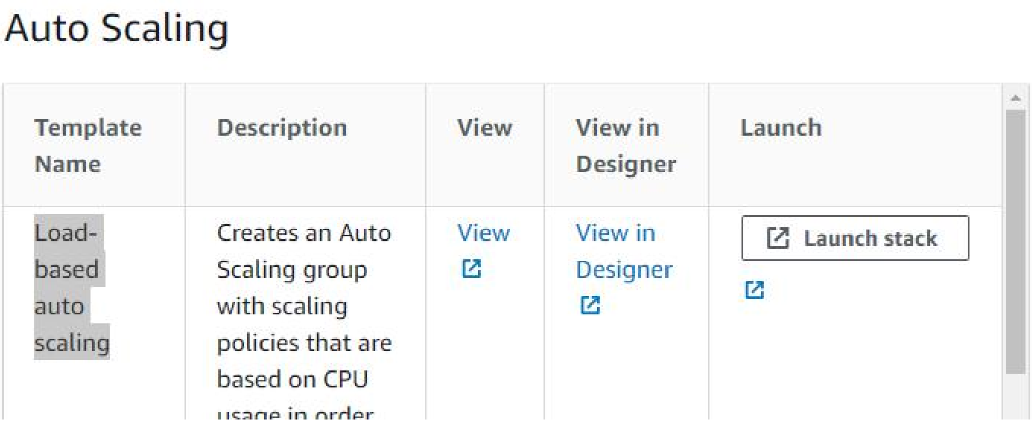
JichenDai_CS 524_Lab_#4

Step1: Create a stack

1. Choose a template sample from this website: https://docs.aws.amazon.com/zh_cn/AWSCloudFormation/latest/UserGuide/sample-templates-services-us-west-2.html#w1ab2c21c45c15c15

I choose Load-based auto scaling



Auto Scaling

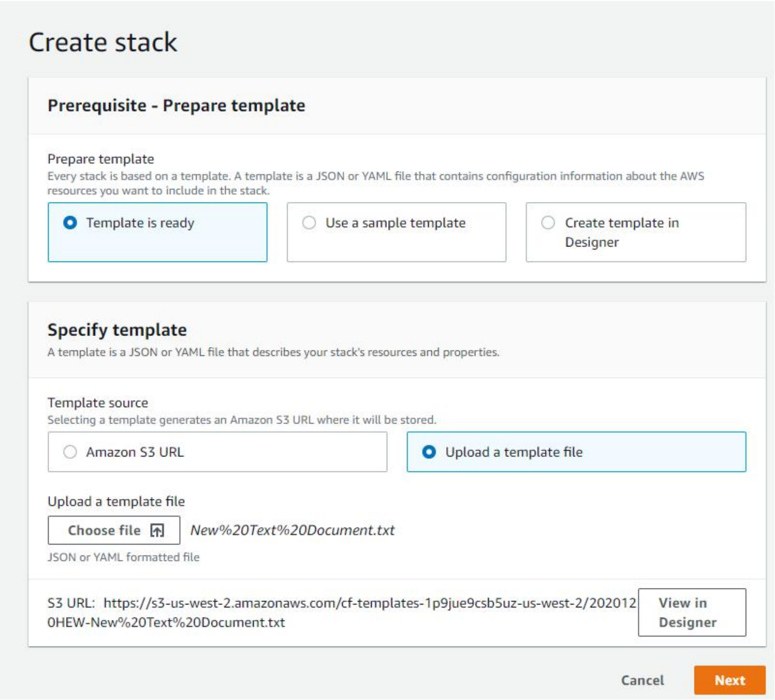
Template Name	Description	View	View in Designer	Launch
Load-based auto scaling	Creates an Auto Scaling group with scaling policies that are based on CPU usage in order	View	View in Designer	Launch stack

2. Modify the template text, set InstanceType to “t2.micro”, set key to my own key “Lab2Key”, set WebServerGroup: MinSize = 4, MaxSize = 4.

3.Record the path to **index.html**: /var/www/html/index.html

Step2: Create a stack

1. Click on “launch stack”, choose “template is ready”, “Update a template file”, Then upload your text.



Create stack

Prerequisite - Prepare template

Prepare template

Every stack is based on a template. A template is a JSON or YAML file that contains configuration information about the AWS resources you want to include in the stack.

