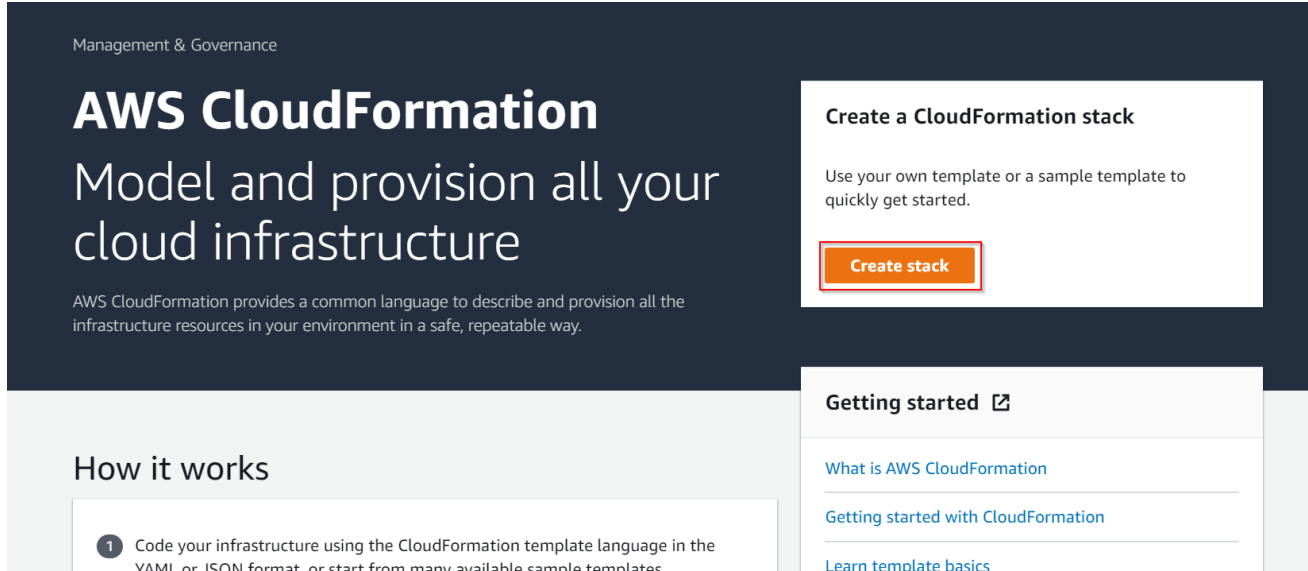


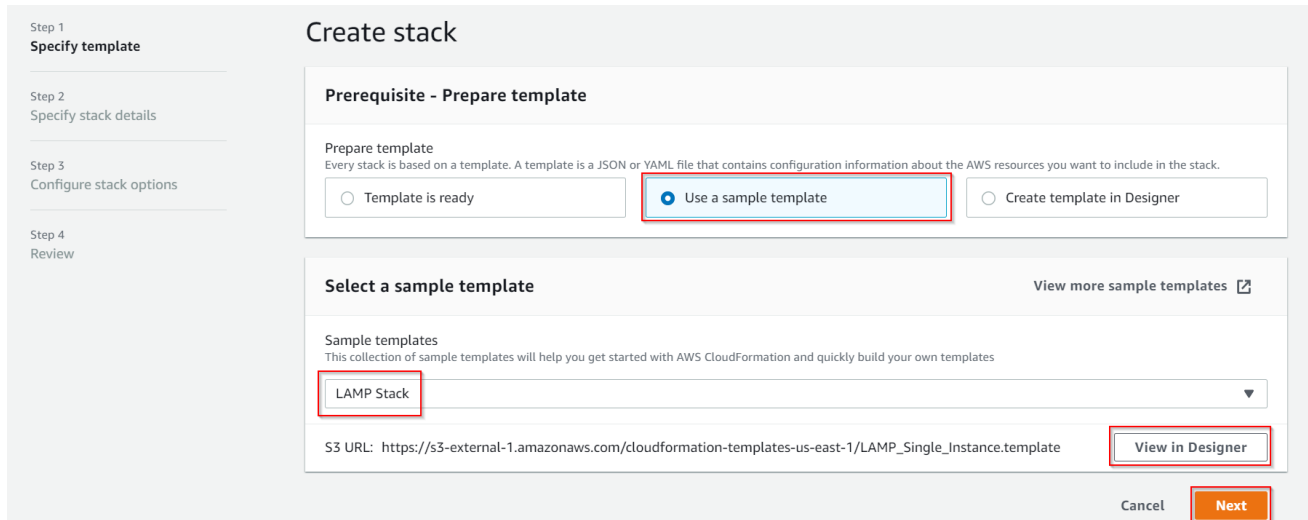
## Module 7: Hands-On: Creating a Stack

**Step 1:** Click on **Create stack** in the CloudFormation console



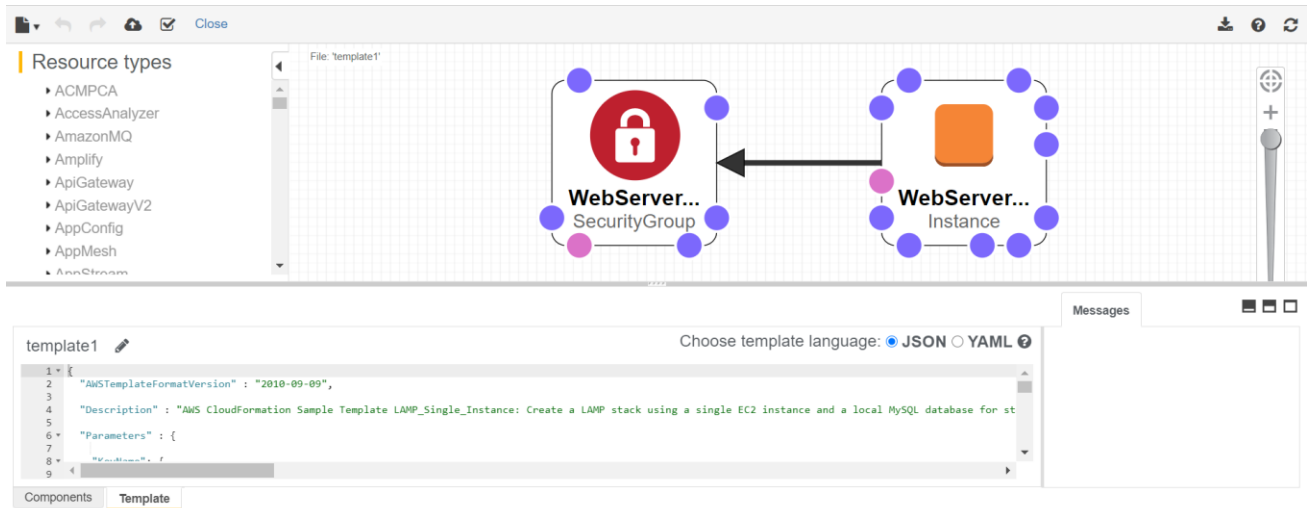
The image shows the AWS CloudFormation console landing page. On the left, there's a dark blue header with the text "Management & Governance" and "AWS CloudFormation Model and provision all your cloud infrastructure". Below this, it says "AWS CloudFormation provides a common language to describe and provision all the infrastructure resources in your environment in a safe, repeatable way." On the right, there's a white box titled "Create a CloudFormation stack" with the text "Use your own template or a sample template to quickly get started." and a red "Create stack" button. Below this, there's a "Getting started" section with links: "What is AWS CloudFormation", "Getting started with CloudFormation", and "Learn template basics". On the left, there's a "How it works" section with a numbered list: "1 Code your infrastructure using the CloudFormation template language in the YAML or JSON format. or start from many available sample templates."

