Cloud Computing - Cloud Design
CS/IS 243

4/01/2021

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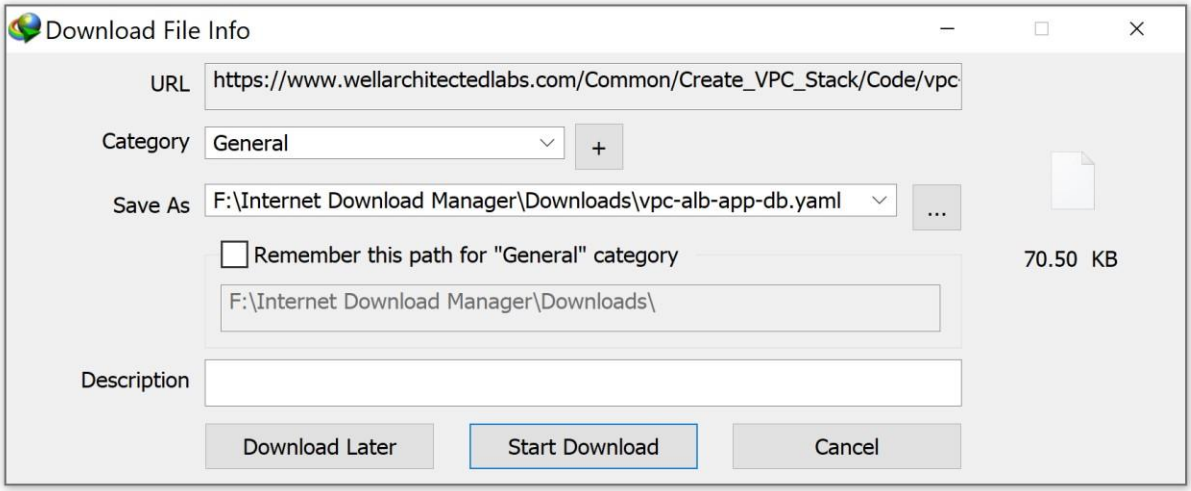
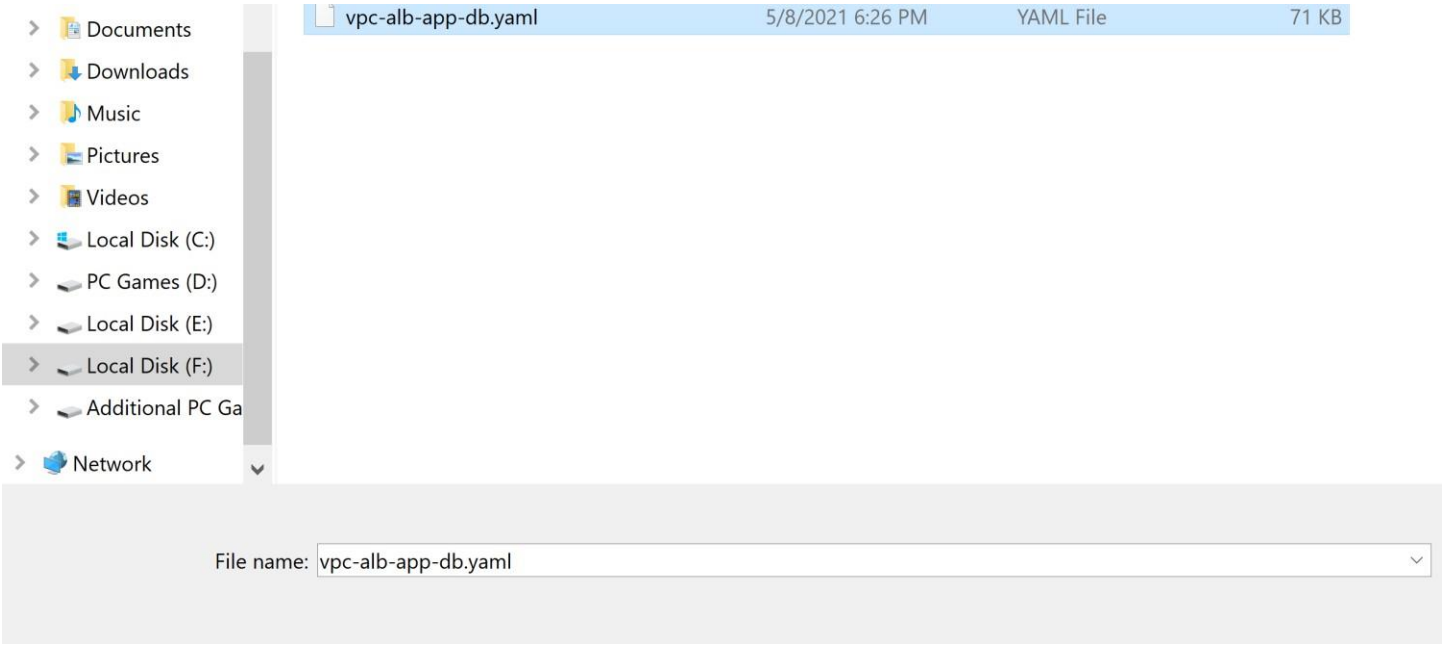
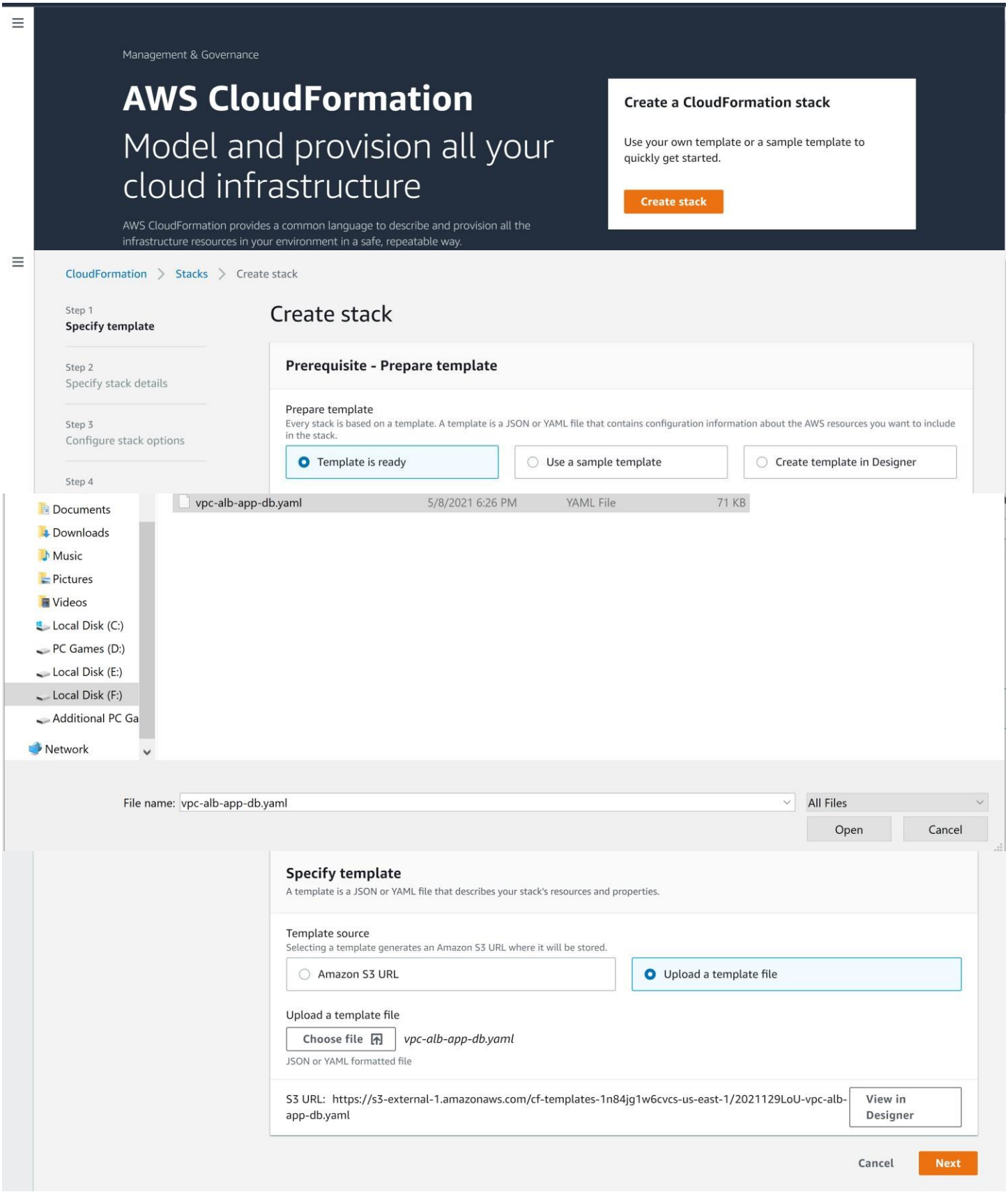
RESILIENCY OF EC2 INSTANCES

