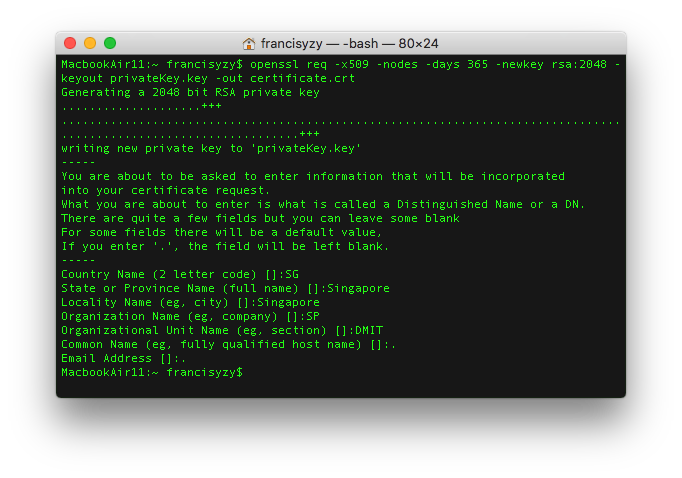
**Create AWS ELB with Self-Signed SSL Cert**

Self-signing SSL Cert

1. Generate self-sign certificate using this command:

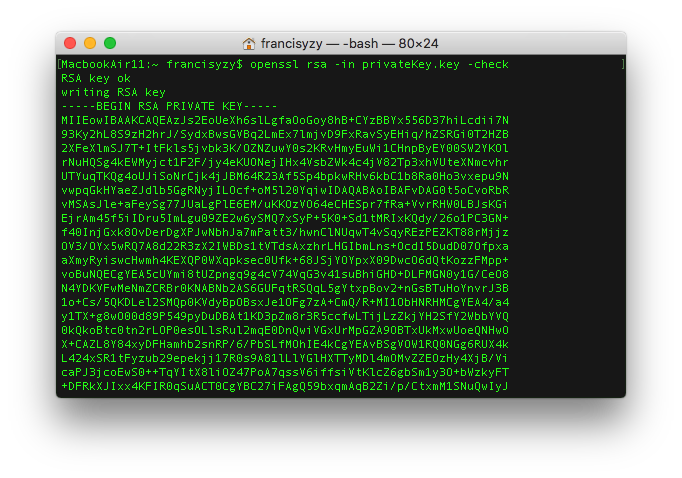
openssl req -x509 -nodes -days 365 -newkey rsa:2048 -keyout privateKey.key -out certificate.crt

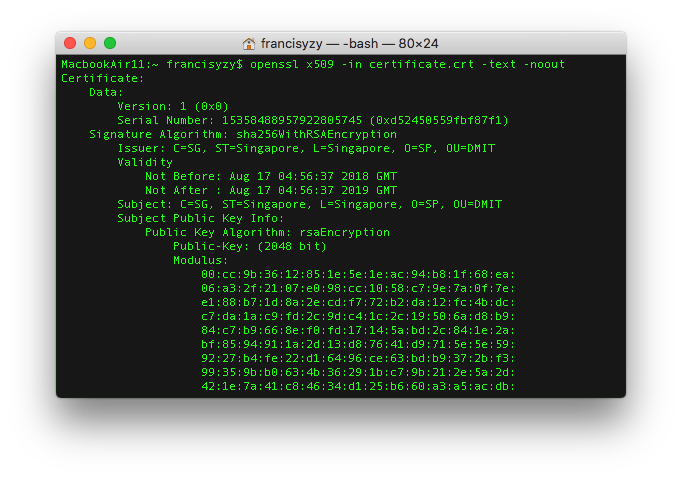


Generating certificate

2. Verify the key and certificate generated

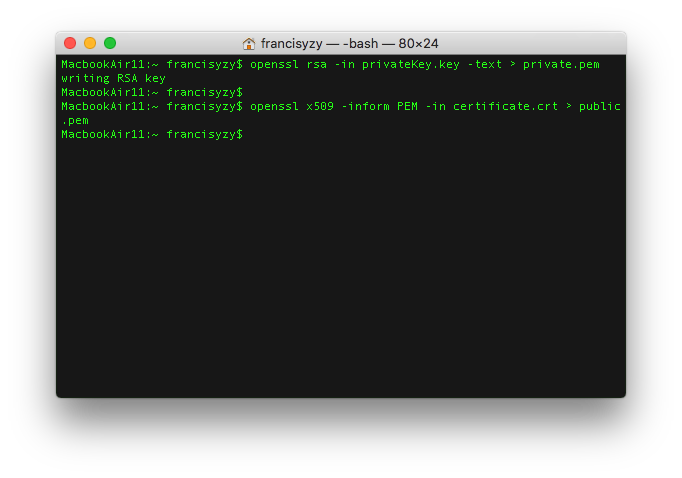
*openssl rsa -in privateKey.key -checkopenssl x509 -in certificate.crt -text -noout*





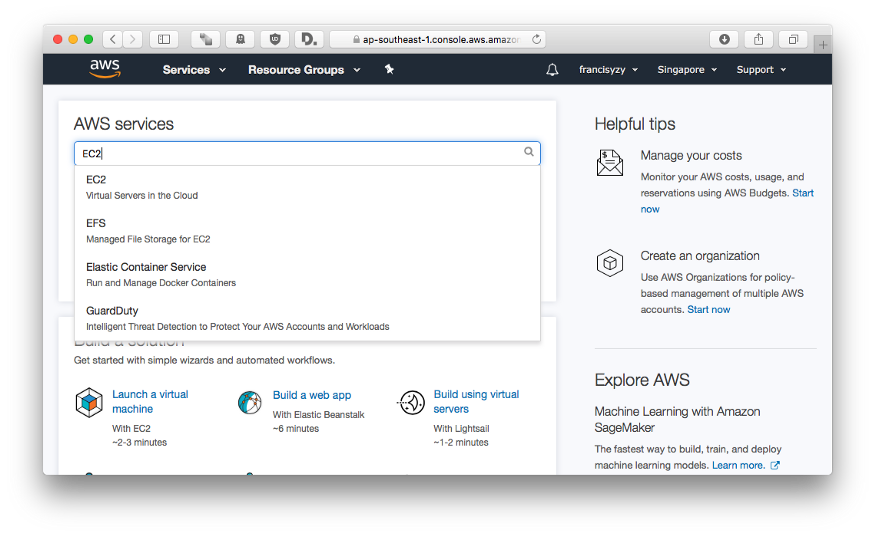
3. Convert the key and cert into .pem encoded file