**Step 2:** As this is just an example for how to create a stack, choose **Use a sample template** and choose a simple stack like the one in this image, LAMP stack. You can either click on **View in Designer** to view the physical architecture or click on **Next** to give the parameters



The image shows the "Create stack" wizard in the AWS CloudFormation console. On the left, there's a sidebar with steps: "Step 1 Specify template", "Step 2 Specify stack details", "Step 3 Configure stack options", and "Step 4 Review". The main area is titled "Create stack". Under "Prerequisite - Prepare template", there are three radio buttons: "Template is ready", "Use a sample template" (which is selected and highlighted with a red box), and "Create template in Designer". Below this, there's a "Select a sample template" section with a dropdown menu showing "LAMP Stack" (highlighted with a red box). To the right of the dropdown is a link "View more sample templates". Below the dropdown, the "S3 URL" is displayed: "https://s3-external-1.amazonaws.com/cloudformation-templates-us-east-1/LAMP\_Single\_Instance.template". To the right of the URL is a red "View in Designer" button. At the bottom right, there are "Cancel" and "Next" buttons.

**Step 3:** This is how the Designer looks. There are two main concepts, an EC2 instance and a security group. From here, you can click on the Create stack button to proceed



**Step 4:** When you click on the Next button, you will have to provide certain details to create the stack. Here give the Stack name, Database name and the Database password

Step 1  
Specify template

Step 2  
Specify stack details

Step 3  
Configure stack options

Step 4  
Review

## Specify stack details

Stack name

Stack name

PracticeStack

Stack name can include letters (A-Z and a-z), numbers (0-9), and dashes (-).

Parameters

Parameters are defined in your template and allow you to input custom values when you create or update a stack.

