

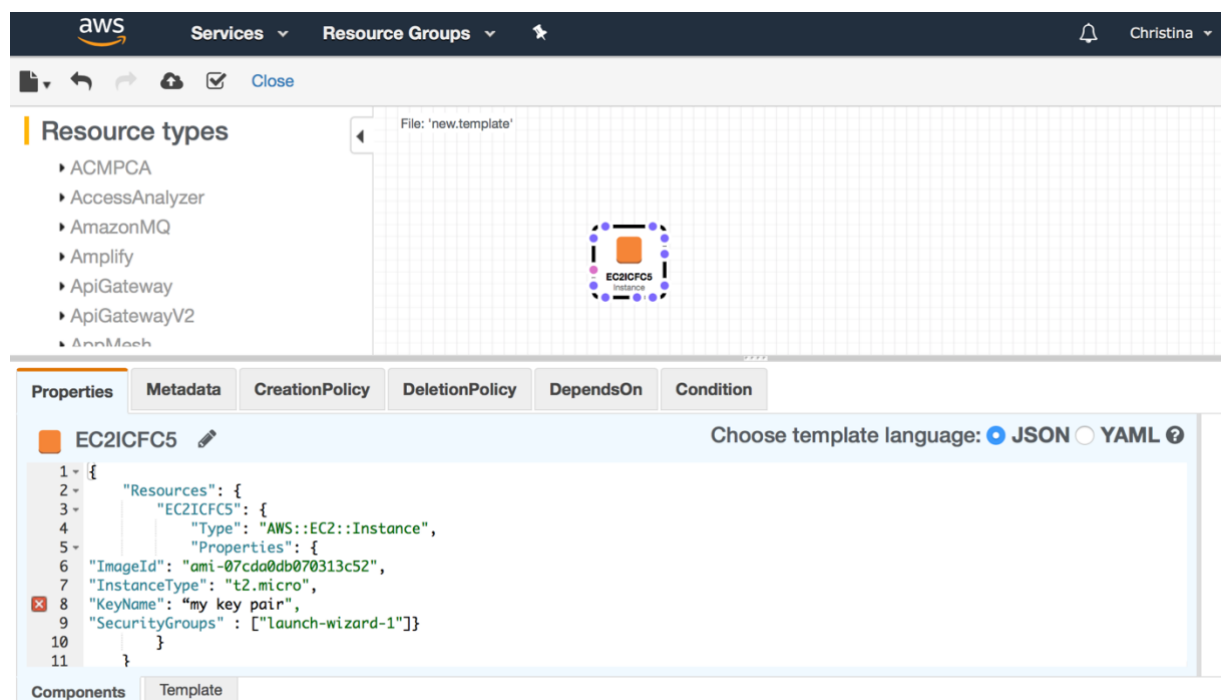
## WEEK 4 ASSIGNMENT 3

### Large-Scale Data Storage Systems – DATA-5400 | Spring 2020

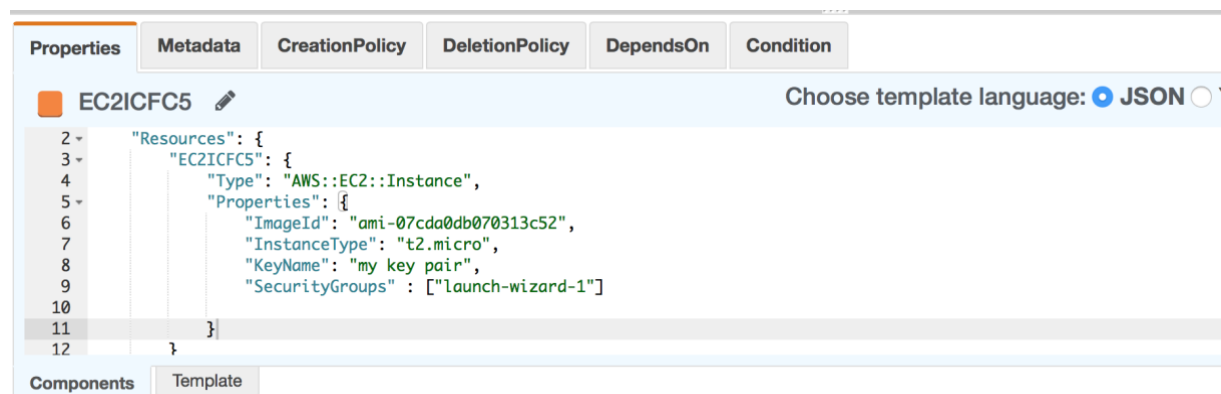
Christina Morgenstern

For this assignment on using automation to create and delete VMs, I chose option 2, AWS CloudFormation. AWS CloudFormation is a service in AWS which allows you to automate the infrastructure and application deployments.

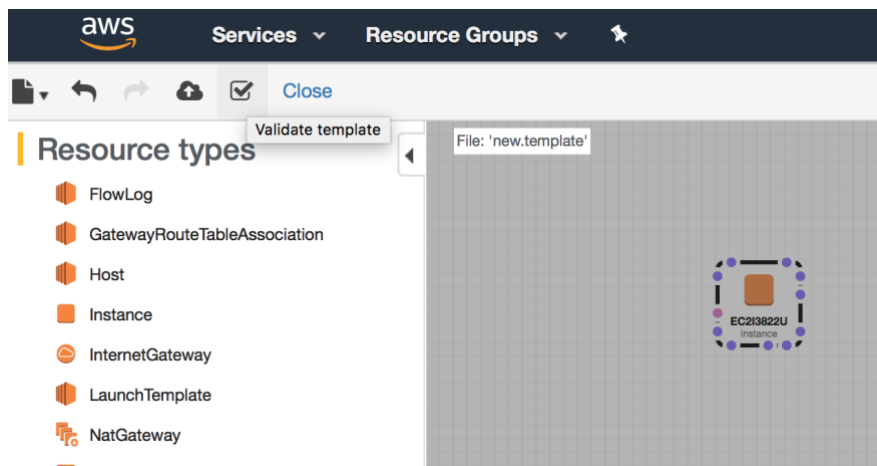