*openssl rsa -in privateKey.key -text > private.pemopenssl x509 -inform PEM -in certificate.crt > public.pem*

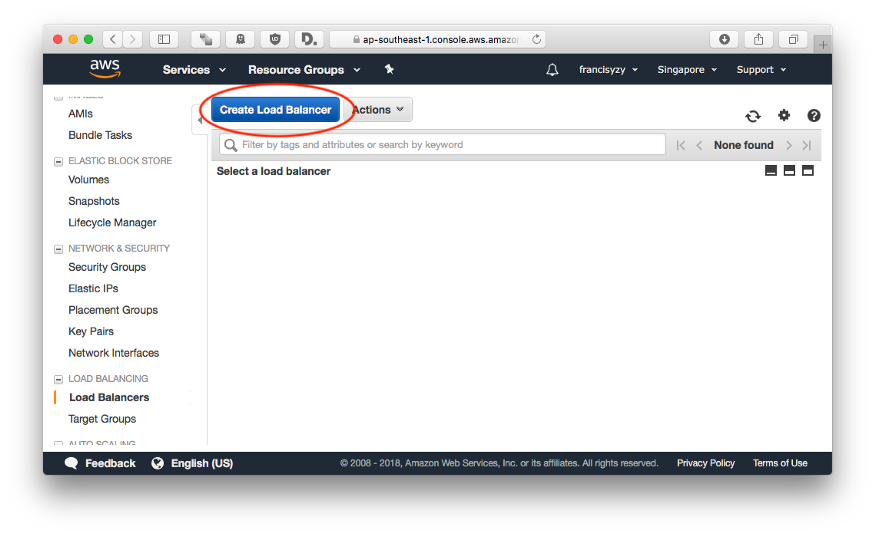


Create Elastic Load Balancer using AWS Console

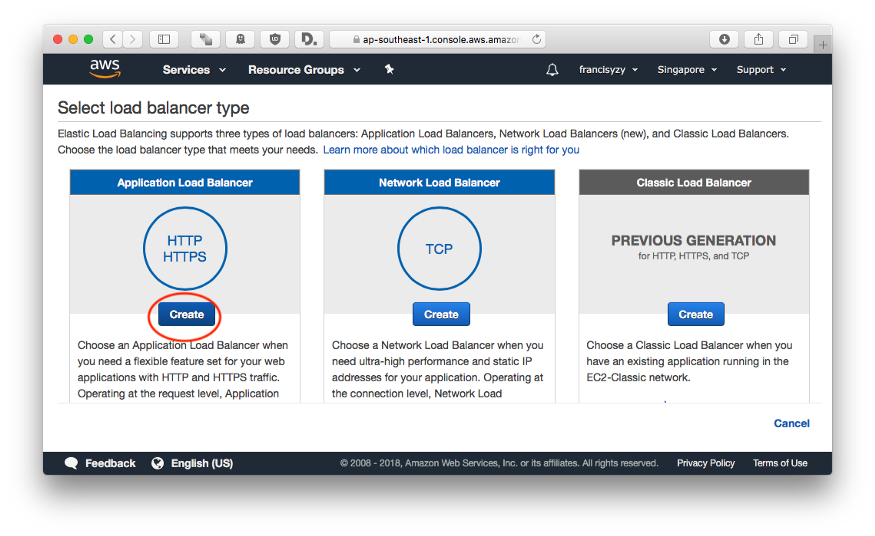
Sign into [AWS Console](http://console.aws.amazon.com/) and head to EC2 dashboard



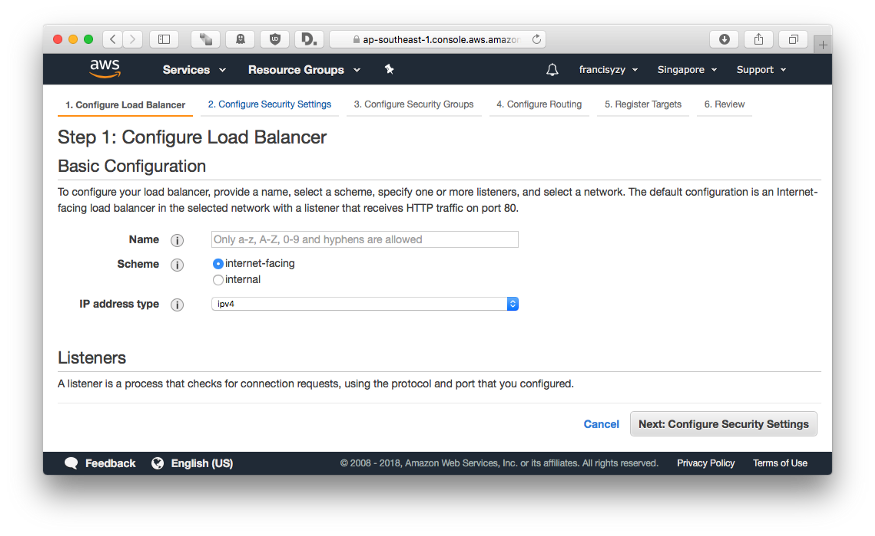
Go to load balancer and click Create Load Balancer



