

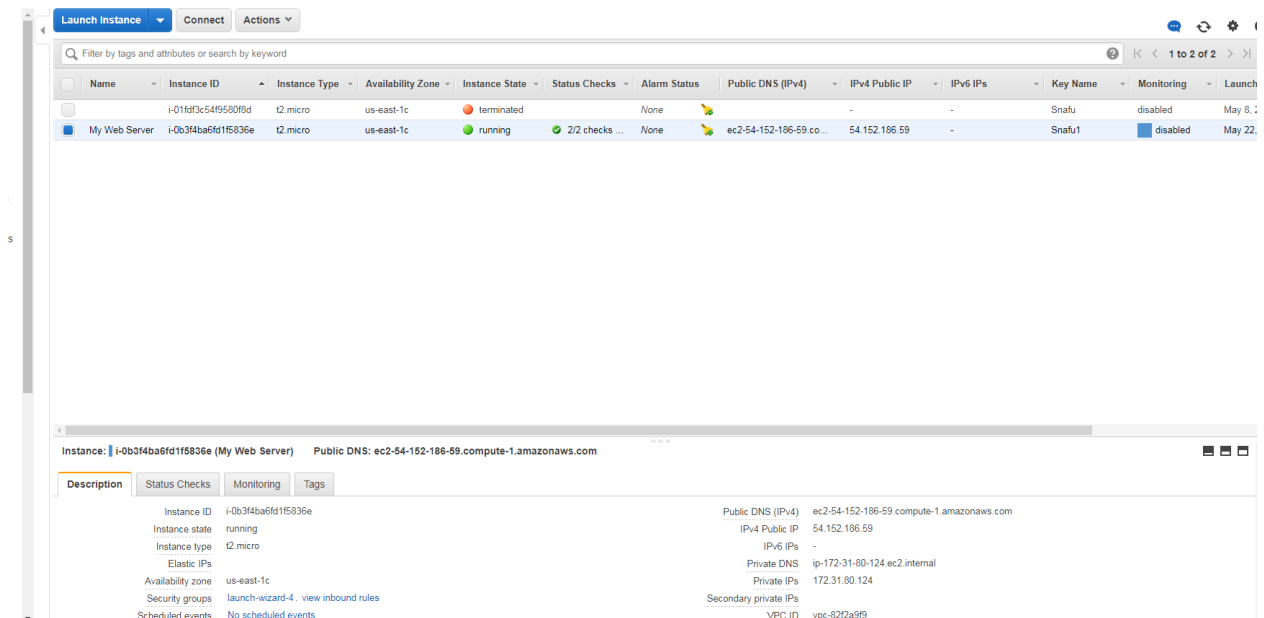
MSDS 7346
Cloud Computing
Mini Project 2 -- Compute

This is a mini project for MSDS 7346, Cloud Computing. For this assignment, turn in a single pdf file containing all of your answers. The file should be named <yourLastName>MiniProject-Number.pdf. For example, the file name for my mini project 1 would be 'RafiqiMiniProject-Number.pdf'.

Collaboration is expected and encouraged; however, each student must hand in their own homework assignment. To the greatest extent possible, answers should not be copied but, instead, should be written in your own words. Copying answers from anywhere is plagiarism, this includes copying text directly from the textbook. Do not copy answers. Always use your own words and your own code. Directly under each question list all persons with whom you collaborated and list all resources used in arriving at your answer. Resources include but are not limited to the textbook used for this course, papers read on the topic, and Google search results. Don't forget to place your name on the first page of the pdf document.

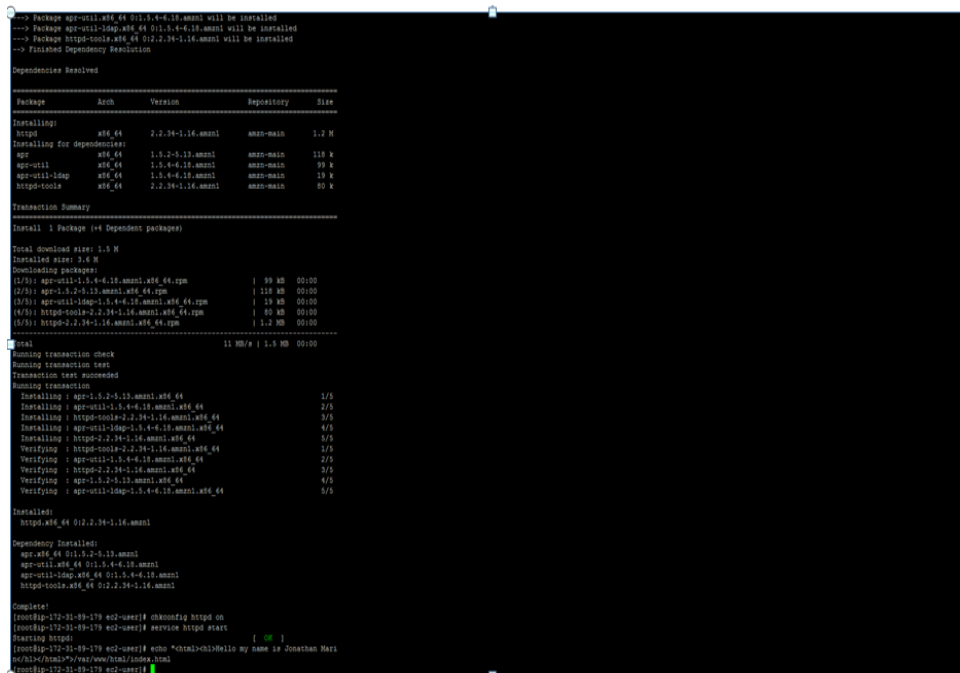
The objective of this lab is to dig deeper into AWS EC2. This is continuation of what we did in the class. Please complete the following steps and take screenshots at each of the steps to submit:

1. Create and launch an instance on EC2 with termination protection enabled against accidental termination, naming your instance "My Web Server"



2. Insert the following script so that it is executed as EC2 instance is created

```
#!/bin/bash
yum -y update
yum -y install httpd
chkconfig httpd on
service httpd start
echo "<html><h1>Hello my name is INSERT YOUR
NAME</h1></html>" > /var/www/html/index.html
```



```
--> Package apr-util.x86_64 0:1.5.4-6.15.amzn1 will be installed
--> Package apr-util-ldap.x86_64 0:1.5.4-6.15.amzn1 will be installed
--> Package httpd-tools.x86_64 0:2.2.34-1.16.amzn1 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====================================================================
Package Arch Version Repository Size
=====================================================================
Installing:
httpd.x86_64 2.2.34-1.16.amzn1 amzn-main 1.2 M
Installing for dependencies:
apr.x86_64 1.5.2-5.13.amzn1 amzn-main 118 K
apr-util.x86_64 1.5.4-6.15.amzn1 amzn-main 99 K
apr-util-ldap.x86_64 1.5.4-6.15.amzn1 amzn-main 19 K
httpd-tools.x86_64 2.2.34-1.16.amzn1 amzn-main 80 K
Transaction Summary
-----
Install 1 Package (+4 dependent packages)
Total download size: 1.5 M
Installed size: 3.4 M
Uninstalling packages:
(1/5): apr-util-1.5.4-6.15.amzn1.x86_64.rpm | 99 KB 00:00
(2/5): apr-1.5.2-5.13.amzn1.x86_64.rpm | 118 KB 00:00
(3/5): apr-util-ldap-1.5.4-6.15.amzn1.x86_64.rpm | 19 KB 00:00
(4/5): httpd-tools-2.2.34-1.16.amzn1.x86_64.rpm | 80 KB 00:00
(5/5): httpd-2.2.34-1.16.amzn1.x86_64.rpm | 1.2 MB 00:00
Total
-----
11 MB/s | 1.5 MB 00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
Installing : apr-1.5.2-5.13.amzn1.x86_64 1/5
Installing : apr-util-1.5.4-6.15.amzn1.x86_64 2/5
Installing : httpd-tools-2.2.34-1.16.amzn1.x86_64 3/5
Installing : apr-util-ldap-1.5.4-6.15.amzn1.x86_64 4/5
Installing : httpd-2.2.34-1.16.amzn1.x86_64 5/5
Verifying : httpd-tools-2.2.34-1.16.amzn1.x86_64 1/5
Verifying : apr-util-1.5.4-6.15.amzn1.x86_64 2/5
Verifying : httpd-2.2.34-1.16.amzn1.x86_64 3/5
Verifying : apr-1.5.2-5.13.amzn1.x86_64 4/5
Verifying : apr-util-ldap-1.5.4-6.15.amzn1.x86_64 5/5
Installed:
httpd.x86_64 0:2.2.34-1.16.amzn1
Dependency Installed:
apr.x86_64 0:1.5.2-5.13.amzn1
apr-util.x86_64 0:1.5.4-6.15.amzn1
apr-util-ldap.x86_64 0:1.5.4-6.15.amzn1
httpd-tools.x86_64 0:2.2.34-1.16.amzn1
Complete!
[root@ip-172-31-59-179 ec2-user]# chkconfig httpd on
[root@ip-172-31-59-179 ec2-user]# service httpd start
Starting httpd: [ OK ]
[root@ip-172-31-59-179 ec2-user]# echo "<html><h1>Hello my name is Jonathan Mari
es</h1></html>">/var/www/html/index.html
[root@ip-172-31-59-179 ec2-user]#
```

3. Try to access the Web Server (Note: may need to update your security group setting)

root@ip-172-31-89-179:/home/ec2-user

login as: ec2-user

Authenticating with public key "imported-openssh-key"

```
  _ |  _ |  )
  _ | (  _ /  Amazon Linux AMI
 _ | \ _ | _ |
```

<https://aws.amazon.com/amazon-linux-ami/2018.03-release-notes/>

6 package(s) needed for security, out of 7 available

Run "sudo yum update" to apply all updates.

