AWS CDK Testing – 1. Fine-grained assertions Tests

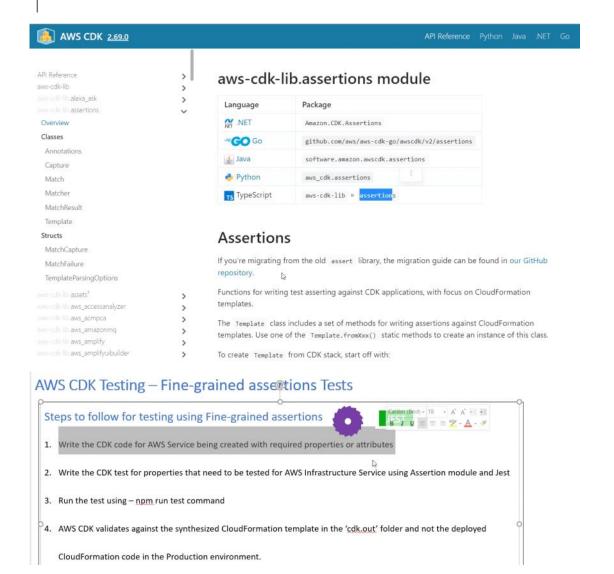
There are two categories of tests that you can write for AWS CDK apps.

Fine-grained assertions





- AWS CDK apps uses the AWS CDK's assertions module and test frameworks like Jest for TypeScript
- Test specific aspects of the generated AWS CloudFormation template this property with this value
- Detect regressions.
- Test-driven development- write a test first, then make it pass by writing a correct implementation
- Most frequently used tests.



AWS CDK Testing – 2. Snapshot Tests

Snapshot Tests



- Test the synthesized AWS CloudFormation template against a previously stored baseline template.
- · Snapshot tests let you refactor freely
- If the changes are intentional, you can accept a new baseline for future tests.



Steps to follow for testing using Snapshot Test



JEST

- 1. Write the CDK code for AWS Service being created with required properties or attributes
- Write the CDK test and define the baseline/master CloudFormation template against which the new templates will be compared.
- 3. Run the test using "npm run test" command
- 4. A baseline CloudFormation template will be generated under the "__snapshots__" folder.
- 5. When any changes are made to the CDK Code, the synthesized template will be tested against the baseline template
- 6. You can modify the template if changes are inadvertent or you can accept using "npm test -- -u" command, which will

```
rs infratestts x
section_9 > CDKsnapshottesting > infra > test > Ts infratestts > ...

import * as cdk from 'aws-cdk-lib';

import { Match, Template } from 'aws-cdk-lib/assertions';

import { DeadLetterQueue } from "../lib/snap-test";

describe("DeadLetterQueue", () => {
    test("matches the snapshot", () => {
        const stack = new cdk.Stack();
        new DeadLetterQueue(stack, "DeadLetterQueue");

const template = Template.fromStack(stack);
    expect(template.toJSON()).toMatchSnapshot();
};

};

};

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```

```
PS C:\Users\ADMIN\Desktop\AWS Publish\Udemy\AWS CDK\AWSCDK_final_03032023\Section 7\CDK Testing\CDKsnapshottesting\infra> npm run build
> infra@0.1.0 build
> tsc

PS C:\Users\ADMIN\Desktop\AWS Publish\Udemy\AWS CDK\AWSCDK_final_03032023\Section 7\CDK Testing\CDKsnapshottesting\infra> npm run test
> infra@0.1.0 test
> jest
```

```
Pass test/infra.test.ts (9.601 s)

DeadLetterQueue

/ matches the snapshot (132 ms)

/ 1 snapshot written.

Snapshot written from 1 test suite.

Test Suites: 1 passed, 1 total
Tests: 1 passed, 1 total
Tests: 1 passed, 1 total
Time: 10.017 s
```