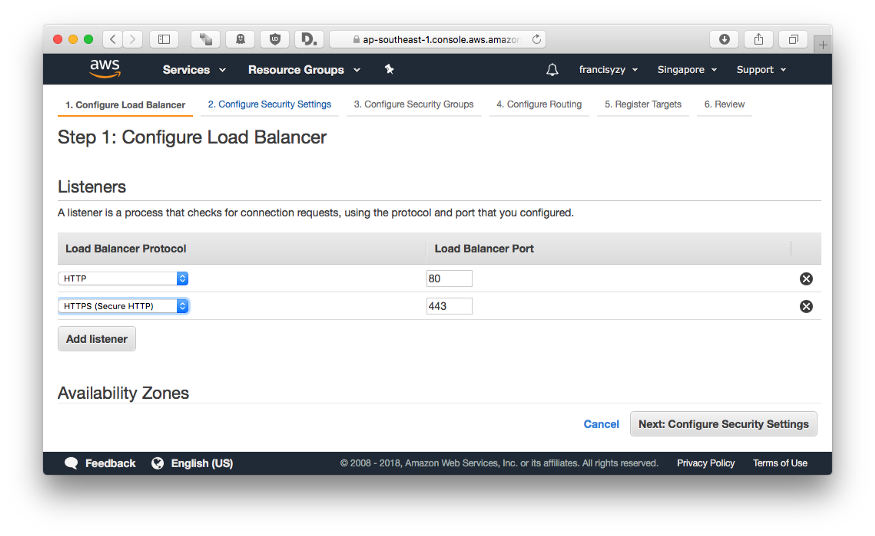
Select Application Load Balancer



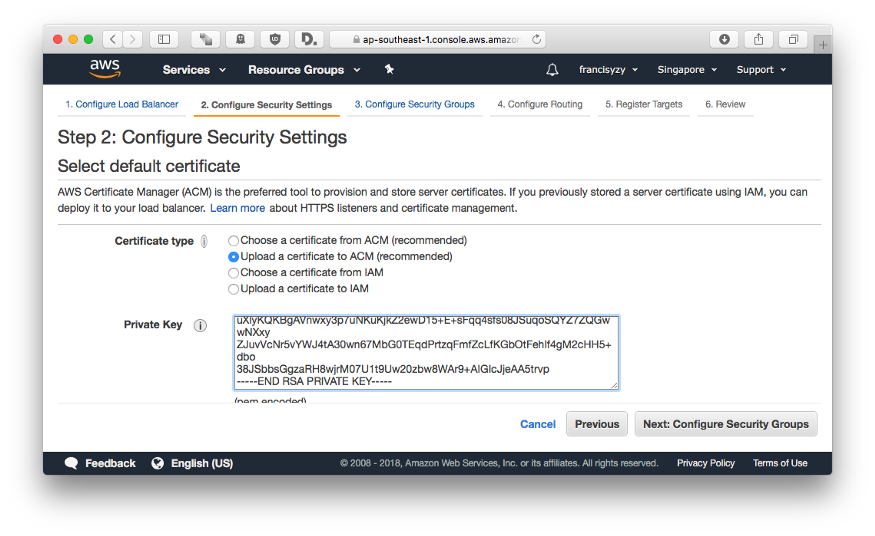
Configure Load balancer



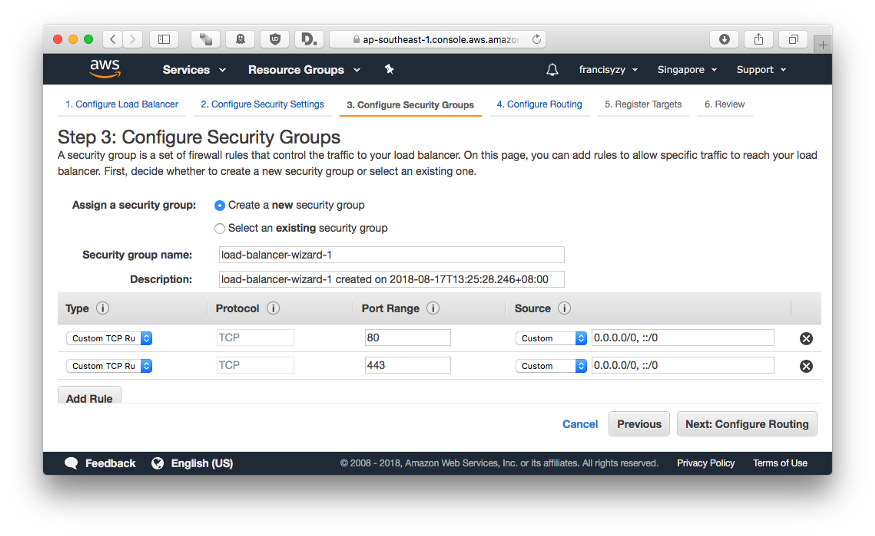
Add new HTTPS Listener



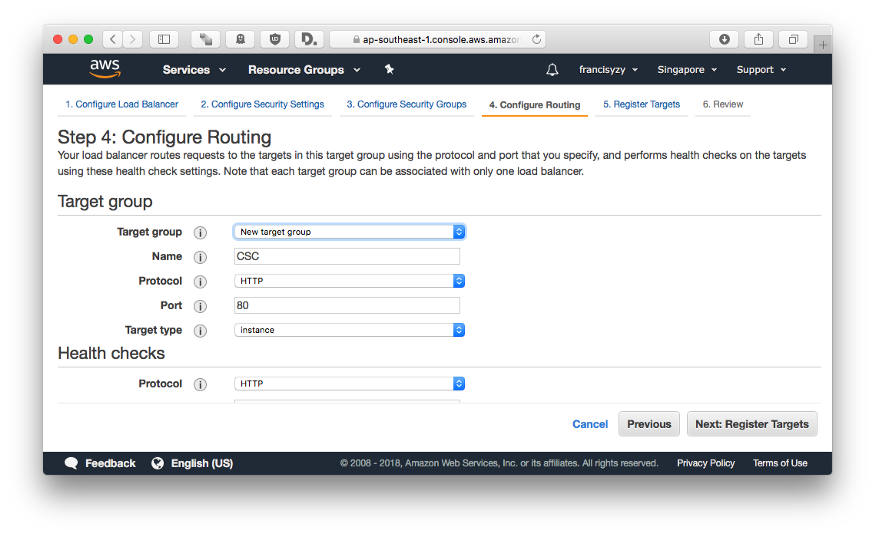
Using PEM Generated in Self-Signing SSL Cert