To create a Linux VM using the CloudFormation service, I navigated to the Designer in the left-hand panel and further selected EC2. Next, I dragged an EC2 instance to the designer drawing board.



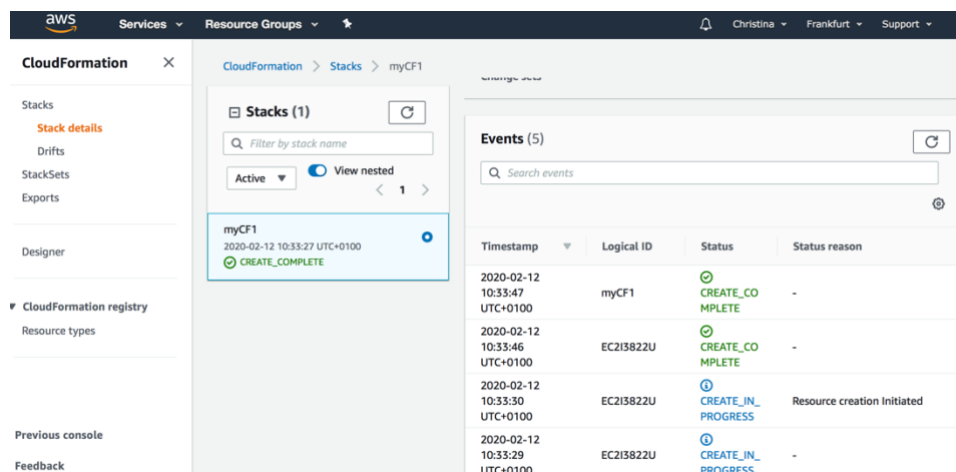
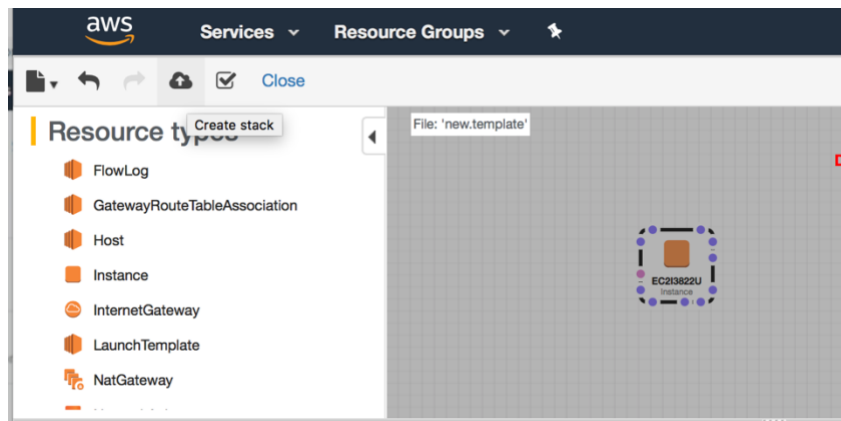
To specify the VM, I amended the “Properties” section of the JSON template. The information of ImageId, KeyName and SecurityGroups was taken from the previously generated VM under EC2 “MyLinuxVM1”. I used the Atom editor to copy and paste the required sections in the correct format.



