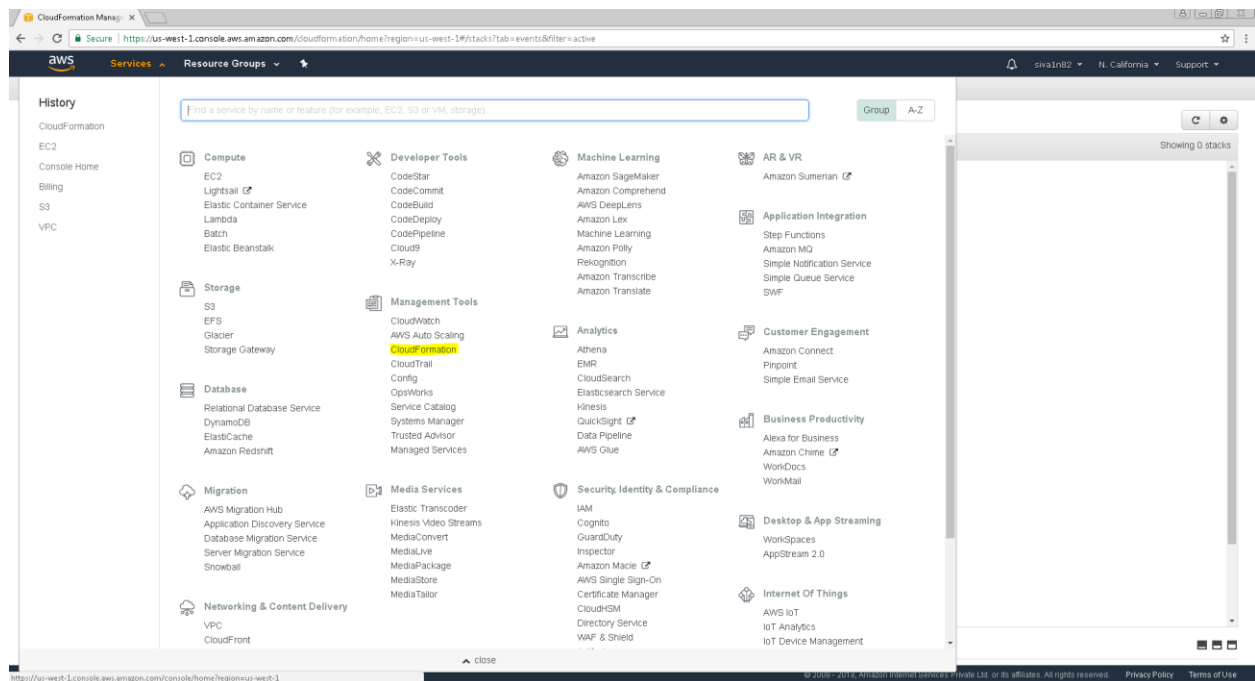


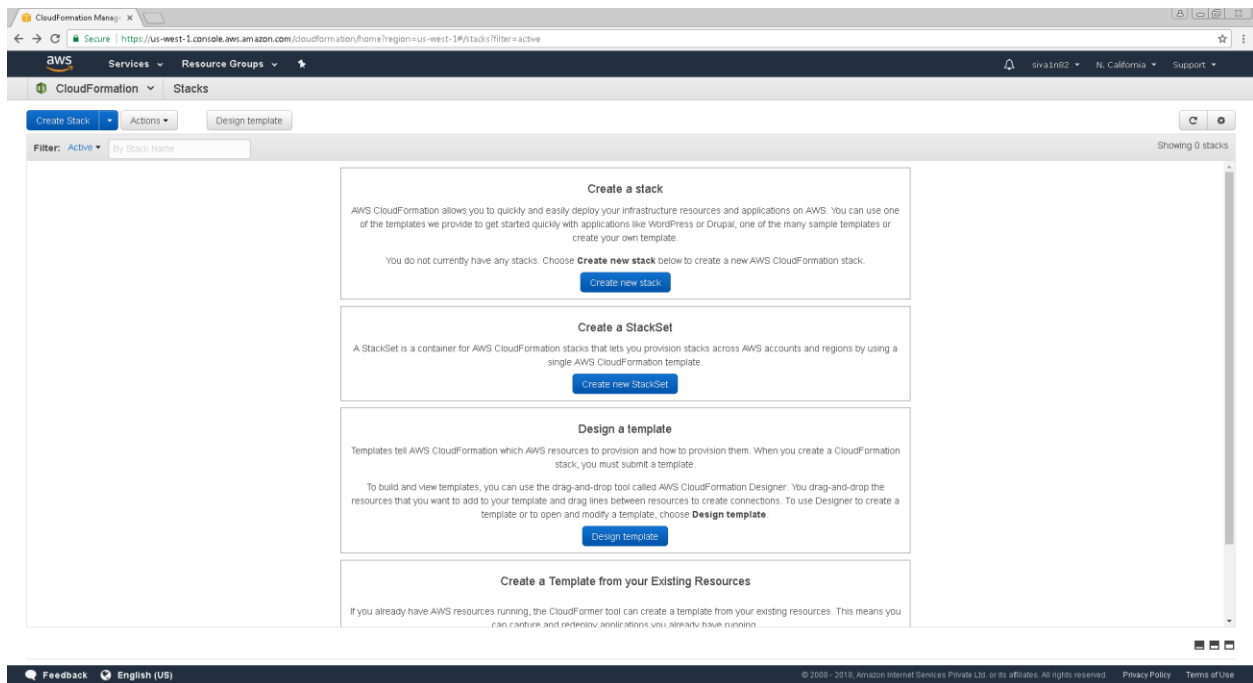
## Lab21

### Cloud Formation – LAMP stack

Click “Cloud formation”.



Click “Create new stack”.



In Select a sample template, click drop down box.

The screenshot shows the AWS CloudFormation 'Create Stack' console. The breadcrumb navigation at the top indicates the path: CloudFormation > Stacks > Create Stack. On the left, a sidebar lists the steps: Select Template (active), Specify Details, Options, and Review. The main content area is titled 'Select Template' and includes the instruction: 'Select the