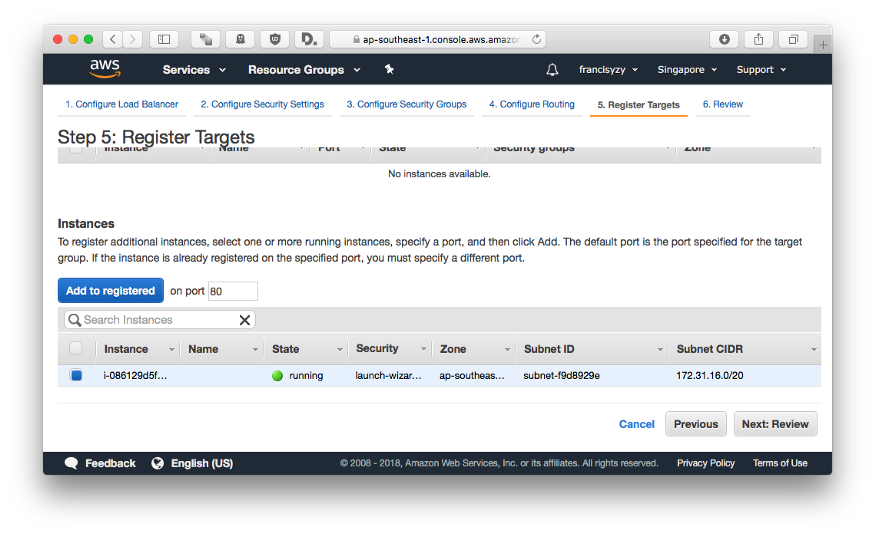
Create new security group for new ELB

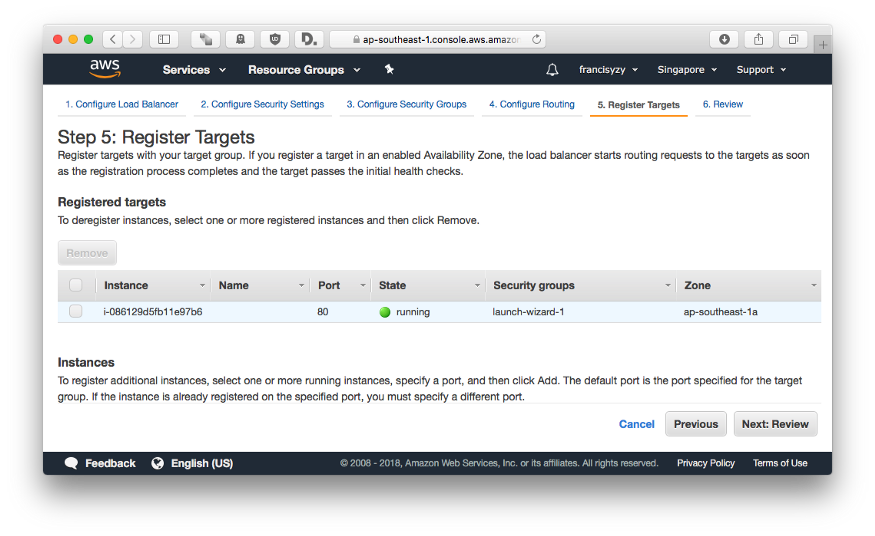


Add internal routing using HTTP

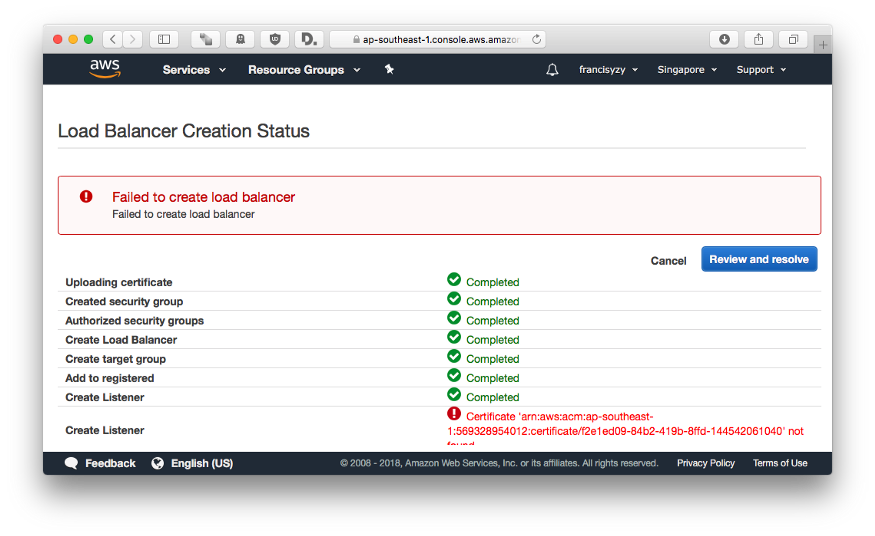


Register targets





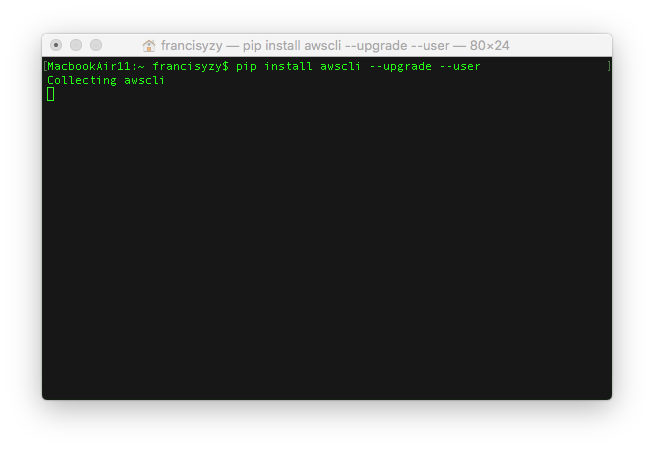
Review and create ELB

