**CLOUD AWS ADMIN L1 (TOP-GEAR ASSIGNMNET)**

**Topic: User and Group Management**

**Assignment 1:**

* Create user TRHOL<candidate AD ID name> user using IAM
* Attach Administrator Policy
* Login to AWS console using TRHOL

**Answers:**

1. Login to aws console or portal and select services->then select security & identity & compliance.
2. Click on IAM service.
3. From IAM Dashboard panel ->select users.
4. Then click on Add users button.
5. Create user TRHOL<MA20115639> with administrator policy.
6. For user name TRHOL<MA20115639
7. For Access type : AWS Management console access
8. For password console \*\*\*\*\*\*\*\*\*\*\*\*
9. Uncheck require password reset then click on next permissions button.
10. Click on Attach existing policies directly box(or else create a group with administrator policy and add this user to that group).
11. In filter type search for administrator access & select it.
12. Click on next review button. & verify user details and click on create user button.
13. Then Download .csv file& click on close button.
14. Now verify login to the aws console using create user TRHOL<Ma20115639> using password.

**Assignment 2:**

1. To remove administrator policy & delete users
2. From IAM dashboard, select users, drag down action button.
3. Click on delete users button.
4. Incase user is attached with any group with administrative policy delete the group first in the same way.

**Topic: compute:**

**Assignment 1:**

* Create VM (instance Type t2.micro) with tag “TRHOL<candidate AD ID name>VM” using Amazon Linux AMI
* Login with using AWS CLI

**Asnwers**

1. TO Launch Linux instance (VM).
2. Login to aws console then select compute and click on EC2 services
3. Then select the region ex: US west oregon.
4. Now click on Launch instance.
5. On choose amazon machine image(AMI) page select :quick start:
6. Then select Amazon Linux AMI under free tier eligible then click on select button.
7. On choose an instance type page select general purpose type t2.micro then click on next
8. On configure instance details page, leave all the values as default then click Next
9. On add storage page, leave all the values as default then click Next.
10. On the add tags page, enter the key as THROL(MA20115639) and value as windows server and click next.
11. On the security group page, create a new security group then click review and launch.
12. On the next page review all VM details and click on Launch.
13. On the next page create a new key pair and download it & click on launch instance.
14. Now to to EC2 dashboard and check the instance status.

**To connect**

1. Login to the linux pc. Open the terminal and run following commands.

First go to the folder whwre private key file .pem is stored

Eg: keylinuxvm.pem

#ls

#ll

#chmod 400 keylinix.pem

#ssh –I “keylinux.pem: “ec2-user@ec2-54-191-200-74.uswest-2.compute.amazonaws.com

\*Check the vm is connected now.

**Assignment 2:**

* Create VM (instance Type t2.micro) with tag “TRHOL<candidate AD ID name>VM” using “Microsoft Windows Server 2016 Base” AMI (Note select Free Tier only based AMI)
* Login to VM as administrator.

**Answers:**

1. TO Launch windows instance (VM).
2. Login to aws console then select compute and click on EC2 services
3. Then select the region ex: US west oregon.
4. Now click on Launch instance.
5. On choose amazon machine image(AMI) page select :quick start:
6. Then select Microsoft windows server2016 AMI under free tier eligible then click on select button.
7. On choose an instance type page select general purpose type t2.micro then click on next
8. On configure instance details page, leave all the values as default then click Next
9. On add storage page, leave all the values as default then click Next.
10. On the add tags page, enter the key as THROL(MA20115639) and value as windows server and click next.
11. On the security group page, create a new security group the click review and launch.
12. On the next page review all VM details and click on Launch.
13. On the next page create a new key pair and download it & click on launch instance.
14. Now to to EC2 dashboard and check the instance status.

**To connect or login to VM as Administrator.**

1. Open EC2 dashboard select created windows server2016 VM and click on connect button.
2. Click on download remote desktop file button and click on get password.
3. Now click on choose file button & click decrypt button & close.
4. Now double click on RDp file provide username as Administrator and give password.
5. Click on connect & ok & yes. And wait for a while and verify.

**Topic: Networking:**

**Assignment 1:**

* Create VM (instance Type t2.micro) with tag “TRHOL(Candidate AD ID name)VM” using Amazon Linux AMI
* Enable SSH and ICMP services
* Attach EIP
* Ping and SSH to “TRHOL(Candidate AD ID name)VM”
* Disable services
* Remove VM

**Answers:**

1. TO Launch Linux instance (VM).
2. Login to aws console then select compute and click on EC2 services
3. Then select the region ex: US west oregon.
4. Now click on Launch instance.
5. On choose amazon machine image(AMI) page select :quick start:
6. Then select Amazon Linux AMI under free tier eligible then click on select button.
7. On choose an instance type page select general purpose type t2.micro then click on next
8. On configure instance details page, leave all the values as default then click Next
9. On add storage page, leave all the values as default then click Next.
10. On the add tags page, enter the key as THROL(MA20115639) and value as windows server and click next.
11. On the security group page, create a new security group ->Enable/Add SSH and ICMP services here by providing ssh, protocol and port range and source-> then click review and launch.
12. On the next page review all VM details and click on Launch.
13. On the next page create a new key pair and download it & click on launch instance.
14. Now to to EC2 dashboard and check the instance status.

**TO Attach EIP(Elastic Ip):**

1. Open aws console
2. On the EC2 Dashboard panel select “Network Security” -> click on Elastic Ip.
3. Click on allocate new address button.
4. Click on allocate button & close.
5. To associate and disassociate & release this EIP with an instance use action button.