template that describes the stack that you want to create. A stack is a group of related resources that you manage as a single unit.'

Under the heading 'Design a template', there is a link to 'Use AWS CloudFormation Designer to create or modify an existing template. [Learn more.](#)' and a 'Design template' button.

Under the heading 'Choose a template', there is a description: 'A template is a JSON/YAML-formatted text file that describes your stack's resources and their properties. [Learn more.](#)'

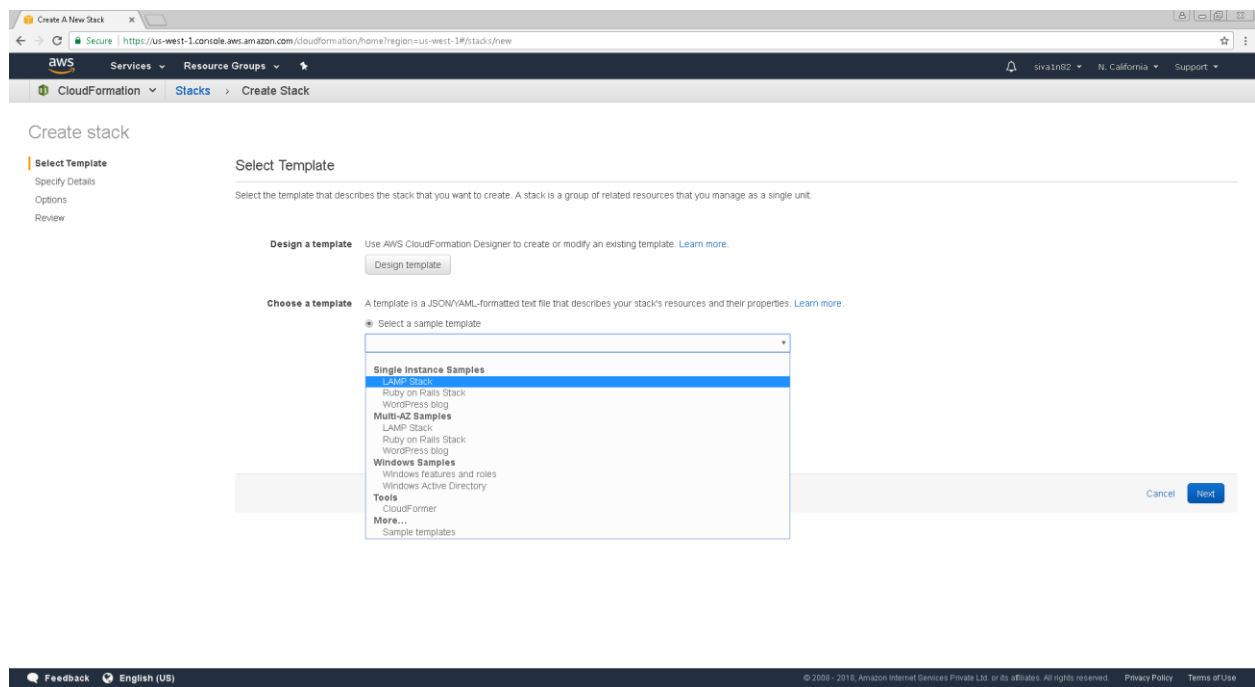
Three options are available for choosing a template:

