Micro Services

Microservice architecture is an architectural style that structures an application as a collection of loosely coupled services, which implement business capabilities.

Each service will have it’s own database and its own server. When a client send a request it will first reach the api gateway and from the gateway the request is send to the service discovery. The service discovery have all the ip addresses of the service and according to the need of the user the request will be directed to the correct the service.

The main advantages of using microservice is :

Scalability: Services can be scaled independently, allowing for more efficient use of resources.

Resilience: Faults in one service do not impact others, improving overall system robustness.

Technological Agility: Allows the adoption of new technologies and processes without overhauling the entire system.

As opposed to monolith architecture which stores all application in one server, when a failure happen to one service it wont affect the other services.

Some of the challenges of microservice include:

Complexity: Increased operational and management complexity.

Data Integrity: Ensuring data consistency across services can be challenging.

Network Issues: Dependency on network latency and load balancing.

Skill Set: Requires a broad set of skills from development teams, including DevOps capabilities.