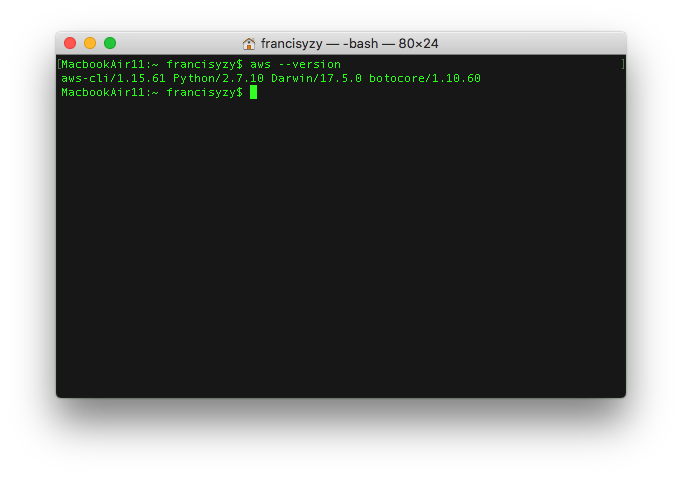


Error will occur because certificate uploaded via GUI cannot be found.

Uploading certificate via CLI

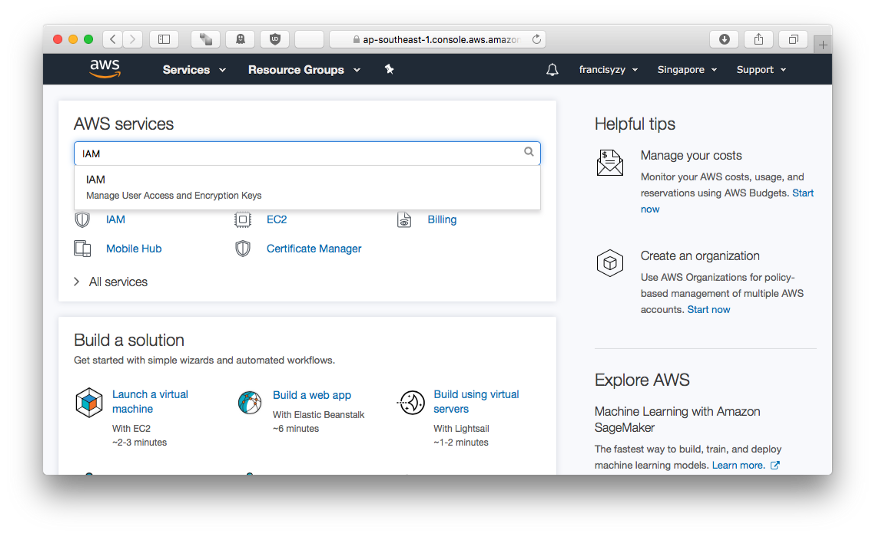
Install [AWS CLI](https://docs.aws.amazon.com/cli/latest/userguide/installing.html)



