



lab



lab title

**Intro to AWS CloudFormation
V1.01**



Course title

**BackSpace Academy
AWS Certification Preparation**



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About the Lab

Please note that not all AWS services are supported in all regions. Please use the US-East-1 (North Virginia) region for this lab.

These lab notes are to support the hands on instructional videos of the CloudFormation section of the AWS Certified Cloud Practitioner course.

Please note that AWS services change on a weekly basis and it is extremely important you check the version number on this document to ensure you have the latest version with any updates or corrections.

Deploying a CloudFormation Stack

In this section, we will use the CloudFormation service to create a stack to launch a LAMP (Linux Apache MySQL PHP) environment on EC2.

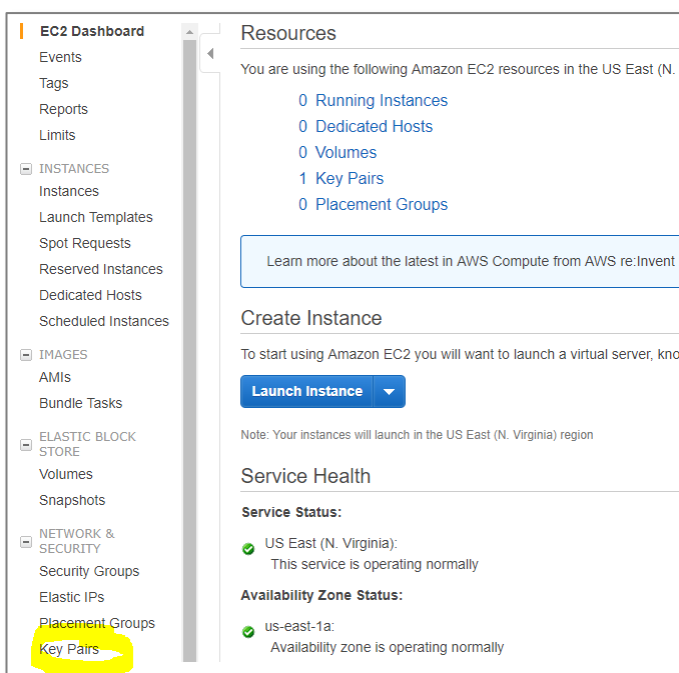
Creating an EC2 Encryption Key Pair

An EC2 encryption key pair is used to connect to the Linux operating system of an EC2 instance. If we have not already created and downloaded an EC2 previously we will need to create one.

