**Microservices :**

* API Gateway :

It is single entry point for microservices which are then aggregate as single Microservice.

API Gateway(Controller)

ArchiveService

SourcingStatusService

* Load Balancer :

Load balancing is the process of distributing traffic among different instance of same application.

**Spring Boot Security :**

1. Spring Boot Security secure web application by default and further we can customize as per need.
2. We just need to add the spring boot start security dependency in application.

* **Important Terms** :

1. Authentication :

It checks the identity of the user.

Verify the user.

1. Authorization :

Authorized user to perform the actions in the application.

1. Filter :

It performs the actions preprocessor and postprocessor.

* **How Spring Security Works** :

Authentication Provider

Authentication Manager

authenticate(Authentication auth)

Authentication Provider

|  |
| --- |
| **request** |

Provider Manager

Authentication Provider

Authentication Provider

UserDetailsService

FILTER

(Authentication)

true

set the authentication to securityContext

1. Request will received by **Filter** (basic Authentication Filter) it intercept request.Filter creates the **Authentication** object and send that object to **Authentication Manager**.
2. Authentication Manager calls **authenticate**(Authentocation auth ) method for validate the Authentication object.
3. Authentication Manager calls **Authentication Provider** and Authentications Provider checks the provider which we are going to use is suitable for our authentication mechanism .
4. If it is suitable for our authentication mechanism then it will send that object to **UserDetailsService**.
5. UserDetailsService calls **loadUserbyUserName** which loads data from database.
6. If authentication done then **Authentication Provider** send valid authentication Object to Provider Manager then it will goes to filter and request gets proceed further.

* **Authentication Types :**

1. *Basic Authentication (Basic Auth) :*

**Server**

**Client**

GET Request

401 UnAuthorized

GET Request(Base 64 Username Password)

200 OK

* HTTPS Recommonded
* Cannot logout

1. *Form Based Authetication*

Server

Client

POST Username Password

OK Validate cred

COOKIE SESSIONID

ANY REQUEST WITH SESSIONID

Validate SID

200 OK

* Username and Password
* Standard in most website
* Forms (Full Control)
* Can logout
* HTTPS Recommended