DBName

MySQL database name

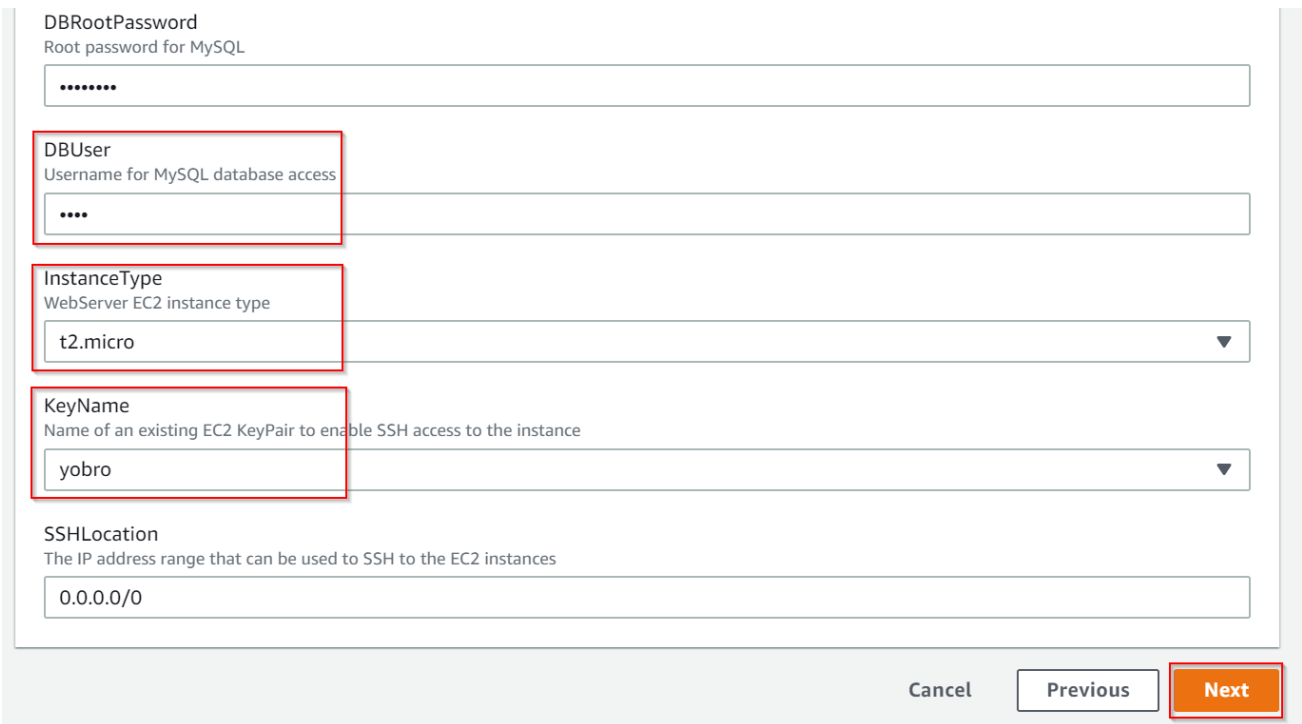
MyDatabase

DBPassword

Password for MySQL database access

\*\*\*\*\*

**Step 5:** There are more details to provide. For free tier eligibility, choose **t2.micro** instance type, then choose a keypair name, and then click on **Next**



DBRootPassword  
Root password for MySQL

DBUser  
Username for MySQL database access

InstanceType  
WebServer EC2 instance type

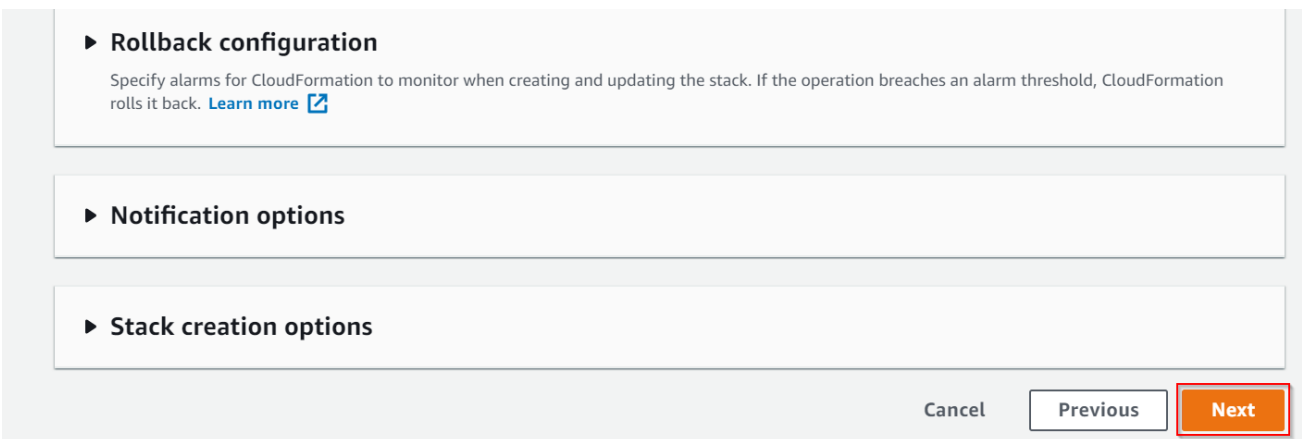
KeyName  
Name of an existing EC2 KeyPair to enable SSH access to the instance

SSHLocation  
The IP address range that can be used to SSH to the EC2 instances

0.0.0.0/0

Cancel Previous **Next**

**Step 6:** In the next page, keep everything at default and click on **Next**



► **Rollback configuration**

Specify alarms for CloudFormation to monitor when creating and updating the stack. If the operation breaches an alarm threshold, CloudFormation rolls it back. [Learn more](#)

► **Notification options**

► **Stack creation options**

Cancel Previous **Next**

**Step 7:** In the final page, review and click on **Create stack** to start the process

### Stack creation options

Rollback on failure  
Enabled

Timeout  
-

Termination protection  
Disabled

► Quick-create link

Cancel Previous Create change set **Create stack**

**Step 8:** Wait until the status shows **CREATE\_COMPLETE**. This means, your stack is successfully created

CloudFormation > Stacks > PracticeStack

Stacks (1)

