AWS SAM CLI

Serverless on AWS

CONCEPTS

A SAM template is CloudFormation with shorthand resources (AWS::Serverless::Function). sam build prepares code, sam deploy hands the template to CloudFormation.

template.yaml SAM template
↓ sam build
.aws-sam/build built artifacts
↓ sam deploy
CloudFormation change set
↓ creates
Lambda, API, ... per stack

sam deploy --guided writes samconfig.toml; later runs of sam deploy need no flags.

PROJECT

sam init
Create a project interactively

sam validate
Check the template is valid

BUILD

sam build
Build all functions and layers

sam build --use-container
Build in a Lambda-like container

sam build --cached --parallel
Reuse unchanged builds, build in parallel

LOCAL TESTING

sam local invoke
Run the only function once

sam local invoke *<FunctionId>* **--event** *<file>*
Run a function with an event file

sam local invoke --env-vars *<file>*
Set environment variables from JSON or .env

sam local start-api
Serve the API on localhost:3000

sam local generate-event *<service> <event>*
Print a sample event

DEPLOY

sam deploy --guided
Answer prompts, save samconfig.toml

sam deploy
Deploy using saved config

sam deploy --stack-name *<name>* **--resolve-s3 --capabilities CAPABILITY_IAM**
Deploy with no prompts

sam deploy --no-confirm-changeset
Skip the changeset prompt

sam deploy --parameter-overrides ParameterKey=*<k>***,ParameterValue=***<v>*
Set a template parameter

sam deploy --config-env *<env>*
Use a named samconfig.toml section

sam deploy --profile *<profile>* **--region** *<region>*
Pick credentials and region

SYNC & REMOTE

sam sync --stack-name *<name>* **--watch**
Auto-sync code and infra changes

sam remote invoke *<FunctionId>* **--stack-name** *<name>*
Invoke the deployed function

sam remote invoke *<FunctionId>* **--stack-name** *<name>* **--event '***<json>***'**
Send an inline event

LOGS & TRACES

sam logs --stack-name *<name>*
Fetch recent logs for the stack

sam logs --stack-name *<name>* **--tail**
Follow logs live

sam logs -n *<FunctionId>* **--stack-name** *<name>*
Logs for one function

CONFIG & CLEANUP

sam delete
Delete the stack (prompts)

sam *<command>* **--help**
Show a command's options