Resiliency of EC2 instances is about the fundamentals of using tests to ensure your implementation is resilient to failure by injecting failure modes into your application. This may be a familiar concept to companies that practice Failure Mode Engineering Analysis (FMEA). It is also a key component of Chaos Engineering, which uses such failure injection to test hypotheses about workload resiliency. One primary capability that AWS provides is the ability to test your systems at a production scale, under load.

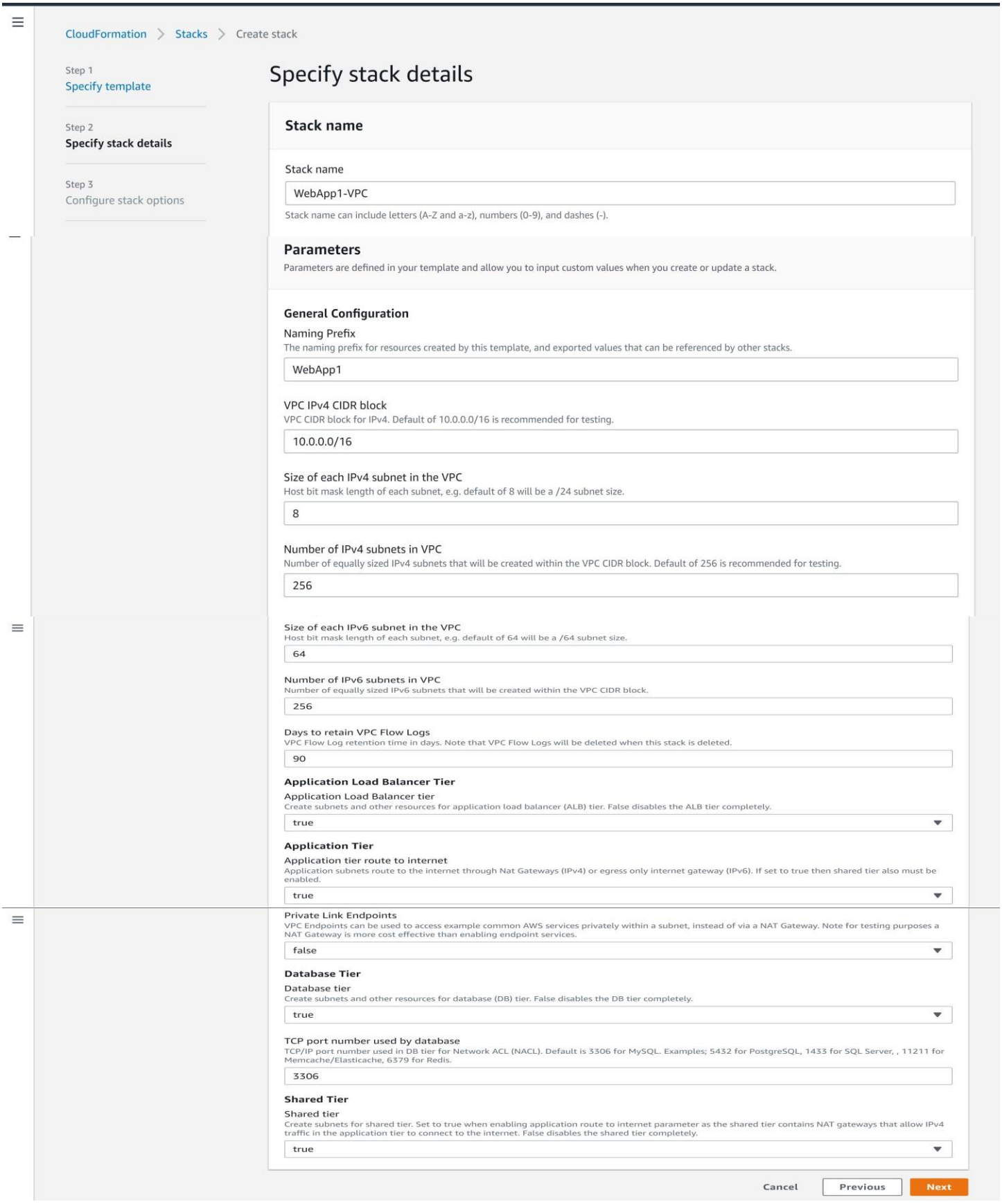




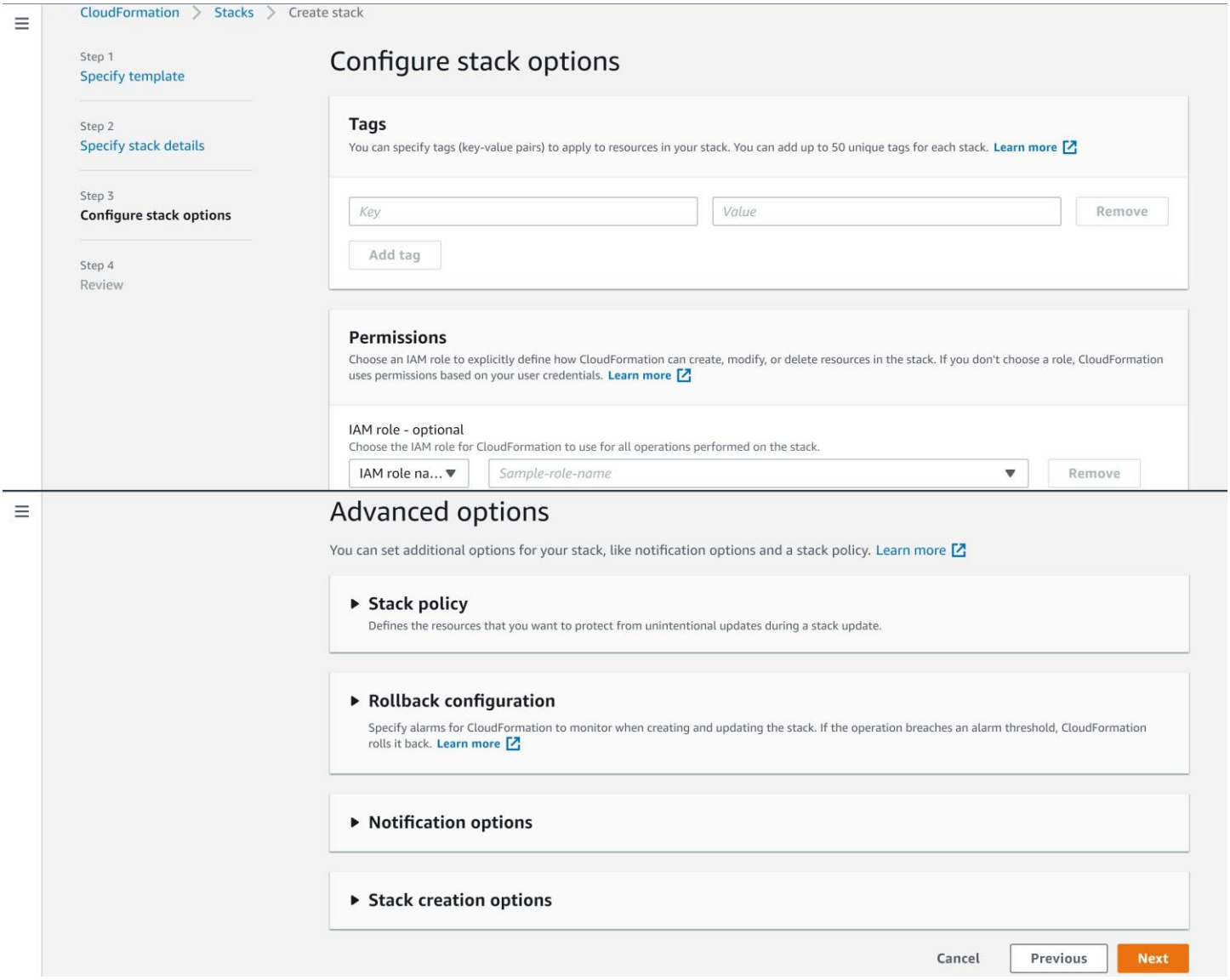
I begin by downloading the CloudFormation template: “vpc-alb-app-db.yaml”. once that’s done, I store the downloaded template in a retrievable folder.



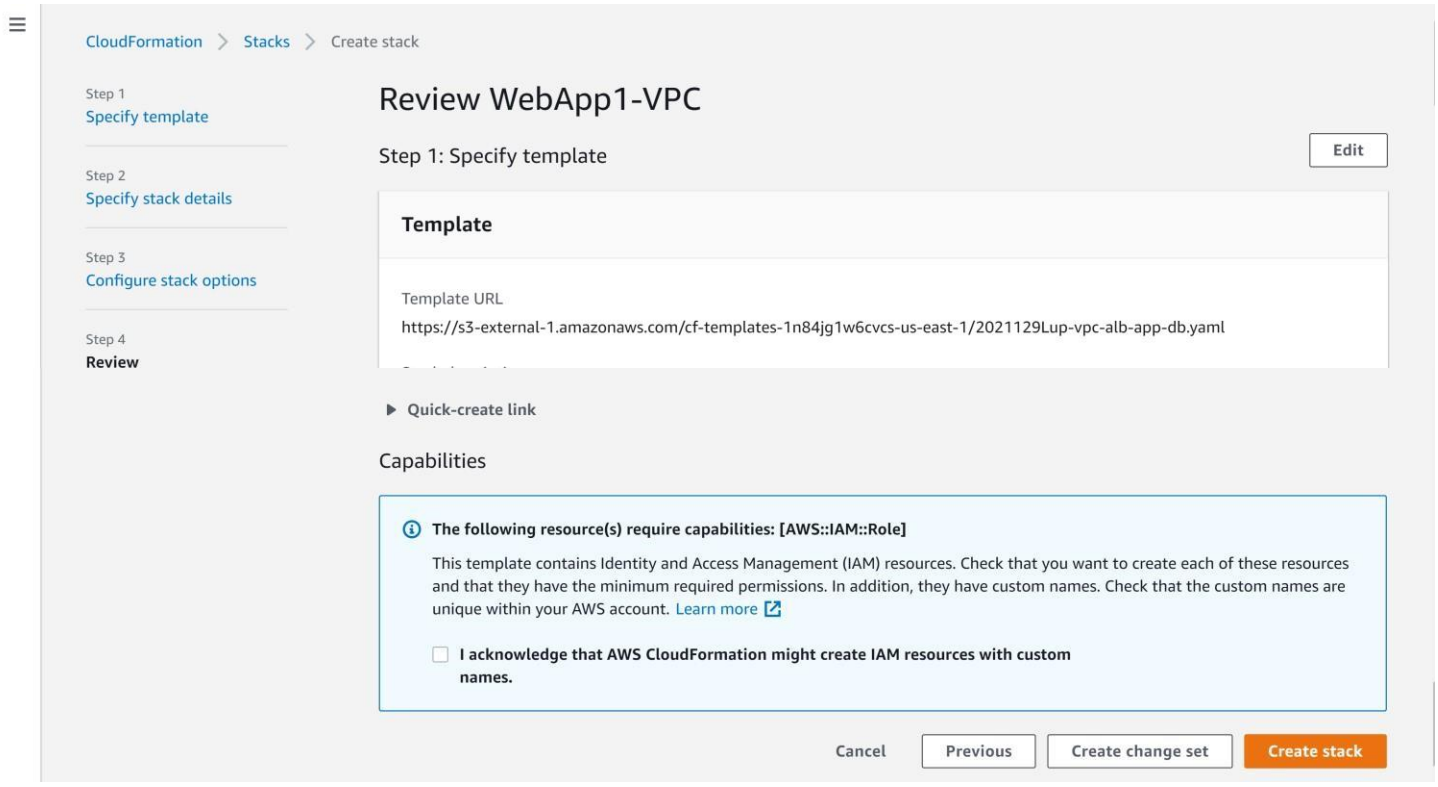
In this step, I create a CloudFormation stack, uploaded the template I had installed earlier (vpc-albapp-db.yaml), after I was done uploading it, I clicked on Next.



