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