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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 → Monolithic Architecture

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

- ↳ All programs are interconnected and interdependent in monolithic architecture.
- ↳ Is a tightly coupled Architecture.

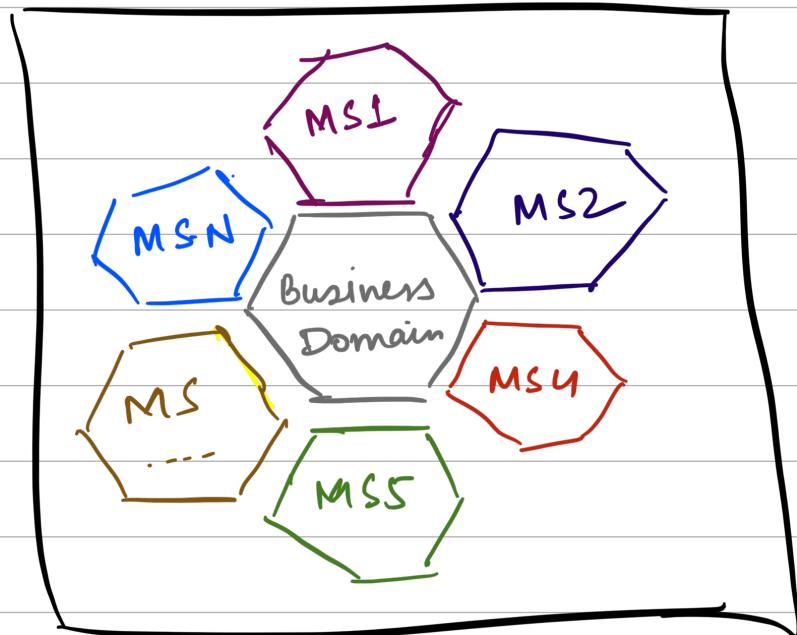
* Major cons of Monolithic Architecture are :

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

- 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 .

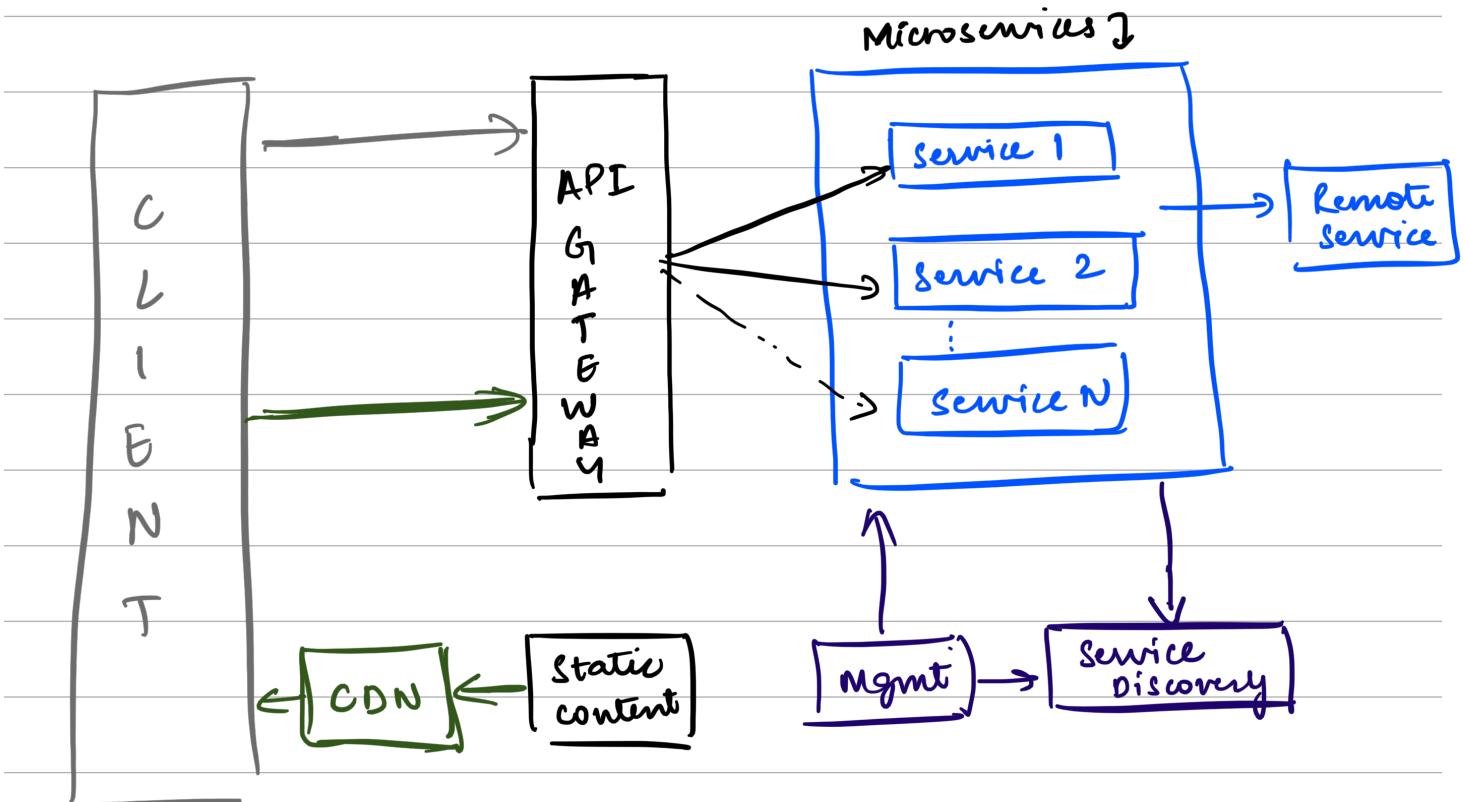
What is Microservice Architecture ?

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



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