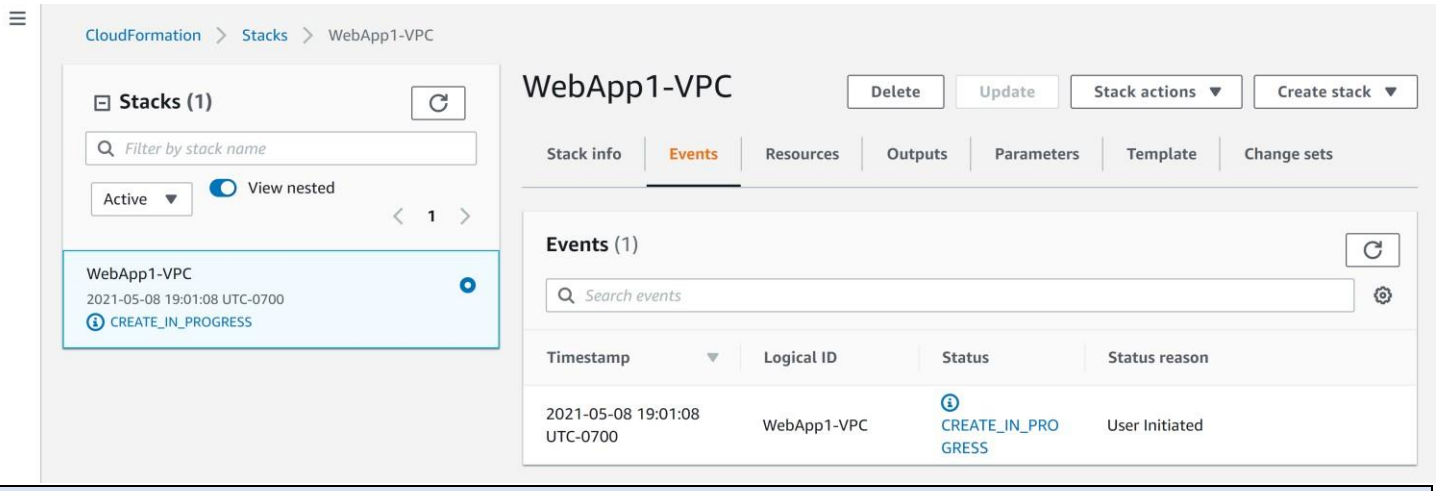
In this step, I specify the stack details. I named the stack as “WebApp1-VPC” and I leave the rest of the parameters at its default settings. I clkickesd on Next after I was done inputting the appropriate informations.



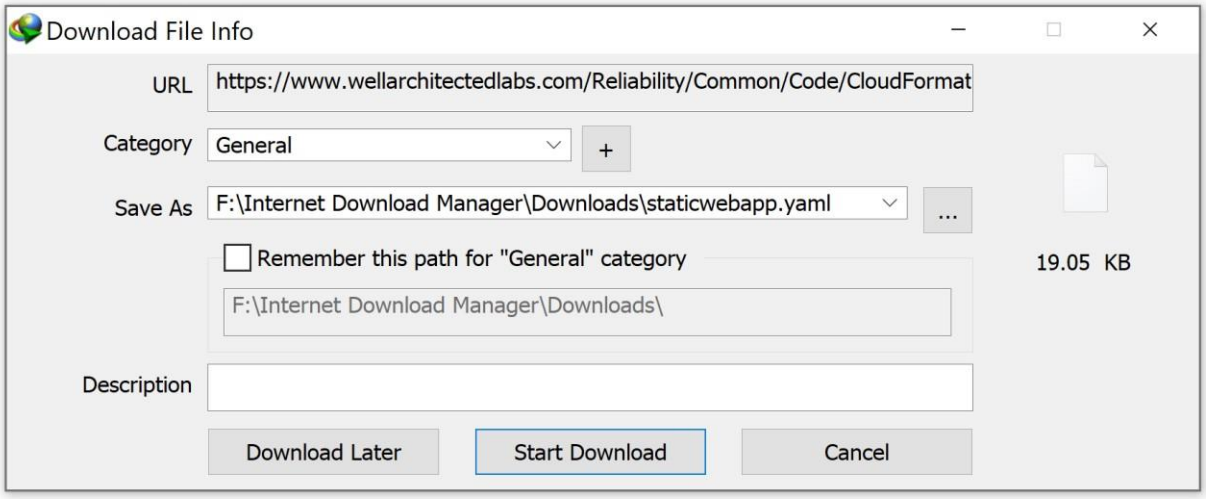
I left everything at its default settings at the Configure stack options page and clicked on Next to move on to the next step.



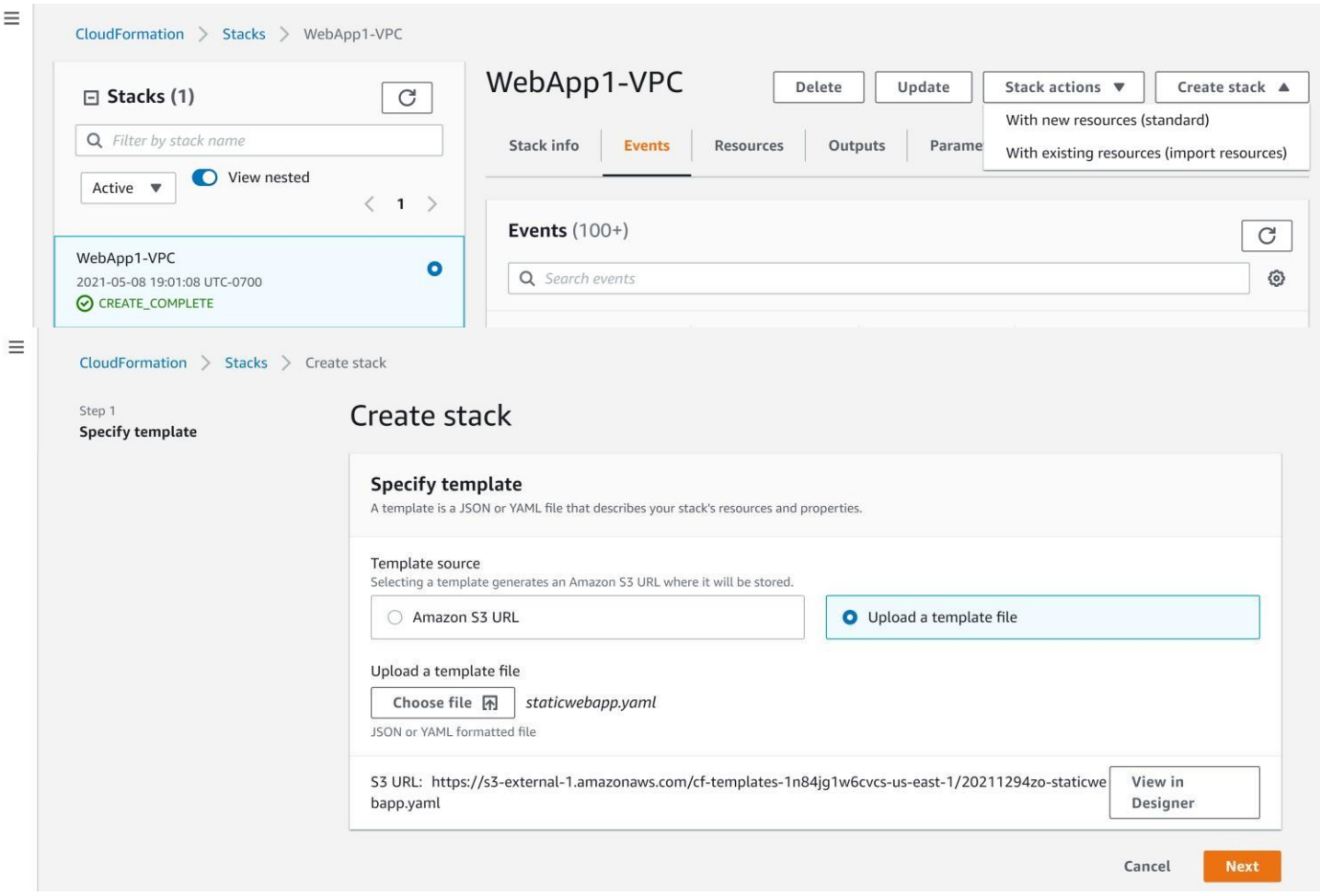
The next page, which was the Review page, I acknowledged that everything I had done in the earlier steps are correct. Once I was done, I clicked on Create stack.



