



#ASLI ENGINEERING

GitHub Outage: Repository Creation Failed



BY

ARPIT BHAYANI

Dissecting GitHub Outage

New repository creation failed
due to scanning secrets

What happened?

In April 2021, people were unable to create new repository and root cause was dependency on scanning secrets

New repository creation

What is secret scanning?

Developers tend to check-in secrets in their codebases through settings / constants file

- API Keys
- Passwords
- Tokens
- Critical webhook URL

What if the repository is accidentally made public?
or somehow the secrets are leaked!

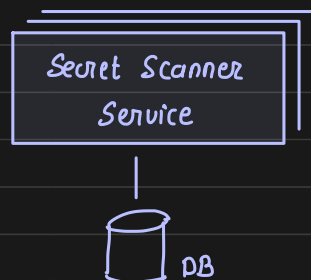
This often leads to Data Breach or Infra abuse

- ransom
- mining

GitHub periodically checks for committed secrets and warns us about it

Secret Scanner Service

Github has an internal service that periodically scans all the repositories for any checked-in secrets, we call it



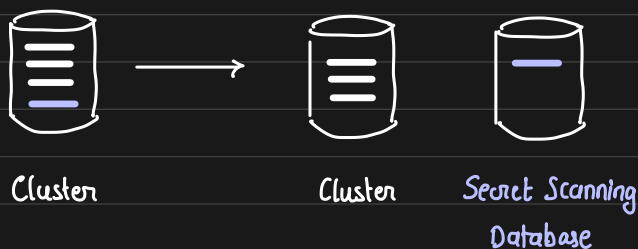
Repository creation flow

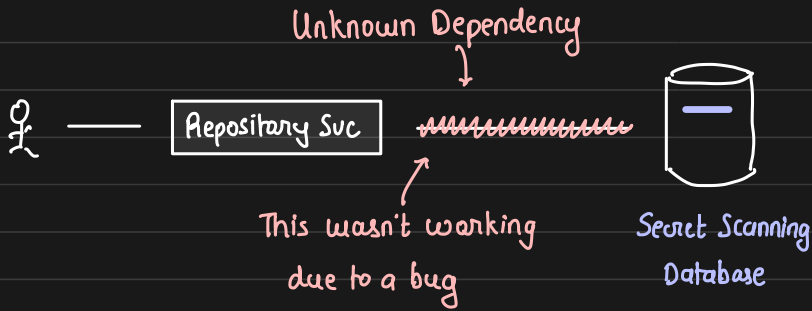
When a new repository is created on Github, it is registered in the DB of Secret Scanner Service so that they can be periodically scanned.



What changed ?

Secret Scanning table was moved to its own cluster





"Broke the ability of application to write to the secret scanning DB"

↓
Repository service

* This tells us - repository service was directly writing to secret scan DB and it was an unknown dependency! ← Hence, repo creation wasn't working

How did they mitigate?

"Rolled back the data migration"

* purely speculative

As soon as data would have been migrated, the creation failed so, they quickly moved back the data (repo info) to where it was



- it could also be just a network or credential change