Filter by stack name

Active View nested

PracticeStack  
2020-07-02 19:41:43 UTC+0530  
✓ CREATE\_COMPLETE

### PracticeStack

Delete Update Stack actions Create stack

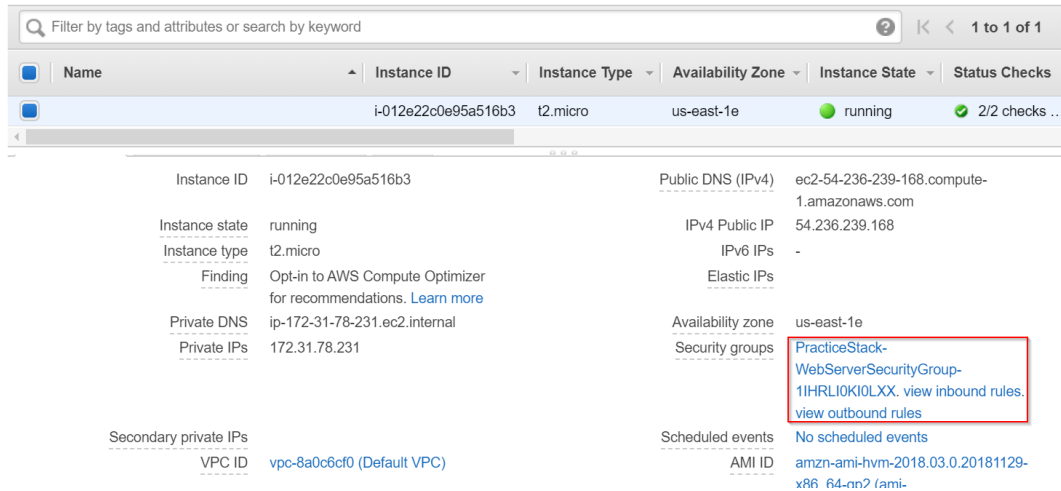
Stack info Events Resources Outputs Parameters Template Change sets

Events (9)

Search events

Timestamp	Logical ID	Status	Status reason
2020-07-02 19:43:16 UTC+0530	PracticeStack	✓ CREATE_COMPLETE	-
2020-07-02 19:43:13 UTC+0530	WebServerInstance	✓ CREATE_COMPLETE	-

**Step 9:** This step is just for verification, i.e., to check if your instance is successfully created



Filter by tags and attributes or search by keyword

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks
	i-012e22c0e95a516b3	t2.micro	us-east-1e	running	2/2 checks ...

Instance ID: i-012e22c0e95a516b3

Instance state: running

Instance type: t2.micro

Finding: Opt-in to AWS Compute Optimizer for recommendations. [Learn more](#)

Private DNS: ip-172-31-78-231.ec2.internal

Private IPs: 172.31.78.231

Secondary private IPs: -

VPC ID: vpc-8a0c6cf0 (Default VPC)

Public DNS (IPv4): ec2-54-236-239-168.compute-1.amazonaws.com

IPv4 Public IP: 54.236.239.168

IPv6 IPs: -

Elastic IPs: -

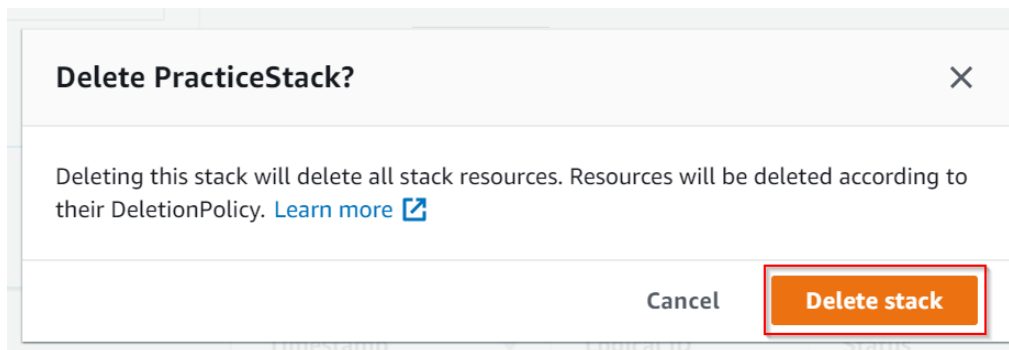
Availability zone: us-east-1e

Security groups: [PracticeStack-WebServerSecurityGroup-1IHR10KI0LXX. view inbound rules. view outbound rules](#)

Scheduled events: No scheduled events

AMI ID: amzn-ami-hvm-2018.03.0.20181129-x86\_64-np2 (ami-...)