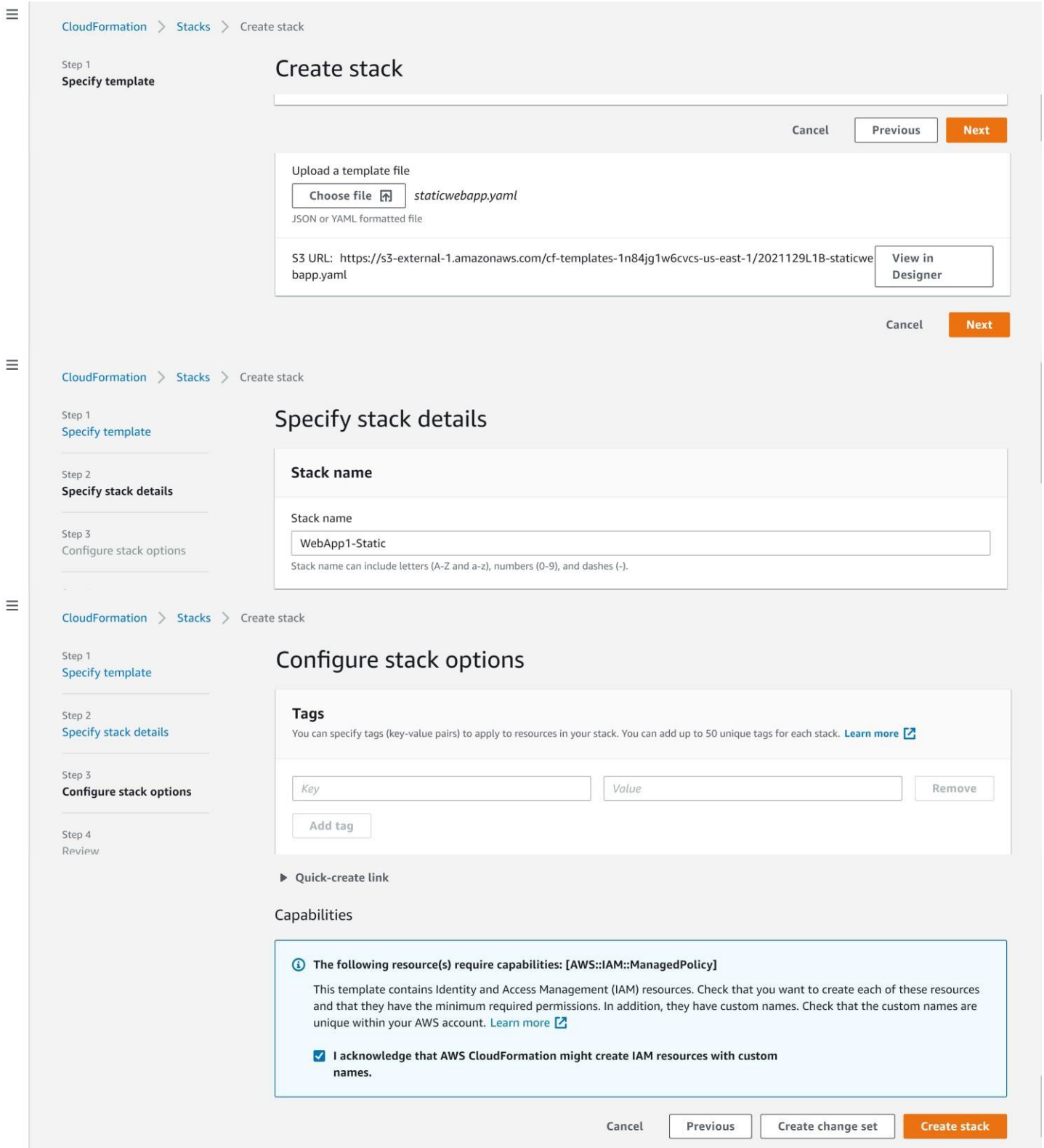
My stack is being created.



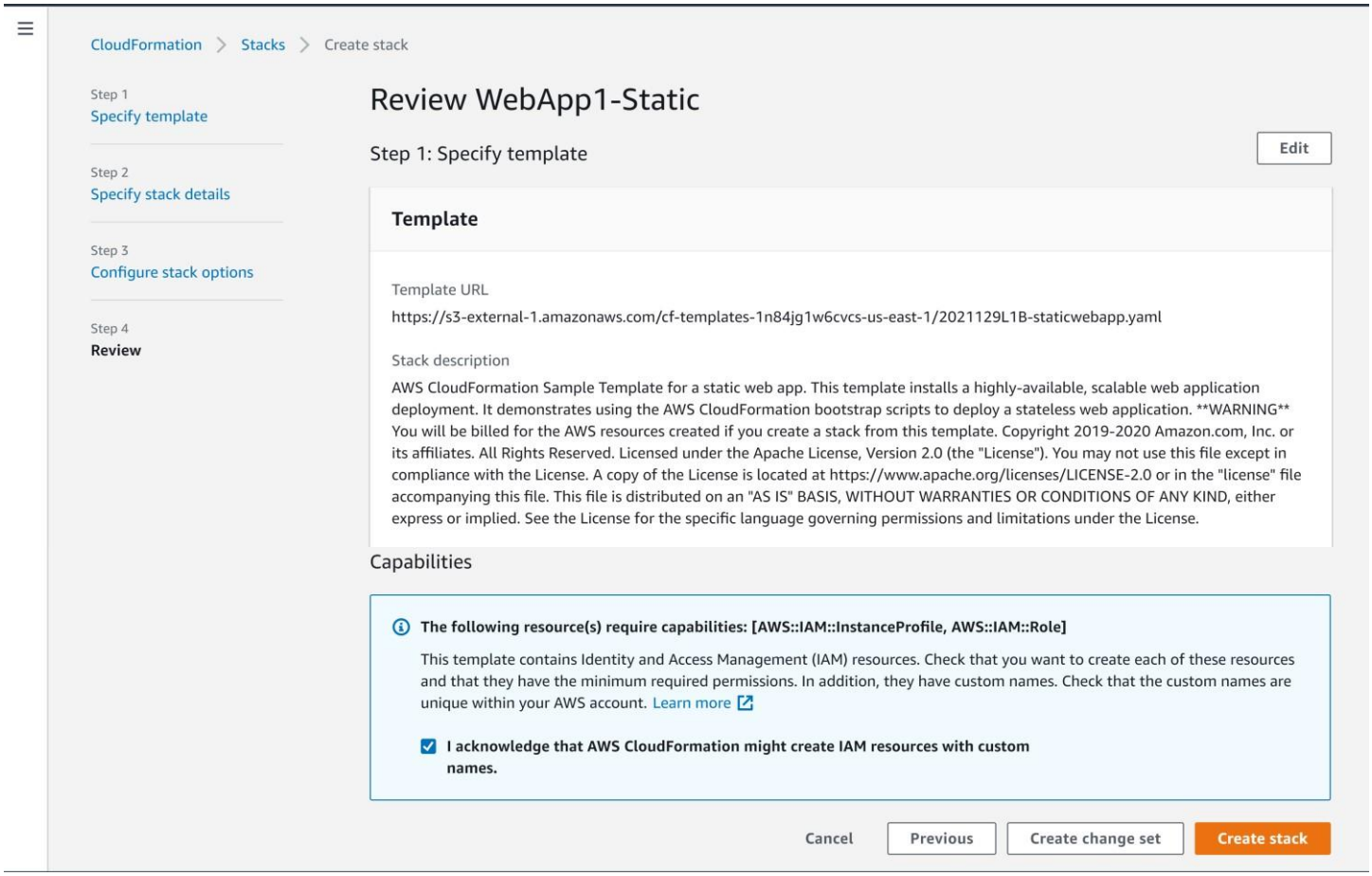
For this step, I will also need to download another template (staticwebapp.yaml) and store it in a retrievable location.



