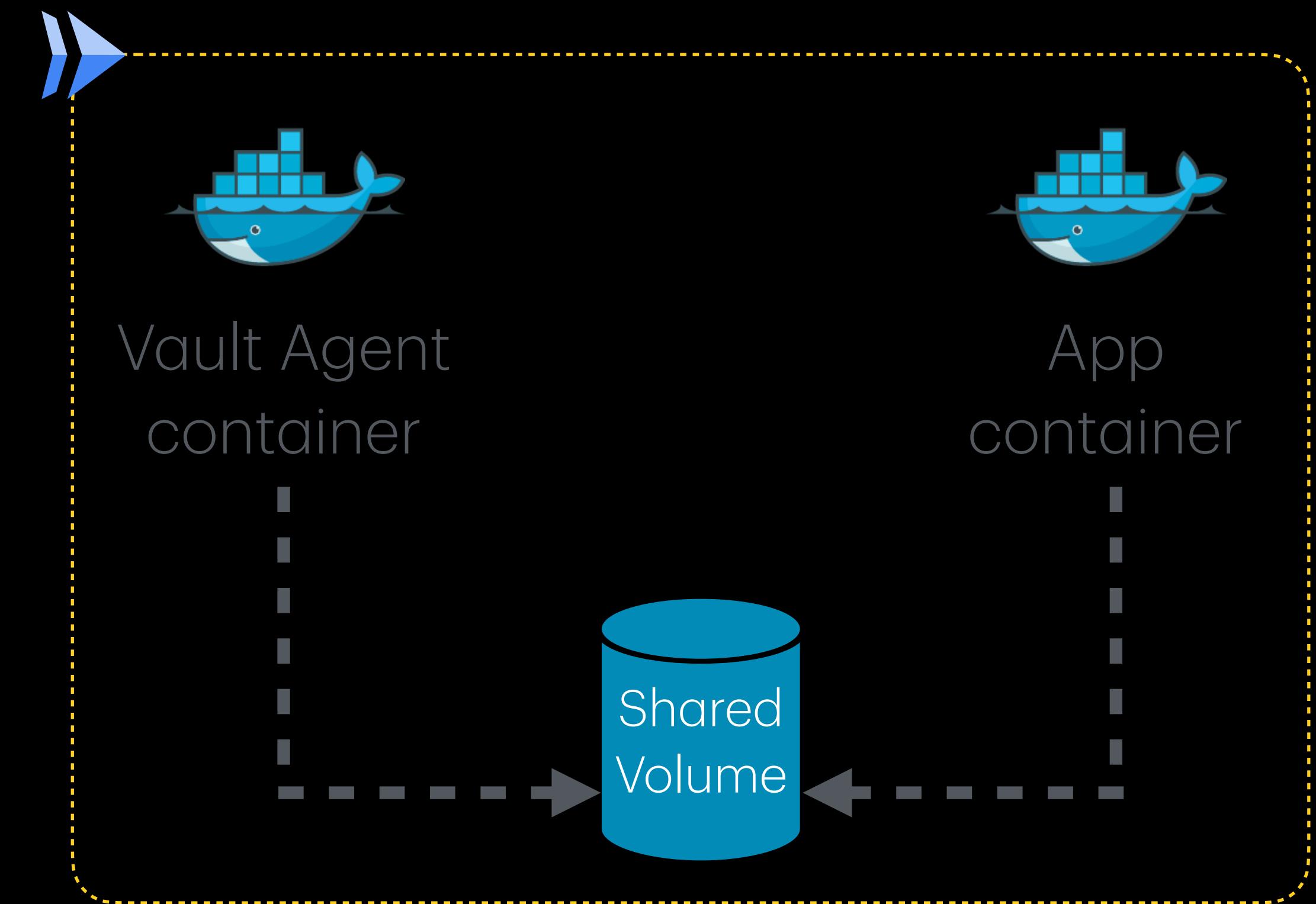
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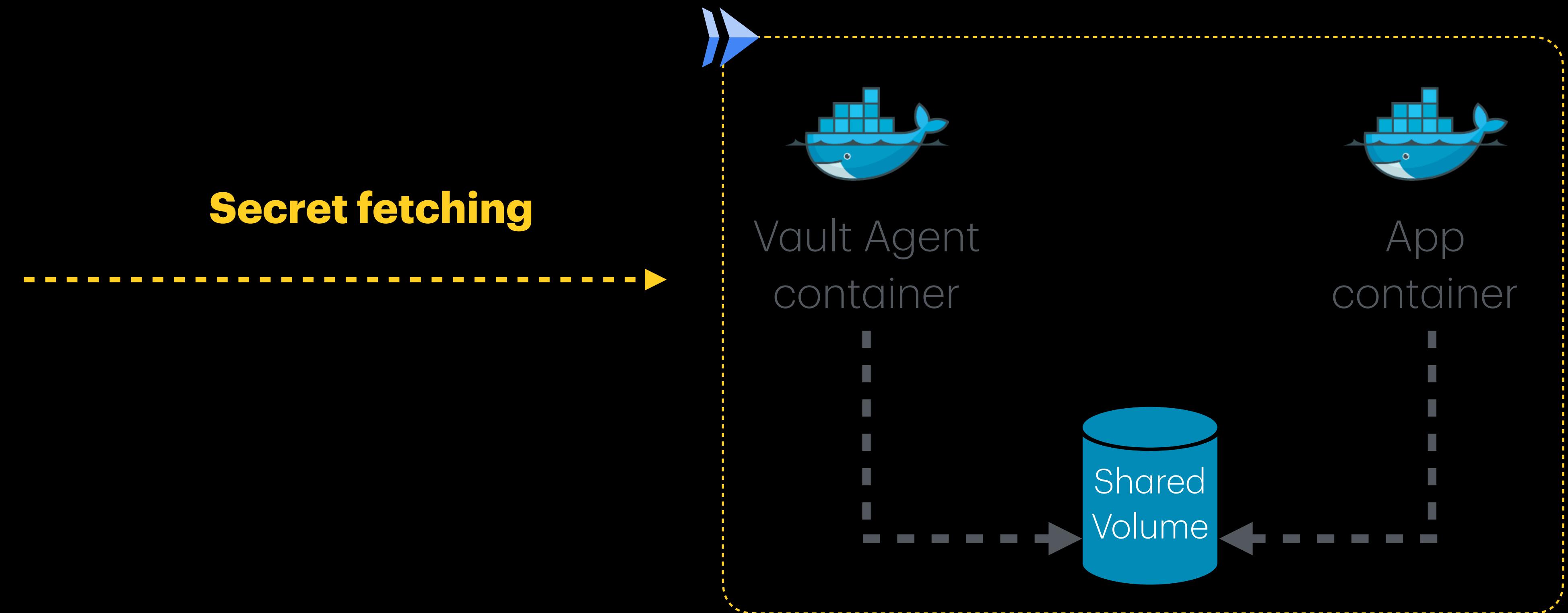
**Secret fetching**



# Vault Agent Pattern



**Secret fetching**



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# Vault Agent Pattern Demo

# Demo Code and Resources





Thank you