Introduction to Microservices

by
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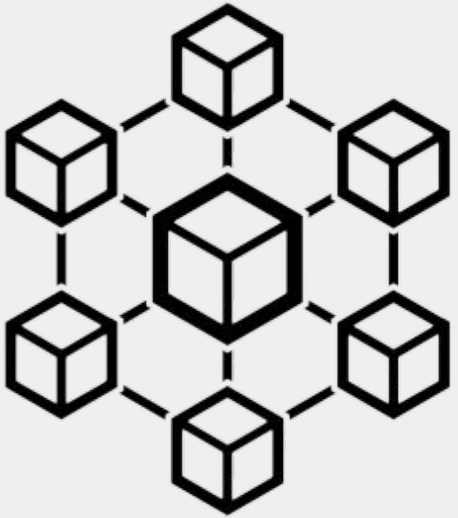
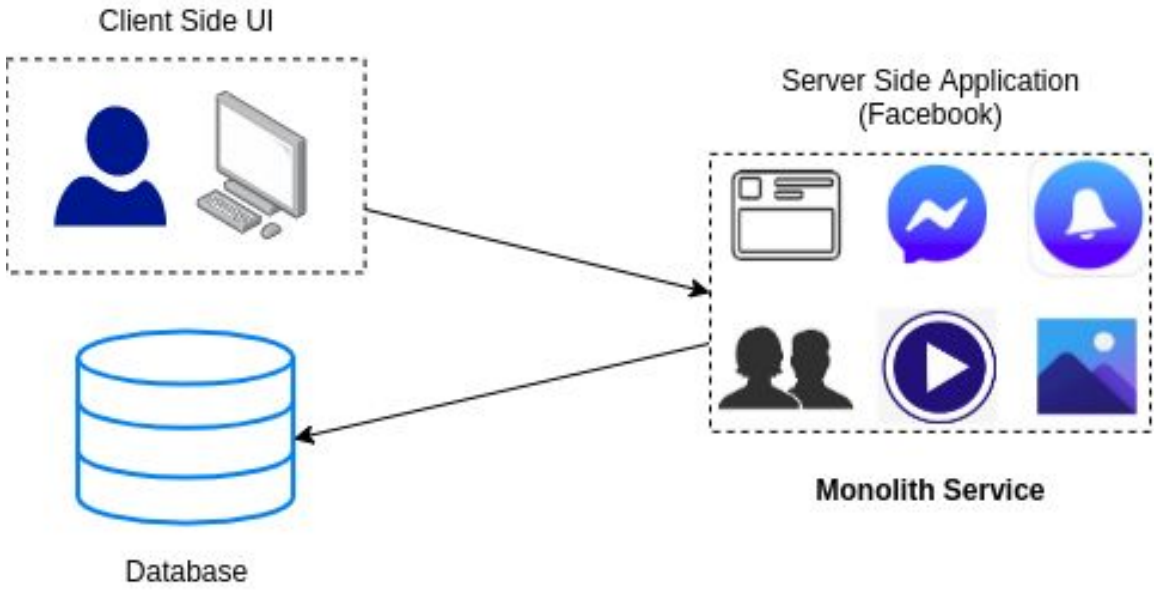


Things We Will Discuss

1. Monolithic Architecture
2. Examples of Monolithic Architectures
3. Challenges of a monolithic architecture
4. Microservices
5. Monoliths vs Microservices (example)
6. Advantages of Microservices
7. Companies Using Microservices
8. Best practices to design a monolithic architecture
9. Problems with Microservices
10. What to know next?

Monolithic Architecture



Monolithic architecture is like a big container where all the software components of an application are packaged together.