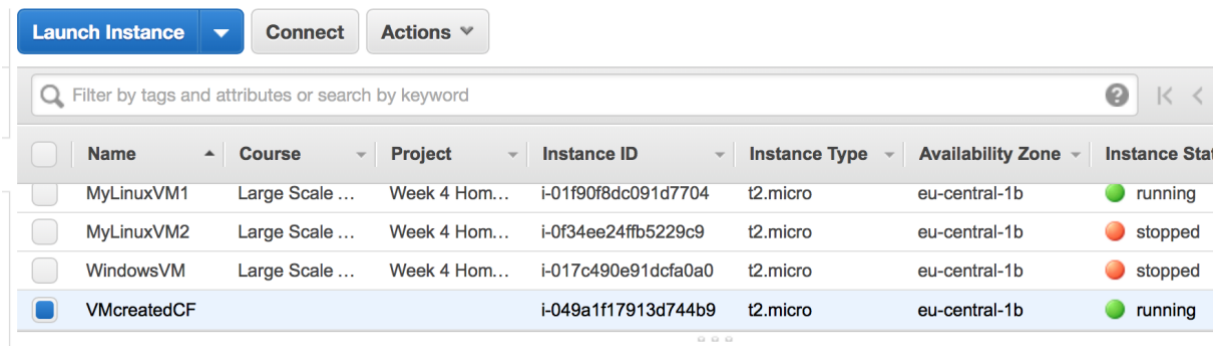
Next, the template was validated and confirmed valid.



After generating a stack, “MyCF1”, the VM was up and running.



The newly created VM is renamed to “VMcreatedCF” in the EC2 console window.



|                                     | Name        | Course          | Project       | Instance ID         | Instance Type | Availability Zone | Instance State |
|-------------------------------------|-------------|-----------------|---------------|---------------------|---------------|-------------------|----------------|
| <input type="checkbox"/>            | MyLinuxVM1  | Large Scale ... | Week 4 Hom... | i-01f90f8dc091d7704 | t2.micro      | eu-central-1b     | running        |
| <input type="checkbox"/>            | MyLinuxVM2  | Large Scale ... | Week 4 Hom... | i-0f34ee24ffb5229c9 | t2.micro      | eu-central-1b     | stopped        |
| <input type="checkbox"/>            | WindowsVM   | Large Scale ... | Week 4 Hom... | i-017c490e91dcfa0a0 | t2.micro      | eu-central-1b     | stopped        |
| <input checked="" type="checkbox"/> | VMcreatedCF |                 |               | i-049a1f17913d744b9 | t2.micro      | eu-central-1b     | running        |

