



Mercedes-Benz

DevOps Engineer Technical Challenge

Introduction

Thank you very much for filling out this challenge to the best of your competencies. The purpose of this challenge is to evaluate your areas of expertise.

Feel free to modify the challenge if a question is not clear to you or uses unfamiliar notation. Document assumptions used to solve the problem.

Good luck and thank you again for your time!

Objective

Implement and deploy a microservice that interacts with the [SWAPI - The Star Wars API](#) demonstrating proficiency in software development, containerization, orchestration, and performance optimization.

Please provide your completed solution as a public GitHub repository.

Technical Requirements

- Implement the microservice in one of the following languages: Golang, Java, or Python.
- The microservice should consume the *people* endpoint from the Star Wars API.
- Fetch the data from the *people* endpoint.
- Sort the fetched data in ascending order based on the *name* attribute.
- Create an endpoint in your microservice that returns the sorted data.
- Include error handling and logging.

Containerization and Orchestration

- Containerize the microservice using Docker.
- Write a Docker Compose file to run the service and dependencies locally.
- Deploy the service to a local Kubernetes cluster (minikube or kind).

Evaluation

- **Code Quality:** Clarity, maintainability, and adherence to language-specific conventions.
- **Functionality:** Fulfillment of the acceptance criteria and proper functioning of the microservice.
- **Deployment:** Successful deployment using Docker, Docker Compose, and Kubernetes.
- **Documentation:** Clear instructions, explanations, and comments.

Extra Points: Performance and Scaling

The requirements below are not mandatory. The fact of not doing them will not discard you from the hiring process neither reduce points. In case you decide to implement these requirements, they must work as expected, otherwise the ones not working will not be considered.

- Configure Horizontal Pod Autoscaler for the service.
- Write a simple performance test script to simulate load.
- Document how to run the performance test and interpret the results.