Examples of Monolithic Architectures

WordPress

Router OS

MVP

Minimum Viable Products

Monolithic Architecture - Challenges

Large & Complex Applications

Slow Development

Blocks Continuous Deployment

Unscalable

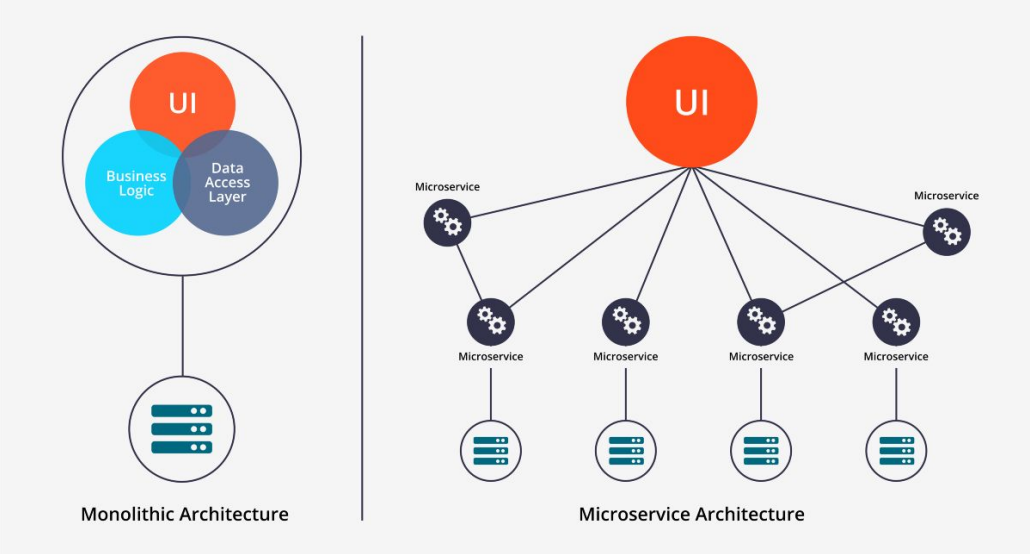
Unreliable

Inflexible

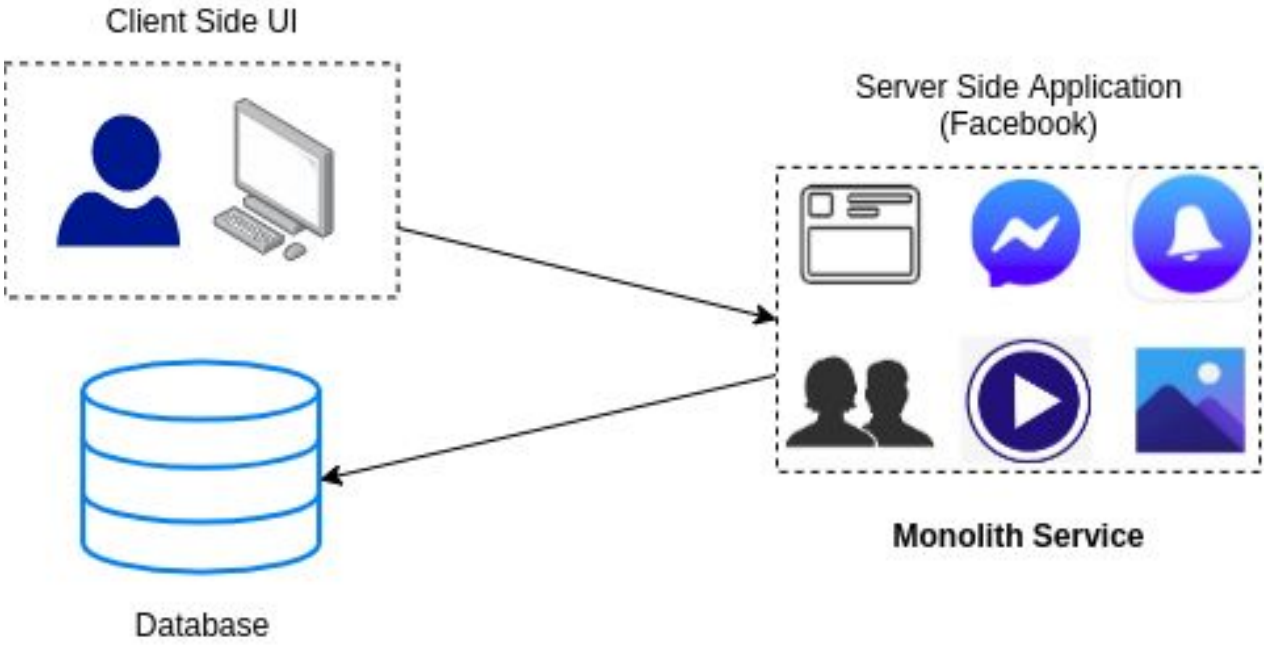
What are Microservices?

