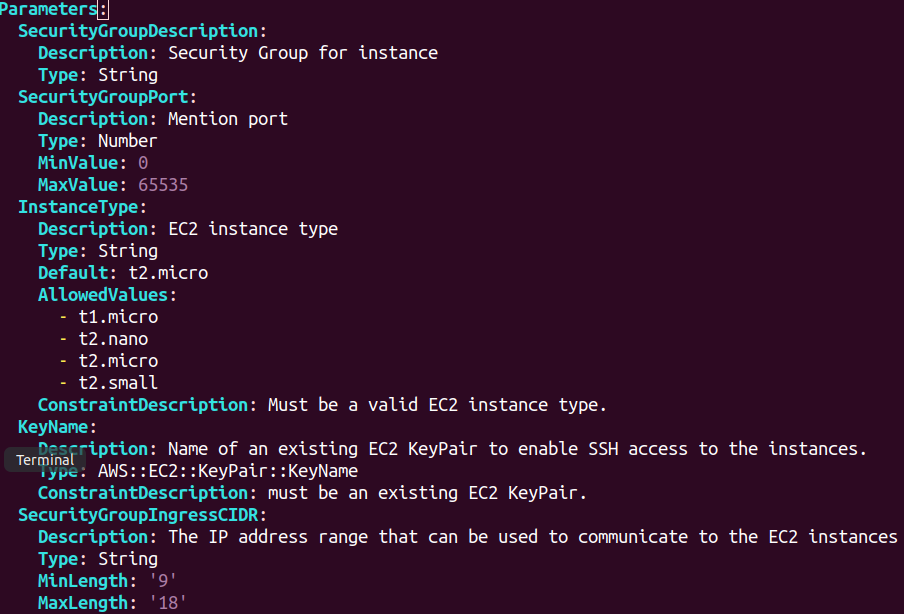
**Assessment 28- Cloudformation**

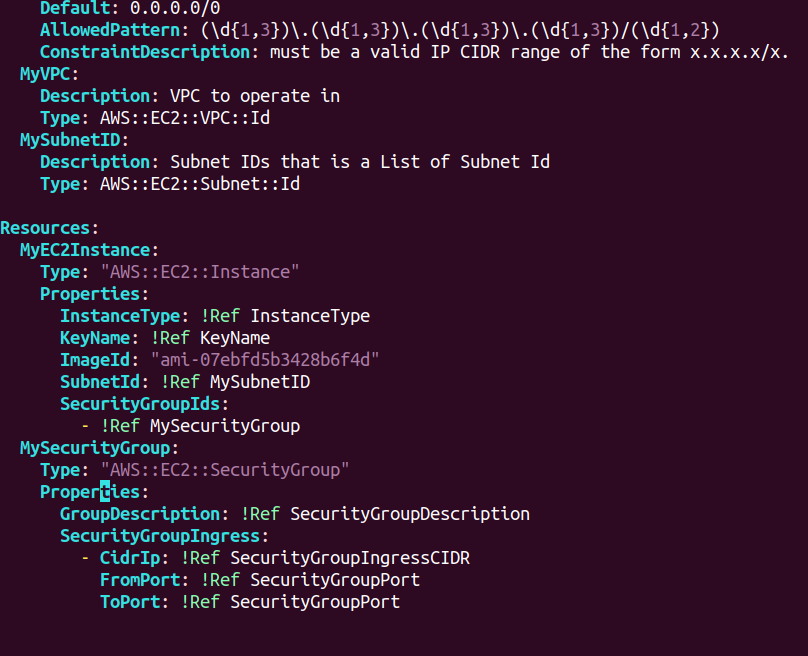
**Trainee Name : Gargi Sharma**

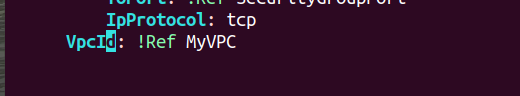
**Mentor Name : Mr. Akansh Gupta**

**College Name : UPES**

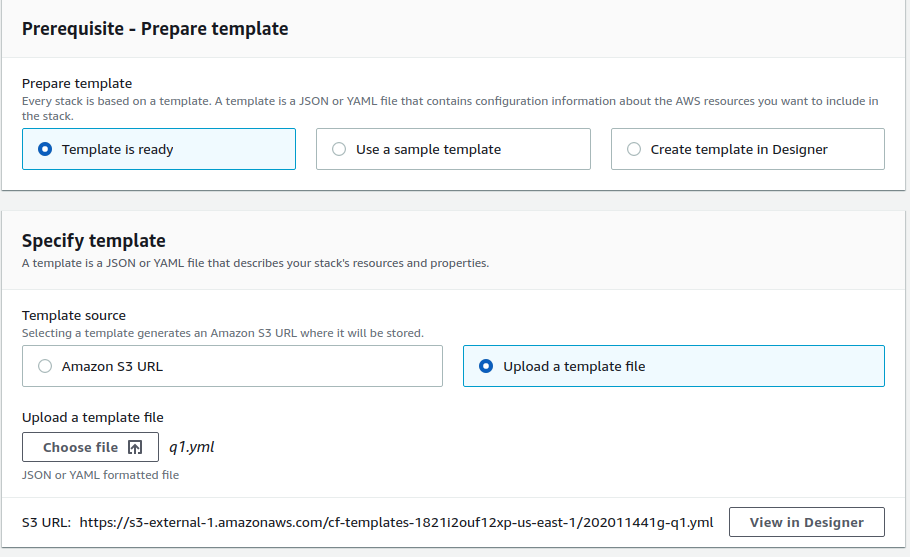
1. **Start an EC2 Instance with Parameter KEY NAME, VPC, Subnet using Cloudformation Template.**

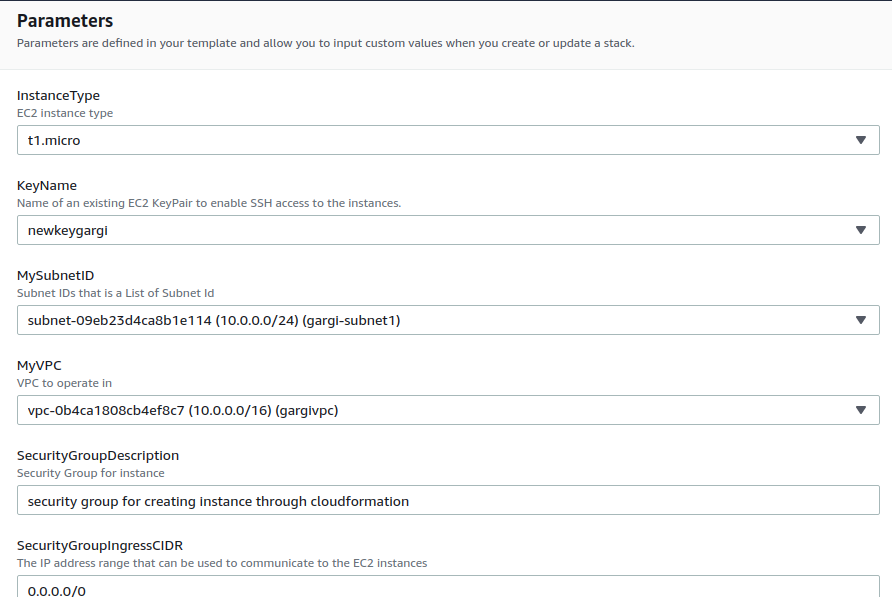
Create a cloudformation template:  


