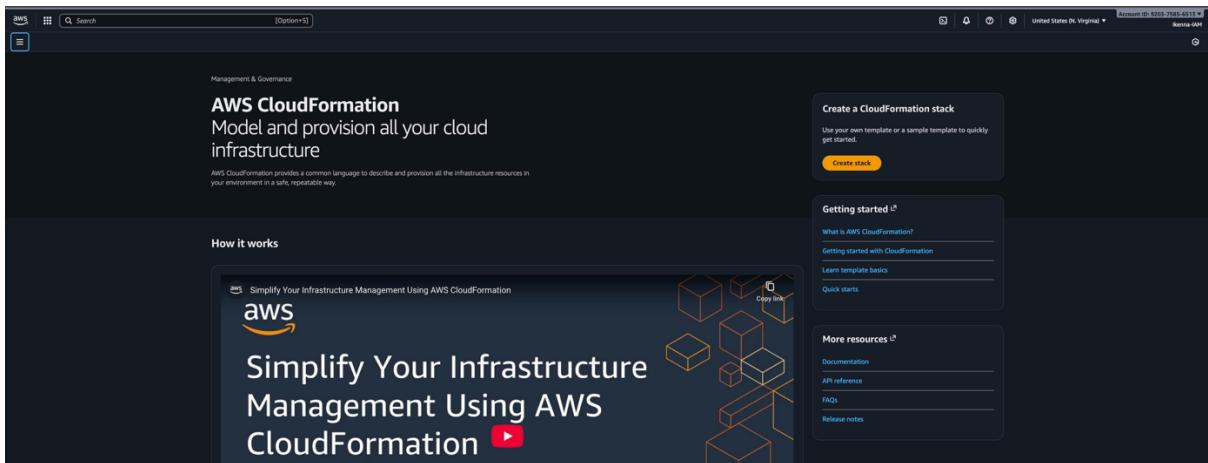
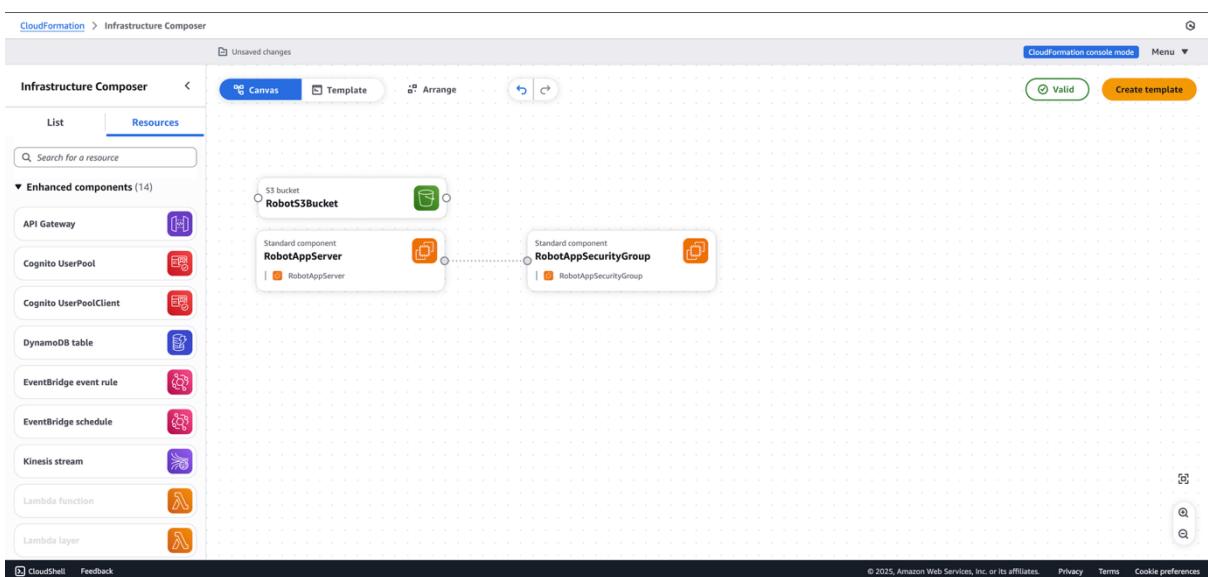