Microservices

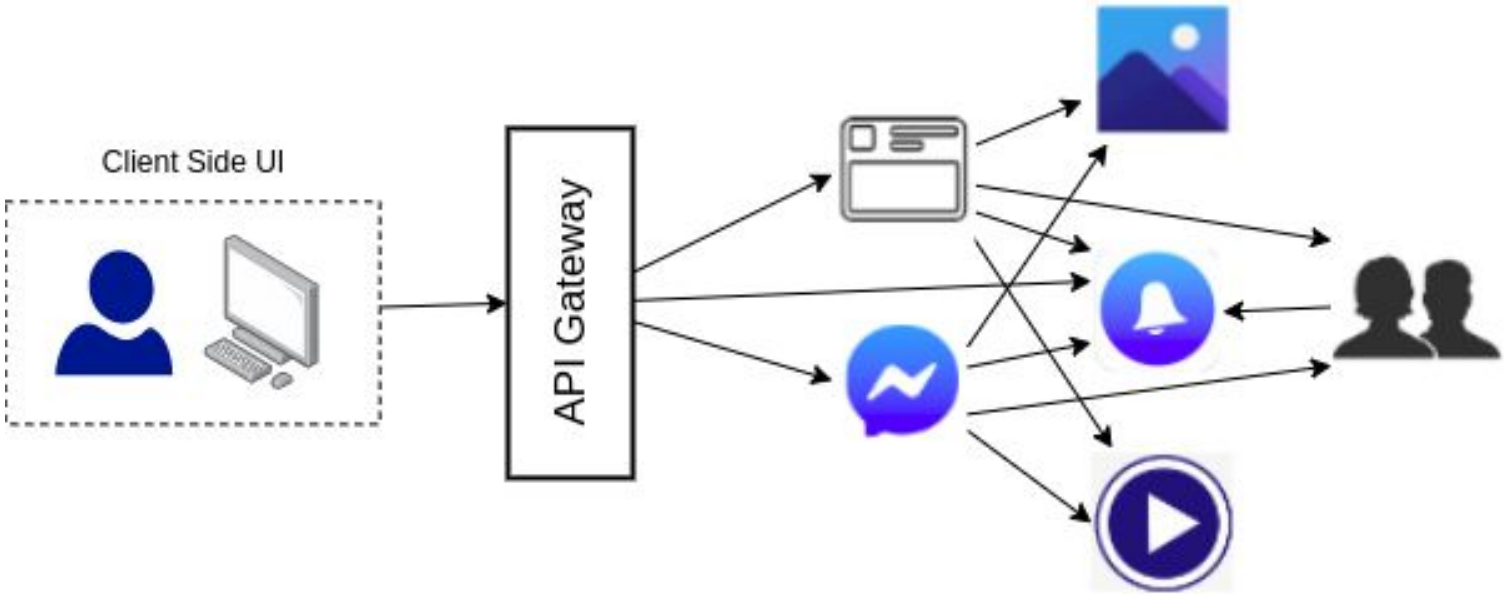
Microservices are basically an architecture where a **monolithic application is decomposed** into **small applications** which are packaged and **deployed independently**