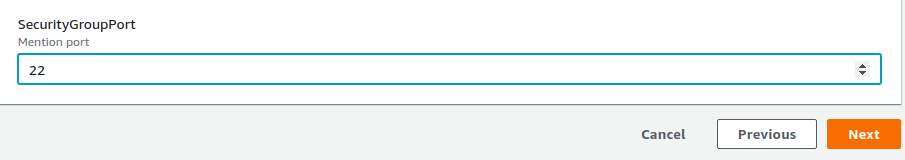


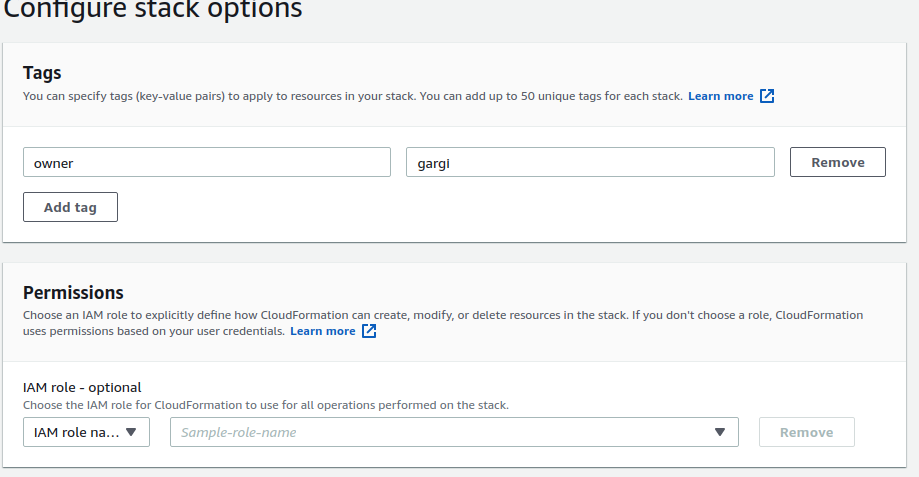


Now go to aws console->cloudformation-> Create Stack

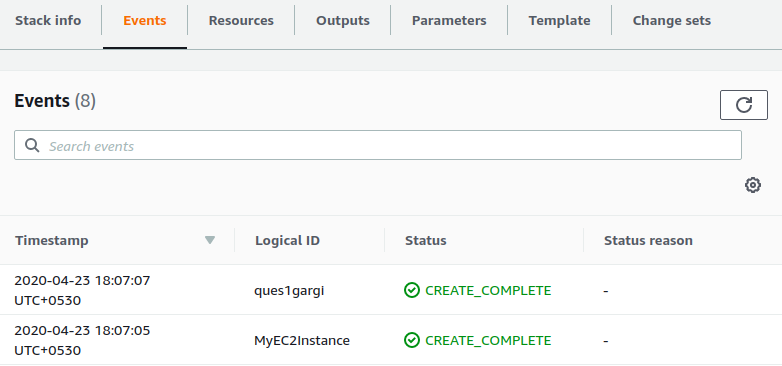




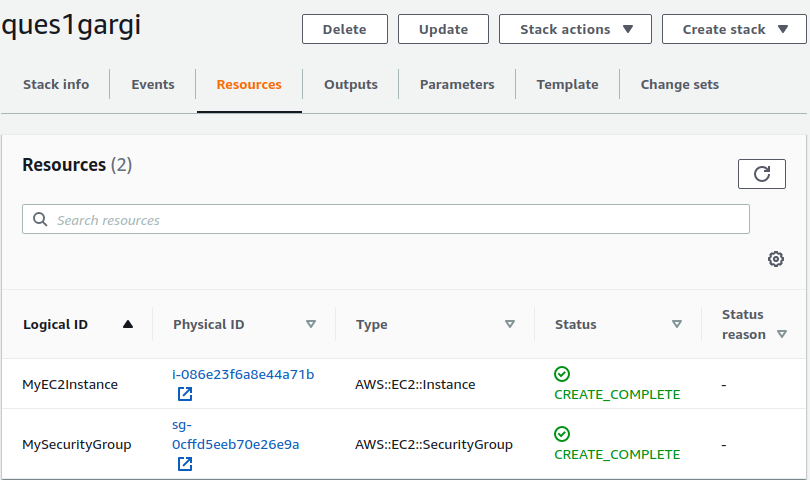




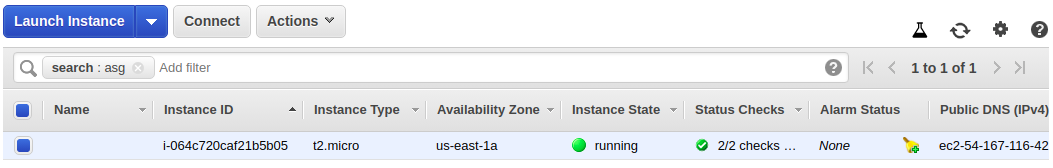
Now check for the events on the Cloudformation dashboard:



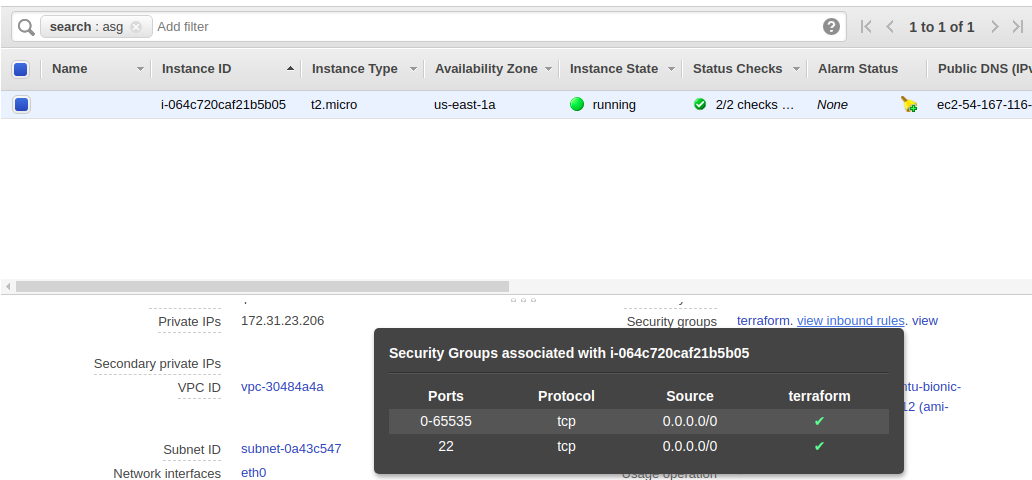
Resources:



Check for instance on ec2 dashboard:



Check for the security group attached with the instance:



Ec2 instance with specified vpc and security group is set up successfully using Cloudformation.

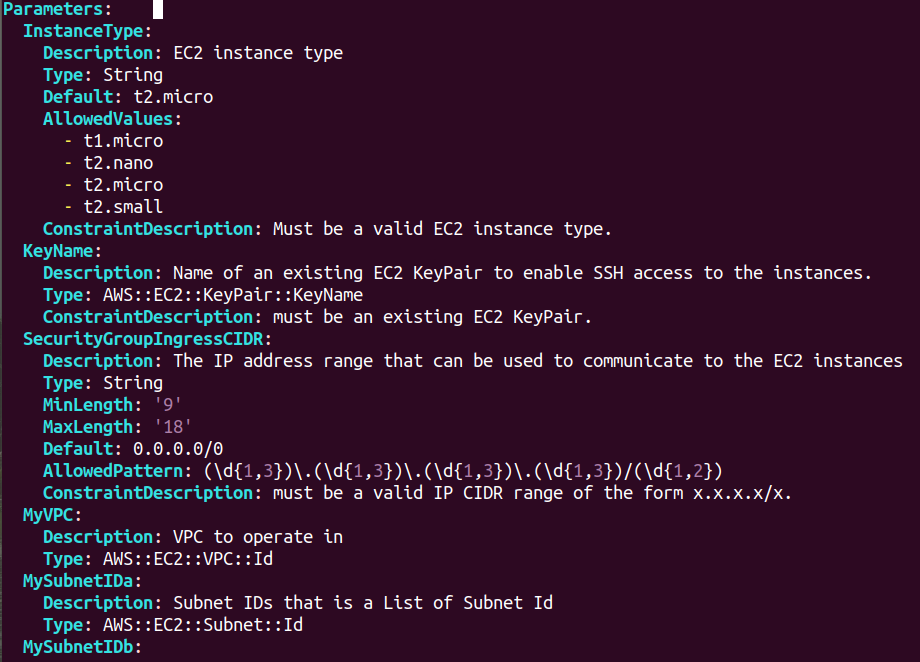
2. **Install Nginx in EC2 and put it in an ASG.**