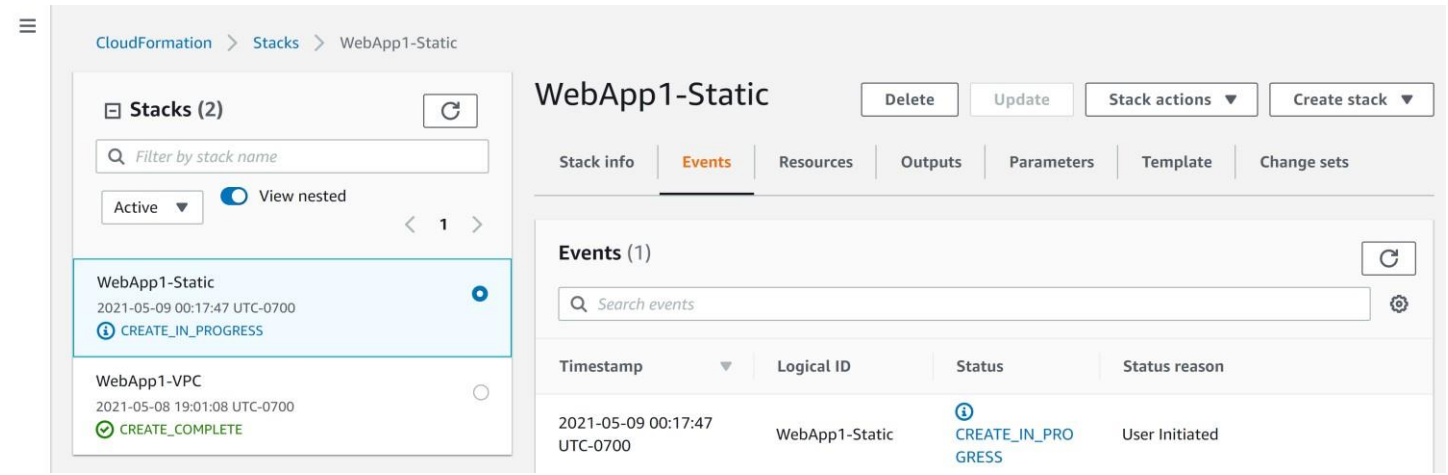
Within the WebApp-VPC dashboard, I toggle to the Create stack tab and I select ‘with new resources (standard)”. I am then taken to the Create stack page where I can upload the new template I downloaded earlier: staticwebapp.yaml. I click on Next after I upload the template.



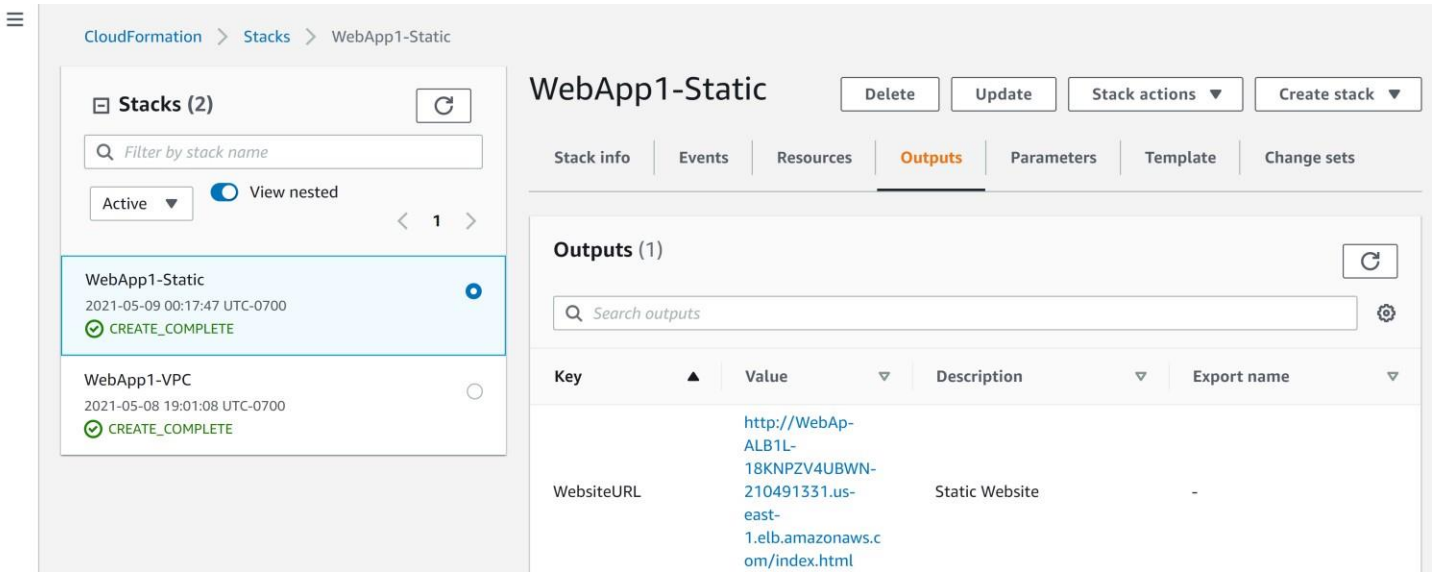
In the Specify stack details page, I name the stack “WebApp1-Static” and leave all else at its default settings. Clicking on Next takes me to the Configure stack options page, here I leave everything on its default settings and click on Next. I am then taken to the Review WebApp1-Static page.



From the Review WebApp1-Static page, I very that I have inputted the correct information, once tha is done, I click on Create stack after I have acknowledge what I am attempting to do.



The stack, WebApp1-Static is being created.