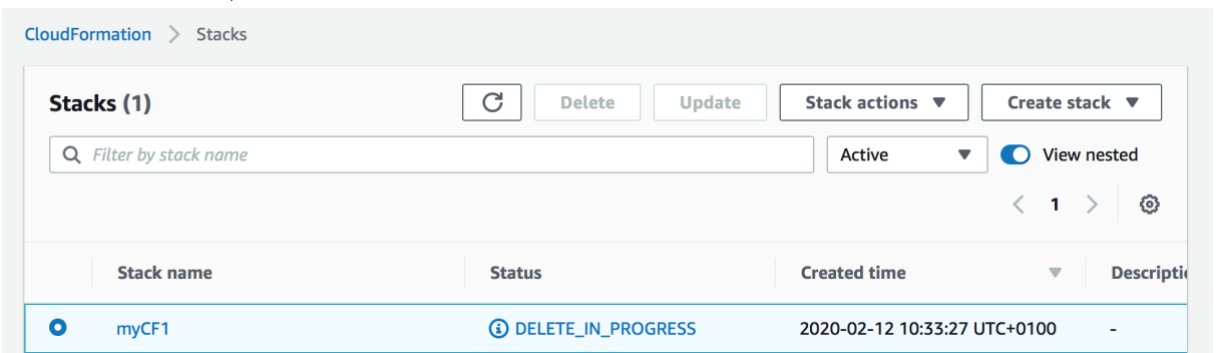
Connecting to the VM “VMcreatedCF” was confirmed using the Terminal and connecting via SSH.

```
[(base) Christinas-MacBook-Pro:Week_4 Christina$ ssh -i "mykeypair.pem" ec2-user@ec2-18-185-85-156.eu-central-1.compute.amazonaws.com

__|  __|_ )
 _| (    /   Amazon Linux 2 AMI
 __| \__|__|

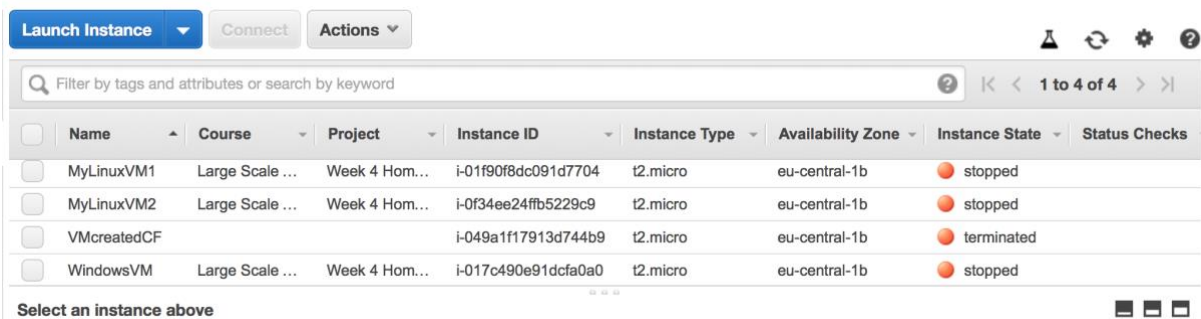
https://aws.amazon.com/amazon-linux-2/
7 package(s) needed for security, out of 39 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-38-197 ~]$
```

To remove the VM, I deleted the stack in the CloudFormation window.



| Stack name | Status             | Created time                 | Description |
|------------|--------------------|------------------------------|-------------|
| myCF1      | DELETE_IN_PROGRESS | 2020-02-12 10:33:27 UTC+0100 | -           |

And confirmed termination of the VM “VMcreatedCF” in the EC2 section.



|                          | Name        | Course          | Project       | Instance ID         | Instance Type | Availability Zone | Instance State | Status Checks |
|--------------------------|-------------|-----------------|---------------|---------------------|---------------|-------------------|----------------|---------------|
| <input type="checkbox"/> | MyLinuxVM1  | Large Scale ... | Week 4 Hom... | i-01f90f8dc091d7704 | t2.micro      | eu-central-1b     | stopped        |               |
| <input type="checkbox"/> | MyLinuxVM2  | Large Scale ... | Week 4 Hom... | i-0f34ee24ffb5229c9 | t2.micro      | eu-central-1b     | stopped        |               |
| <input type="checkbox"/> | VMcreatedCF |                 |               | i-049a1f17913d744b9 | t2.micro      | eu-central-1b     | terminated     |               |
| <input type="checkbox"/> | WindowsVM   | Large Scale ... | Week 4 Hom... | i-017c490e91dcfa0a0 | t2.micro      | eu-central-1b     | stopped        |               |