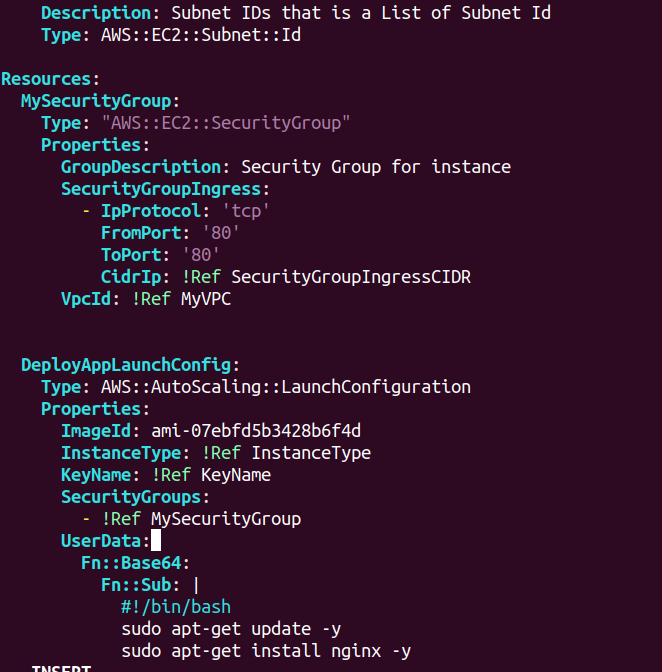
**i) First by Userdata**

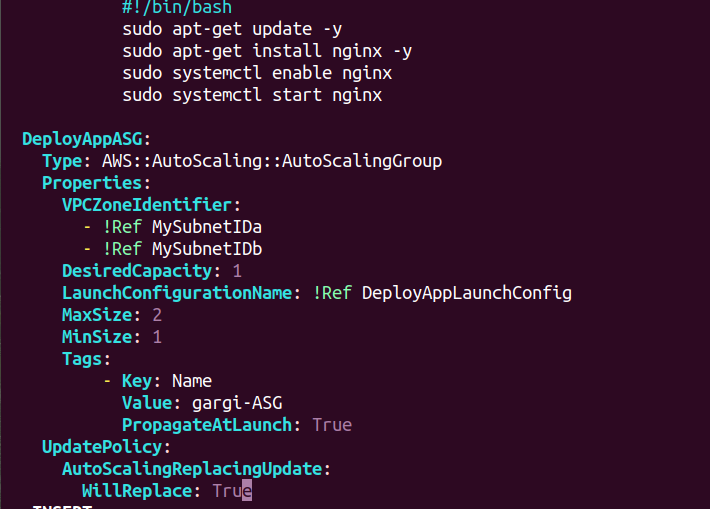
**ii) By Metadata**

**i .) By Userdata:**

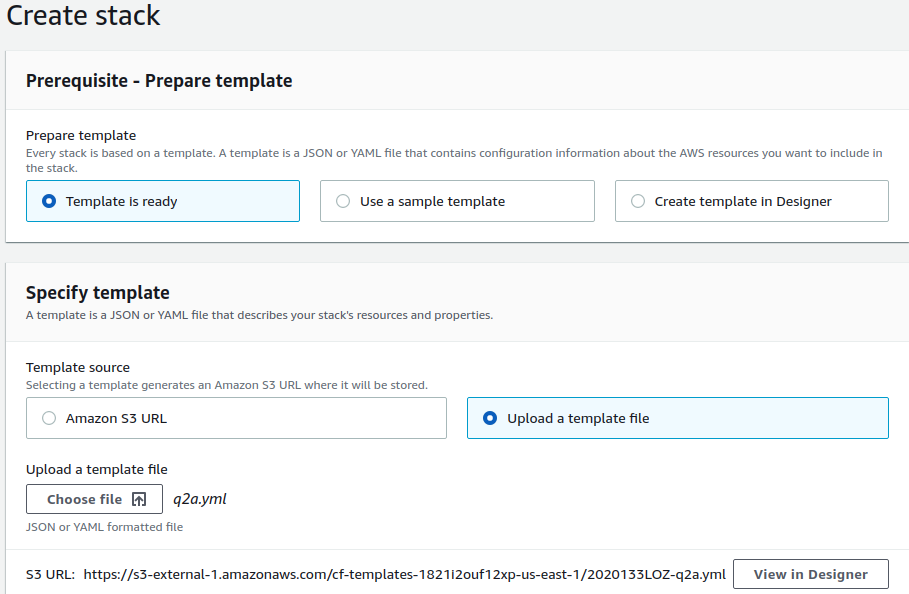
Create a cloudformation template



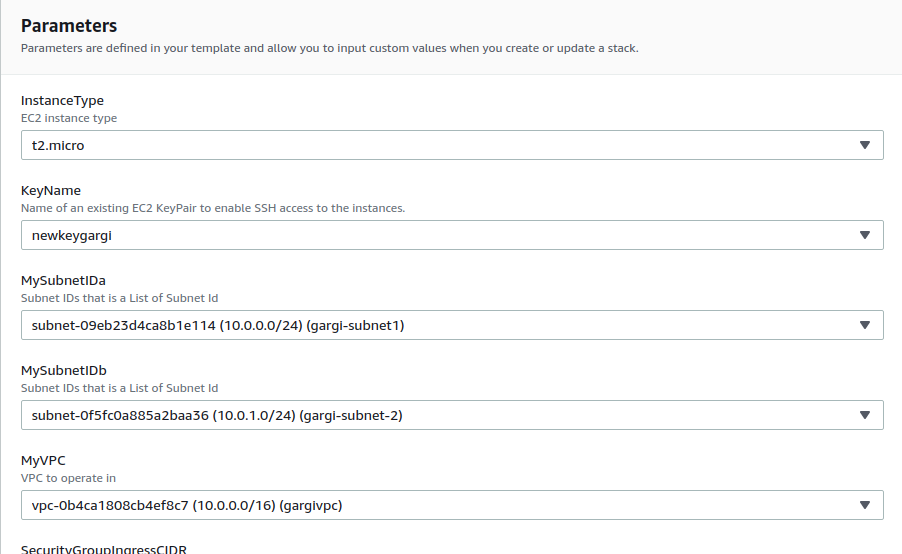




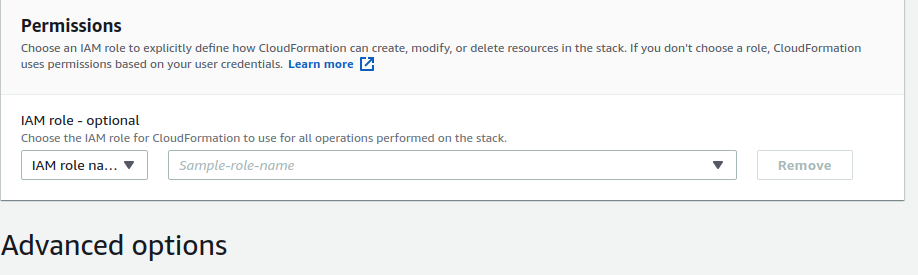
Now go to cloudformation-> Create Stack -> Upload a template



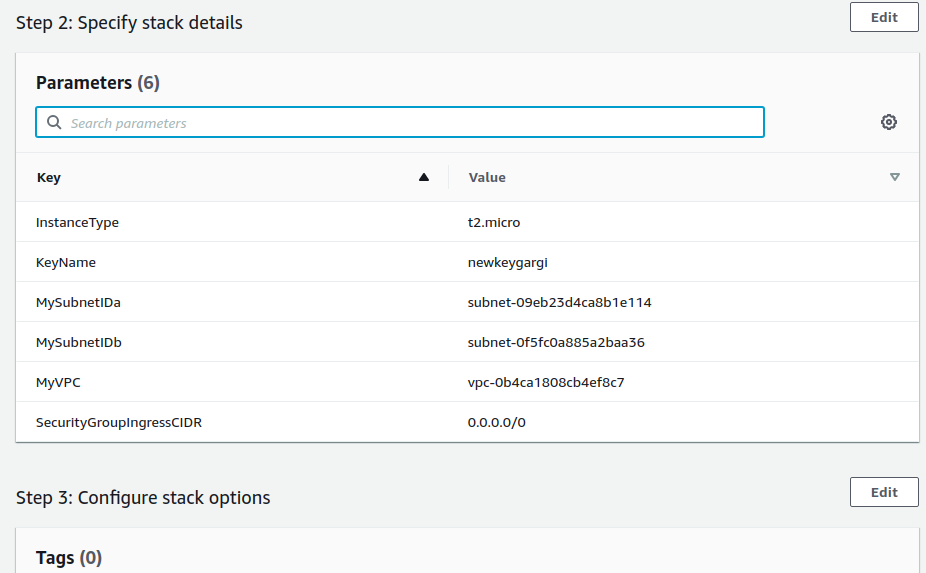
Specify the name of the stack and give parameters.



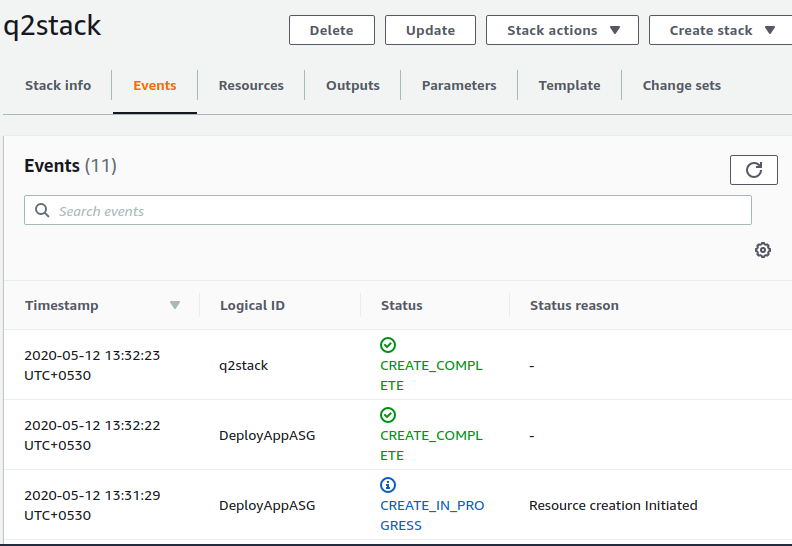
Configure stack options



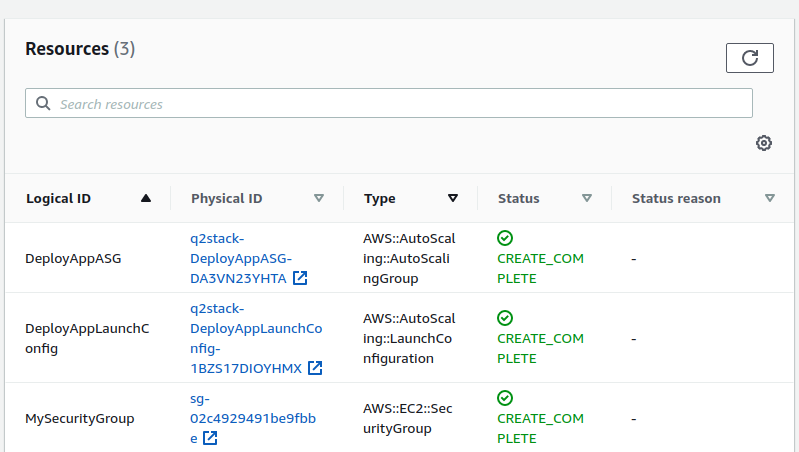
Review stack:



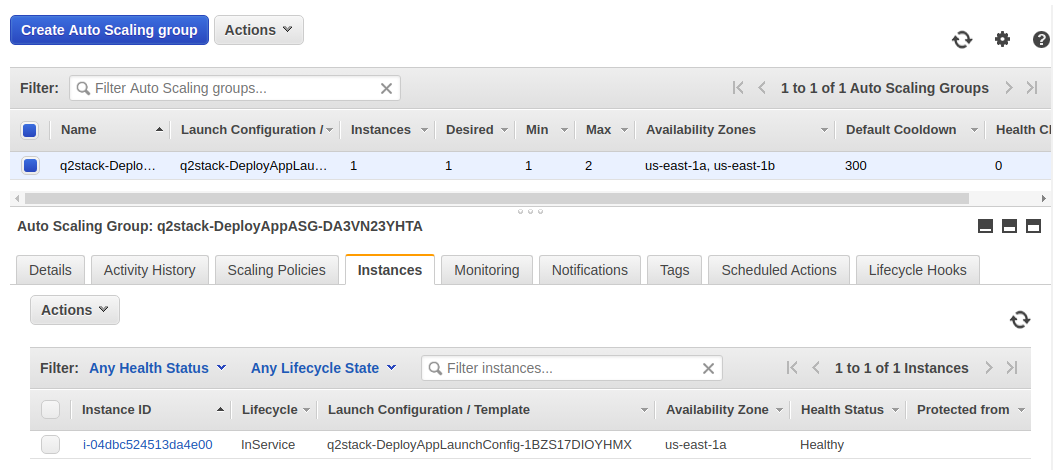
Check for events



Check resources created



Go to ASG and look for the newly created instances

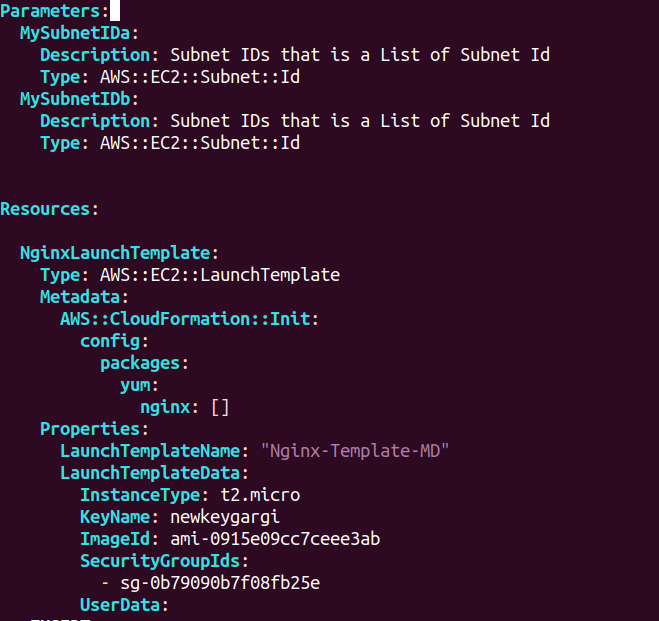


Copy the instance IP and hit it on a browser



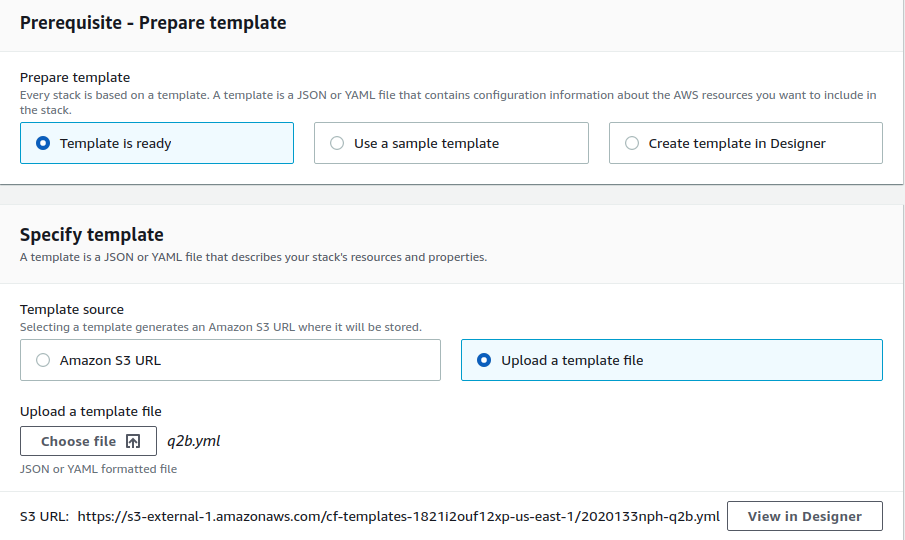
**ii.) With Metadata**

Write cloudformation template

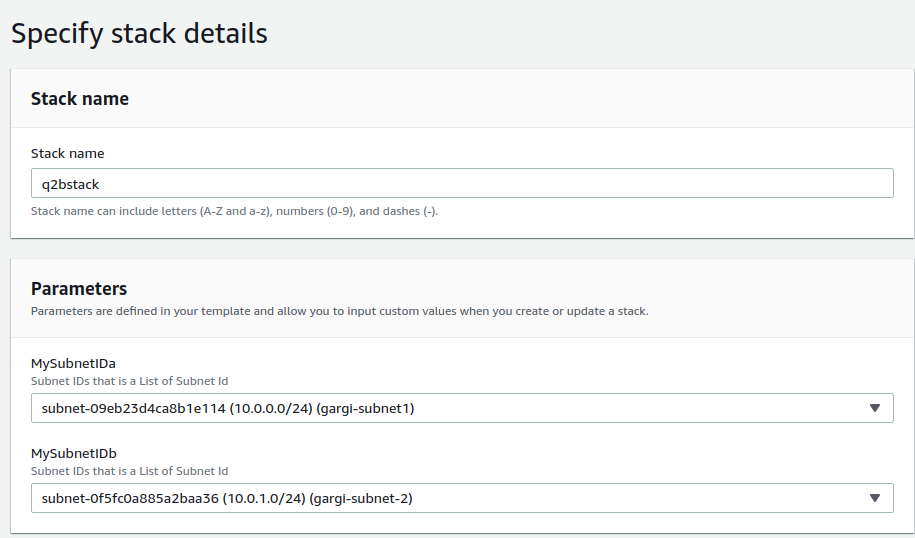




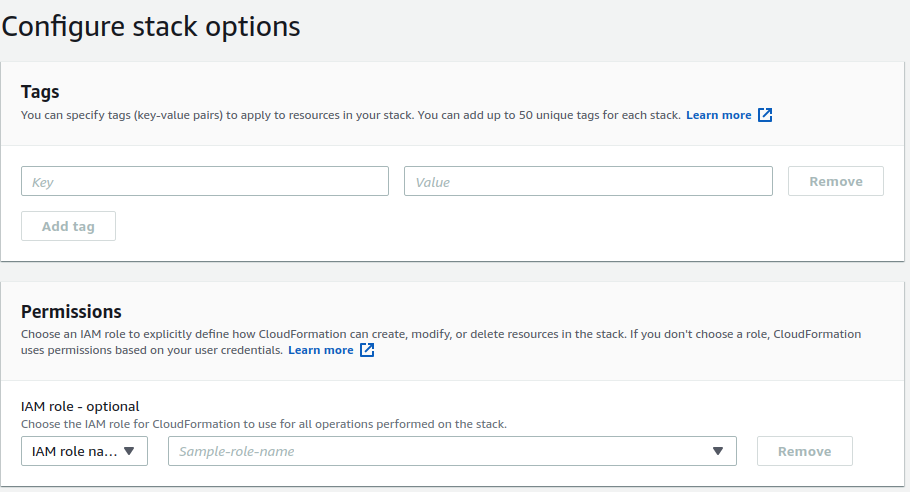
Create stack



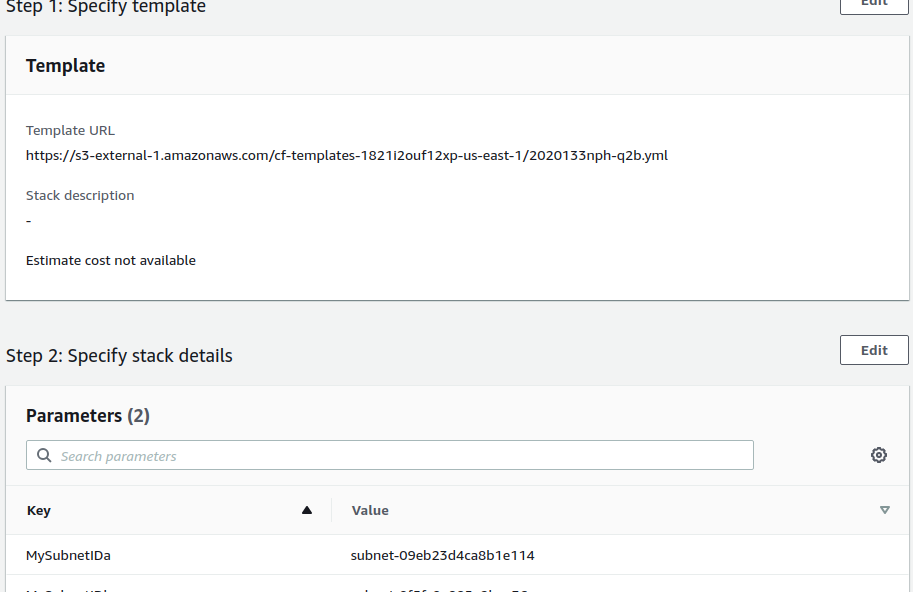
