

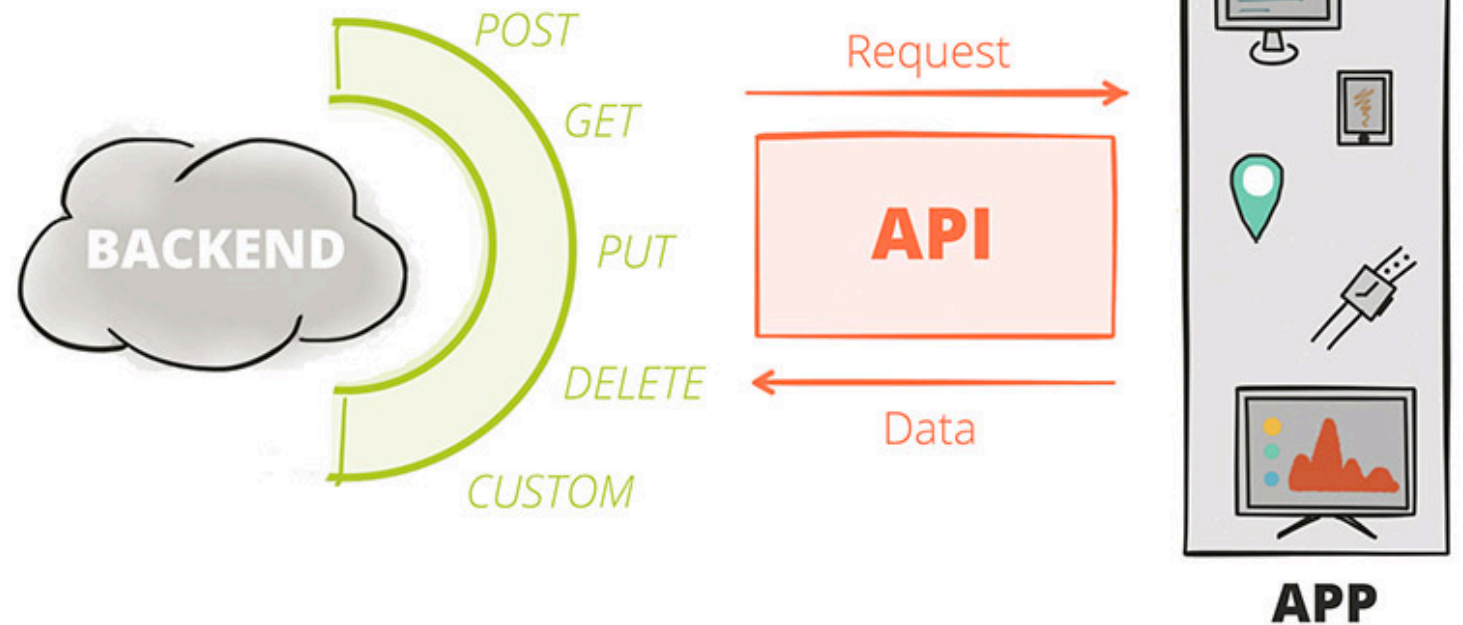
# Google API Gateway

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- Sachin Choube

# What is API?

- API stands for “Application Programming Interface”. It is a set of defined rules that enable different applications to communicate with each other. APIs act as an intermediary layer that processes data transfers between systems, letting companies open their application data and functionality to external third-party developers, business partners, and other organizations<sup>12</sup>