# ANASIEZE IKENNA – CLOUD ENGINEER. ROBOTICS RESEARCH (IaC)

## TASK 1 - LOG IN AND OPEN CLOUDFORMATION



## TASK 2 - CREATE A NEW STACK



## TASK 3 - CHOOSE THE TEMPLATE SOURCE

The screenshot shows the AWS CloudFormation Infrastructure Composer interface. At the top, there's a navigation bar with 'CloudFormation' and 'Infrastructure Composer'. Below it is a toolbar with tabs for 'Canvas' (selected), 'Template' (highlighted in blue), 'YAML', and 'JSON'. There are also 'Validate' and 'Create template' buttons. The main area has a 'List' tab selected and a 'Resources' tab highlighted. A search bar says 'Search for a resource'. Below that is a section titled 'Enhanced components (14)' with icons for various services like API Gateway, Cognito UserPool, DynamoDB table, etc. To the right, the 'Template' tab shows the following YAML code:

```
1 # STACK TWO
2
3 AWSTemplateFormatVersion: '2010-09-09'
4 Description: Multi-region safe EC2 + Security Group + S3 stack
5
6 Parameters:
7   DefaultVPC:
8     Type: AWS::EC2::VPC::Id
9     Description: Select the default VPC for the region
10
11 Resources:
12
13   RobotAppSecurityGroup:
14     Type: AWS::EC2::SecurityGroup
15     Properties:
16       GroupDescription: Allow SSH and HTTP access
17       VpcId: !Ref DefaultVPC
18       SecurityGroupIngress:
19         - IpProtocol: tcp
20           FromPort: 22
21           ToPort: 22
```

At the bottom, a message says 'No template validation errors'.

## TASK 4 - NAME THE STACK AND CONFIGURE STACK OPTIONS

The screenshot shows the 'Create stack' wizard in the AWS CloudFormation console. It's on Step 1: 'Create stack'. The left sidebar shows steps: Step 1 (selected), Step 2, Step 3, Step 4. The main area has a title 'Create stack' and a 'Prerequisite – Prepare template' section. It says you can create a template by scanning existing resources or building from Infrastructure Composer. A note says 'Your template was successfully imported from Infrastructure Composer.' Below is an 'Amazon S3 URL' field with a link and an 'Edit in Infrastructure Composer' button. At the bottom are 'Cancel' and 'Next' buttons.

## TASK 5 - REVIEW AND CREATE

The screenshot shows the AWS CloudFormation console with the 'RobotAppStack' stack selected. The 'Resources' tab is active, listing three resources:

Logical ID	Physical ID	Type	Status	Module
RobotAppSecurityGroup	<a href="#">RobotAppStack-RobotAppSecurityGroup-bAKSQcJvhF3S1</a>	AWS::EC2::SecurityGroup	<span>CREATE_COMPLETE</span>	-
RobotAppServer	<a href="#">i-Oce1a6987da77c52b</a>	AWS::EC2::Instance	<span>CREATE_IN_PROGRESS</span>	-
RobotS3Bucket	<a href="#">robotappstack-robots3bucket-guptsmrxb2</a>	AWS::S3::Bucket	<span>CREATE_COMPLETE</span>	-

## TASK 6 - MONITOR DEPLOYMENT

The screenshot shows the AWS CloudFormation console with the 'RobotAppStack' stack selected. The 'Events' tab is active, listing 12 events:

Operation ID	Timestamp	Logical ID	Status	Detailed status	Status reason	Hook invocations
<a href="#">bu91a1832-280e-46ee-887b-0455416625a</a>	2025-12-14 19:54:22 UTC-03:30	<a href="#">RobotAppStack</a>	<span>CREATE_COMPLETE</span>	-	-	-
<a href="#">bu91a1832-280e-46ee-887b-0455416625a</a>	2025-12-14 19:54:21 UTC-03:30	<a href="#">RobotAppServer</a>	<span>CREATE_COMPLETE</span>	-	-	-
<a href="#">bu91a1832-280e-46ee-887b-0455416625a</a>	2025-12-14 19:54:11 UTC-03:30	<a href="#">RobotS3Bucket</a>	<span>CREATE_COMPLETE</span>	-	-	-
<a href="#">bu91a1832-280e-46ee-887b-0455416625a</a>	2025-12-14 19:54:11 UTC-03:30	<a href="#">RobotAppServer</a>	<span>CREATE_IN_PROGRESS</span>	<span>CONFIGURATION_COMPLETE</span>	Eventual consistency check initiated	-
<a href="#">bu91a1832-280e-46ee-887b-0455416625a</a>	2025-12-14 19:54:09 UTC-03:30	<a href="#">RobotAppServer</a>	<span>CREATE_IN_PROGRESS</span>	-	Resource creation initiated	-
<a href="#">bu91a1832-280e-46ee-887b-0455416625a</a>	2025-12-14 19:54:06 UTC-03:30	<a href="#">RobotAppServer</a>	<span>CREATE_IN_PROGRESS</span>	-	-	-
<a href="#">bu91a1832-280e-46ee-887b-0455416625a</a>	2025-12-14 19:54:06 UTC-03:30	<a href="#">RobotAppSecurityGroup</a>	<span>CREATE_COMPLETE</span>	-	-	-
<a href="#">bu91a1832-280e-46ee-887b-0455416625a</a>	2025-12-14 19:53:59 UTC-03:30	<a href="#">RobotAppSecurityGroup</a>	<span>CREATE_IN_PROGRESS</span>	-	Resource creation initiated	-
<a href="#">bu91a1832-280e-46ee-887b-0455416625a</a>	2025-12-14 19:53:58 UTC-03:30	<a href="#">RobotS3Bucket</a>	<span>CREATE_IN_PROGRESS</span>	-	Resource creation initiated	-
<a href="#">bu91a1832-280e-46ee-887b-0455416625a</a>	2025-12-14 19:53:57 UTC-03:30	<a href="#">RobotAppSecurityGroup</a>	<span>CREATE_IN_PROGRESS</span>	-	-	-
<a href="#">bu91a1832-280e-46ee-887b-0455416625a</a>	2025-12-14 19:53:57 UTC-03:30	<a href="#">RobotS3Bucket</a>	<span>CREATE_IN_PROGRESS</span>	-	-	-
<a href="#">bu91a1832-280e-46ee-887b-0455416625a</a>	2025-12-14 19:53:55 UTC-03:30	<a href="#">RobotAppStack</a>	<span>CREATE_IN_PROGRESS</span>	-	User initiated	-

## TASK 7 - VALIDATE RESOURCES AFTER COMPLETION

The screenshot shows the AWS EC2 Instances page. On the left, there's a navigation sidebar with links for EC2, Dashboard, EC2 Global View, Events, Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Capacity Manager, Images, Elastic Block Store, Network & Security, Load Balancing, Auto Scaling, and Settings.

The main content area displays the "Instance summary for i-0ce1a6987da77c52b". Key details include:

- Public IP address:** 50.17.58.179 | Open address
- Private IP address:** 172.31.21.19 | Open address
- Private DNS name (IPv4 only):** ip-172-31-21-19.ec2.internal
- Instance state:** Running
- Instance type:** t2.micro
- VPC ID:** vpc-0235c46f450cad35
- Subnet ID:** subnet-0408aaf1e62ee431d
- Instance ARN:** arn:aws:ec2:us-east-1:154280210964:instance/i-0ce1a6987da77c52b
- Elastic IP addresses:** None
- AWS Compute Optimizer finding:** Opt-in to AWS Compute Optimizer for recommendations. Learn more
- Auto Scaling Group name:** None
- Managed:** false

Below the summary, there are tabs for Details, Status and alarms, Monitoring, Security, Networking, Storage, and Tags. Under Details, you can see information like AMI ID, AMI name, Stop protection, and Launch time. Under Networking, there are sections for Instance reboot migration, Allowed image, Instance auto-recovery, and AMI launch index. Under Storage, there are sections for Credit specification, Usage operation, and Enclaves Support. Under Tags, it says "Allow tags in instance metadata" is disabled.