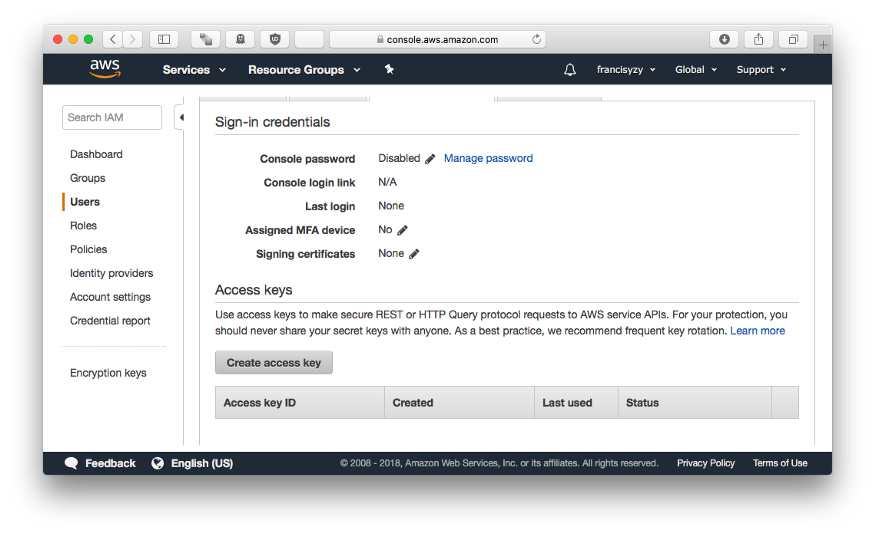


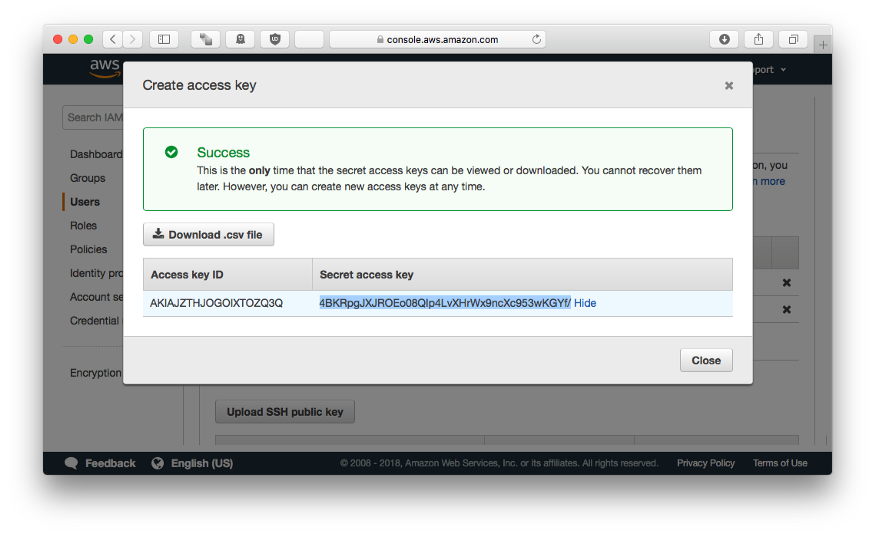
Get AWS Access Keys

Go to IAM Dashboard



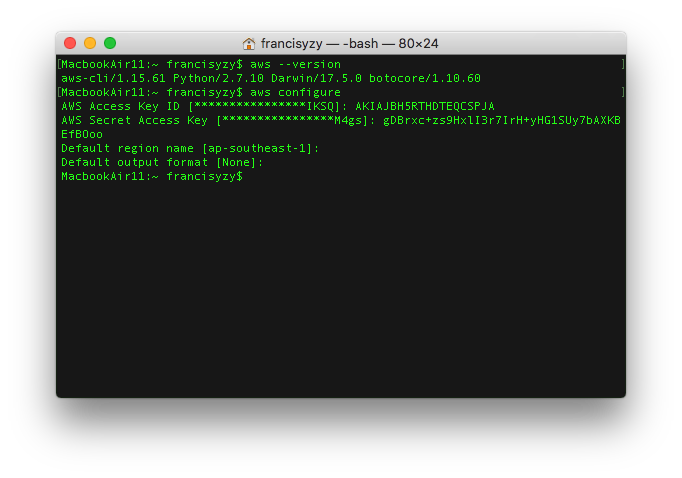
Find your user and create access key





[Configure AWS CLI](https://docs.aws.amazon.com/cli/latest/userguide/cli-chap-getting-started.html)

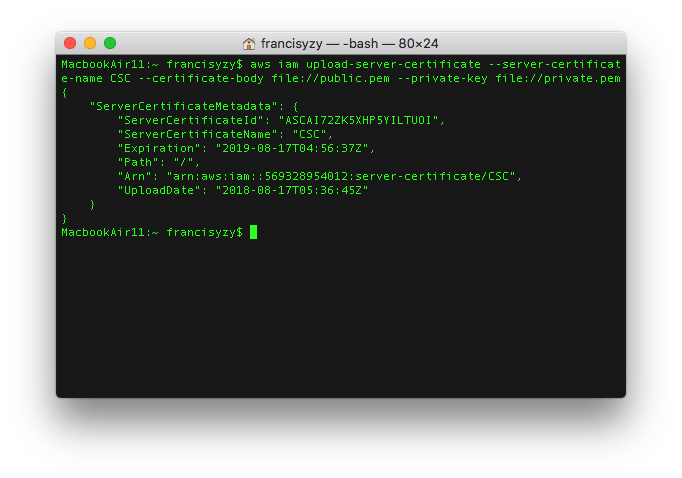
Enter your Access Key ID



[Upload the Certificate using AWS IAM CLI](https://docs.aws.amazon.com/cli/latest/reference/iam/upload-server-certificate.html)

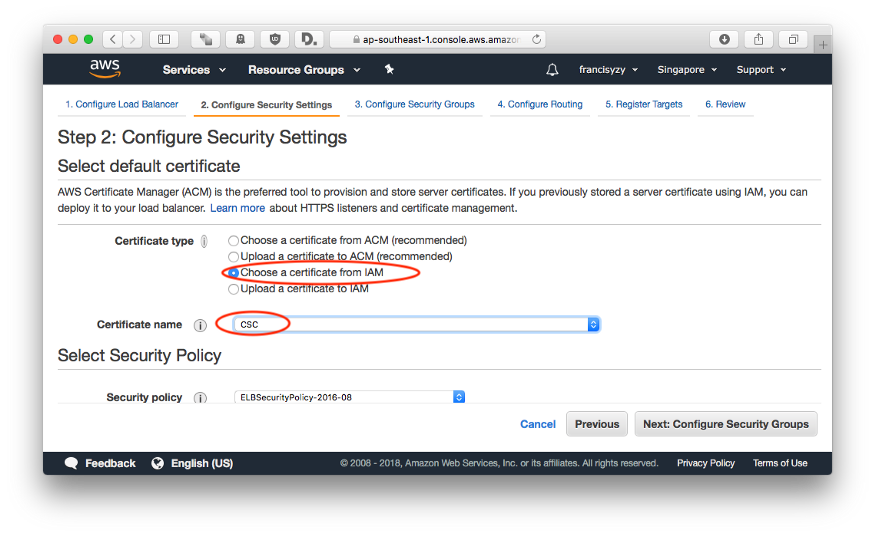
Enter the following command with the correct pathing to the Key and Certificate. Server certificate name is user defined.

aws iam upload-server-certificate --server-certificate-name CSC --certificate-body file://public.pem --private-key file://private.pem

