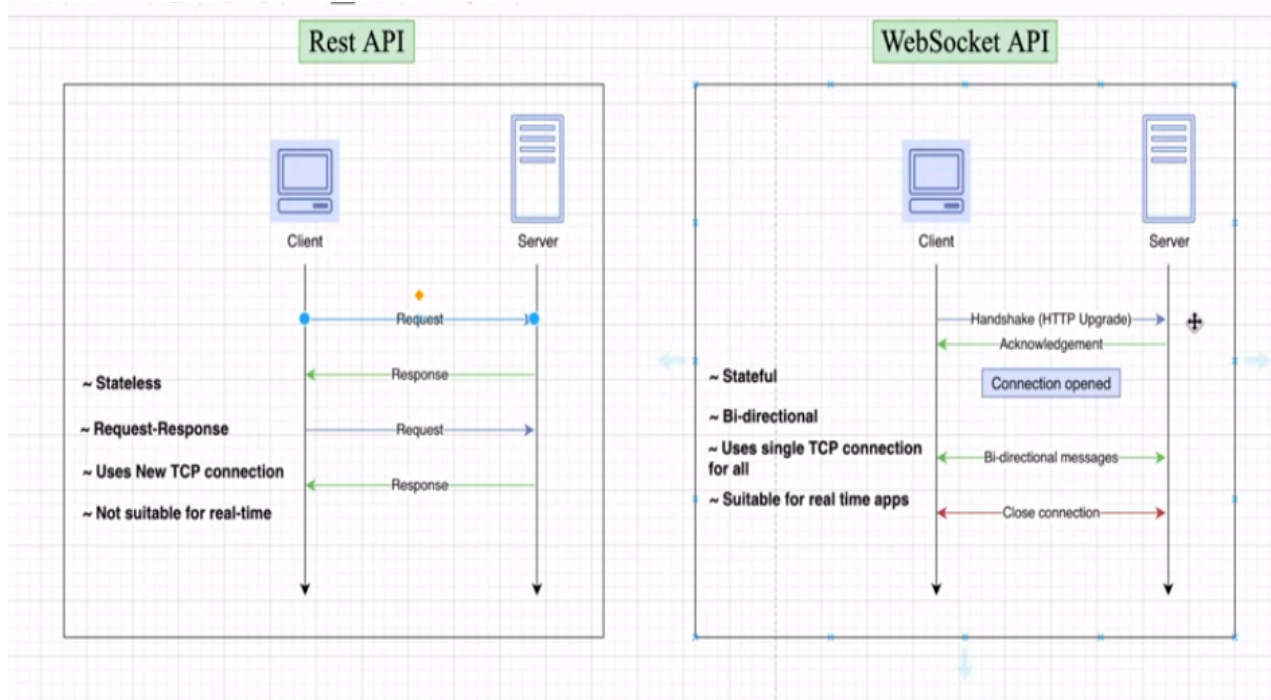


## Why we are using websocket APIs in chat APPs:

We need an *open connection*, **Bidirectional**, *event-driven* actions between client browser and server, that will bring us great performance.

Server can initiate post responses to client anytime, as opposite to http based APIs

But If i use http api which is a “*Request/response API*” each time client send message, it uses new tcp connection, for the same connection-id



[Refer](https://www.youtube.com/watch?v=PYQTFS-sgAk&list=PL5KTLzN85O4J7WKgPUhN6J2EG8rkIcC74)

<https://www.youtube.com/watch?v=PYQTFS-sgAk&list=PL5KTLzN85O4J7WKgPUhN6J2EG8rkIcC74>

## API gateway:

<https://www.youtube.com/watch?v=PYQTFS-sgAk&list=PL5KTLzN85O4J7WKgPUhN6J2EG8rkIcC74>

is a secure scalable aws service that handles the APIs to the backend based on route expressions configured on it.

An API gateway is an API management tool that sits between a client and a collection of backend services. An API gateway acts as a reverse proxy to accept all application

programming interface (API) calls, aggregate the various services required to fulfill them, and return the appropriate result.

API gateway may have different backends, such as lambda function, ec2, https endpoints

### Types:

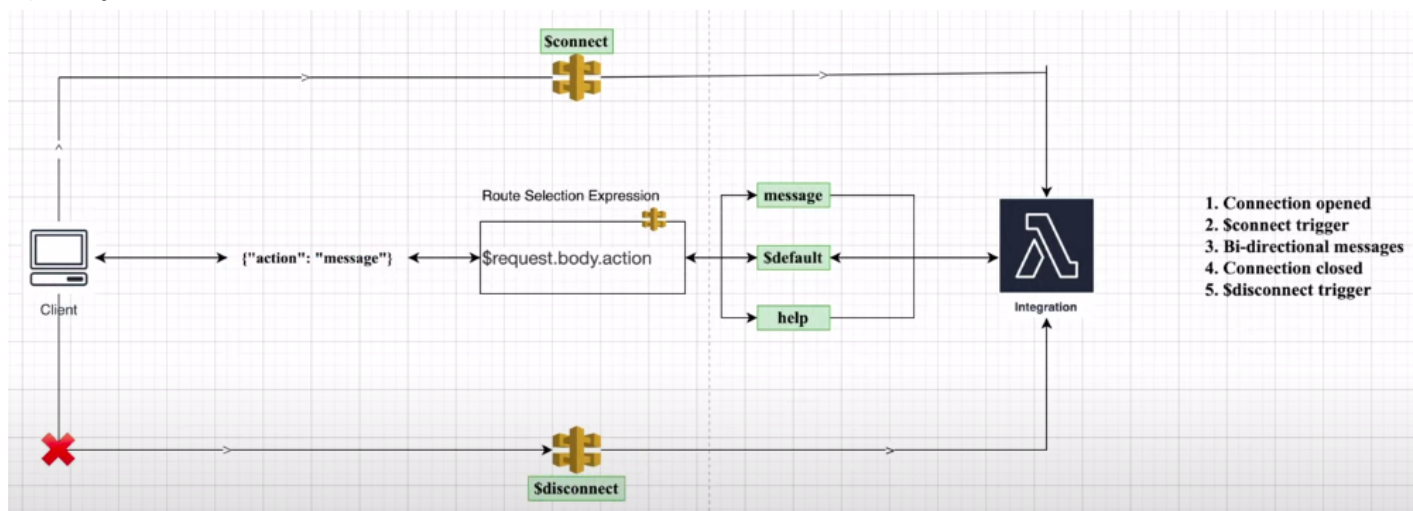
Websocket

Http

Others

### Routes:

Specify what the route should be taken to invoke the backend



### Components:

- **connection opened**: upon connection established between user and server, this \$connect route is finished, then
- **Bi-directional messages**: after opening the connection, the role of custom routes comes to play
- **default route**: when there are no custom routes that match the request, \$default route comes to play.
- **connection closed**: when you want to close the connection, this route comes to play \$disconnect.

-> \$connect and \$disconnect route is not mandatory to be added