# What is OpenAPI ?

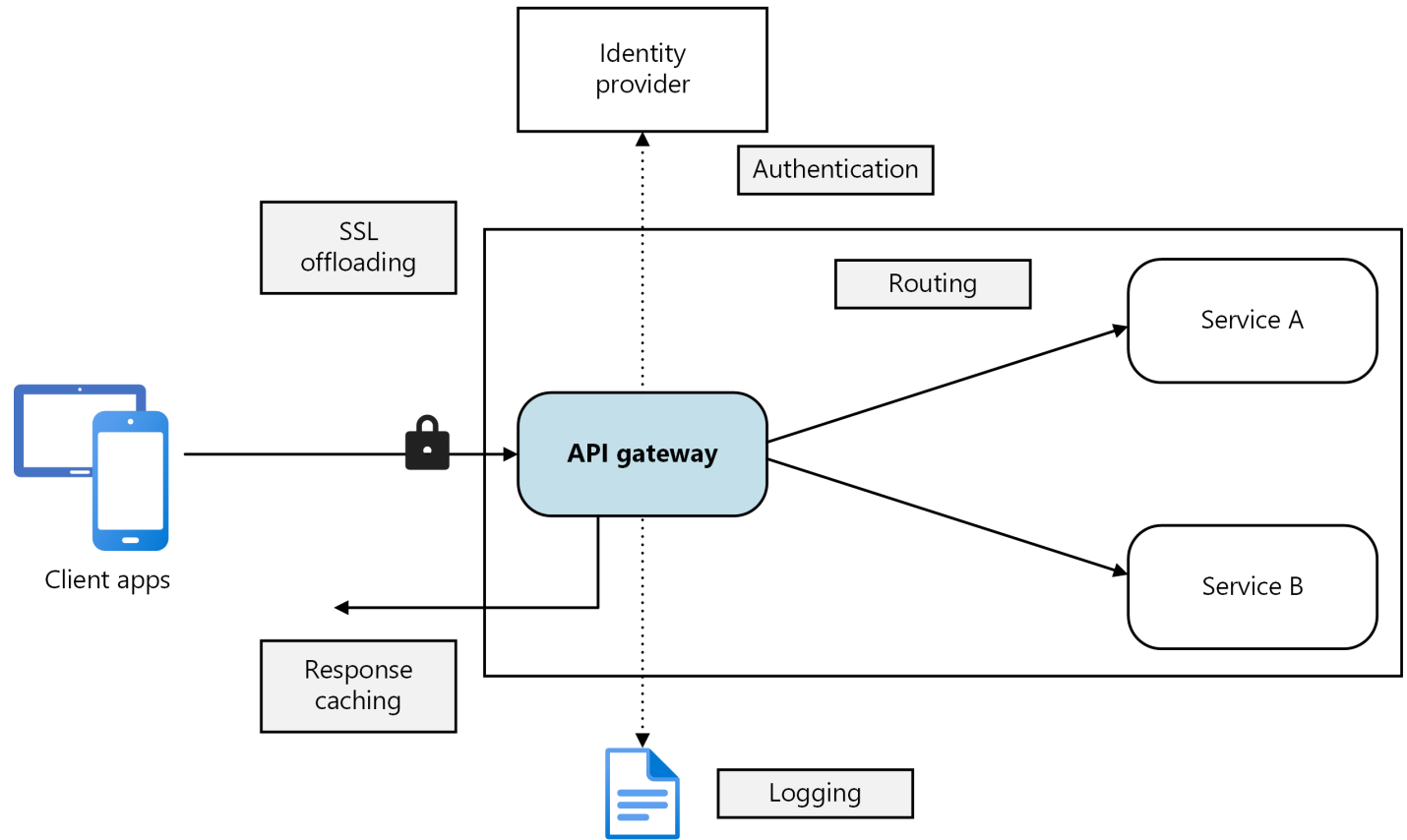
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- OpenAPI is a standard for describing computing interfaces known as APIs (Application Programming Interfaces). The OpenAPI Specification defines an open, vendor-neutral description format for API services.

```
1 openapi: 3.0.3
2 info:
3   title: K8Sug Session
4   description: |-
5     This is a sample K8Sug Singapore Demo
6   termsOfService: https://tos.k8sug.com
7   contact:
8     email: info@k8sug.com
9   license:
10    name: K8sug
11    url: http://www.k8sug.org/licenses/LICENSE-2.0.html
12   version: 1.0.11
13 externalDocs:
14   description: Find out more about Swagger
15   url: http://swagger.io
16 servers:
17 - url: https://qa.example.com
18   description: QA
19 - url: https://prod.example.com
20   description: Prod
21 tags:
22 - name: pet
23   description: Everything about your Pets
24   externalDocs:
25     description: Find out more
26     url: http://swagger.io
27 - name: store
28   description: Access to Petstore orders
29   externalDocs:
30     description: Find out more about our store
31     url: http://swagger.io
32 - name: user
33   description: Operations about user
34 paths:
35   /v1/beer :
36     get:
37       responses:
38         '200' :
39           'description': This is for Testing
40           content:
41             application/json:
42               schema:
43                 maxItems: 100
44                 minItems: 1
45                 type: array
```

# What is API Gateway?

- An API gateway sits between clients and services. It acts as a reverse proxy, routing requests from clients to services. It may also perform various cross-cutting tasks such as authentication, SSL termination, and rate limiting. If you don't deploy a gateway, clients must send requests directly to front-end services.



# Google API Deployment Options



1

## API Gateway

Fully managed service  
tailormade to package  
serverless functions as  
RESTful APIs

2

## Cloud Endpoints

Customer managed  
service with extensible  
service proxy to run  
tactical use cases

3

## Apigee API Management

Comprehensive solution  
to build, manage, and  
secure APIs—for any use  
case, environment, or  
scale

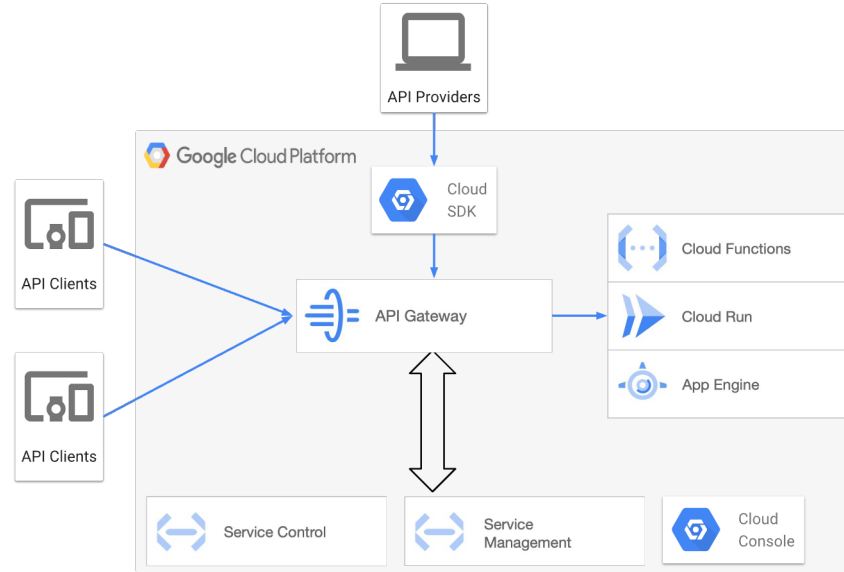
# Google API Gateway Components

## Service Control API

- [Service Control API](#) applies API management rules at runtimes, such as API key authentication, monitoring, and logging. Service Control provides the following methods:

## Service Management API

- use the [OpenAPI specification](#) to define your API. You then use the gcloud CLI to upload the OpenAPI spec to Service Management, which creates the API config. Other configuration-related tasks also happen here, such as sharing your API with other developers, enabling or disabling the API in different projects, and generating API keys



# Google API Gateways Architecture

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DEMO



END