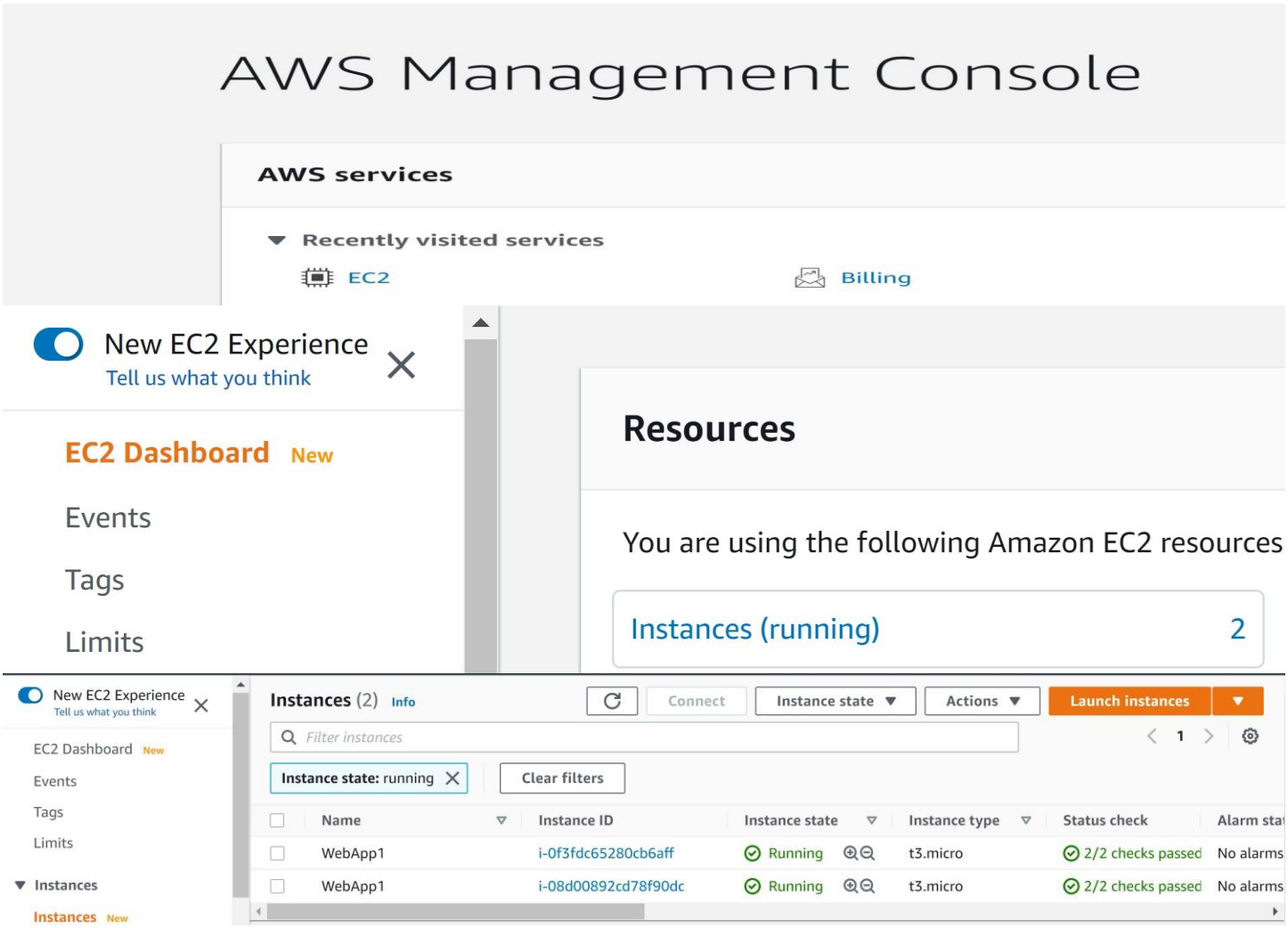
Hello World from i-08d00892cd78f90dc

After the WebApp1-Static stack has been created, I have a link that gives me access to a static website. It is a static Hello World website.