## TASK 8 – USE CHANGESET TO UPDATE STACK

The screenshot shows the CloudFormation Changesets page. The URL is CloudFormation > Stacks > RobotAppStack > Changesets: RobotAppSt-822cstampx-1kiclezj2q2. The changeset is named "RobotAppSt-822cstampx-1kiclezj2q2".

Details of the changeset:

- Change set status:** CREATE\_COMPLETE
- Change set status reason:** None
- Execution status:** AVAILABLE

Below the details, there are tabs for Resource changes, Deployment validations - new, Input, Template, JSON changes, and Evaluations. The Resource changes tab shows one change made to the RobotAppServer resource, which was replaced by a new AWS::EC2::Instance resource.

## TASK 8 – VERIFY UPDATED STACK

The screenshot shows the CloudFormation Stacks page. The URL is CloudFormation > Stacks > RobotAppStack. A message at the top says "arn:aws:cloudformation:us-east-1:154280210964:changeSet/RobotAppSt-822cstampx-1kiclezj2q2/b47b146c-977b-40cc-8d66-0d027734e117 has been executed".

The Stack info tab is selected, showing tabs for Events, Resources, Outputs, Parameters, Template, Changesets, and Git sync. The Events tab displays 14 events:

Operation ID	Timestamp	Logical ID	Status	Detailed status	Status reason
490c21a8-4f61-4941-9e04-3f244017382	2025-12-14 19:59:56 UTC-03:30	RobotAppServer	UPDATE_IN_PROGRESS	-	-
490c21a8-4f61-4941-9e04-3f244017382	2025-12-14 19:59:53 UTC-03:30	RobotAppStack	UPDATE_IN_PROGRESS	-	User initiated
bf9a1832-280e-4ee6-8878-d45d41b626a	2025-12-14 19:54:22 UTC-03:30	RobotAppServer	CREATE_COMPLETE	-	-
bf9a1832-280e-4ee6-8878-d45d41b626a	2025-12-14 19:54:21 UTC-03:30	RobotAppServer	CREATE_COMPLETE	-	User initiated
bf9a1832-280e-4ee6-8878-d45d41b626a	2025-12-14 19:54:11 UTC-03:30	RobotAppServer	CREATE_IN_PROGRESS	CONFIGURATION_COMPLETE	Eventual consistency check initiated
bf9a1832-280e-4ee6-8878-d45d41b626a	2025-12-14 19:54:09 UTC-03:30	RobotAppServer	CREATE_IN_PROGRESS	-	Resource creation initiated
bf9a1832-280e-4ee6-8878-d45d41b626a	2025-12-14 19:54:06 UTC-03:30	RobotAppServer	CREATE_IN_PROGRESS	-	-
bf9a1832-280e-4ee6-8878-d45d41b626a	2025-12-14 19:54:05 UTC-03:30	RobotAppSecurityGroup	CREATE_COMPLETE	-	-
bf9a1832-280e-4ee6-8878-d45d41b626a	2025-12-14 19:53:59 UTC-03:30	RobotAppSecurityGroup	CREATE_IN_PROGRESS	-	Resource creation initiated
bf9a1832-280e-4ee6-8878-d45d41b626a	2025-12-14 19:53:58 UTC-03:30	Robot5Bucket	CREATE_IN_PROGRESS	-	Resource creation initiated
bf9a1832-280e-4ee6-8878-d45d41b626a	2025-12-14 19:53:57 UTC-03:30	RobotAppSecurityGroup	CREATE_IN_PROGRESS	-	-
bf9a1832-280e-4ee6-8878-d45d41b626a	2025-12-14 19:53:57 UTC-03:30	Robot5Bucket	CREATE_IN_PROGRESS	-	-
bf9a1832-280e-4ee6-8878-d45d41b626a	2025-12-14 19:53:55 UTC-03:30	RobotAppStack	CREATE_IN_PROGRESS	-	User initiated