- ☒ Select a sample template: This option is selected, and a dropdown menu is visible below it.
- ☐ Upload a template to Amazon S3: This option includes a 'Choose File' button and the text 'No file chosen'.
- ☐ Specify an Amazon S3 template URL: This option has an empty text input field below it.

At the bottom right of the main content area, there are 'Cancel' and 'Next' buttons.

The footer of the console shows a 'Feedback' link, the language 'English (US)', and copyright information: '© 2016 - 2019, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.' It also includes links for 'Privacy Policy' and 'Terms of Use'.

Click “Lamp stack”.



Specify stackname as sansLamp, DBPassword and user. Select t2.micro, choose key name and ssh location as 0.0.0.0/0

The screenshot shows the AWS CloudFormation 'Create Stack' console. The 'Specify Details' step is active, where a stack name and parameter values are defined. The stack name is 'sansLamp'. The parameters section includes fields for DBName (MyDatabase), DBPassword (masked), DBRootPassword (masked), DBUser (\*\*\*\*), InstanceType (t2.micro), KeyName (northcalifornia), and SSHLocation (0.0.0.0/0). The console also shows a 'Cancel' button, a 'Previous' button, and a 'Next' button.

Create stack

Select Template

Specify Details

Options

Review

Specify Details

Specify a stack name and parameter values. You can use or change the default parameter values, which are defined in the AWS CloudFormation template. [Learn more](#)

Stack name sansLamp

Parameters

DBName MyDatabase MySQL database name

DBPassword Password for MySQL database access

DBRootPassword Root password for MySQL

DBUser Username for MySQL database access

InstanceType t2.micro WebServer EC2 instance type

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

SSHLocation 0.0.0.0/0 The IP address range that can be used to SSH to the EC2 instances

Cancel Previous Next

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Click “Next”.

**Options**  
Review

**Tags**  
You can specify tags (key-value pairs) for resources in your stack. You can add up to 50 unique key-value pairs for each stack. [Learn more](#)

Key (127 characters maximum)	Value (255 characters maximum)
1	

**Permissions**  
You can choose an IAM role that CloudFormation uses to create, modify, or delete resources in the stack. If you don't choose a role, CloudFormation uses the permissions defined in your account. [Learn more](#)

**IAM Role** Choose a role (optional)   
Enter role arn

**Rollback Triggers**  
Rollback triggers enable you to have AWS CloudFormation monitor the state of your application during stack creation and updating, and to rollback that operation if the application breaches the threshold of any of the alarms you've specified. [Learn more](#)

**Monitoring Time** 0-180 Minutes  
Minimum value of 0. Maximum value of 180.

Type	ARN (Amazon Resource Name)	Available triggers remaining: 5
1 AWS::CloudWatch::Alarm	<input type="text"/>	<a href="#">+</a>

**Advanced**  
You can set additional options for your stack, like notification options and a stack policy. [Learn more](#)

Click “Create”.