Specify parameters



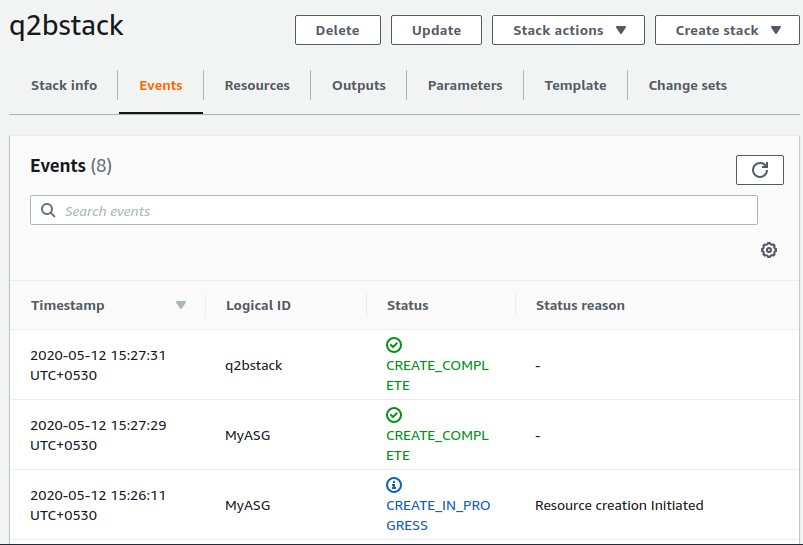
Configure stack options



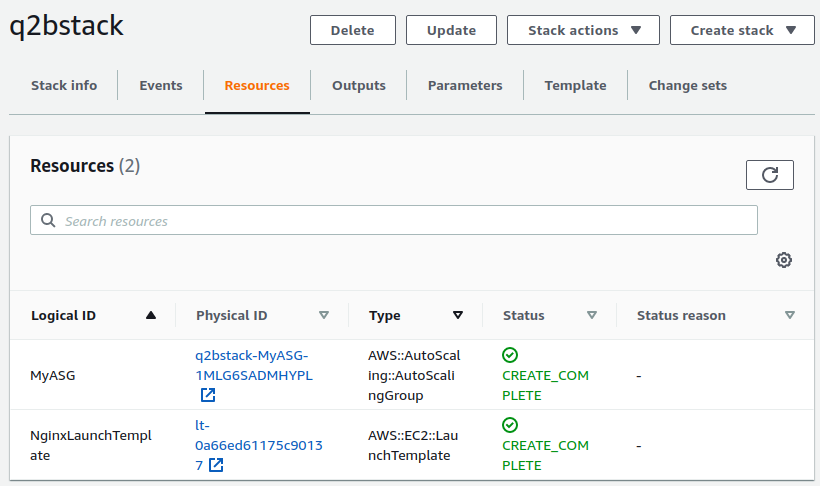
Review stack



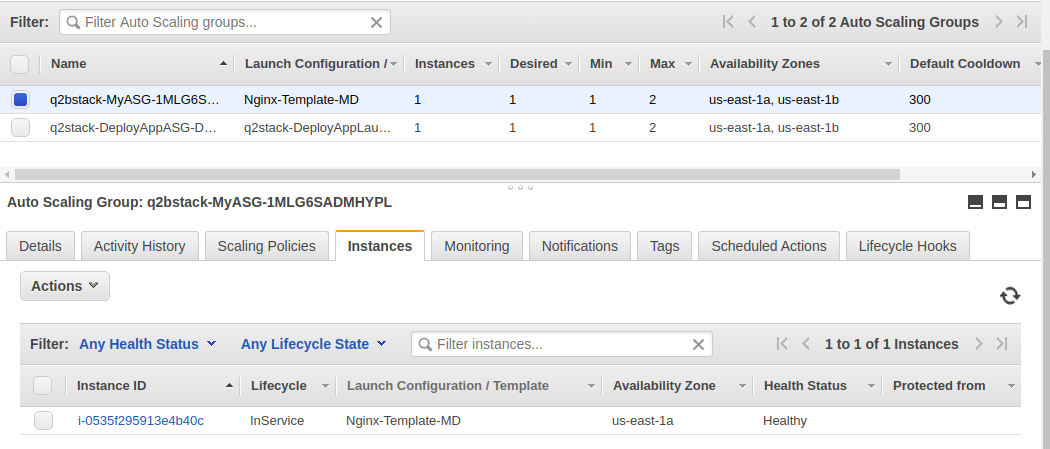
Check Events



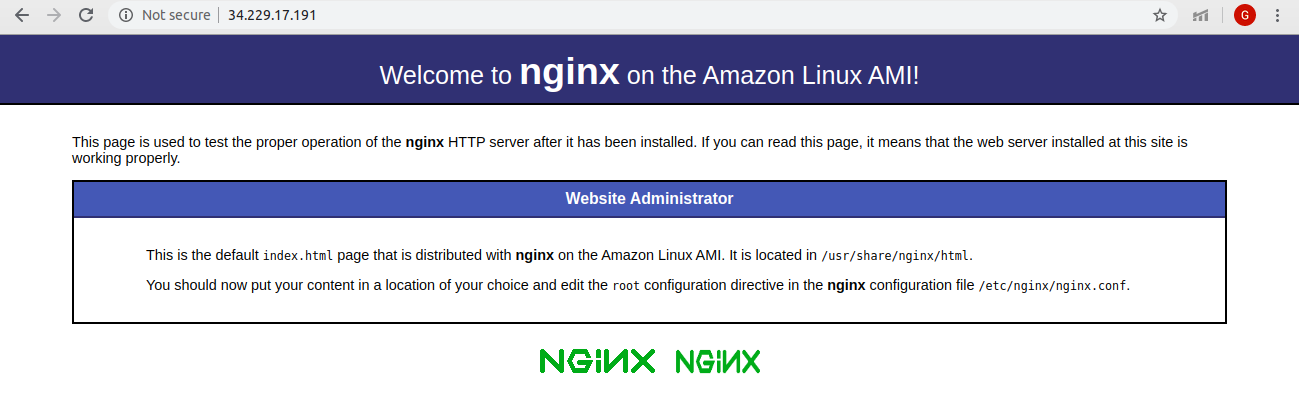
Check Resources



Find the instance under ASG

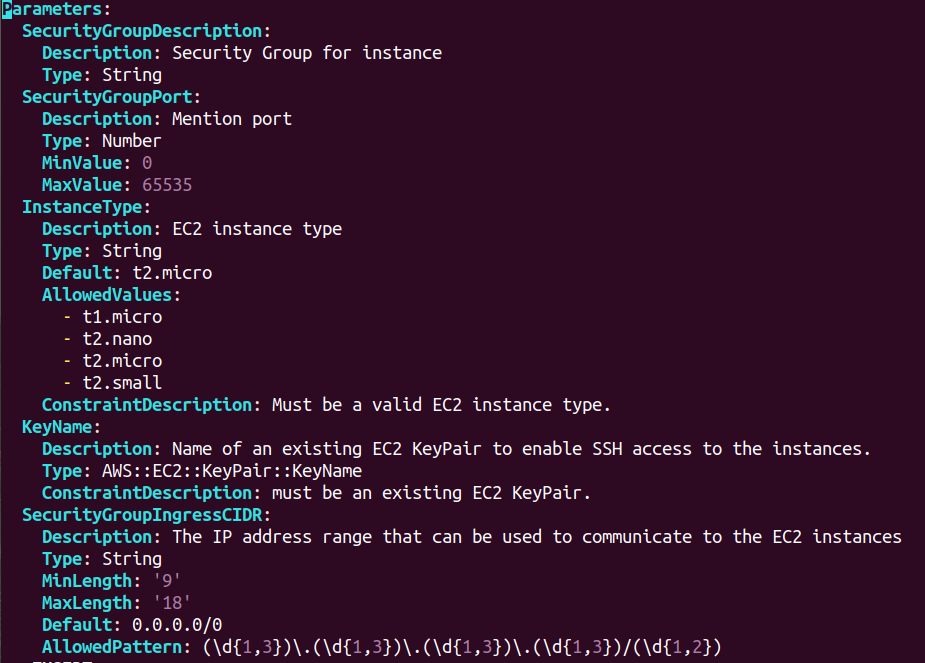


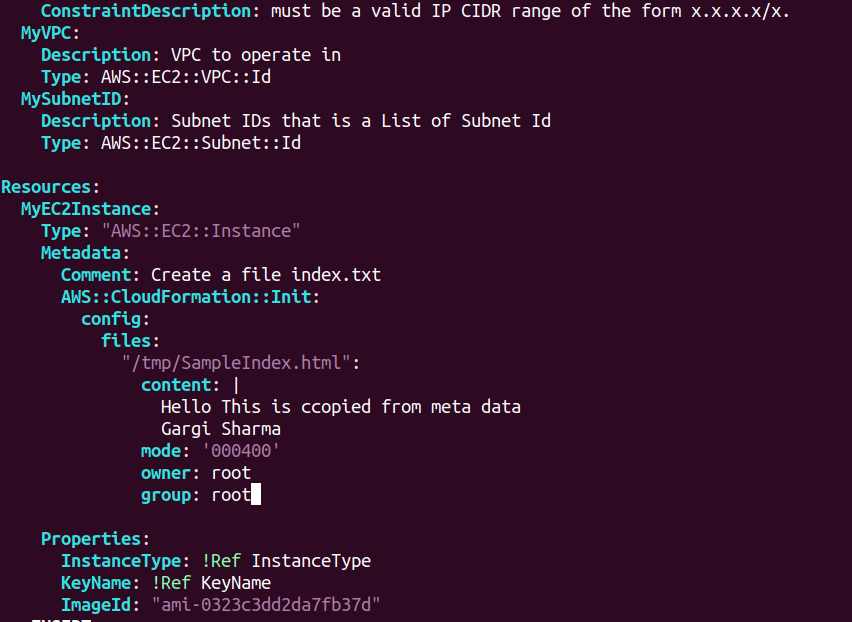
SSH into the instance and start nginx. Copy the public ip of the instance and hit it on port 80

