



INTRODUCTION

IoT Communication APIs are used to communicate between the server and system in IoT.

TYPES OF IOT COMMUNICATION MODEL

There are two different types of IoT Communication API, they are

- REST based Communication API
- Web Socket based Communication API

REST BASED COMMUNICATION API

Representational state Transfer (REST) API uses a set of architectural principles that used to design web services. These APIs focus on the systems' resources that how resource states are transferred using the request-response communication model. This API uses some architectural constraints.

Client-server

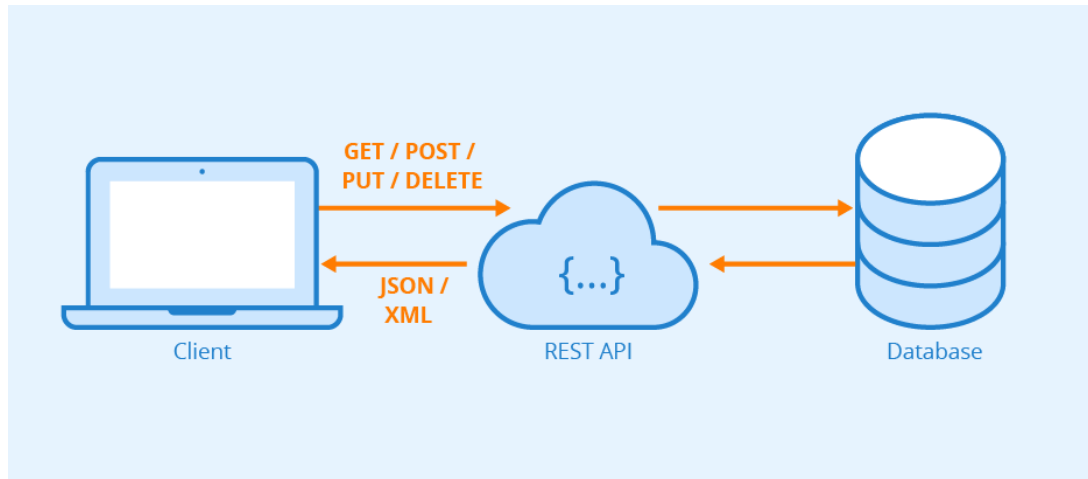
Here the client is not aware of the storage of data because it is concerned about the server and similarly the server should not be concerned about the user interface because it is a concern of the client and this separation is needed for independent development and updating of server and client. No matter how the client is using the response of the server and no matter how the server is using the request of the client.

Stateless

It means each request from the client to the server must contain all the necessary information to understand by the server. Because if the server can't understand the request of the client then it can't fetch the request data in a proper manner.

Cacheable

In response, if the cache constraints are given then a client can reuse that response in a later request. It improves the efficiency and scalability of the system without loading the extra data. A RESTful web APIs is implemented using HTTP and REST principles.



WEBSOCKET BASED COMMUNICATION API

This type of API allows bi-directional full-duplex communication between server and client using the exclusive pair communication model. This API uses full-duplex communication so it does not require a new connection setup every time when it requests new data. Web Socket API begins with a connection setup between the server and client and if the Web Socket is supported by the server then it responds back to the client with the successful response and after setup of a connection server and client can send data to each other in full-duplex mode.

This type of API reduces the traffic and latency of data and makes sure that each time when we request new data it cannot terminate the request.

