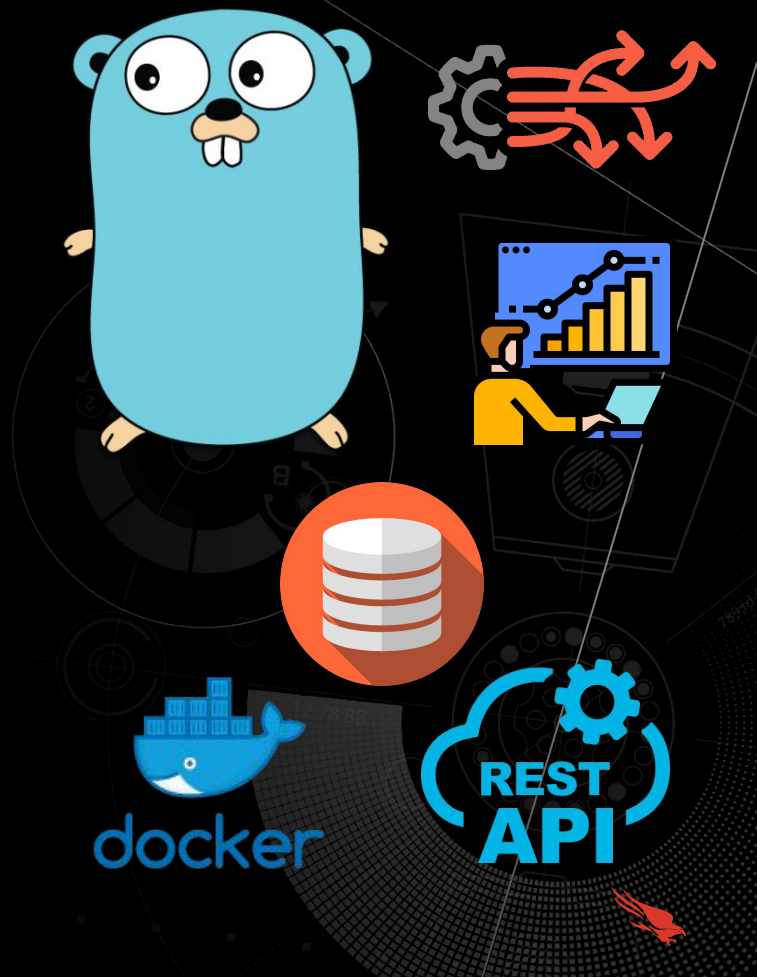
System design & Do it yourself app

CrowdStrike HEROES - Cloud Workshop

CROWDSTRIKE

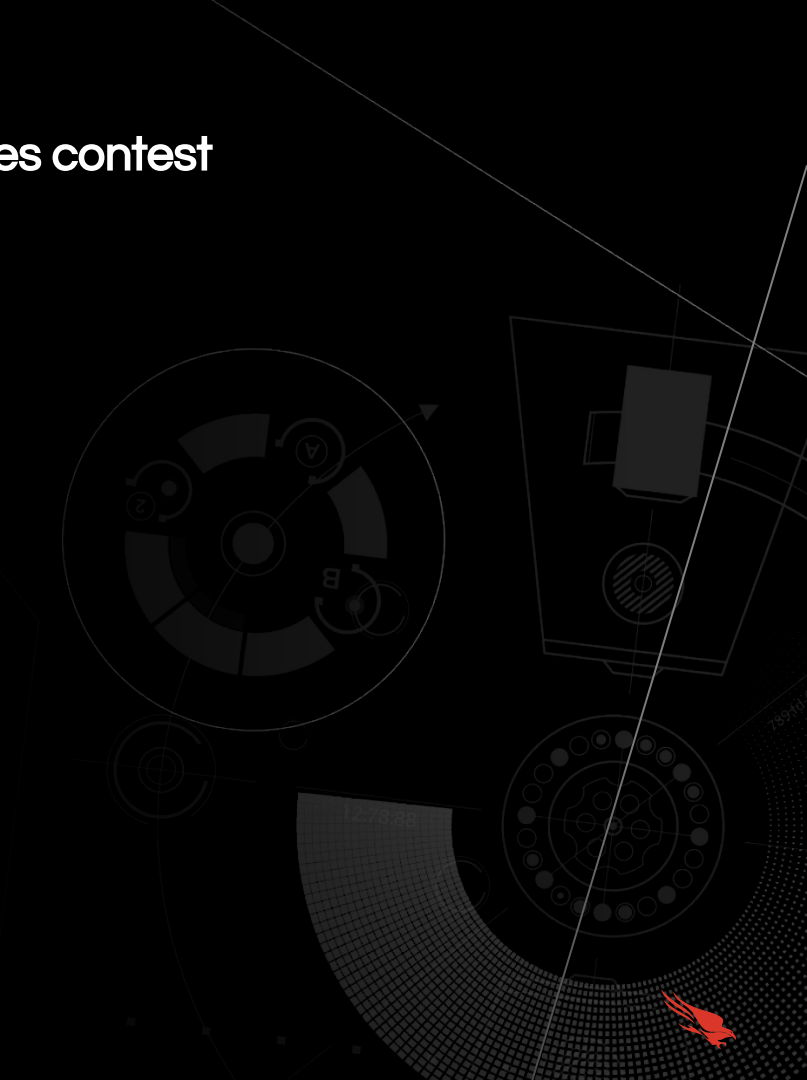
Date	Topic
July 25 - 16:00	Intro to golang
July 26 - 16:00	Intro to golang (continuation)
July 27 - 16:00	Multithreading
July 28 - 16:00	Rest API
July 29 - 16:00	Unit testing, logging and monitoring
August 1 - 16:00	**Workshop and Q&A**
August 2 - 16:00	Deployments/Docker
August 3 - 16:00	Databases
August 4 - 16:00	Databases extended
August 5 - 13:00	Microservices contest (4h with Awards)



CROWDSTRIKE

For Friday's microservices contest

- Teams of two people
- It will start at 12:30
- There will be **plenty** of food
- Prizes!



CROWDSTRIKE

Workshop plan

- How to design a service starting from requirements
- System design overview
- Create a service from scratch
  - Test it with postman
  - Service should do some processing

Example: warehouse management system

Requirements:

- We want a warehouse management system, to manage the storing of various products
- We want the following functionalities:
  - To add multiple products in the same time in the storage
  - To see the details of multiple products in same time

CROWDSTRIKE

Warehouse management system - design

- First of all, we need to model a product from warehouse - which fields are necessary: name, id, price, etc.
- Let’s break down the given required functionalities:
  - adding multiple products in the same time in the storage:
    - a POST endpoint can model this requirement, where a body with multiple items can be sent
  - seeing the details of multiple items in the same time:
    - A GET endpoint can model this requirement, sending the ids of the items
    - Example of bulk handler

CROWDSTRIKE

Warehouse management system - design

- We want efficiency when processing the data
  - Solution: use of goroutines
- We want a modular architecture
  - How: creating two services, which communicate through HTTP:
    - API service
    - Store service

API

Store

ID
Name
Price
Quantity
Origin country

CROWDSTRIKE

Any questions?