Monolithic Facebook

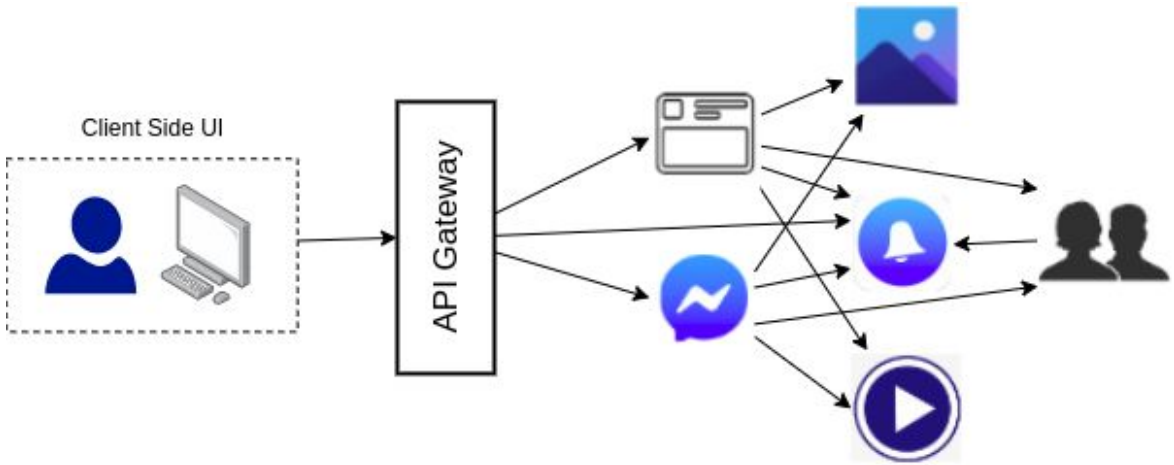


Microservices of Facebook



Advantages of Microservice

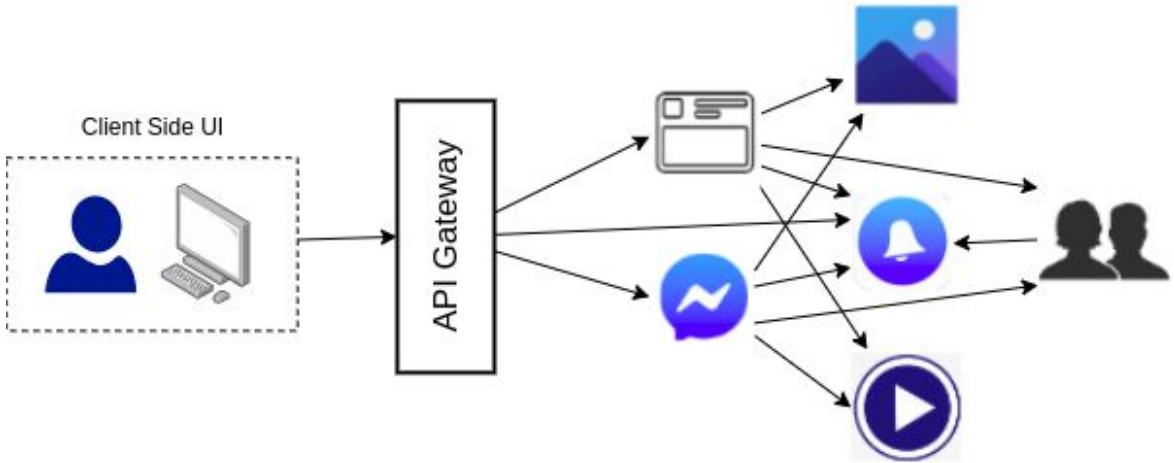
1. Independent development
2. Independent deployment
3. Fault isolation
4. Mixed technology stack
5. Granular scaling



Companies Using Microservices

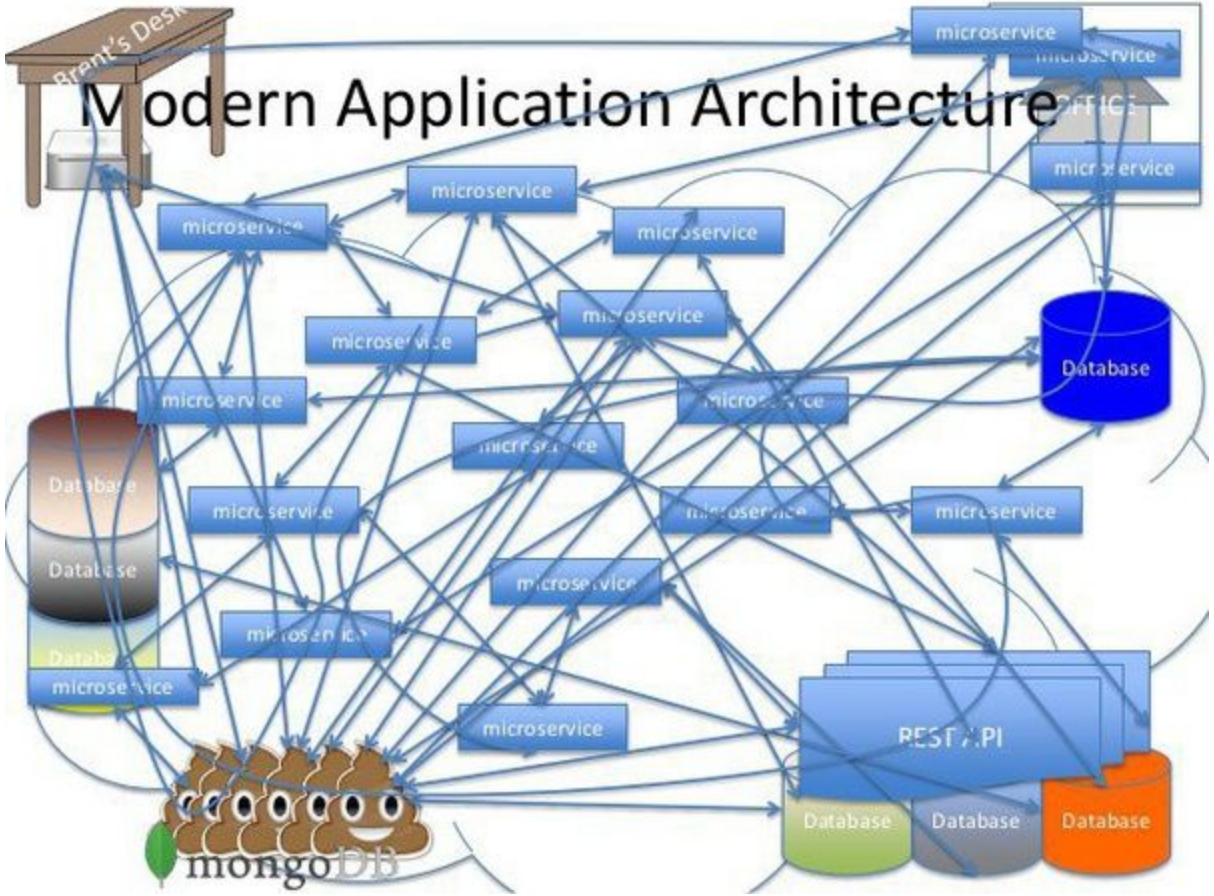
Microservice Architecture - Best Practices

