Serverless

# Concepts - AWS

## Functions

A serverless function in AWS is called an AWS lambda function. A function is an independent unit of code, stateless, and performs one job.

## Event (Trigger)

Anything that triggers a function is regarded as an event. Common events are:

* Endpoint request - API Gateway
* AWS S3 bucket upload
* CloudWatch timer

## Resources

Components which the functions use and store state in, such as:

* AWS DynamoDB table
* AWS S3 bucket
* SNS topic

## Service

Service is the frameworks unit of organisation. Similar to a project file, however there can be multiple services for a single application. Services are described in a YAML or JSON file and are commonly called serverless.yml and look like:

service: users

functions: # Your "Functions"

usersCreate:

events: # The "Events" that trigger this function

- http: post users/create

usersDelete:

events:

- http: delete users/delete

resources: # The "Resources" your "Functions" use. Raw AWS CloudFormation goes in here.

# API - Gateway

API Gateway is an AWS service for creating HTTP and WebSocket APIs at scale.

## Architecture

API Gateway acts as the front door, accepting and proxying requests to different AWS services.


                API Gateway architecture diagram
            

API Gateways can be created directly in AWS console, through the AWS SDK, or indirectly using the serverless framework.