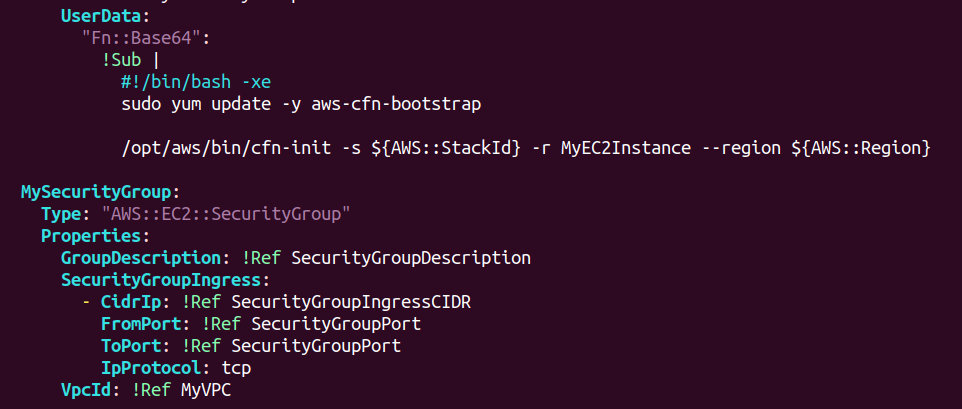


**3. Create a Sample Index file and copy this file using MetaData into EC2 Instance.**

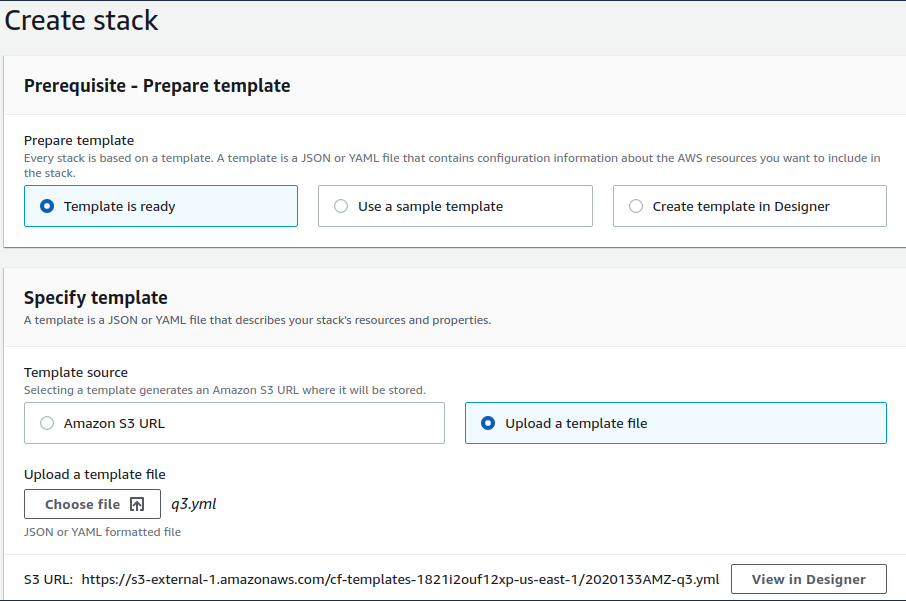
Create a cloudformation template



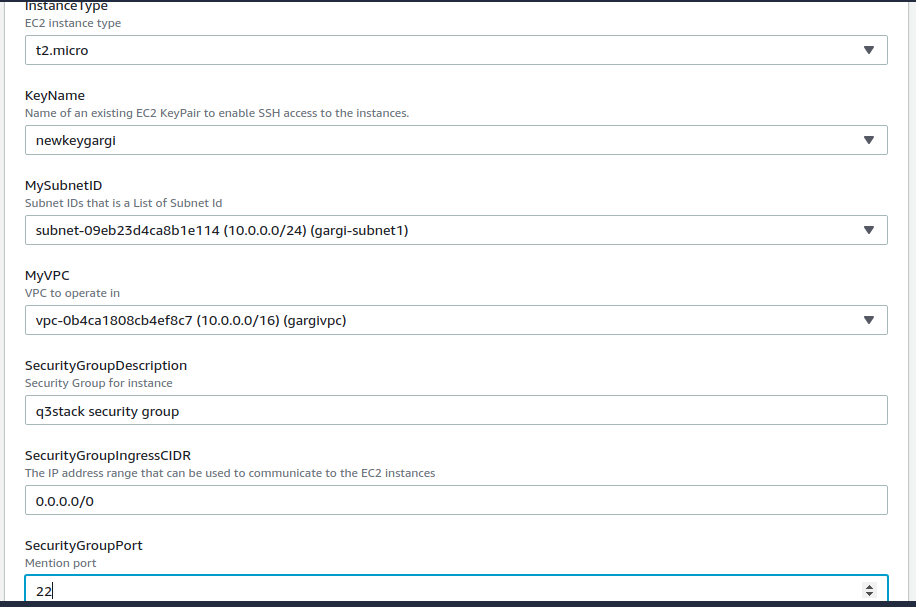




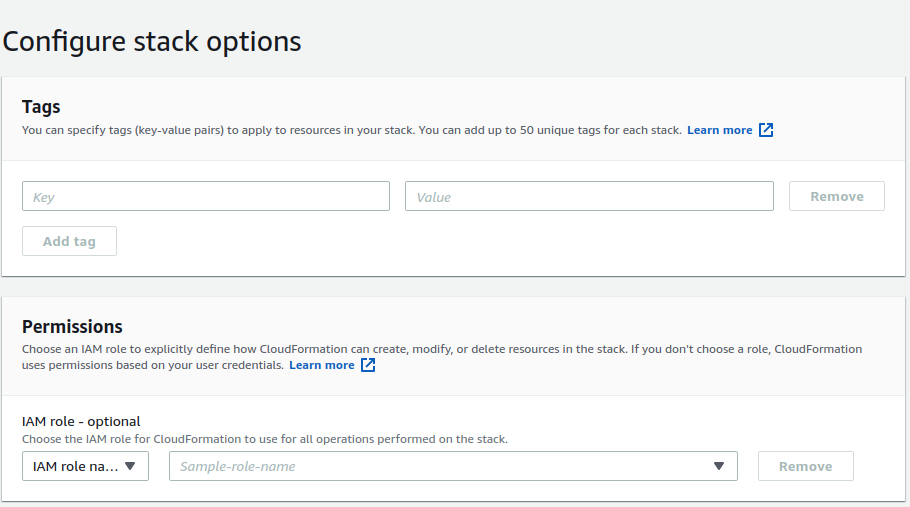
Go to cloudformation and create stack



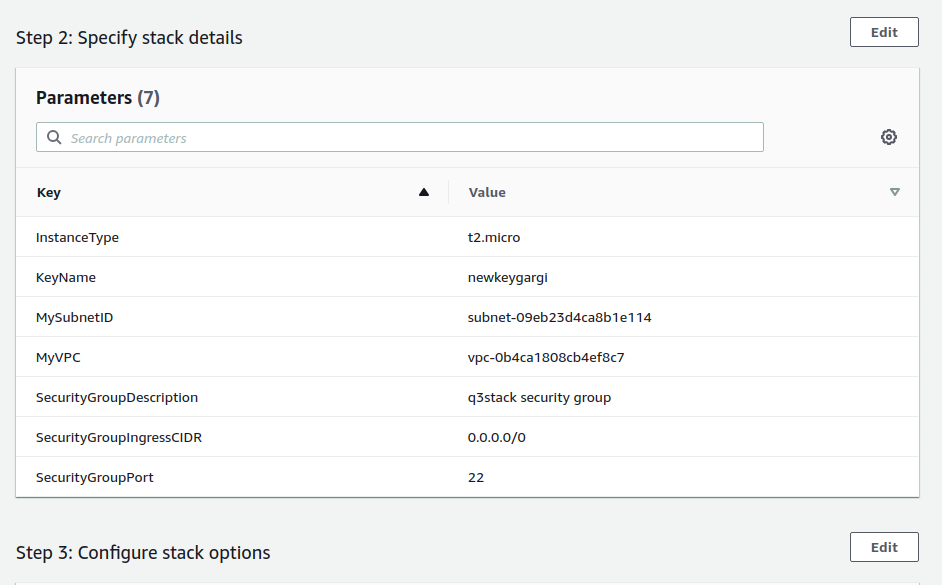
Specify parameters



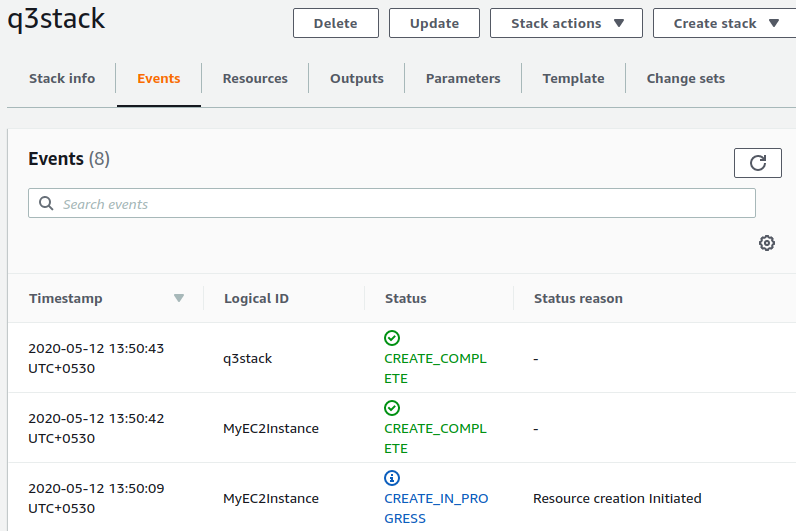
Configure stack options



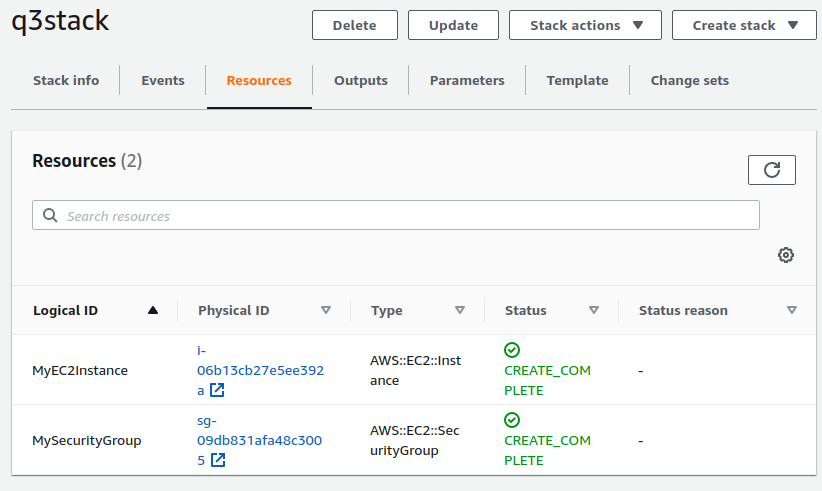