● Template is ready ○ Use a sample template ○ Create template in Designer

Specify template

A template is a JSON or YAML file that describes your stack's resources and properties.

Template source

Selecting a template generates an Amazon S3 URL where it will be stored.

○ Amazon S3 URL ● Upload a template file

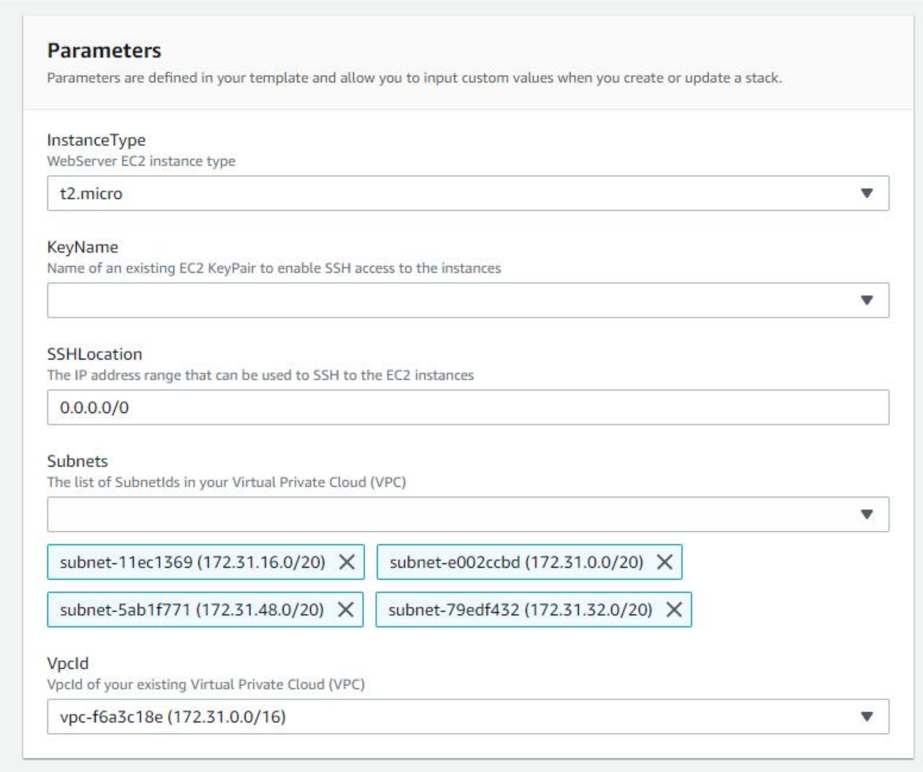
Upload a template file

Choose file *New%20Text%20Document.txt*

JSON or YAML formatted file

S3 URL: https://s3-us-west-2.amazonaws.com/cf-templates-1p9jue9csb5uz-us-west-2/2020120HEW-New%20Text%20Document.txt

2. Input “name”, input parameters.



Parameters

Parameters are defined in your template and allow you to input custom values when you create or update a stack.