The screenshot shows the 'Create a New Stack' wizard in the AWS CloudFormation console. The browser address bar indicates the URL: <https://us-west-1.console.aws.amazon.com/cloudformation/home?region=us-west-1#/stacks/new>. The page title is 'Create a New Stack'. A warning message states: 'CloudFormation bootstrap scripts to install the packages and files necessary to deploy the Apache web server, PHP and MySQL at instance launch time. \*\*WARNING\*\* This template creates an Amazon EC2 instance. You will be billed for the AWS resources used if you create a stack from this template.'

**Estimate cost** [Cost](#)

**Details**

Stack name: sansLamp

DBName: MyDatabase

DBPassword: .....

DBRootPassword: .....

DBUser: .....

InstanceType: t2.micro

KeyName: northcalifornia

SSHLocation: 0.0.0.0/0

**Options**

**Tags**

No tags provided

**Rollback Triggers**

No monitoring time provided

No rollback triggers provided

**Advanced**

Notification: Disabled

Termination Protection: none

Timeout: .....

Rollback on failure: Yes

[Quick Create Stack](#) (Create stacks similar to this one, with most details auto-populated)

[Cancel](#) [Previous](#) [Create](#)

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Creation in progress

The screenshot displays the AWS CloudFormation console interface. At the top, the navigation bar shows the AWS logo, 'Services', 'Resource Groups', and a user profile 'siva1n02' in 'N. California'. The main header indicates 'CloudFormation' and 'Stacks'. Below this, there are buttons for 'Create Stack', 'Actions', and 'Design template'. A filter dropdown is set to 'Active', and a search bar is present. The 'Stacks' table lists one stack: 'sansLamp', created on '2018-02-14 11:22:09 UTC+0550', with a status of 'CREATE\_IN\_PROGRESS'. The description for this stack is 'AWS CloudFormation Sample Template LAMP\_Single\_Instance: Create a LAMP stack using a single EC2 instance and a local MySQL database for storage. This te...'. Below the stacks table, the 'Events' tab is selected, showing a table with columns: 'Filter by: Status', 'Status', 'Type', 'Logical ID', and 'Status Reason'. A single event is listed for the date '2018-02-14' at '11:22:09 UTC+0550', with a status of 'CREATE\_IN\_PROGRESS', type of 'AWS::CloudFormation::Stack', logical ID of 'sansLamp', and status reason of 'User Initiated'. The footer contains a 'Feedback' button, 'English (US)' language selector, and copyright information for 2008-2018 Amazon Internet Services Private Ltd.

Stack Name	Created Time	Status	Description
sansLamp	2018-02-14 11:22:09 UTC+0550	CREATE_IN_PROGRESS	AWS CloudFormation Sample Template LAMP_Single_Instance: Create a LAMP stack using a single EC2 instance and a local MySQL database for storage. This te...

Filter by: Status	Status	Type	Logical ID	Status Reason
2018-02-14	CREATE_IN_PROGRESS	AWS::CloudFormation::Stack	sansLamp	User Initiated

Lamp stack has been successfully created.



The screenshot displays the AWS CloudFormation console interface. At the top, the navigation bar shows 'CloudFormation' and 'Stacks'. Below this, a table lists the stacks. The stack 'sansLamp' is selected, and its details are shown in the main area. The 'Events' tab is active, displaying a list of events for the stack.

Stack Name	Created Time	Status	Description
sansLamp	2018-02-14 11:22:09 UTC+0550	CREATE_COMPLETE	AWS CloudFormation Sample Template LAMP_Single_Instance: Create a LAMP stack using a single EC2 instance and a local MySQL database for storage. This te...