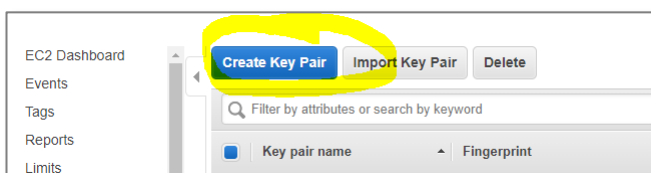
From the AWS console click *Services*

Select *EC2*

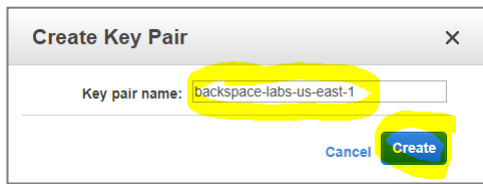
Select *Key Pairs*



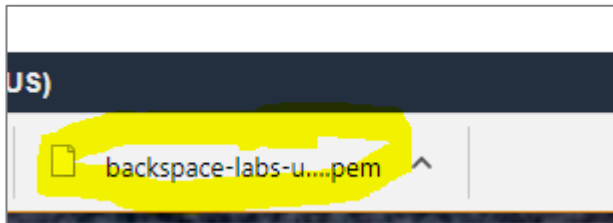
Click *Create Key Pair*



Give the Key Pair a name



Your Key file (.pem) should now be downloading

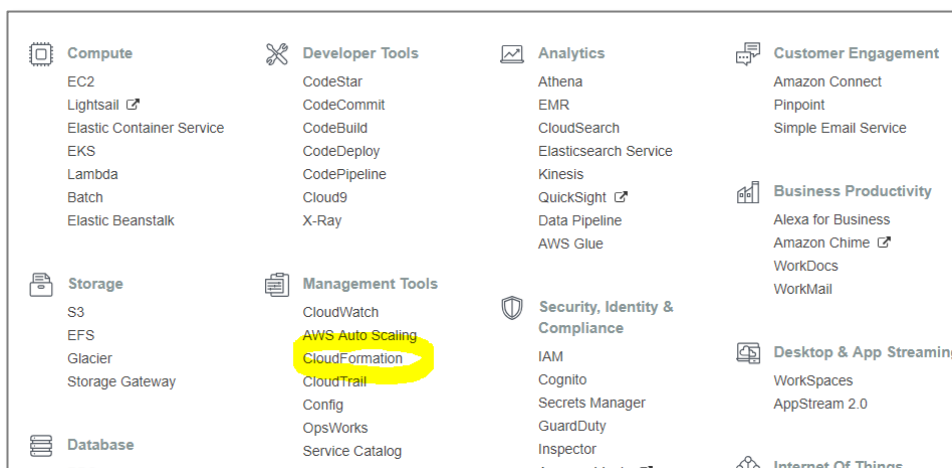


Make sure you store your PEM file somewhere safe. If you lose it you will not be able to connect to instances that use that key pair.

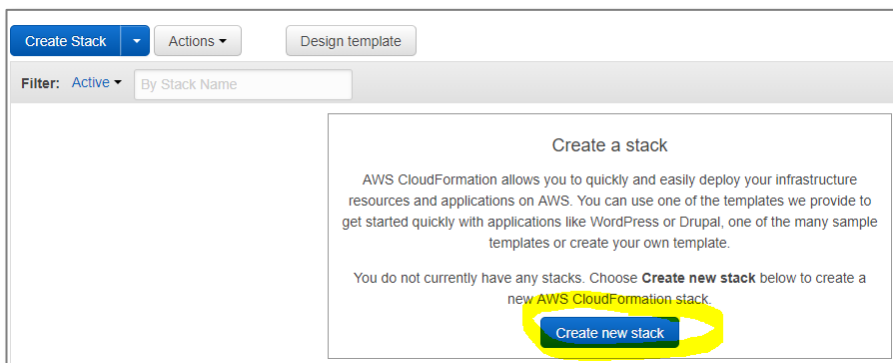
Creating a CloudFormation Stack

From the AWS console click *Services*

Select *CloudFormation* from the *Management Tools* services.