[ec2-user@ip-172-31-89-179 ~]\$ #!/bin/bash

[ec2-user@ip-172-31-89-179 ~]\$ yum -y update

Loaded plugins: priorities, update-motd, upgrade-helper

You need to be root to perform this command.

[ec2-user@ip-172-31-89-179 ~]\$ yum -y install httpd

Loaded plugins: priorities, update-motd, upgrade-helper

You need to be root to perform this command.

[ec2-user@ip-172-31-89-179 ~]\$ root

-bash: root: command not found

[ec2-user@ip-172-31-89-179 ~]\$ sudo su

[root@ip-172-31-89-179 ec2-user]# passwd root

Changing password for user root.

New password:

BAD PASSWORD: The password fails the dictionary check - it is based on a dictionary word

Retype new password:

passwd: all authentication tokens updated successfully.

[root@ip-172-31-89-179 ec2-user]# yum -y update

Loaded plugins: priorities, update-motd, upgrade-helper

amzn-main	2.1 kB	00:00
amzn-updates	2.5 kB	00:00

Resolving Dependencies

--> Running transaction check

---> Package ntp.x86_64 0:4.2.6p5-44.36.amzn1 will be updated

---> Package ntp.x86_64 0:4.2.8p11-1.37.amzn1 will be an update

---> Package ntpdate.x86_64 0:4.2.6p5-44.36.amzn1 will be updated

---> Package ntpdate.x86_64 0:4.2.8p11-1.37.amzn1 will be an update

---> Package openssh.x86_64 0:7.4p1-11.68.amzn1 will be updated

---> Package openssh.x86_64 0:7.4p1-16.69.amzn1 will be an update

---> Package openssh-clients.x86_64 0:7.4p1-11.68.amzn1 will be updated

---> Package openssh-clients.x86_64 0:7.4p1-16.69.amzn1 will be an update

---> Package openssh-server.x86_64 0:7.4p1-11.68.amzn1 will be updated

---> Package openssh-server.x86_64 0:7.4p1-16.69.amzn1 will be an update

---> Package openssl.x86_64 1:1.0.2k-8.107.amzn1 will be updated

---> Package openssl.x86_64 1:1.0.2k-12.109.amzn1 will be an update

---> Package rpcbind.x86_64 0:0.2.0-13.9.amzn1 will be updated

---> Package rpcbind.x86_64 0:0.2.0-13.10.amzn1 will be an update

--> Finished Dependency Resolution

Dependencies Resolved

4. Resize your instance type and EBS volume (change the volume size from 8 GiB to 10GiB and instance type to t2.small)

Filter by tags and attributes or search by keyword											
Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs	Key Name	Monitoring
	i-01b667d6d06ad26a	t2.micro	us-east-1c	terminated	None		-	-	-	Snafu	disabled
	i-050ffe6170b5c3d37	t2.small	us-east-1c	stopped	None		-	-	-	Snafu	disabled
My Web Server	i-0b3f4ba6fd1f5836e	t2.micro	us-east-1c	terminated	None		-	-	-	Snafu1	disabled

Filter by tags and attributes or search by keyword											
Name	Volume ID	Size	Volume Type	IOPS	Snapshot	Created	Availability Zone	State	Alarm Status	Attachment Information	Monitoring
	vol-0665c07f...	10 GiB	gp2	100 / 3000	snap-086b6d8...	May 22, 2018 at 10:...	us-east-1c	in-use - ...	None	i-050ffe6170b5c3d37...	OK

5. Create a custom image

Create Image

Create Image request received.

[View pending image ami-3368f24c](#)

Any snapshots backing your new EBS image can be managed on the [snapshots screen](#) after successful image creation.

Close

6. Launch EC2 instance using the custom image

Filter by tags and attributes or search by keyword											
Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs	Key Name	Monitoring
	i-01b667d6d06ad26a	t2.micro	us-east-1c	terminated			-	-	-	Snafu	disabled
	i-024b66e203eecd113	t2.micro	us-east-1c	running	Initializing		ec2-34-201-133-66.co...	34.201.133.66	-	Snafu	disabled
	i-050ffe6170b5c3d37	t2.small	us-east-1c	stopped			-	-	-	Snafu	disabled
My Web Server	i-0b3f4ba6fd1f5836e	t2.micro	us-east-1c	terminated			-	-	-	Snafu1	disabled

7. Launch Web Server on the custom image

```
ec2-user@ip-172-31-80-226:~  
login as: ec2-user  
Authenticating with public key "imported-openssh-key"  
Last login: Wed May 23 02:38:59 2018 from 65.188.54.4  
  
  _|  _|_ )  
  _| (  _| /   Amazon Linux AMI  
  __| \__|__|  
  
https://aws.amazon.com/amazon-linux-ami/2018.03-release-notes/  
[ec2-user@ip-172-31-80-226 ~]$
```

Please submit screenshots for each steps.