InstanceType
WebServer EC2 instance type
t2.micro ▼

KeyName
Name of an existing EC2 KeyPair to enable SSH access to the instances
▼

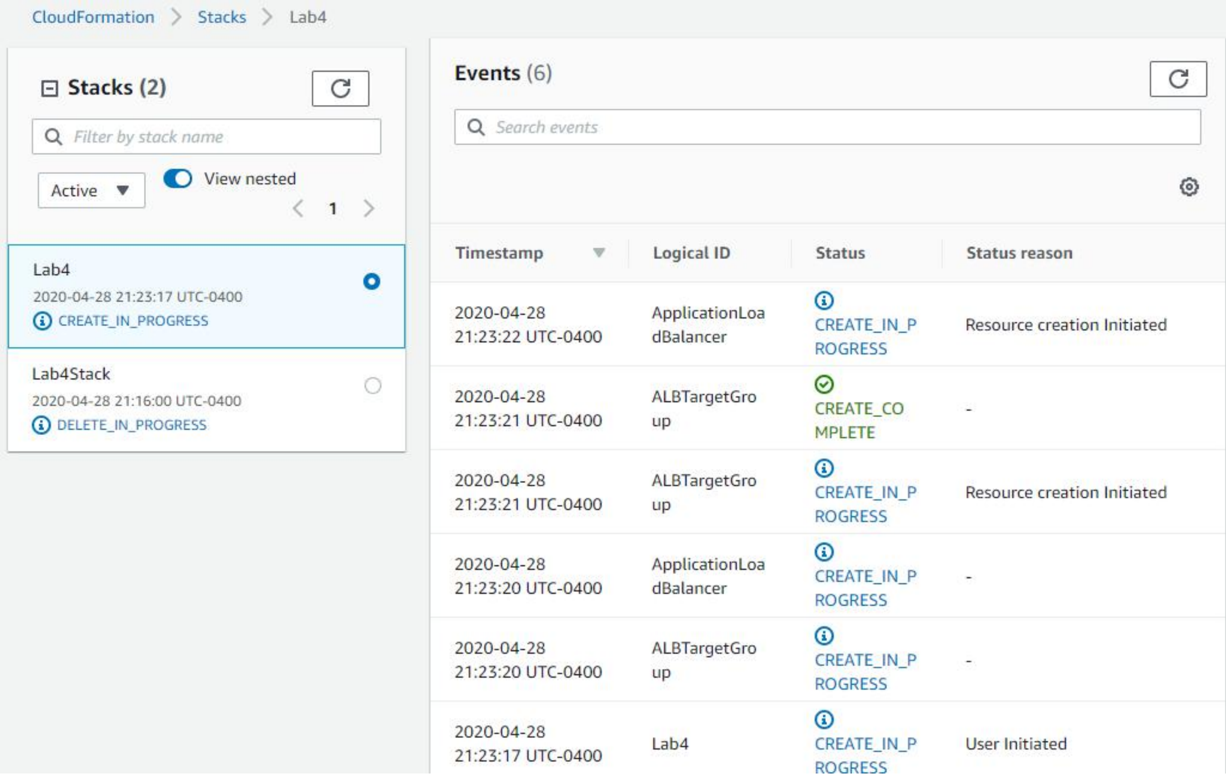
SSHLocation
The IP address range that can be used to SSH to the EC2 instances
0.0.0.0/0

Subnets
The list of SubnetIds in your Virtual Private Cloud (VPC)
▼

subnet-11ec1369 (172.31.16.0/20) ✕ subnet-e002ccbd (172.31.0.0/20) ✕
subnet-5ab1f771 (172.31.48.0/20) ✕ subnet-79edf432 (172.31.32.0/20) ✕

VpcId
VpcId of your existing Virtual Private Cloud (VPC)
vpc-f6a3c18e (172.31.0.0/16) ▼

3. click next for two times and click Create Stack.
We finished constructing the stack.



Stacks (2)

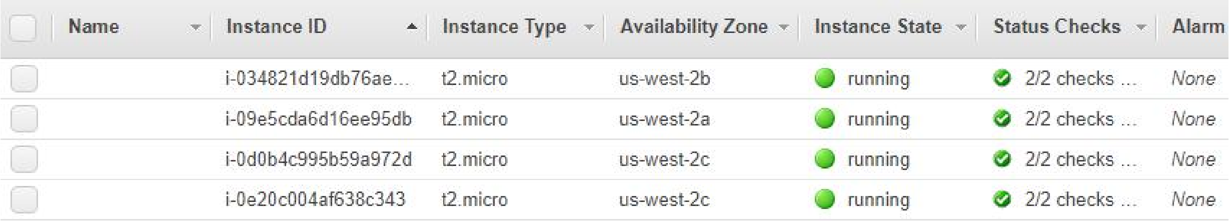
Lab4 ●
2020-04-28 21:23:17 UTC-0400
CREATE_IN_PROGRESS

Lab4Stack ○
2020-04-28 21:16:00 UTC-0400
DELETE_IN_PROGRESS

Events (6)