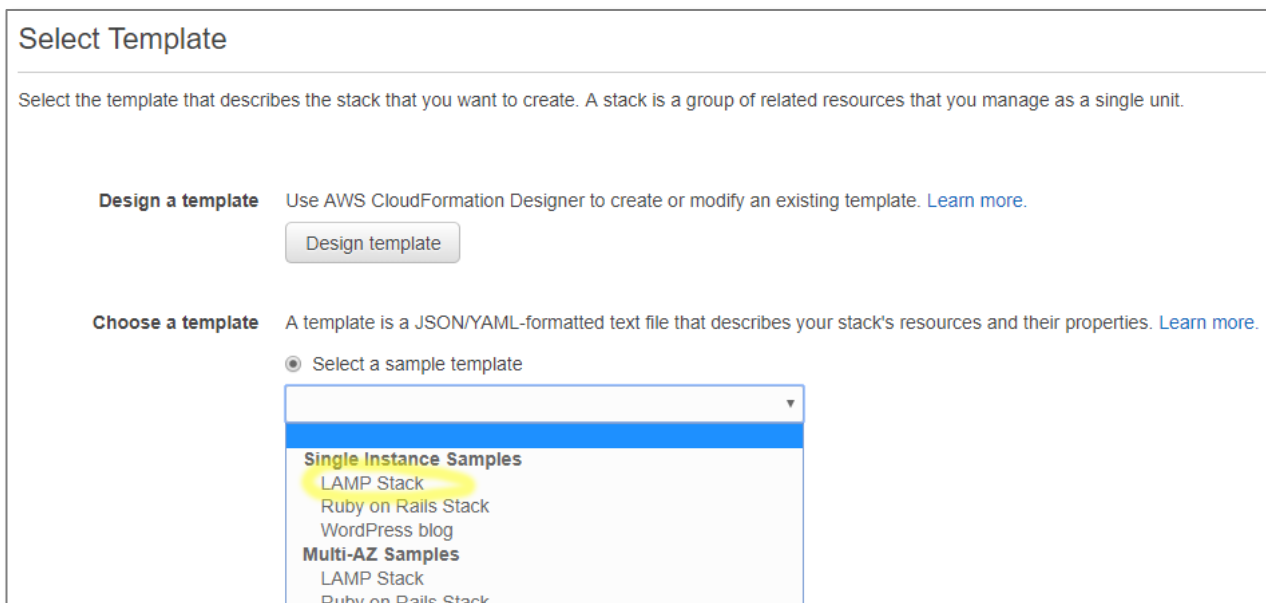


Click *Create new stack*

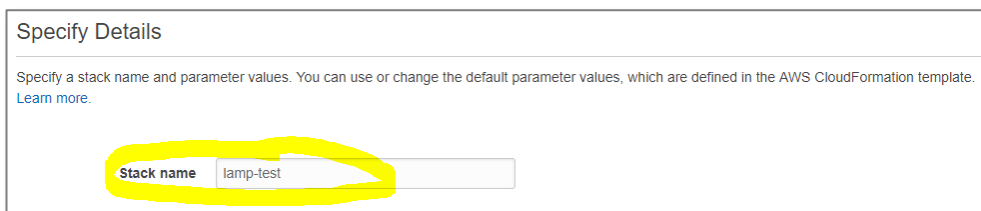


Select *Single Instance Samples – LAMP Stack*

Click Next



Give your stack a name



Give your database as name

Enter passwords for DB and DB root access (alphanumeric only)

Enter a DB username

Select the t2.micro instance type for the free tier

Select an EC2 key pair

Click *Next*

Parameters

DBName	MyDatabase	MySQL database name
DBPassword	*****	Password for MySQL database access
DBRootPassword	*****	Root password for MySQL
DBUser	*****	Username for MySQL database access
Instance Type	t2.micro	WebServer EC2 instance type
KeyName	pcoady	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**

Enter a Name tag (make sure capital N)

Options

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	Name	LAMP-Test	+

Leave other options as default

Click *Next*

Advanced

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

Cancel Previous **Next**

Click *Create*

Options

Tags

Name LAMP-Test

Rollback Triggers

No monitoring time provided

No rollback triggers provided

Advanced

Notification

Termination Protection Disabled

Timeout none

Rollback on failure Yes

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

Cancel Previous **Create**

Click refresh icon until the stack creation has completed

Create Stack Actions Design template

Filter: Active By Stack Name Showing 1 stack

Stack Name	Created Time	Status	Description
lamp-test	2018-06-20 03:39:28 UTC+1000	CREATE_COMPLETE	AWS CloudFormation Sample Template LAMP_Single_Instan...

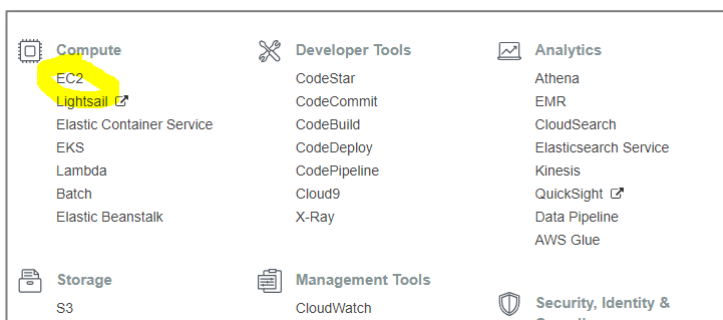
Overview Outputs Resources **Events** Template Parameters Tags Stack Policy Change Sets Rollback Triggers

Filter by: Status Search events

2018-06-20	Status	Type	Logical ID	Status Reason
03:40:58 UTC+1000	CREATE_COMPLETE	AWS::CloudFormation::Stack	lamp-test	
03:40:56 UTC+1000	CREATE_COMPLETE	AWS::EC2::Instance	WebServerInstance	
03:40:55 UTC+1000	CREATE_IN_PROGRESS	AWS::EC2::Instance	WebServerInstance	Received SUCCESS signal with Unique