Review stack



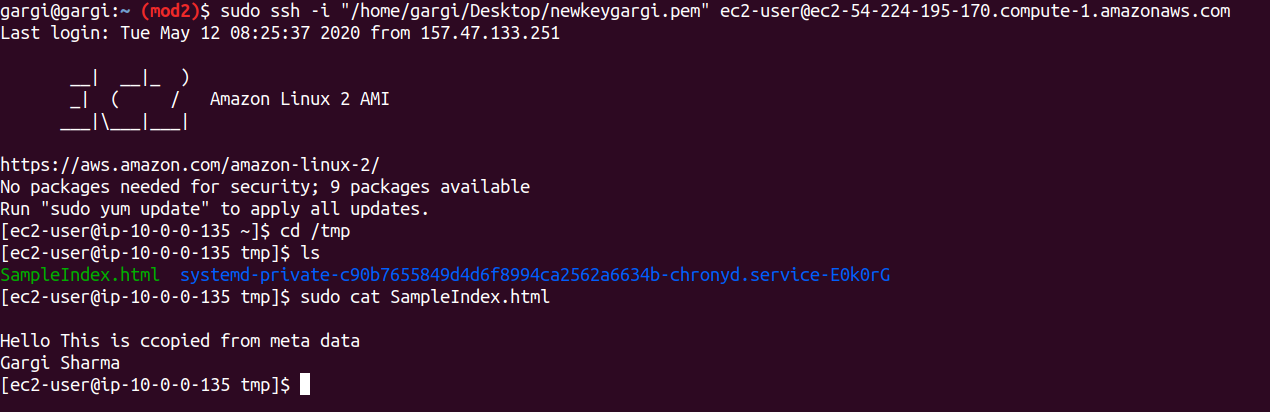
Check for events in stack



Check resources



Now ssh into the instance and find the copied file in /tmp directory

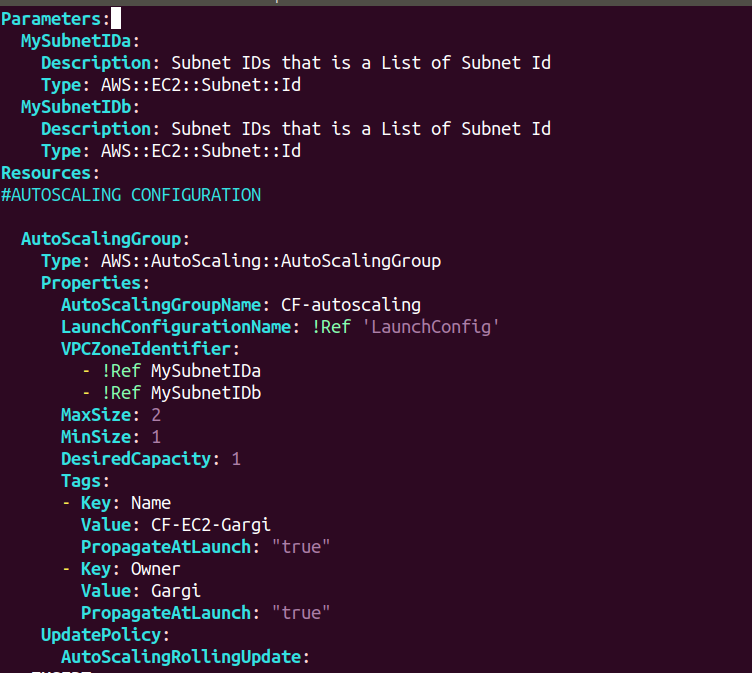


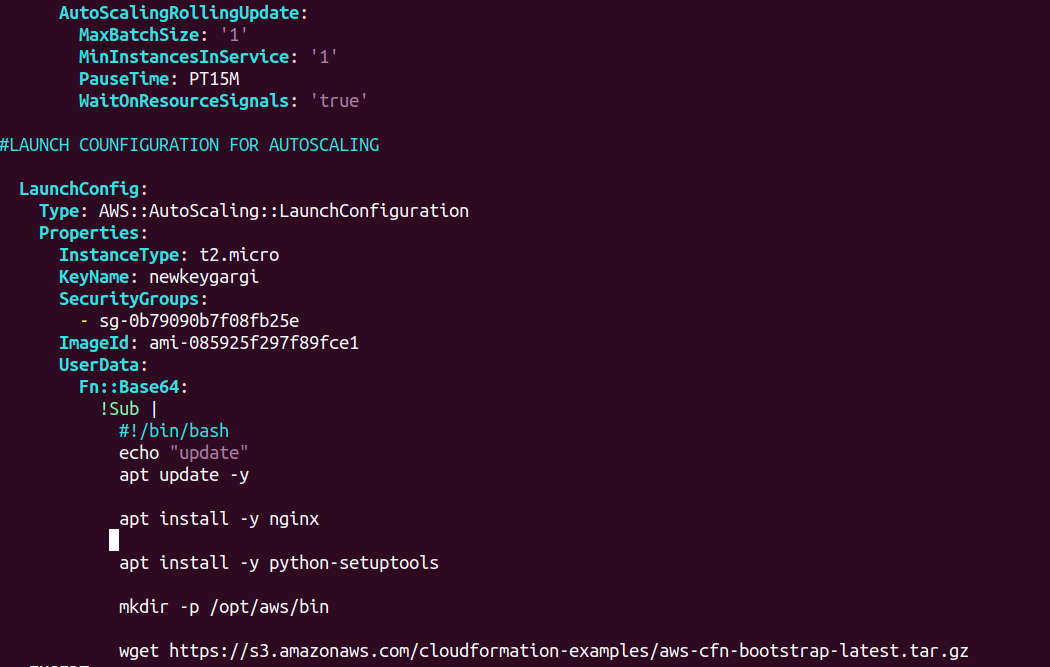
**4. Changing the content of Index should reload the nginx config automatically in EC2 Instance.**

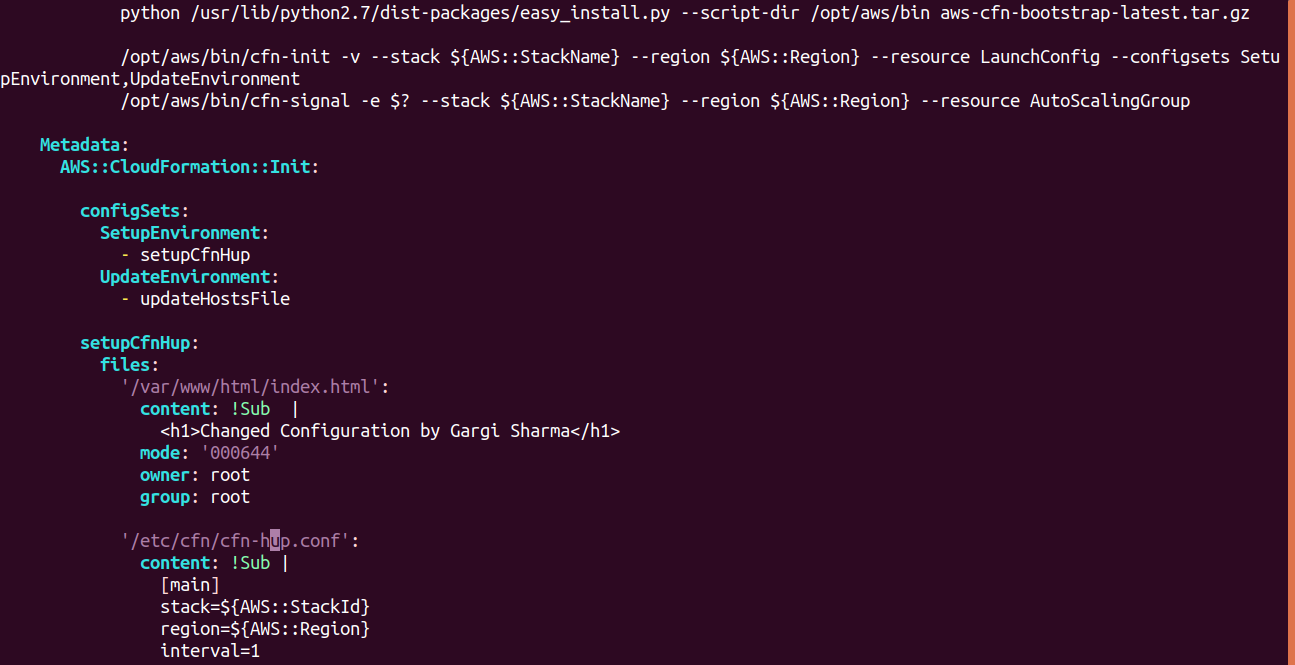
**5. Perform ASG Rolling Update with the change in UserData in above Cloudformation Template.**