Timestamp ▼	Logical ID	Status	Status reason
2020-04-28 21:23:22 UTC-0400	ApplicationLoadBalancer	CREATE_IN_PROGRESS	Resource creation Initiated
2020-04-28 21:23:21 UTC-0400	ALBTargetGroup	CREATE_COMPLETE	-
2020-04-28 21:23:21 UTC-0400	ALBTargetGroup	CREATE_IN_PROGRESS	Resource creation Initiated
2020-04-28 21:23:20 UTC-0400	ApplicationLoadBalancer	CREATE_IN_PROGRESS	-
2020-04-28 21:23:20 UTC-0400	ALBTargetGroup	CREATE_IN_PROGRESS	-
2020-04-28 21:23:17 UTC-0400	Lab4	CREATE_IN_PROGRESS	User Initiated

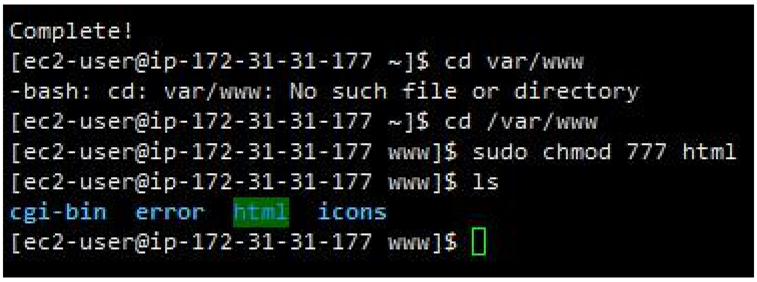
4. Now if we go to EC2, we will see our 4 instances.



□	Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm
□		i-034821d19db76ae...	t2.micro	us-west-2b	● running	✓ 2/2 checks ...	None
□		i-09e5cda6d16ee95db	t2.micro	us-west-2a	● running	✓ 2/2 checks ...	None
□		i-0d0b4c995b59a972d	t2.micro	us-west-2c	● running	✓ 2/2 checks ...	None
□		i-0e20c004af638c343	t2.micro	us-west-2c	● running	✓ 2/2 checks ...	None

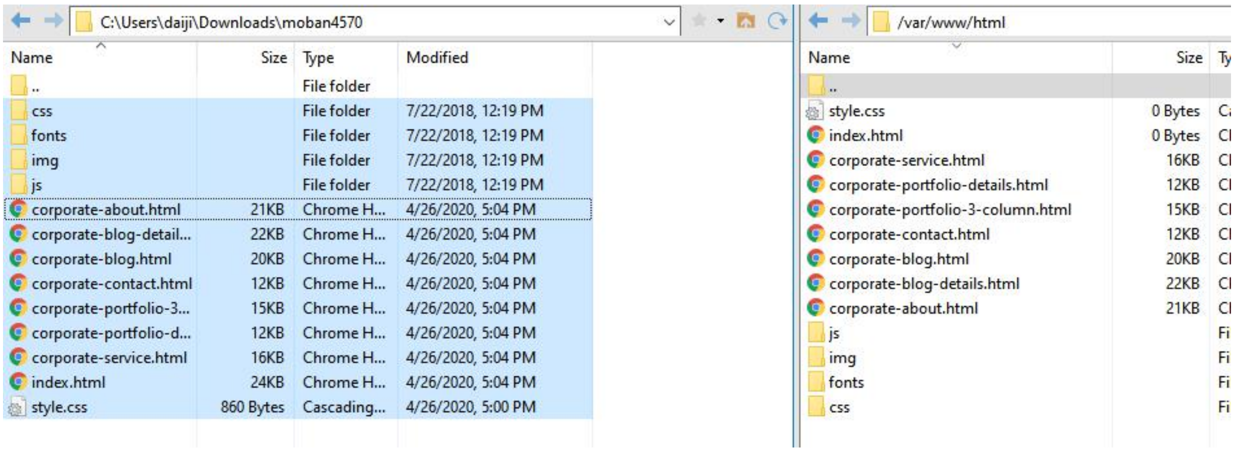
Step3: Modify index.html

1. Connect to a instance and modify the index.html



```
Complete!
[ec2-user@ip-172-31-31-177 ~]$ cd var/www
-bash: cd: var/www: No such file or directory
[ec2-user@ip-172-31-31-177 ~]$ cd /var/www
[ec2-user@ip-172-31-31-177 www]$ sudo chmod 777 html
[ec2-user@ip-172-31-31-177 www]$ ls
cgi-bin  error  html  icons
[ec2-user@ip-172-31-31-177 www]$ 
```

