

## Project 2

AWS CloudFormation provides a common language for you to model and provision AWS and third party application resources in your cloud environment. AWS CloudFormation allows you to use programming languages or a simple text file to model and provision, in an automated and secure manner, all the resources needed for your applications across all regions and accounts. This gives you a single source of truth for your AWS and third party resources.

To create an instance for wordpress:

1. Selecting "CloudFormation" from the dashboard.
2. Selecting "Create New Stack".
3. From the "Choose a template" section, highlight "Select a sample template" and from the dropdown choose "WordPress blog" and click "Next". Else create a Template if doesn't exist.
4. Enter a name in the "Stack Name" box and complete the rest of the options. Be sure to change the "Instance Type" to "T2.micro" and in the "KeyName" section, select a key which you have possession of. Then click "Next".
5. Give your instance a meaningful tag name. Then click "Next".
6. Review the settings and then click "Create".
7. Wait until the Stack process has a status of "COMPLETED"

AMI Creation:

1. Switch to the EC2 dashboard and verify that your new instance is available for use.
2. Highlight the new instance and Actions > Image > Create Image.
3. Enter an "Name" and "description" and then "Create Image"
4. Switch to the AMI dashboard and wait until your new AMI has a "Status" of "available"

Configuration of Auto Scaling:

1. Go to the "Auto Scaling Groups" dashboard, and click "Create Auto Scaling Group".
2. Create launch configuration.
3. On the "Choose AMI" page, go to "My AMIs" and select your newly created AMI.
4. On the "Choose Instance Type" page, select "T2.micro" and click "Next: Configure Details".
5. Enter a suitable "Name" for the Launch Configuration, and click "Next: Add Storage".
6. Click "Next: Configure Security Group".
7. Choose a suitable Security Group or select the Security Group that was created as part of your CloudFormation step. Then click "Review".
8. Review the settings and then click "Create launch configuration".

9. Choose a key that you have in your possession and then click "Create launch configuration".
10. You can now use the new Launch Configuration to create a new WordPress instance during the hours of 9AM-6PM. To do this, click "Create Auto Scaling group".
11. Enter a "Group Name" and a "Group Size" of 0. Also select a subnet or subnets you want the new instance to be created in.
12. Select "Keep this group at its initial size" and click "Next: Configure Notifications".
13. Click "Next: Configure Tags".
14. Enter meaningful tags, for example "Key = Name" and "Value = PROJECT2\_WP\_AUTOSCALE". Then click "Review".
15. Review the settings and then click "Create Auto Scaling group".
16. Click "View your Auto Scaling groups" and highlight the new group.
17. Click Actions > Edit and set the "Desired" value to "0", "Min" to "0" and Max to "1"
18. Click the "Scheduled Actions" tab and click "Create Scheduled Action" to create the scheduled actions.
19. Enter a "Name", for example "SCALEUP\_9AM", the "Desired Capacity" of "1" and set the time of day you first want the job to run. The time is UTC format so you need to set it to the UTC equivalent of 9AM for your time zone. Once complete, click "Create".
20. Enter a "Name", for example, "SCALEDOWN\_6PM", the "Desired Capacity" of "0" and set the time of day you first want the job to run. The time is UTC format, so you need to set it to the UTC equivalent of 6PM for your time zone. Once complete, click "Create".
21. Verify that the actions have been created successfully.
22. If you want to test further, try creating Scheduled Actions to run immediately to see if they work.

Now lets Terminate all the instances which we make