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MICROSERVICES

ASHISH GUPTA

1. Why Microservices
2. What is Microservices Architecture
3. Features of Microservice Architecture
4. Advantages
5. Real World Companies using this.

Why we need Microservices ?

Before Microservices \longrightarrow Monolithic Architecture

Monolithic Arch is like whole software is composed in single piece.

\longrightarrow All programs are interconnected and interdependent in monolithic architecture.

\longrightarrow It's a tightly coupled Architecture.

* Major cons of Monolithic Architecture are :

- Difficult to understand and modify the large and complex applications.
- Development will be slowed down over time.
- Quality of code degrades overtime.
- BLOCKS CONTINUOUS DEVELOPMENT :
 - \longrightarrow To deploy small change, you will have to deploy whole application which interrupt the services.

- Unscalable : different services might require different resources and capacity.

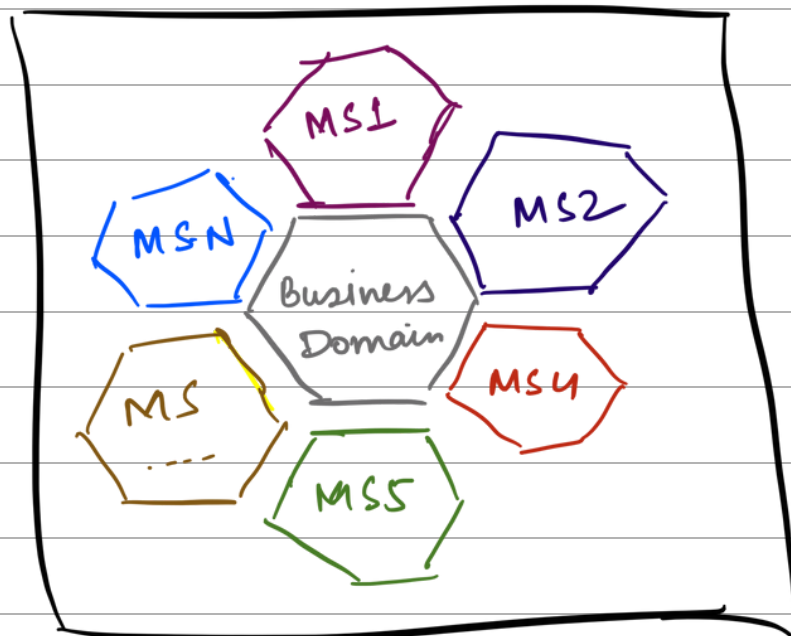
but since its one app, so scaling will be done for all services.

- Unreliable : If any one thing failed whole app will fail, it makes highly unstable.

- Inflexible : Can't adapt new tech and framework easily.

What is Microservice Architecture ?

Microservices / Microservice Arch is an architectural style that structures application as a collection of small autonomous services modelled around a Business Domain.

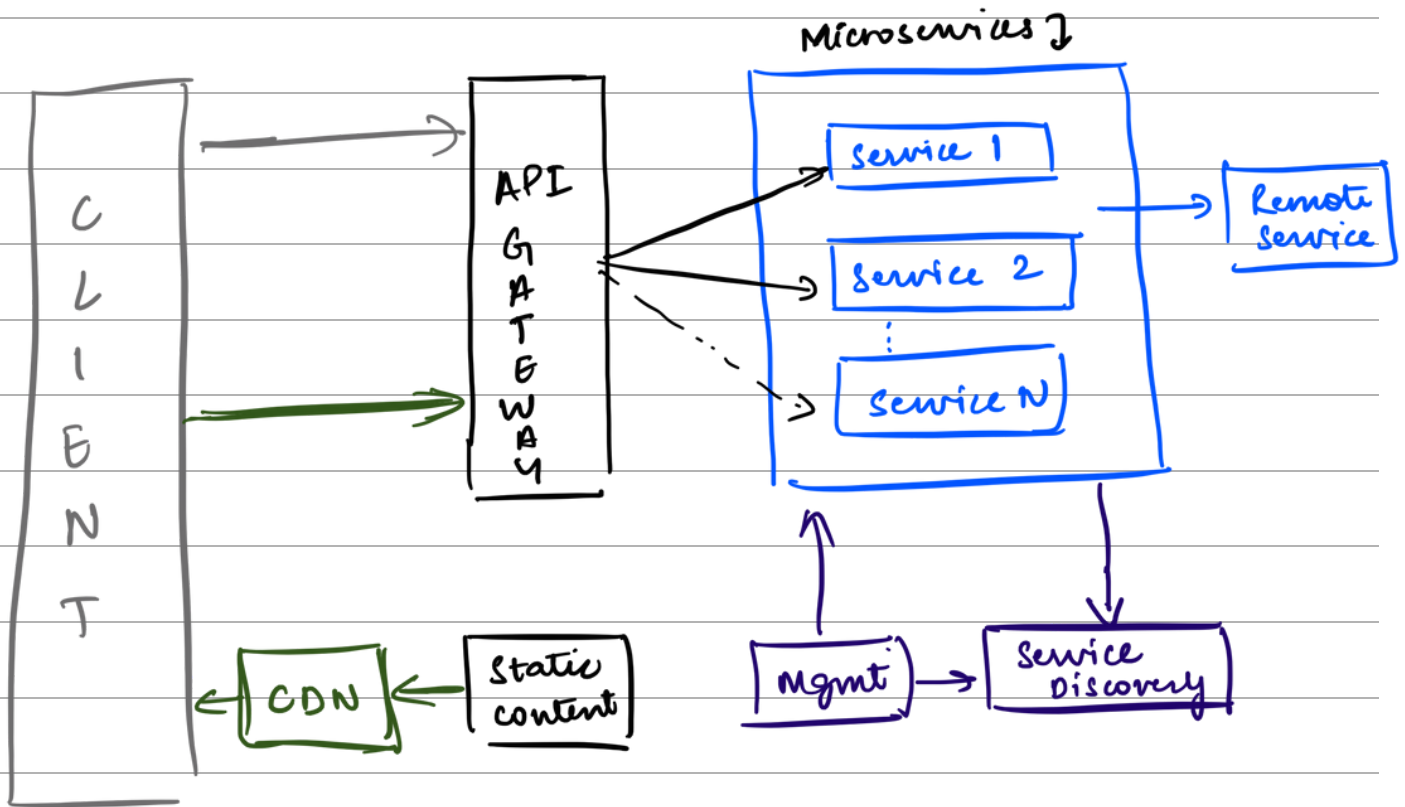


* Each Service is Self contained and implements a Single Business Capability.

* Communication b/w each microservice is Stateless communication.

Architecture

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- * Each Service is responsible for persistence of its own data.
- * Implementation is hidden from other services.
- * Tech stack can be different for different services.

* FEATURES of Microservices Architecture:

1. Small Focused :

2. Loosely Coupled

3. Language Neutral

4. Bounded Context

↳ No need of understanding the implementation of other microservice by one microservice.

ADVANTAGES

* Independent Deployment & Development

* Mixed Tech Stack

* Fault Isolation → One service goes down whole app will not.

* Granular Scaling.

* Companies Using Microservices

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