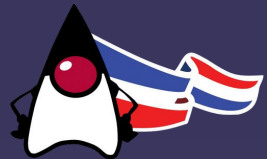


Deep dive into microservices architecture in Java Spring

By Ing. Aluis Marte





Deep dive into microservices architecture in Java Spring

What are we going to do?

- Concepts
- Microservices Definition
- Architecture composition
- Use cases
- Typical mistakes
- Demonstration
- Questions



Concepts

Service

Minimal and operational definition to create a microservice

Every service need a purpose, do actions and every action have to be related

Instance

Runtime execution of any service

External Request

Any request from a user, UI App, Mobile App or device out from infrastructure We define this as A2S (App to Service) Request

Internal Request

Any request do it from any service to another service. Always is internal. We define this as S2S (Service to Service) request



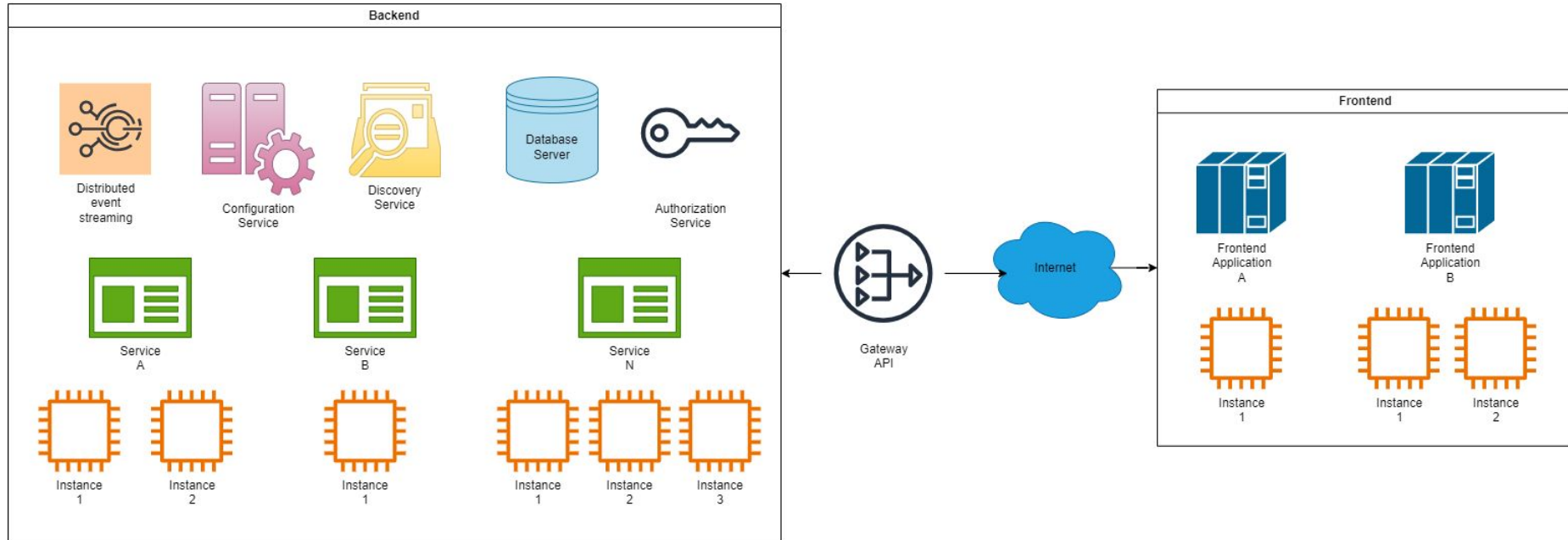
What is a Microservice architecture?

Microservices are lightweight, loosely coupled services that can be used to build cloud-based applications. A microservices architecture is agile and scalable and supports rapid deployment, compared to a monolithic architecture.

[<https://www.intel.com/content/www/us/en/cloud-computing/microservices.html>]



What an microservice architecture looks like?





When to use this architecture?

—

This architecture is not the holy grail, it offers advantages under certain scenarios and could complicate the application when used without criteria.



Will my application have 50,000 requests per hour at some point? if your answer is not, don't use it

Do I have well-organized work teams oriented to specific processes? if your answer is not, don't use it

Do I have staff with experience in architecture or any way to consult someone with experience? if your answer is not, don't use it



The best example of an application designed to be microservices

ERP, E--Commerce app, Massive App Blogs, Data processors (video, data analysis)





Typical mistakes

Usual errors when we try to convert a monolithic app to a microservice

DB

A micro does not always have its own DB, it will depend on its nature, if it processes data or creates it.

Microservice without criteria

A table in the DB is not a microservice, it makes no sense to have a schema for 1 table

Business Knowledge

You do not have well-defined criteria because you do not understand the business



Demo

<https://github.com/AlsJava/JConf2024-MicroserviceArchitecture>





Questions?



Thank you!

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<https://github.com/AlsJava>

Applaudo