**Both the questions are solved using this script**

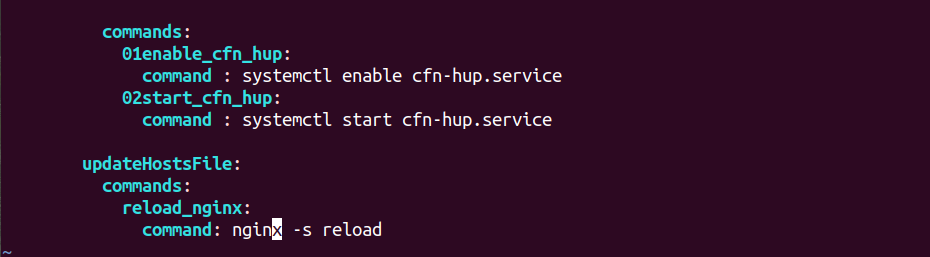
Write a cloudformation template



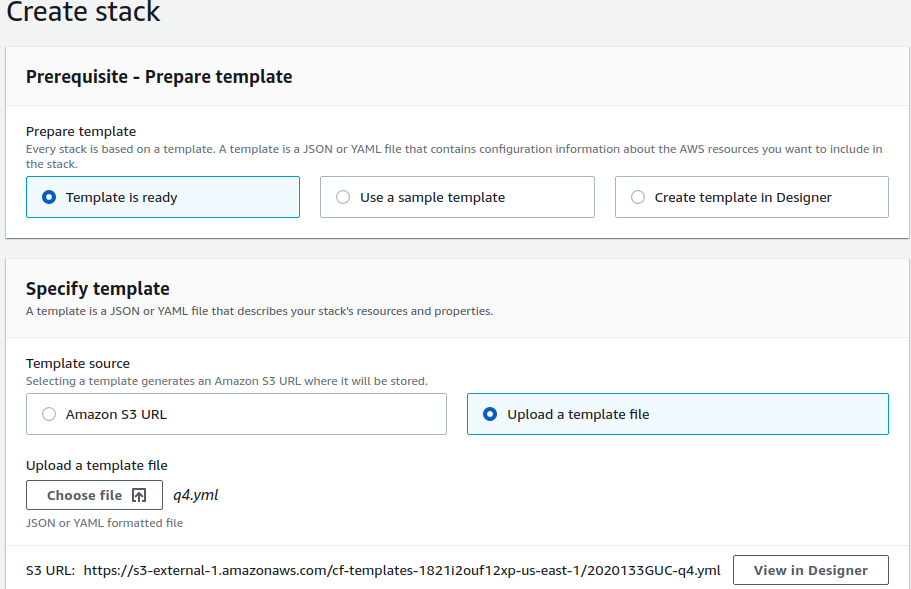




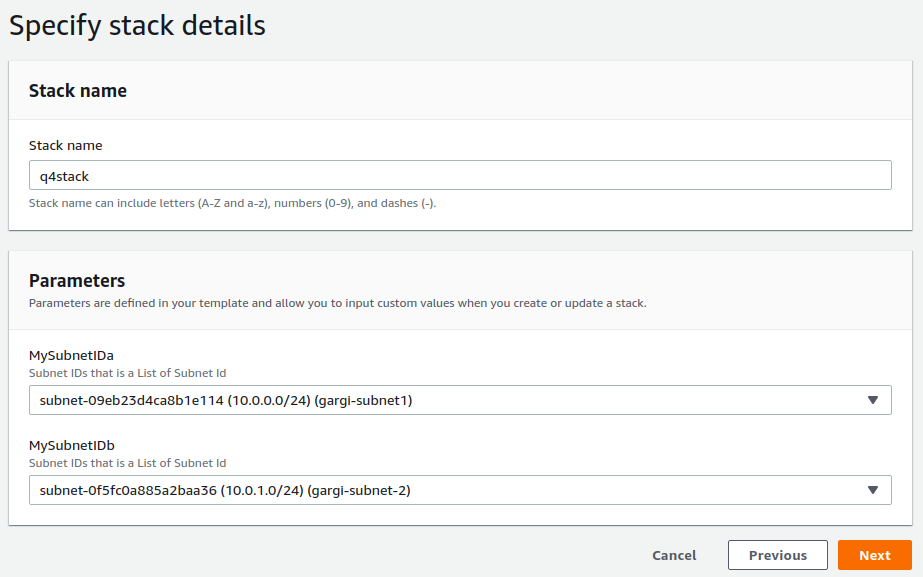




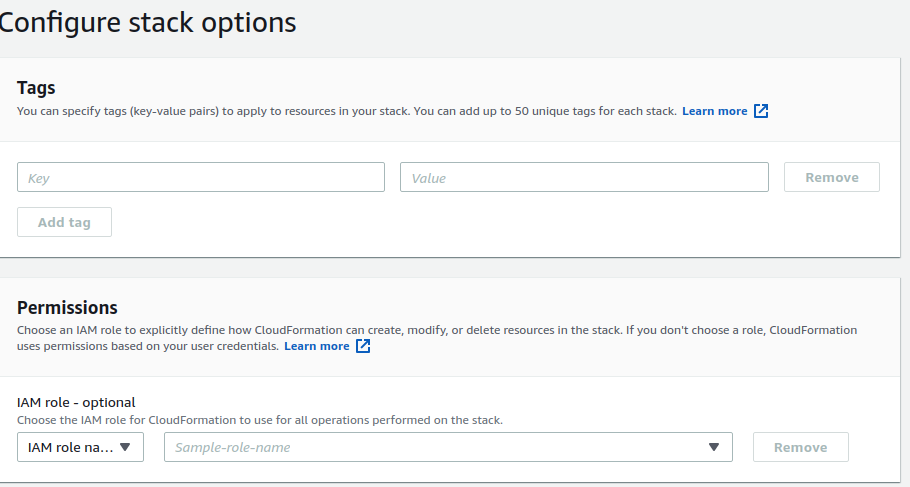
Create Stack



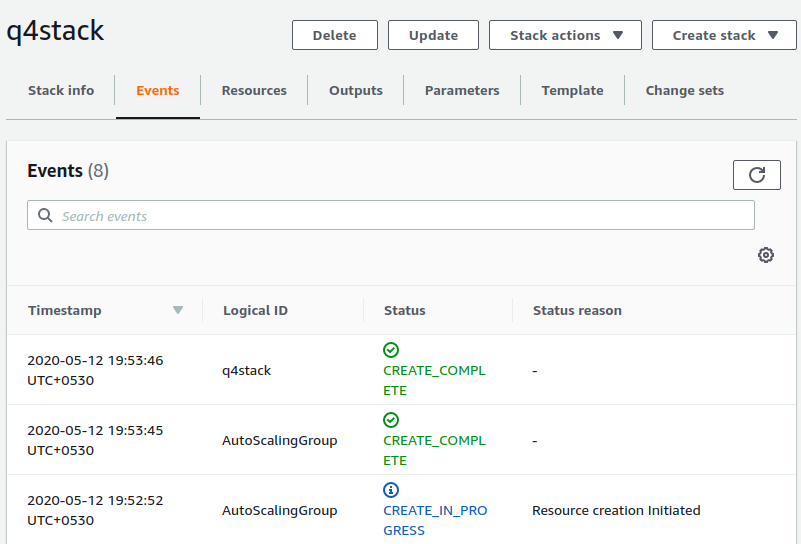
Specify stack parameters



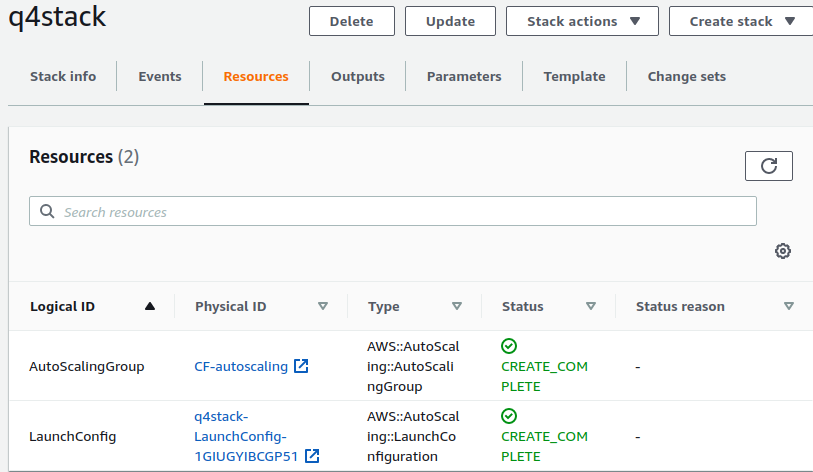
Configure stack options



Check Events



Check Resources



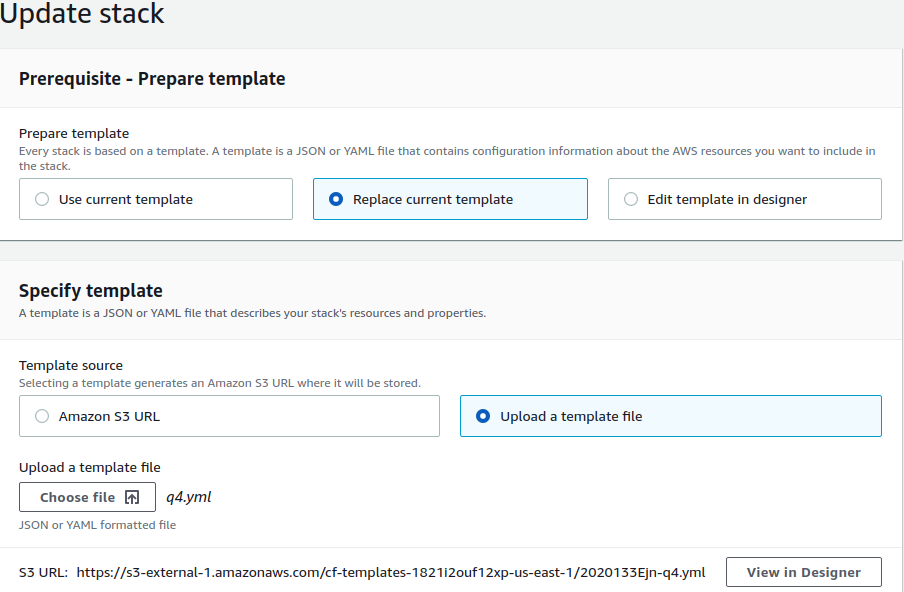
Copy the instance IP in the ASG and hit on port 80



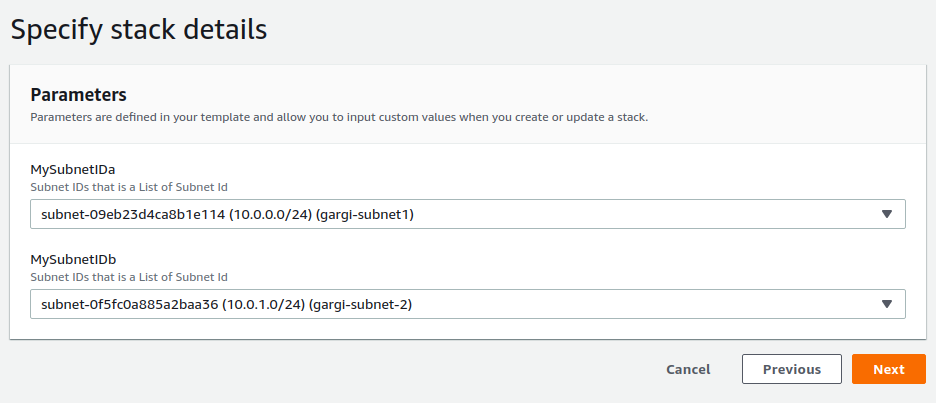
Now update the template to perform rolling update. The name of the new template should be different.



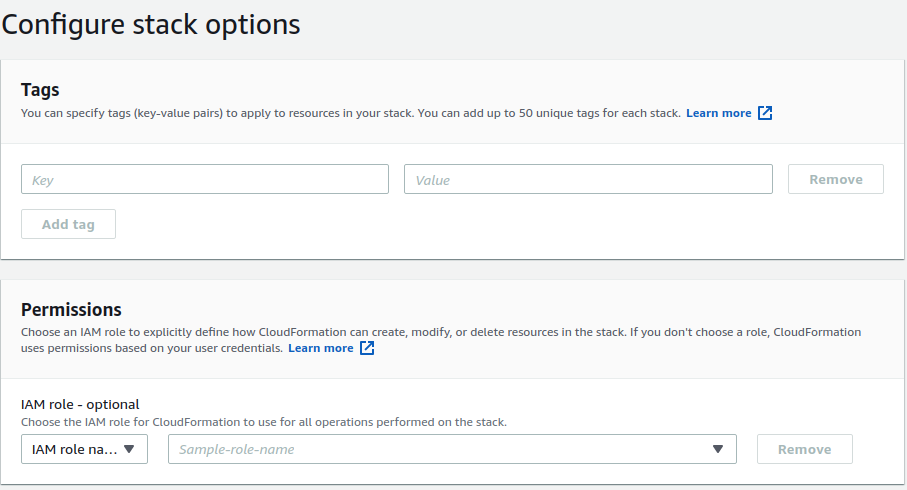
Go to Cloudformation-> Create stack-> Update stack



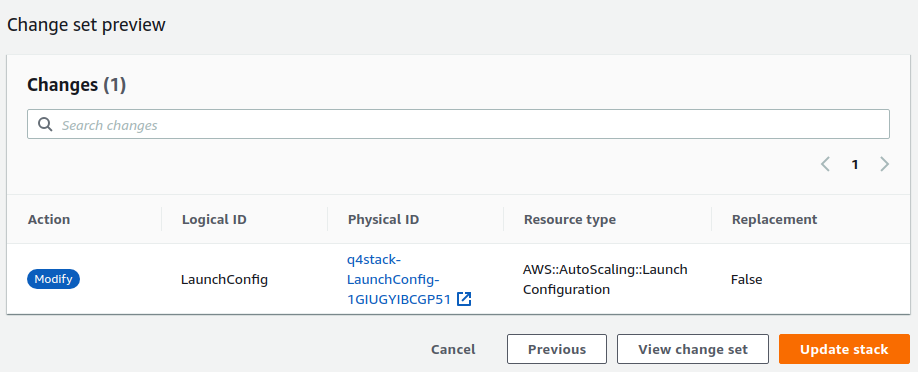
Specify stack details



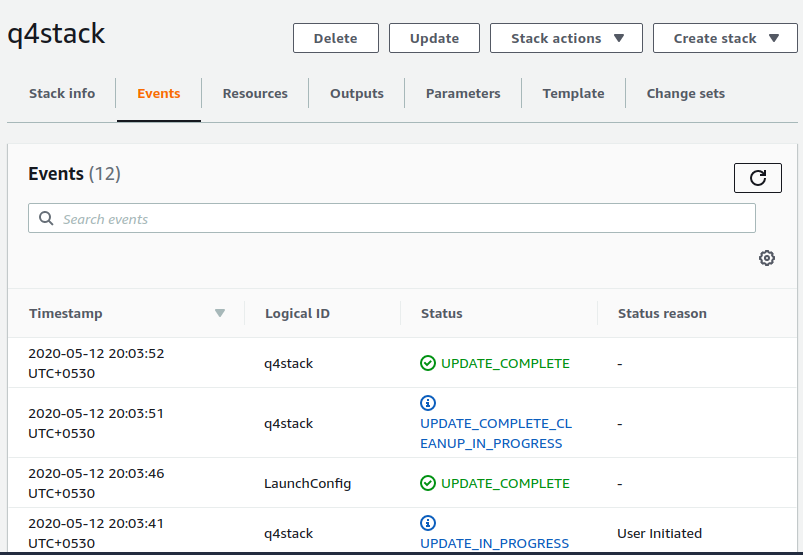
Configure stack options



Review the changed configuration



Check events.



Now hit the instance ip at port 80. It should show new configuration.