2. upload my own index.html using Xftp



C:\Users\daiji\Downloads\moban4570

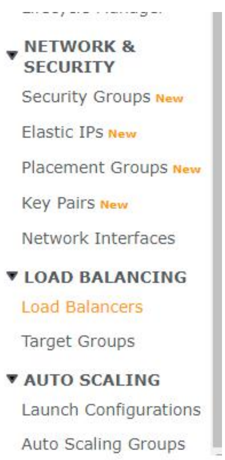
Name	Size	Type	Modified
..		File folder	
css		File folder	7/22/2018, 12:19 PM
fonts		File folder	7/22/2018, 12:19 PM
img		File folder	7/22/2018, 12:19 PM
js		File folder	7/22/2018, 12:19 PM
corporate-about.html	21KB	Chrome H...	4/26/2020, 5:04 PM
corporate-blog-detail...	22KB	Chrome H...	4/26/2020, 5:04 PM
corporate-blog.html	20KB	Chrome H...	4/26/2020, 5:04 PM
corporate-contact.html	12KB	Chrome H...	4/26/2020, 5:04 PM
corporate-portfolio-3...	15KB	Chrome H...	4/26/2020, 5:04 PM
corporate-portfolio-d...	12KB	Chrome H...	4/26/2020, 5:04 PM
corporate-service.html	16KB	Chrome H...	4/26/2020, 5:04 PM
index.html	24KB	Chrome H...	4/26/2020, 5:04 PM
style.css	860 Bytes	Cascading...	4/26/2020, 5:00 PM

/var/www/html

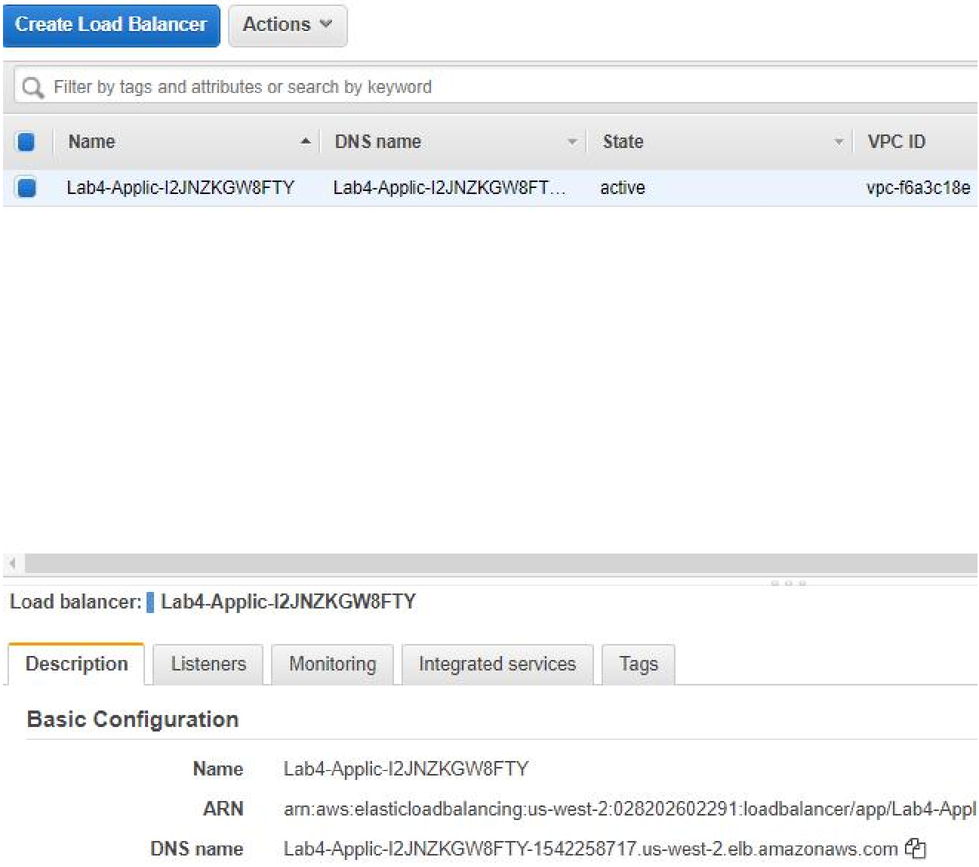
Name	Size	Ty
..		
style.css	0 Bytes	C
index.html	0 Bytes	Cl
corporate-service.html	16KB	Cl
corporate-portfolio-details.html	12KB	Cl
corporate-portfolio-3-column.html	15KB	Cl
corporate-contact.html	12KB	Cl
corporate-blog.html	20KB	Cl
corporate-blog-details.html	22KB	Cl
corporate-about.html	21KB	Cl
js		Fi
img		Fi
fonts		Fi
css		Fi