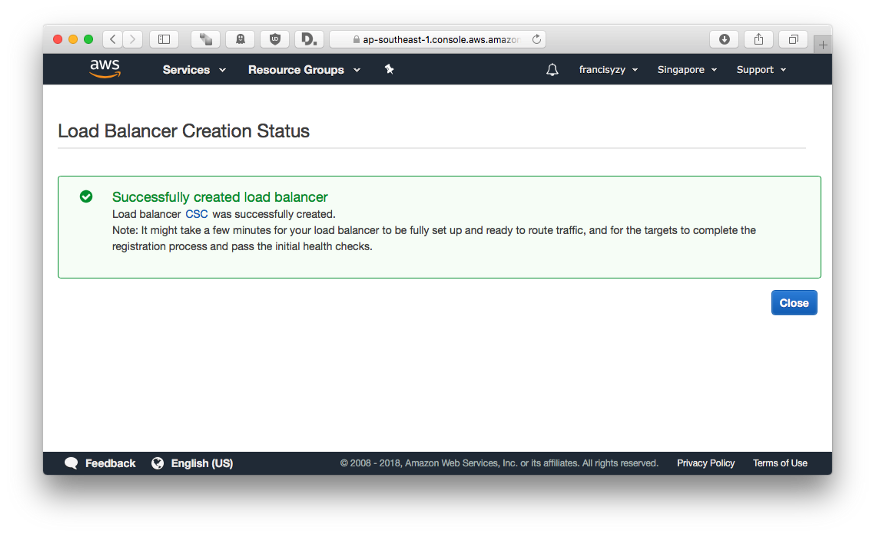


Create Elastic Load Balancer using AWS Console pt2

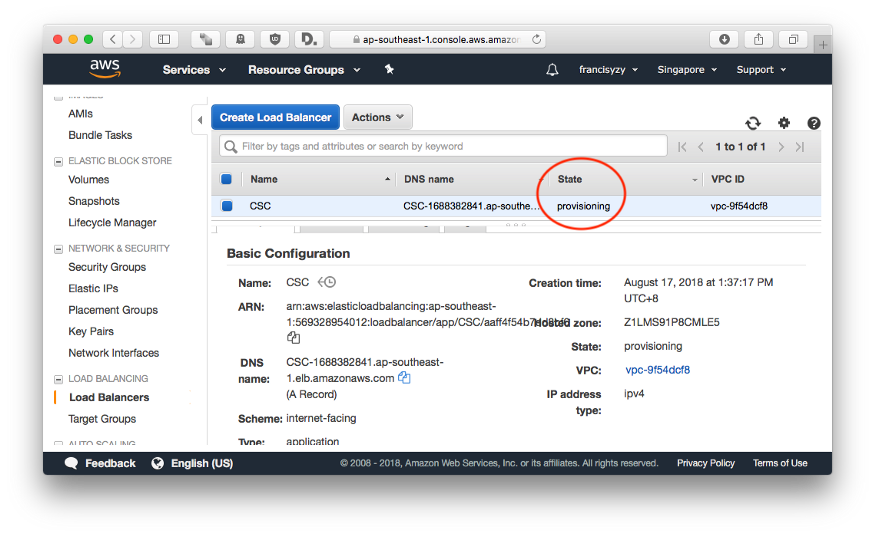
Go to 2. Configure Security Settings and choose the new certificate uploaded.



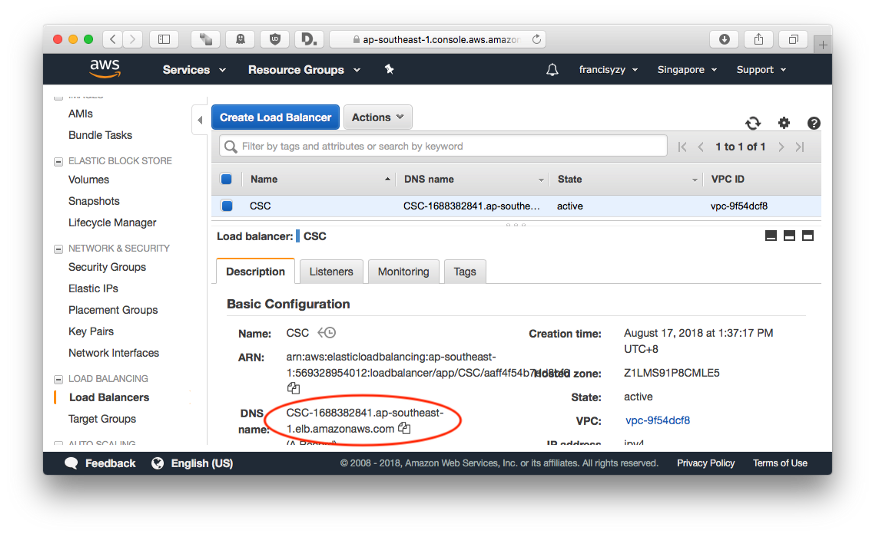
Skip to review and create the ELB



Wait for the ELB to change State

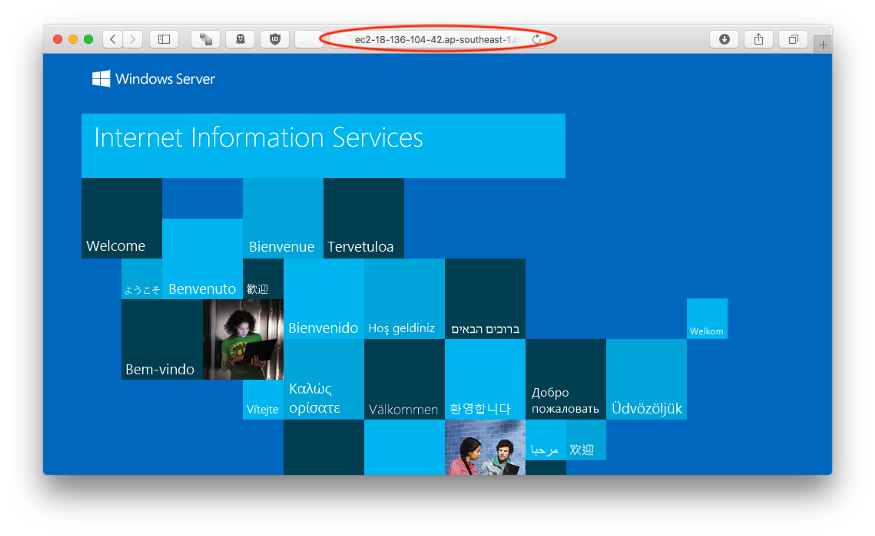


Copy the DNS Name to test it out.