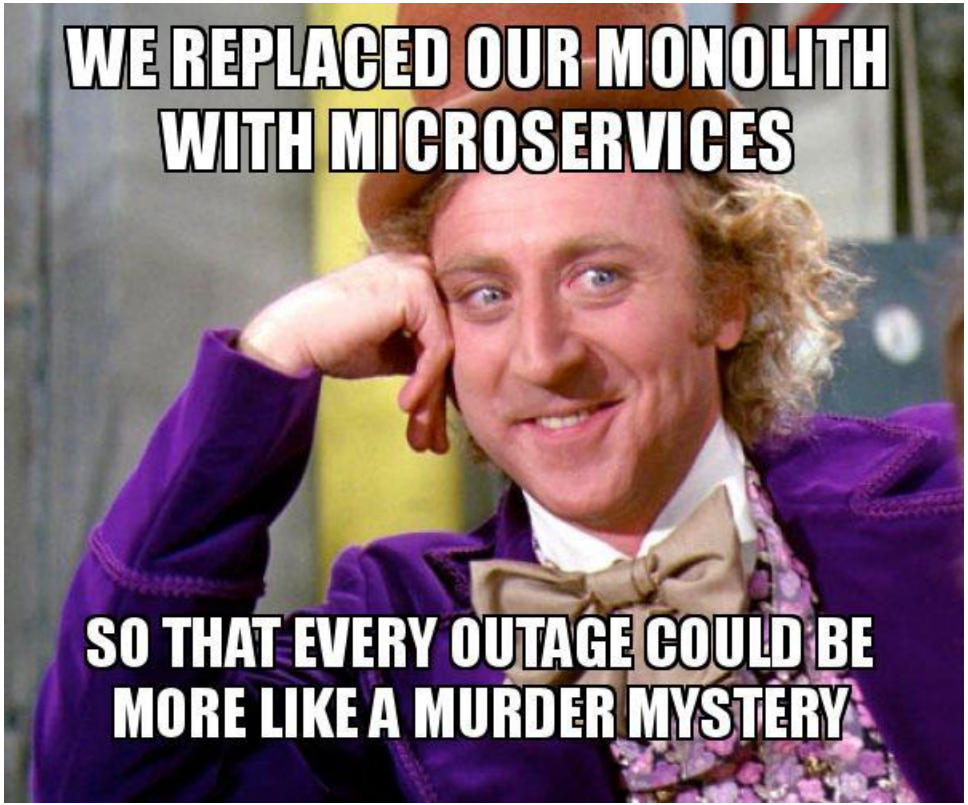
1. Separate data store for each microservice
2. Keep code at a similar level of maturity
3. Separate build for each microservice
4. Deploy in containers
5. Treat servers as stateless



Problems with Microservices

Modern Application Architecture

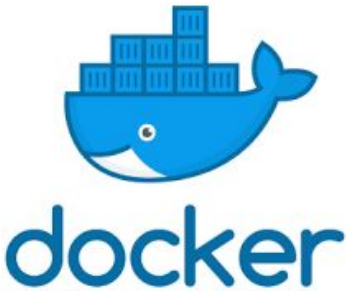


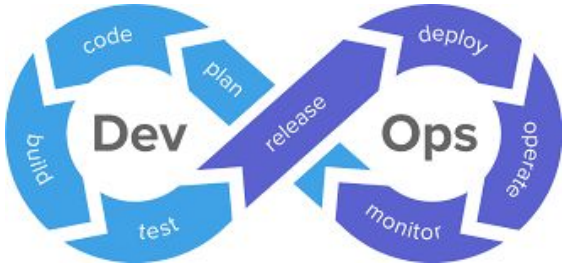

WE REPLACED OUR MONOLITH
WITH MICROSERVICES
SO THAT EVERY OUTAGE COULD BE
MORE LIKE A MURDER MYSTERY


DEVELOPER
MICROSERVICES
MONOLITHIC

What Comes Next?

1. Containerization - Docker
2. Orchestration - Kubernetes -
3. Automation - Devops
4. CQRS pattern





Q/A