3. Do same things on the other three instances.

4. Click on load balancer in EC2, we will see our load balancer.



5. copy the DSN of our load balancer, .



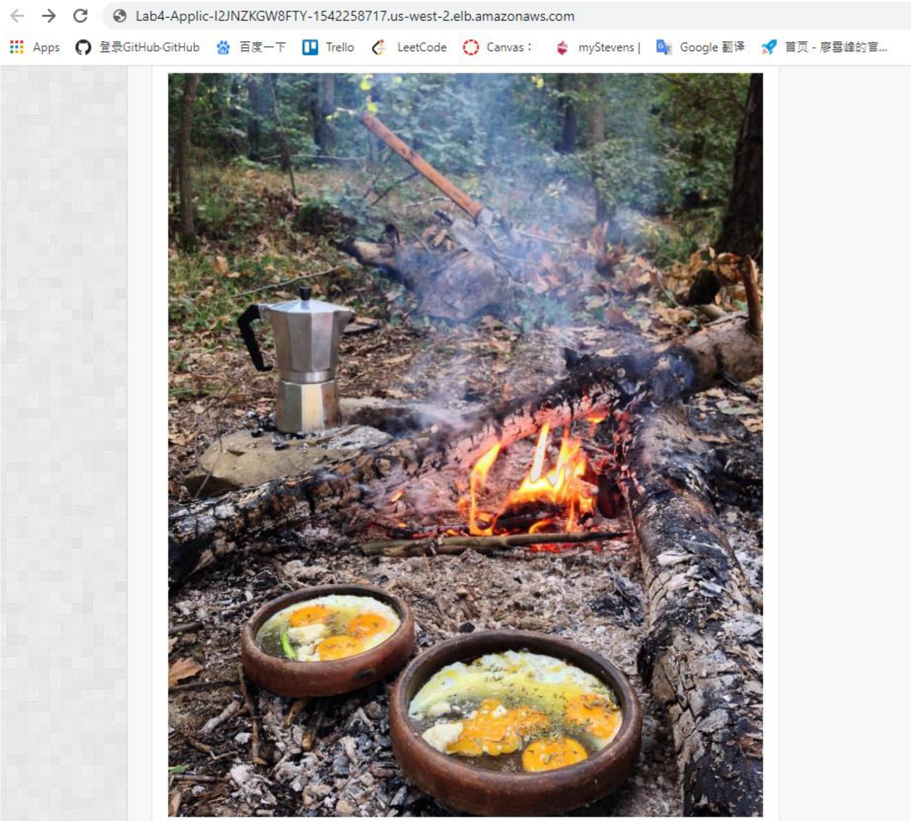
☐	Name	DNS name	State	VPC ID
☐	Lab4-Applic-I2JNZKGW8FTY	Lab4-Applic-I2JNZKGW8FT...	active	vpc-f6a3c18e

Load balancer: Lab4-Applic-I2JNZKGW8FTY

Basic Configuration

Name	Lab4-Applic-I2JNZKGW8FTY
ARN	arn:aws:elasticloadbalancing:us-west-2:028202602291:loadbalancer/app/Lab4-Appl
DNS name	Lab4-Applic-I2JNZKGW8FTY-1542258717.us-west-2.elb.amazonaws.com

6.Copy DSN of load balancer to a browser, we will be able to see **four same pages like this**.


Lab4-Applic-I2JNZKGW8FTY-1542258717.us-west-2.elb.amazonaws.com

My Observation:

As we can see, Cloud Formation give us a very convenient way to construct what we need. When the template document is already written, we can finish constructing who system in only a few minutes.

Additionally, I also noticed that the load balancer provided by Amazon EC2 is really useful. I don’t need to construct balancer by myself anymore (compare to Lab#2).