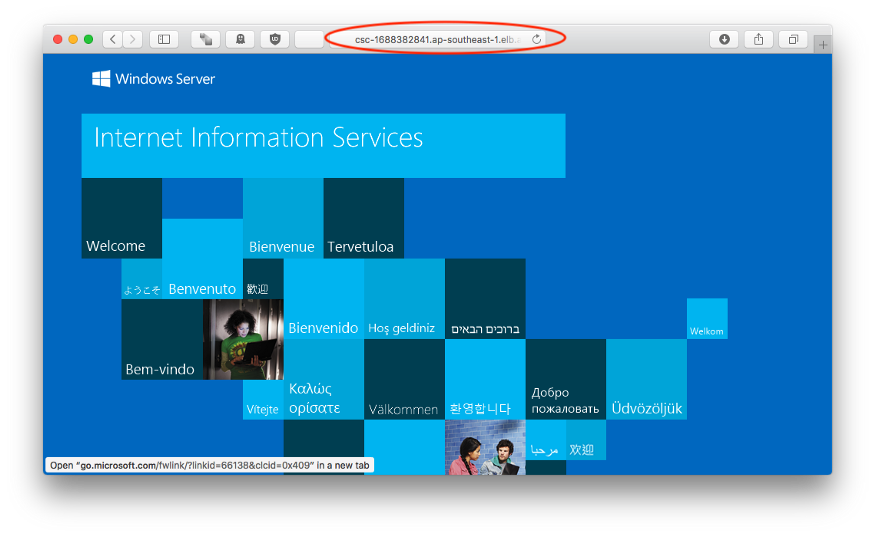


Testing

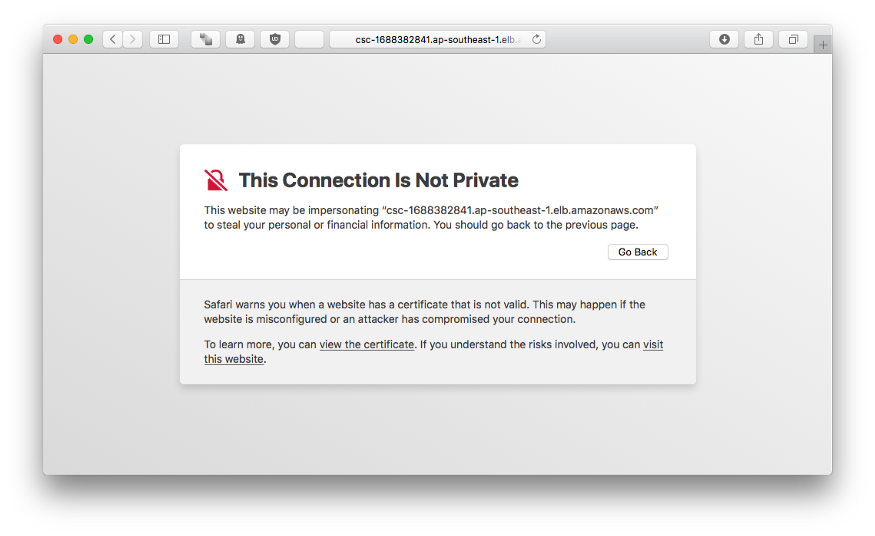
Original EC2 Instance



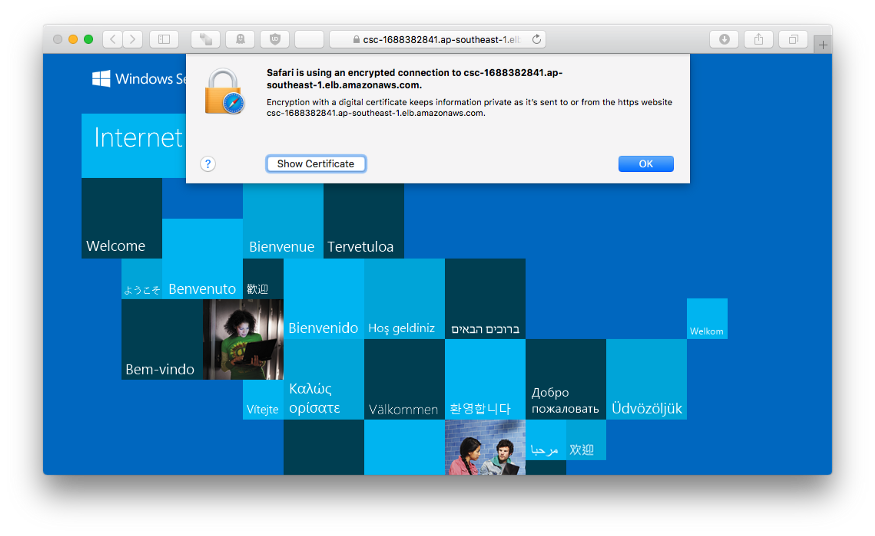
ELB Connection



ELB w/ HTTPs



As this is a self signed certificate, the browser will warn.



Secured connection to ELB

EC2 w/HTTPS will not work as the SSL cert is tied to the ELB and not the EC2.