Filter by: Status	Search events	Status	Type	Logical ID	Status Reason
2018-02-14		CREATE_COMPLETE	AWS::CloudFormation::Stack	sansLamp	
11:23:20 UTC+0550		CREATE_COMPLETE	AWS::EC2::Instance	WebServerInstance	
11:23:17 UTC+0550		CREATE_IN_PROGRESS	AWS::EC2::Instance	WebServerInstance	Received SUCCESS signal with UniqueId i-09ctcb2a690ba994
11:23:19 UTC+0550		CREATE_IN_PROGRESS	AWS::EC2::Instance	WebServerInstance	Resource creation initiated
11:22:17 UTC+0550		CREATE_IN_PROGRESS	AWS::EC2::Instance	WebServerInstance	
11:22:15 UTC+0550		CREATE_COMPLETE	AWS::EC2::SecurityGroup	WebServerSecurityGroup	
11:22:14 UTC+0550		CREATE_IN_PROGRESS	AWS::EC2::SecurityGroup	WebServerSecurityGroup	Resource creation initiated
11:22:13 UTC+0550		CREATE_IN_PROGRESS	AWS::EC2::SecurityGroup	WebServerSecurityGroup	
11:22:09 UTC+0550		CREATE_IN_PROGRESS	AWS::CloudFormation::Stack	sansLamp	User initiated

Go to instance, one instance has been created.

The screenshot displays the AWS Management Console interface for an EC2 instance. The top navigation bar shows the AWS logo, 'Services', 'Resource Groups', and user information 'siva1n02' in 'N. California'. The left sidebar contains a navigation menu with categories like INSTANCES, IMAGES, ELASTIC BLOCK STORE, NETWORK & SECURITY, LOAD BALANCING, and AUTO SCALING. The main content area shows a table of EC2 instances with columns: Name, Instance ID, Instance Type, Availability Zone, Instance State, Status Checks, Alarm Status, Public DNS (IPv4), IPv4 Public IP, IPv6 IPs, Key Name, Monitoring, and Launch Time. One instance is listed with ID 'i-09cfcb2a690ba99f4', type 't2.micro', in 'us-west-1b' availability zone, with a 'running' state and '2/2 checks passed'. Below the table, a detailed view for the selected instance is shown, including tabs for Description, Status Checks, Monitoring, and Tags. The Description tab is active, displaying instance details such as Instance ID, Instance state (running), Instance type (t2.micro), Elastic IPs, Availability zone (us-west-1b), Security groups (santLamp-WebServerSecurityGroup-15N2HBID4C008), Scheduled events (No scheduled events), AMI ID (amzn-ami-hvm-2016.03.3-v86\_64-gp2), Public DNS (IPv4) (ec2-54-153-76-170.us-west-1.compute.amazonaws.com), IPv4 Public IP (54.153.76.170), Private DNS (ip-172-31-5-32.us-west-1.compute.internal), Private IPs (172.31.5.32), Secondary private IPs, VPC ID (vpc-dda06c3a), and Subnet ID (subnet-e2ee45b9).

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs	Key Name	Monitoring	Launch Time
	i-09cfcb2a690ba99f4	t2.micro	us-west-1b	running	2/2 checks passed	None	ec2-54-153-76-170.us-west-1.compute.amazonaws.com	54.153.76.170	-	northcalifornia	disabled	February 1, 2018

**Instance: i-09cfcb2a690ba99f4** Public DNS: ec2-54-153-76-170.us-west-1.compute.amazonaws.com

**Description** | Status Checks | Monitoring | Tags

Instance ID: i-09cfcb2a690ba99f4  
Instance state: running  
Instance type: t2.micro  
Elastic IPs: -  
Availability zone: us-west-1b  
Security groups: santLamp-WebServerSecurityGroup-15N2HBID4C008 view inbound rules  
Scheduled events: No scheduled events  
AMI ID: amzn-ami-hvm-2016.03.3-v86\_64-gp2 (ami-31430d51)

Public DNS (IPv4): ec2-54-153-76-170.us-west-1.compute.amazonaws.com  
IPv4 Public IP: 54.153.76.170  
IPv6 IPs: -  
Private DNS: ip-172-31-5-32.us-west-1.compute.internal  
Private IPs: 172.31.5.32  
Secondary private IPs: -  
VPC ID: vpc-dda06c3a  
Subnet ID: subnet-e2ee45b9

Try to connect webserver, we have got the web page successfully.

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