

# Overview of AWS StepFunction

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Rashi Chauhan

- LinkedIn :- [linkedin.com/in/12rashic](https://linkedin.com/in/12rashic)
- Instagram :- [12rc--](https://www.instagram.com/12rc--/)

# Aws Step Functions



1 What are Step Functions

Step functions offered by Aws is a Serverless service, that provides visual workflow helping developers to automate process and create pipelines in ML.



2 What are components of Step function.

There are mainly 3 components

- 1) State Machine
- 2) state
- 3) Task state

## State Machine

A Computational device that can actually store various status values and update them based on Inputs.

State Machine is built in step function with JSON file

## State

State is a step in your workflow, where each state can:

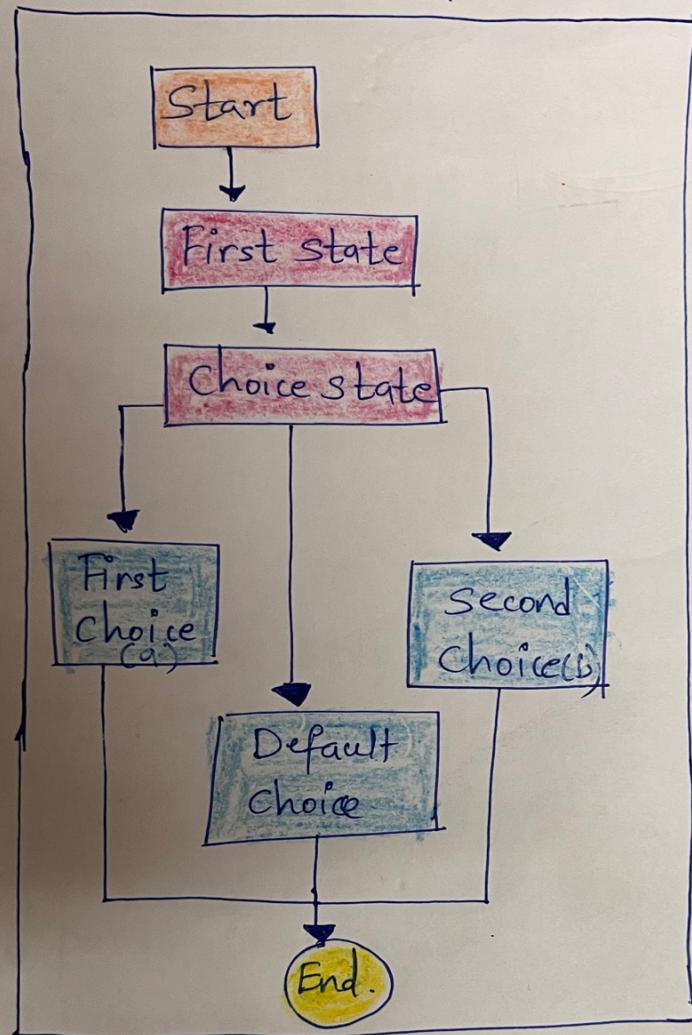
- Choose between different paths
- Stop the process workflow
- pause the workflow
- Repeat execution

## Task state

Task state is used to complete a single unit of work.

## Representation of Step Function

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Step Functions can be triggered by which Services

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- API Gateway
- cloudwatch Events
- S3 Events

- Use Cases where Step Functions are used

Step Functions are widely used in the Engineering domain where we've to design workflows, in businesses. Every step in workflow has some value & can invoke a "Lambda function" which can further update into some D/B or by using any message streaming update on completion of workflow.

Which workflow should be used when.

- Aws Step Functions have 2 WFs.
  - Standard
  - Express

**Standard** :- These are used mostly when processes are tend to run longer ( $>5\text{ min}$ ) for single execution. Also when human

is required / response from one state acts as I/p to next this is used.

**Express Workflows** :- Usually the workflow taking less than 5 min ( $>5$ ) with high volume execution.

At times Standard & Express could be combined to yield better results.

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Why would you choose AWS Step Function over other services

- **Visualization factor** :- Visualization makes process understanding better for complex Business Logic

- Built in Error Handling
- High Availability & Fault Tolerance
- Security
- Pay per Use.