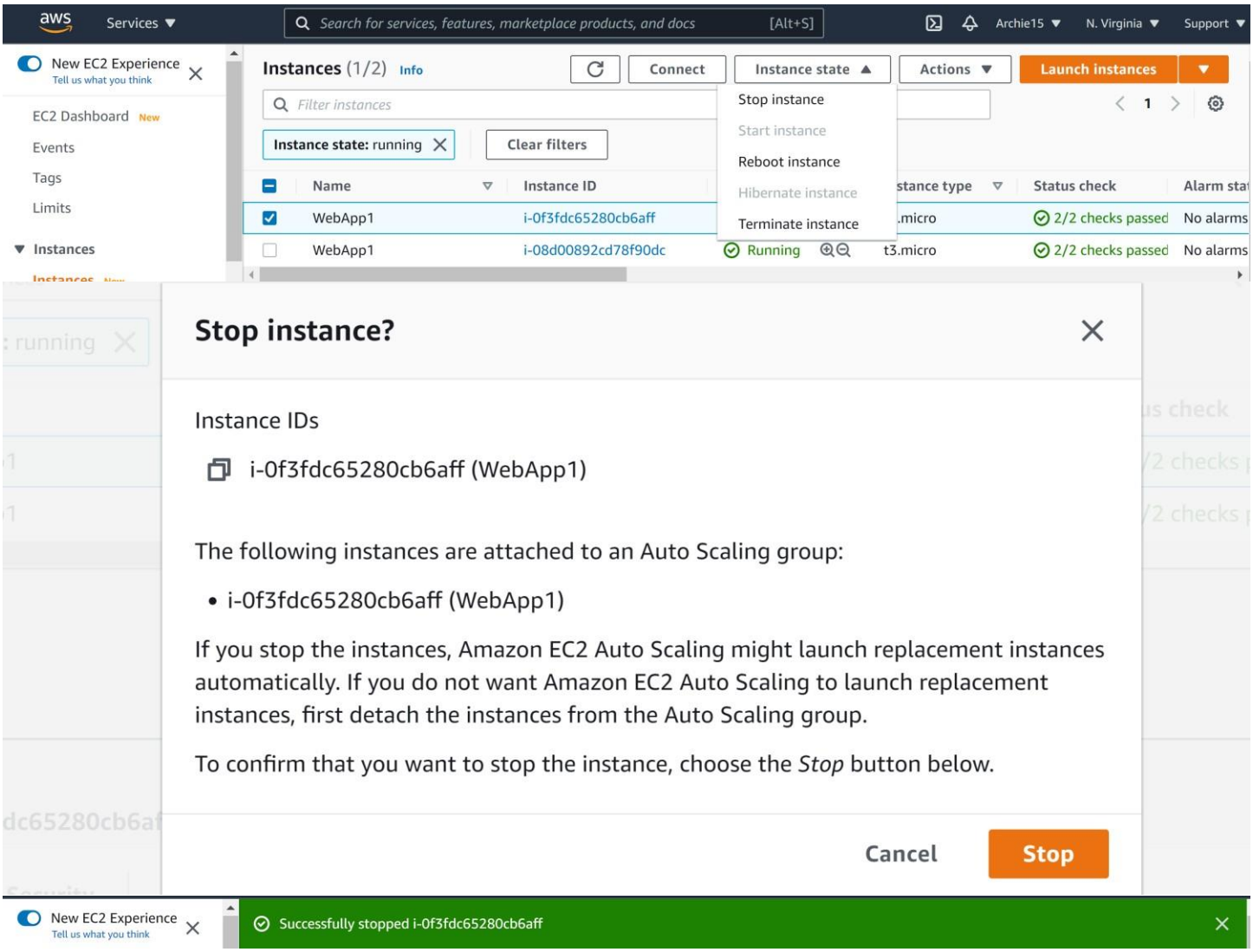
Hello World from i-0f3fdc65280cb6aff

Hello World from i-08d00892cd78f90dc

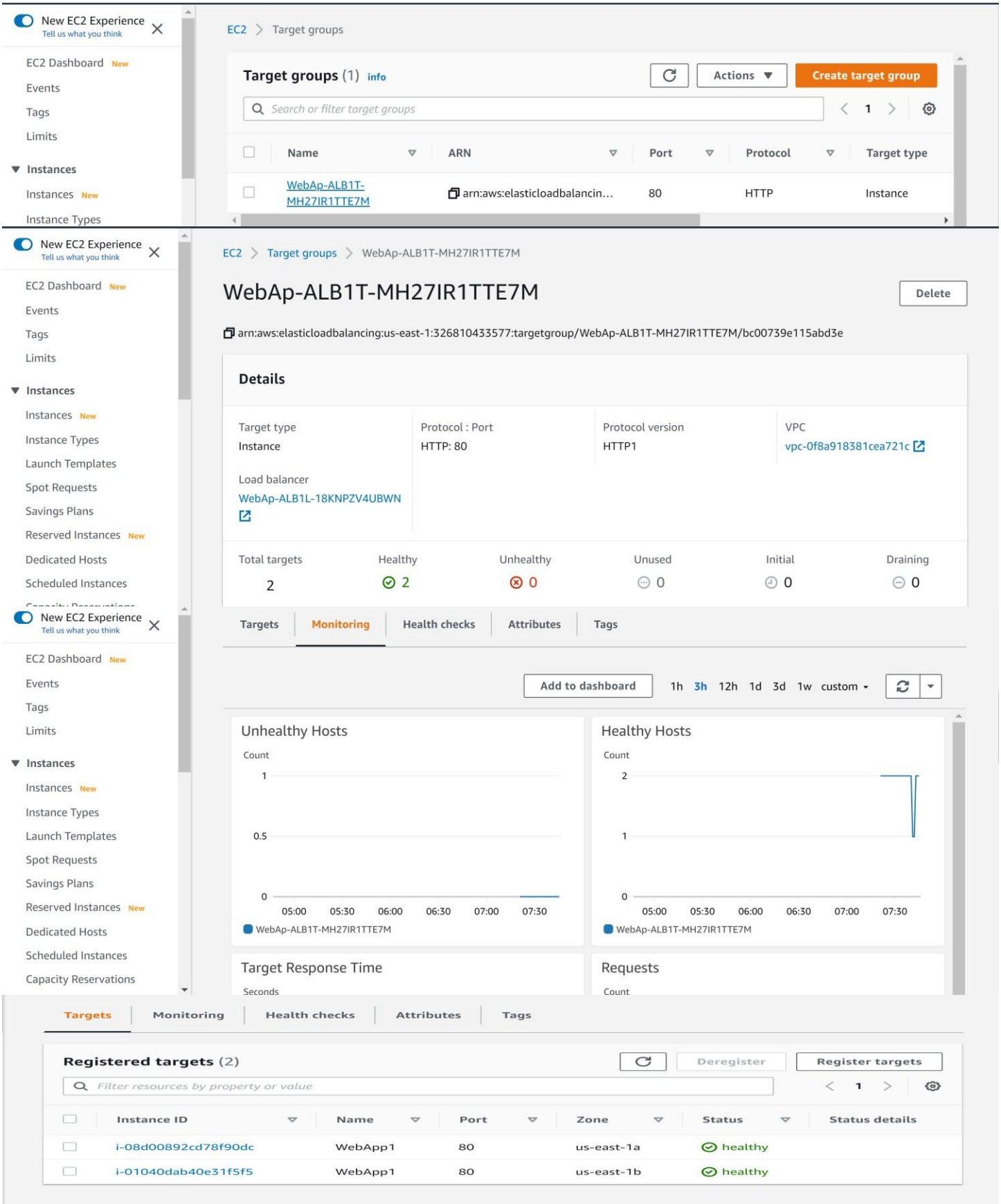
There are two EC2 instances hosting my static website; i-0f3fdc65280cb6aff and i-08d00892cd78f90dc.



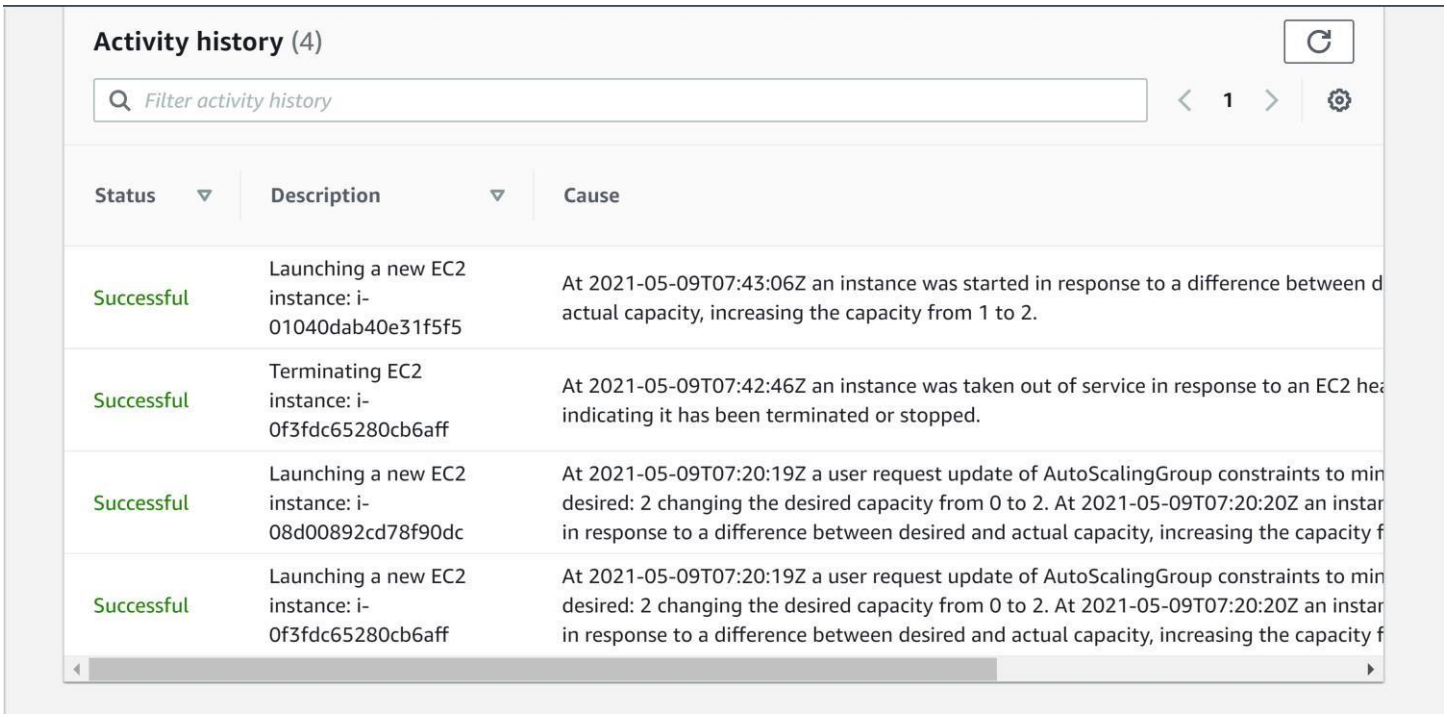
For this step, I will attempt to shut one of the two instances; i-0f3fdc65280cb6aff and i08d00892cd78f90dc. down.



I have chosen to stop instance; i-0f3fdc65280cb6aff.



Next thing I do is head on over to load balancer to ensure that the traffic is only being sent to the remaining healthy instance; i-08d00892cd78f90dc.



Another thing I want to do is also view the Activity History.