From the AWS console click Services

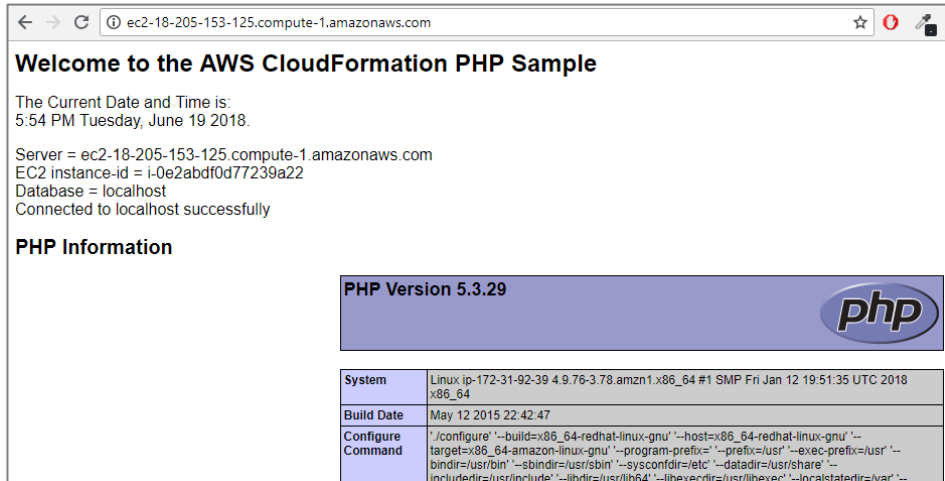
Select EC2 from the Compute services.



Select *Instances*

Copy either the Public DNS or Public IP

Paste into a browser to view the application

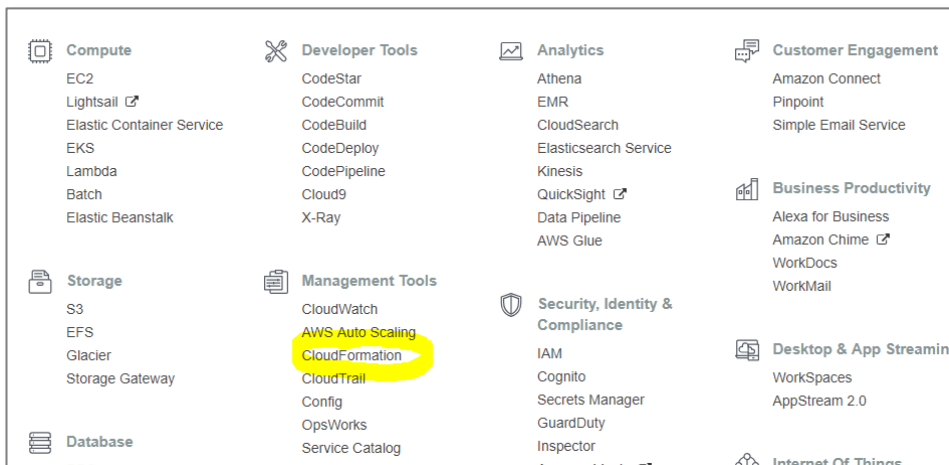


▶ Deleting a CloudFormation Stack

In this section, we will use the CloudFormation service to delete a stack to delete its resources.

From the AWS console click *Services*

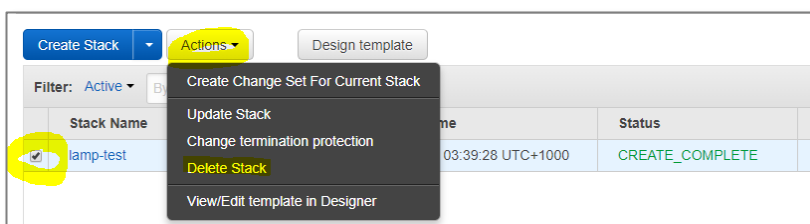
Select *CloudFormation* from the *Management Tools* services.



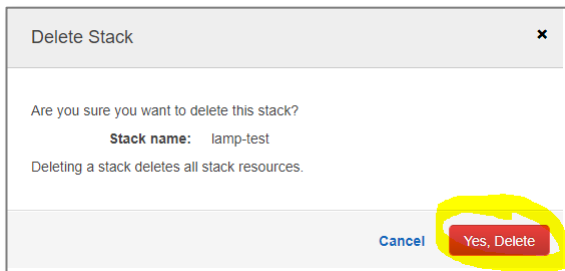
Select the stack

Click *Actions*

Select *Delete Stack*



Click "Yes, Delete"



You can check the status of the delete by clicking the refresh icon

