

Google Cloud Computing Foundation Course
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Lecture-38
Cloud Endpoints

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Cloud Endpoints features



Protection

- Generate and share API keys.
- Validate calls with JSON Web Tokens.
- Identify app users with Auth0 and Firebase Auth.



In this topic you explore cloud endpoints a way to develop deploy and manage api's on any Google cloud back-end. Cloud endpoint is a distributed API management system with cloud endpoints you can control who has access to your API. You can generate API keys in the GCP console and validate on every API call and share your api with other developers to allow them to generate their own keys. You can also validate calls with JSON web tokens.

The integration with oz0 and firebase authentication allows you to identify the users of your web or mobile application.

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Cloud Endpoints features



Speed

- ESP provides security and insight < 1ms.
- Automatic API deployment.



The extensible service proxy delivers security and insight in less than one millisecond per call. You can deploy your api automatically with App Engine and Google kubernetes engine or add Google's proxy container to your kubernetes deployment.

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Cloud Endpoints features



Monitoring and logging


- Inspect performance with Stackdriver Trace.
- Real-time log management with Stackdriver Logging.
- Analysis with BigQuery.



You can monitor critical operations metrics in the GCP console such as error rates and latency and gain insights into your users and usage with stack driver trace and stack driver logging. You can use BigQuery to perform further analysis.


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Cloud Endpoints features



Integration

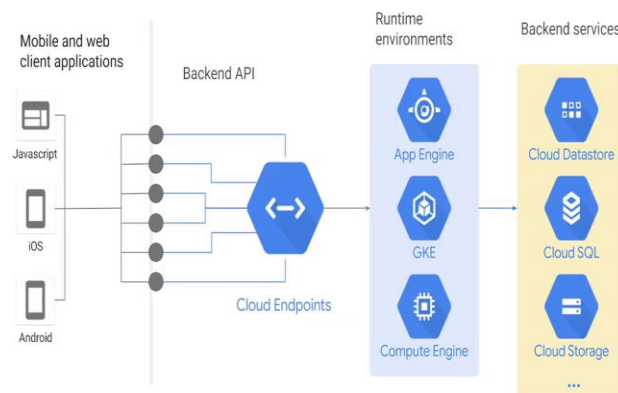
- Choose your own framework and language.
- Upload an OpenAPI specification and deploy Google's containerized proxy.



You can get started quickly by using your favorite API framework and language or choose our open source Cloud endpoints frameworks in Java or Python. You can also simply upload an open API specification and deploy our containerized proxy.

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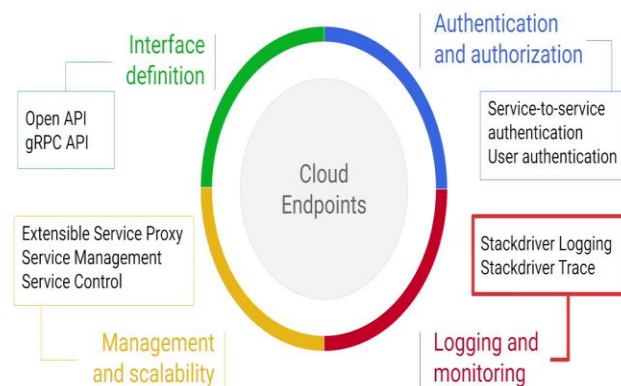
Where Cloud Endpoints fit



Cloud endpoints supports applications running in GCPs compute platforms in your choice of language and your choice of client technologies. It allows you to establish a standardized API for mobile or web client applications to enable them to connect to and use a back-end application on App Engine. It also provides the mobile or web application access to the full resources of App Engine.

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Cloud Endpoints helps to deploy and manage APIs



In the previous topic we discuss how it can be difficult to deploy and manage api's on your own. This graphic summarizes how Cloud endpoint provides the infrastructure support needed to deploy and manage robust, secure and scalable api's. Cloud endpoint supports the open API specification and GRPC API specification. Cloud endpoint also supports service to service authentication and user authentication with firebase auth0 and Google authentication. The extensible service proxy service management and service control together validate requests log data and handle high volumes of traffic.

Logging and trace allow you to view detailed logs trace lists and metrics related to traffic volume latency, size of requests and responses and errors.