**API GATEWAY**

Dis-Advantages

* With out using api gateway.It is user to hardcoded url binding
* Need to change correlation id we need to work on all applications.
* Authenticatio and authorization.

Advantages:

First thing client call the api gateway. That api gateway server redirects the respective servers.

For redirection we use the service called **service Discovery**

In the service discovery we have what are the **ports and host** we have registered in the service.

And it is also called as service registry.

The register servers are cosider here as clients.

**Static and dynamic routing** can be achievable.

Metrics can be acheivable.(limitation of api request.)

**Common api gateways available in market.**

Spring cloud zuul - netflix (open source)

Apigee Api management –google product.

Aws api gateway -amazon

Azure api gateway -microsoft

**Features.**

authentication/autherization.

Routing.

Adapter.

Provide response form the api gateway level (if the one of the server having the static webpage that will be stored in the api gate way server.)

cache.(unnerssary to call the server we can able to set the threshold time).

In router we can able to diffre the separate the mobile and web level classification.

**LoadBalancer**

Load balancer will manage the traffic of the api services.

It will promise to taking the replication of the respective server.

This is the important concept in the API gateway.

That request decision taking mechanism is called round-rabin method.

In that replication server we can able to set the threshold percentage how many request will be send to the replication server, (realworld example if the new feature is deployed in the sever we set the threshold percentage of request will be send to the new feature that is called lazy deployment ).

**Protocal Adapterfeature.**

**Need to learn**

**Other features.**

Monitoring,logs,dashboard,charts

What are the different types of APIs supported by Amazon API Gateway?

Mainly supports tho types.

Restful Apis.

Websocket.

How does caching work in Amazon API Gateway, and why is it beneficial?

Amazon API Gateway provides built-in caching capabilities to improve the performance and reduce latency of APIs by caching responses from backend endpoints. When caching is enabled for a method in API Gateway, it stores the response to a particular request for a configurable time period. Subsequent requests with the same parameters can then be served directly from the cache, bypassing the backend, thereby reducing the load on backend systems and improving response times for clients. Caching is particularly beneficial for APIs with static or infrequently changing data, helping to enhance scalability and cost-effectiveness.