**Step 10:** Once the work is done, you can simply delete the stack which will delete all the resources created by the stack



**Delete PracticeStack?**

Deleting this stack will delete all stack resources. Resources will be deleted according to their DeletionPolicy. [Learn more](#)

Cancel **Delete stack**

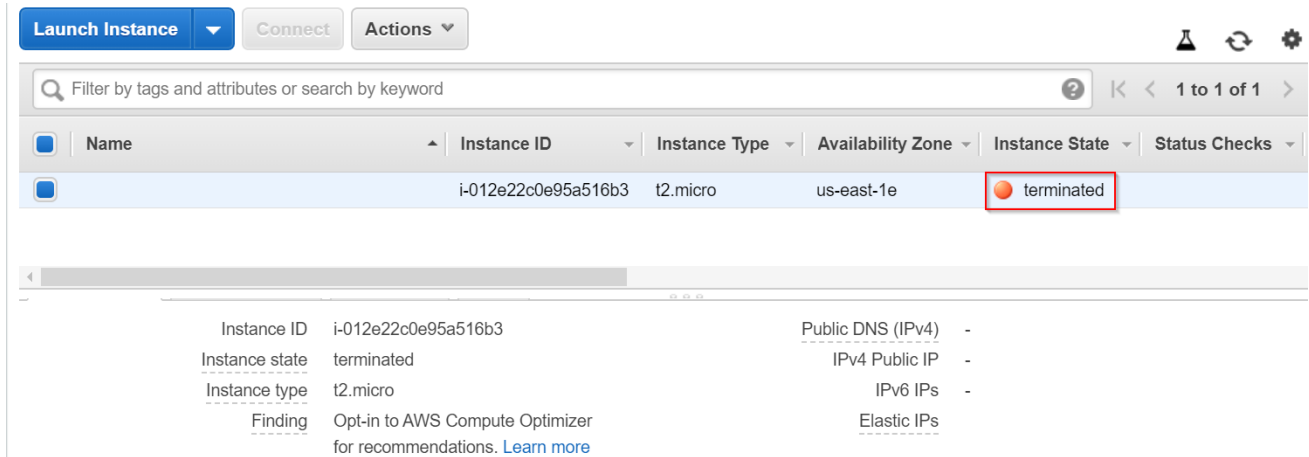
**Step 11:** When the status is **DELETE\_COMPLETE**, all the resources are removed

Events (15)

Search events

Timestamp	Logical ID	Status	Status reason
2020-07-02 19:47:56 UTC+0530	PracticeStack	DELETE_COMPLETE	-
2020-07-02 19:47:55 UTC+0530	WebServerSecurityGroup	DELETE_COMPLETE	-
2020-07-02 19:47:53 UTC+0530	WebServerSecurityGroup	DELETE_IN_PROGRESS	-

**Step 12:** You can see if the resources are deleted completely by checking if the instance is terminated



The screenshot shows the AWS Management Console interface for an EC2 instance. At the top, there are buttons for 'Launch Instance', 'Connect', and 'Actions'. Below these is a search bar and a table of instances. The table has columns for Name, Instance ID, Instance Type, Availability Zone, Instance State, and Status Checks. One instance is listed with ID 'i-012e22c0e95a516b3', type 't2.micro', and availability zone 'us-east-1e'. Its state is 'terminated', which is highlighted with a red box. Below the table, there is a section for 'Instance details' and 'Findings'.

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks
	i-012e22c0e95a516b3	t2.micro	us-east-1e	terminated	

Instance ID: i-012e22c0e95a516b3  
Instance state: terminated  
Instance type: t2.micro  
Finding: Opt-in to AWS Compute Optimizer for recommendations. [Learn more](#)

Public DNS (IPv4): -  
IPv4 Public IP: -  
IPv6 IPs: -  
Elastic IPs: -