**TO ping or connect to created linux VM:**

1. Login to the linux pc. Open the terminal and run following commands.

First go to the folder whwre private key file .pem is stored

Eg: keylinuxvm.pem

#ls

#ll

#chmod 400 keylinix.pem

#ssh –I “keylinux.pem: “ec2-user@ec2-54-191-200-74.uswest-2.compute.amazonaws.com

\*Check the vm is connected now.

1. To disable services go to security groups page and modify or delete entire security group.
2. Then remove the VM.

**Topic : Storage**

**Assignment 1:**

* Create S3 Bucket with name “TRHOl<candidate AD ID name>S3
* Create file name “TRHOLAWSL1”
* Upload the object onto S3
* View the Object and its proprieties
* Delete the Object

**Answers:**

1. To configure S3, open aws console
2. Select storage services and click on s3
3. On amazon s3 page click on create bucket provide name as TRHOL<MA20115639>(should be unique) and region like us-west Oregon.
4. Then click on create
5. TO create files in s3 bucket right click on empty space ad select create provide file name as TRHOLAWSL1 .
6. TO upload files in s3 bucket right click on empty space ad select upload and then add files.
7. Then click on start upload files and verify the files got uploaded.
8. Select the file and click on properties , click on permission tag select everyone or make it public and save it.
9. Now verify file is accessible.
10. TO delete a file/object from a bucket right click on it and select delete button & verify object is deleted.

**Assignment 2:**

* Create VM (instance Type t2.micro) with tag “TRHOL< Candidate AD ID name> VM” using Amazon Linux AMI
* Login with using AWS CLI
* Add internal disks to the VM “TRHOL< Candidate AD ID name>VM”
* Remove disks from VM “TRHOL<Candidate AD ID name>VM”
* Delete VM “TRHOL< Candidate AD ID name>VM”

**Answers:**

1. TO Launch Linux instance (VM).
2. Login to aws console then select compute and click on EC2 services
3. Then select the region ex: US west oregon.
4. Now click on Launch instance.
5. On choose amazon machine image(AMI) page select :quick start:
6. Then select Amazon Linux AMI under free tier eligible then click on select button.
7. On choose an instance type page select general purpose type t2.micro then click on next
8. On configure instance details page, leave all the values as default then click Next
9. On add storage page, leave all the values as default then click Next.
10. On the add tags page, enter the key as THROL(MA20115639) and value as windows server and click next.
11. On the security group page, leave all the values as default hen click review and launch.
12. On the next page review all VM details and click on Launch.
13. On the next page create a new key pair and download it & click on launch instance.
14. Now to to EC2 dashboard and check the instance status.
15. Login to the linux pc. Open the terminal and run following commands.

First go to the folder whwre private key file .pem is stored

Eg: keylinuxvm.pem

#ls

#ll

#chmod 400 keylinix.pem

#ssh –I “keylinux.pem: “ec2-user@ec2-54-191-200-74.uswest-2.compute.amazonaws.com

\*Check the vm is connected now.

1. Add internal disks on vm THROL(MA20115639)

#cd

#pwd

#fdisk /dev/sdb1 /dev/sdb2

-ls –ld/mnt

-mkdir /mnt/disk1part1

-mkdir /mnt/disk2paart2

-mount /dev/sdb1 /mnt/disk1part2

-mount /dev/sdb2 /mnt/disk2part2

-df

2. TO remove disks from vm.

-umount /dev/sdb1 /dev/sdb2

-lvremove /dev/sdb1/ dev/sdb2.

3. TO remove VM.

Login to aws console portal goto EC2 services then select VM and click on actions first stop the vm then terminate.

**Topic: Management & Monitoring**

**Assignment 1:**

* Create VM (instance Type t2.micro) with tag “TRHOL< Candidate AD ID name>VM” using Amazon Linux AMI
* Using Cloudwatch, create dashboard name “TRHOL< Candidate AD ID name>CW”
* Using widget check CPU utilization of “TRHOL< Candidate AD ID name>>VM”

Answers:

1. TO Launch Linux instance (VM).
2. Login to aws console then select compute and click on EC2 services
3. Then select the region ex: US west oregon.
4. Now click on Launch instance.
5. On choose amazon machine image(AMI) page select :quick start:
6. Then select Amazon Linux AMI under free tier eligible then click on select button.
7. On choose an instance type page select general purpose type t2.micro then click on next
8. On configure instance details page, leave all the values as default then click Next
9. On add storage page, leave all the values as default then click Next.
10. On the add tags page, enter the key as THROL(MA20115639) and value as windows server and click next.
11. On the security group page, leave all the values as default hen click review and launch.
12. On the next page review all VM details and click on Launch.
13. On the next page create a new key pair and download it & click on launch instance.
14. Now to to EC2 dashboard and check the instance status.

* Now Launch Amazon linux instance, then open aws console & click on services.
* In the management tools section
* Click in cloudwatch and then select Alarms
* And click on create alarm button.
* On the next page select EC2 Metrics & click on “per-instance metrics”
* Then select Metrics
* In search box provide instance id and name.
* Under metrics name, select CPU Utilization checkbox & click next.
* On create alarm page slect define alarm & under alarm threshold page name:testcpuutlization, description=cputest, whenever cpuutlization is>=30 , for 1 consecutive periods.
* Under actions-> whenever this alarm ->state is alarm.
* Send notifications to🡪 click on new list ->cputopicabc (anyname).
* Email=\*\*\*\*\*\*\*\*\* and click on create alarm button.
* Click on I will do it later now go to you email and verify and goto aws console portal and check the status now and verify.

Thanks & Regards,

M.Madhuprasad.